ADMINISTRATIVE ACTION
TYPE 2 CATEGORICAL EXCLUSION

Florida Department of Transportation

SR-9/I-95 @ SR-842/BROWARD BOULEVARD

District: FDOT District 4

County: Broward County

ETDM Number: 14226

Financial Management Number: 435513-1-22-02

Federal-Aid Project Number: N/A

Project Manager: Anson Sonnett

The environmental review, consultation, and other actions required by applicable federal environmental laws for this project are being, or have been, carried out by the Florida Department of Transportation (FDOT) pursuant to 23 U.S.C. § 327 and a Memorandum of Understanding dated December 14, 2016 and executed by the Federal Highway Administration and FDOT. Submitted pursuant 49 U.S.C. § 303.

This action has been determined to be a Categorical Exclusion which meets the definition contained in 40 CFR 1508.4, and, based on past experience with similar actions and this analysis, does not involve significant environmental impacts. Signature below constitutes Location and Design Concept Acceptance:

December 18, 2019

Director of the Office of Environmental Management
Florida Department of Transportation

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This document was prepared in accordance with the FDOT PD&E Manual.

This project has been developed without regard to race, color or national origin, age, sex, religion, disability or family status (Title VI of the Civil Rights Act of 1964, as amended).

On 08/10/2015 the State of Florida determined that this project is consistent with the Florida Coastal Zone Management Program.

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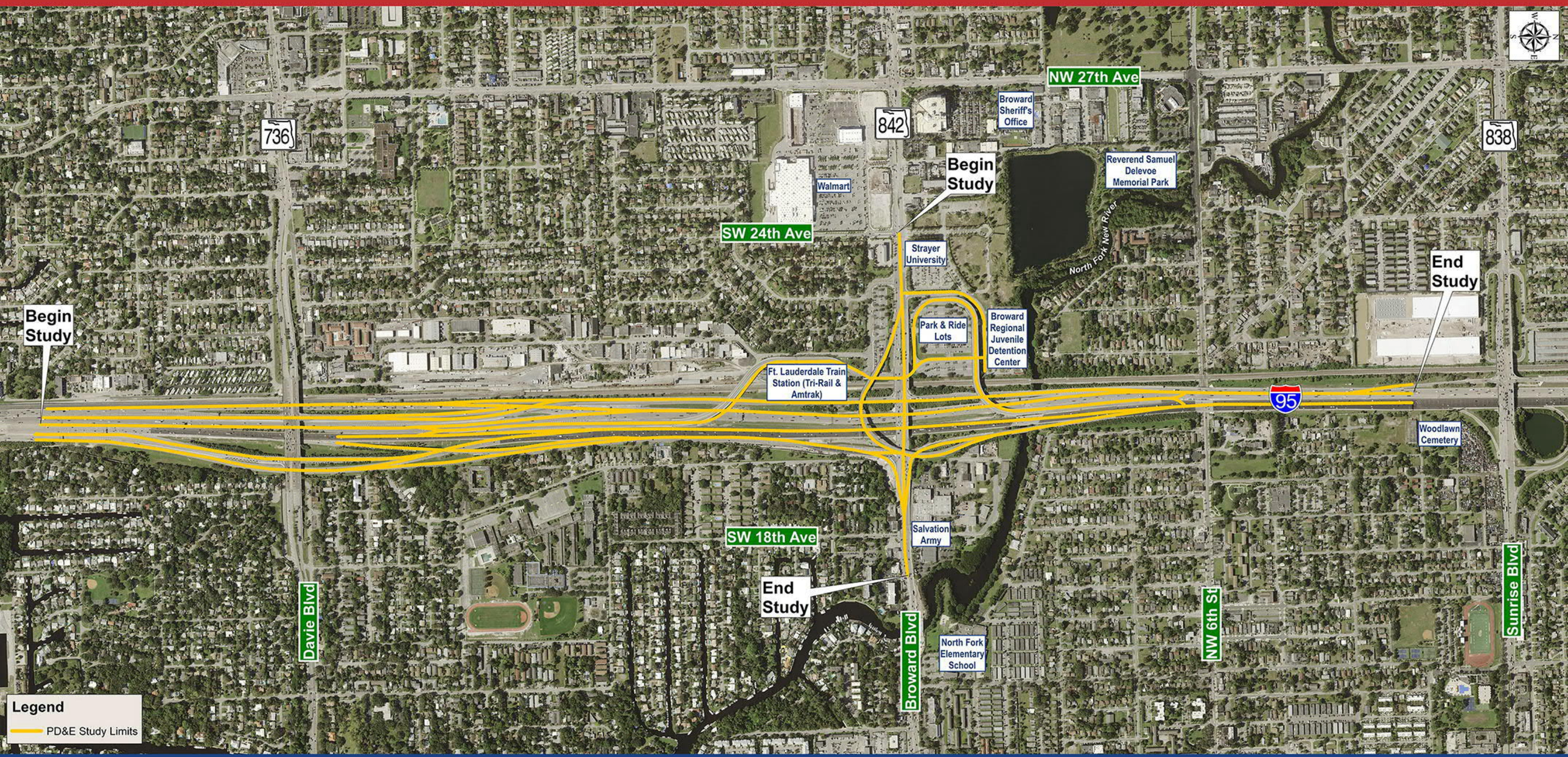
Project Development & Environment (PD&E) Study

I-95 at Broward Boulevard Interchange

Broward County, Florida



Project Location Map

Efficient Transportation Decision Making (ETDM) No. 14226
Financial Project ID No. 435513-1-22-02

FDOT

1. Project Information

1.1 Project Description

The Interchange of I-95 at Broward Boulevard is located in central Broward County in the City of Fort Lauderdale. The South Florida Rail Corridor (SFRC)/CSX Railroad is adjacent to and runs parallel along the west side of I-95 in this area. The limits of this project extend from just south of Davie Boulevard to just south of Sunrise Boulevard, a distance of approximately two miles, along I-95 and from NW 24th Avenue to east of NW/SW 18th Avenue along Broward Boulevard, a distance of approximately one half mile. The study limits are depicted inthe project location map above.
The typical section of I-95 within the study area varies. From the Davie Boulevard interchange to SW 5th Place the typical section of I-95 is an eight-lane facility comprised of three General Purpose Lanes in each direction and one Special Use Lane (previously designated for High Occupancy Vehicle (HOV) use and in transition to dual express lanes under the 95 Express project; the typical section under construction includes a 10-lane facility of which there are 3 general purpose lanes and 2 express lanes) in each direction. From the vicinity of SW 5th Place, where the northbound Collector-Distributor (CD) road ramp system merges traffic from I-595 into the General Purpose Lanes, and through to the Sunrise Boulevard interchange, I-95 is a 10-lane facility comprised of four General Purpose Lanes in each direction and one Special Use Lane in each direction (same condition as noted above). Southbound ingress to I-95 from Broward Boulevard is provided at the western intersection with I-95 ramps by a single lane access right turn lane from eastbound Broward Boulevard and a double left turn lane from westbound Broward Boulevard. Egress from southbound I-95 to Broward Boulevard is provided by a ramp with a single right turn lane for traffic heading west on Broward Boulevard and a double left turn lane for traffic heading east on Broward Boulevard.

In the study area, there is a concurrent project underway, 95 Express Phase 3A-1. Phase 3A-1 is under construction and it will extend the existing express lanes north from just south of Broward Boulevard to just north of Commercial Boulevard in Broward County. One lane will be added and the former High Occupancy Vehicle (HOV) lane will be converted to create two express lanes in each direction. The 3A-1 project includes ramp signalization from Hallandale Beach Boulevard to Commercial Boulevard. Other work includes: installing Intelligent Transportation System (ITS) and tolling equipment; widening bridges; and installing noise barrier walls at various locations including this study area along I-95 Southbound between Broward Boulevard and NW 6th Street. Construction began August 21, 2016, and is expected to be completed in 2021. A map of the entire 95 Express project is attached.

Currently, northbound ingress to I-95 from Broward Boulevard is provided by a single lane access ramp from westbound Broward Boulevard at the eastern intersection with the I-95 ramps and a single lane flyover from eastbound Broward Boulevard west of the western intersection with the I-95 ramps. Egress to Broward Boulevard from northbound I-95 is part of the northbound CD road ramp system, that was recently reconstructed to include triple right turn lanes for traffic heading eastbound on Broward Boulevard and double left turn lanes for traffic heading westbound on Broward Boulevard. Additional ingress and egress to and from I-95 is provided through the Park-and-Ride lot in the southwest and northwest quadrants of the interchange.

SR-842/Broward Boulevard is a six-lane urban divided roadway with a raised median within the vicinity of the I-95 Interchange. In its current configuration there are no bicycle lanes. Seven-foot wide sidewalks are provided on both sides of Broward Boulevard between NW/SW 22nd Avenue and NW/SW 18th Avenue. West of NW/SW 22nd Avenue, the sidewalks are seven feet in the westbound direction and six feet in the eastbound direction. Broward Boulevard provides

the main entry way to the downtown Fort Lauderdale Central Business District from I-95 and the east-west connection between US-1 and SR-817/University Drive in the City of Plantation.

There are a number of transit options within the operating area of the I-95 at Broward Boulevard Interchange that provide direct service and transfer connections along the north-south and east-west corridors. These include passenger rail services (Tri-Rail and Amtrak) and bus services (Broward County Transit, Sun Trolley, 95 Express Bus, and the Tri-Rail Commuter Connector shuttle service). There is a Park-and-Ride lot located within the interchange area on the southwest and northwest quadrants. The existing conditions at the Park-and-Ride lot include the provision of 794 parking spaces throughout five parking lots. Spaces in Lot 5 are designated for Amtrak and Tri-Rail parking only while the spaces in Lots 1-4 are available for any purpose, including car pools and 95 Express Bus. There are no designated bicycle facilities within the Park-and-Ride lot and minimal sidewalk facilities. Access to the Park-and-Ride lots is provided via Broward Boulevard and I-95. Ingress from eastbound Broward Boulevard is provided via a left turn lane at NW 24th Avenue and via a right turn lane at SW 22nd Avenue/SW 1st Street. Ingress from westbound Broward Boulevard is provided via right turn lanes at NW 22nd Avenue and NW 24th Avenue. Egress to westbound Broward Boulevard is provided via the intersections with NW 22nd Avenue and NW 24th Avenue, requiring drivers coming from the south to circulate through the northern parking areas. Egress to eastbound Broward Boulevard is provided via SW 22nd Avenue/SW 1st Street and NW 24th Avenue. Ingress from both northbound and southbound I-95 are provided in a similar manner with northbound vehicles exiting on the south side of Broward Boulevard and merging into SW 21st Terrace and southbound vehicles exiting on the north side of Broward Boulevard with connections to NW 22nd Avenue and SW 22nd Avenue / SW 1st Street provided via access roads within the parking areas. Egress to southbound I-95 is provided on the south side of Broward Boulevard via a ramp that crosses over the southbound General Use Lanes of I-95 and connects to the southbound HOV lane. Egress to northbound I-95 is provided by a direct connect flyover ramp on the north side of Broward Boulevard, accessed from the northern parking area, which crosses over the southbound General Use Lanes of I-95 and connects to the northbound HOV lane. Broward Boulevard's elevation over I-95 creates vertical access challenges for transit users, bicyclists and pedestrians looking to connect with the transit services available in the Park-and-Ride and Transit Station area northwest and southwest of the interchange. Broward Boulevard is elevated over I-95, transit users that are serviced on Broward Boulevard that need to make transit connections in the Park-and-Ride lots or the Fort Lauderdale Train station (Amtrak and Tri-Rail service) below need to walk a considerable distance on either NW or SW 22nd Avenue to access these services. As a result of these challenges and due to its location as the entry way to downtown Fort Lauderdale, this interchange has been the subject of a variety of studies including the City of Fort Lauderdale's Gateway Vision and FDOT's Broward Boulevard Transit Corridor Study.

Each of these studies has evaluated these challenges and recommended multimodal interconnectivity improvements on the west side of the interchange where connections to Tri-Rail and the 95 Express Bus services are offered. These prior studies and recommendations were factored into the preliminary design of the alternatives developed during this study.

The current Study's Preferred Alternative includes:

-A series of new flyover ramps to allow ingress and egress between the 95 Express Lanes and Broward Boulevard, for both the north- and southbound directions, with the exception of the continued use of the existing former HOV ramps for the eastbound Broward Boulevard to Southbound 95 Express;
-Replacement of the Broward Boulevard bridge segment that spans I-95 with a wider bridge segment to allow for additional turn lanes and bicycle and pedestrian improvements;
-Replacement of the Broward Boulevard bridge segment that spans the SFRC with a wider bridge segment to allow for additional turn lanes, bicycle and pedestrian improvements, and an envelope for a potential future premium transit stop in the median of Broward Boulevard. The transit stop could provide vertical connectivity between east/west transit on

Broward Boulevard and the Park-and-Ride Lot/Transit Station below as well as the Ft. Lauderdale Train Station by allowing transit users to access the level below Broward Boulevard through the median on the bridge;
-Reconstruction of the southbound General Purpose Lanes exit ramp to accommodate additional turn lanes and storage;
-Reconstruction of the northbound General Purpose Lanes exit ramp to accommodate additional storage;
-Displacement of northbound exit ramp traffic heading west onto a new bridge; and
-Improvements to the Park-and-Ride Lot to allow for improved circulation for vehicles, transit modes, and pedestrians.
-Modification to SW 1st Street eastbound at SW 22nd Avenue, converting the access point to allow for eastbound Right In/Right-Out traffic movements only.

The 95 Express project mainline improvements under construction at the time of this PD&E Study add one additional Special Use Lane in each direction and modify the use of these lanes to include managed express lanes. The resulting typical section becomes a 12-lane facility comprised of four General Purpose Lanes and two Special Use Lanes in each direction.

1.2 Purpose and Need

The primary purpose of this project is to improve system linkage, traffic operations, and modal interrelationships at the I-95 and Broward Boulevard Interchange. Additional goals of this project are to address capacity, safety, travel demands, and emergency evacuation.

Broward Boulevard is a State Road (SR 842) that provides the main entryway to the downtown Fort Lauderdale Central Business District from I-95. The sections of Broward Boulevard from I-95 to NE 3rd Avenue and north and south of Broward Boulevard on I-95 are part of the state's Strategic Intermodal System (SIS), which consists of high-priority transportation facilities and services of statewide and interregional significance and are critical to the movement of people and goods in Florida. The existing links throughout the system in the study area need improvements based on forecasted traffic demands resulting from regional population growth and employment growth. Currently, the 95 Express Lanes do not directly connect to Broward Boulevard.

Proposed improvements will need to complement the 95 Express Lanes by enhancing existing connectivity within the Park-and-Ride lots, improve existing I-95/Broward Boulevard intersections with the I-95 ramps, and provide improved Express Lane access to Broward Boulevard.

Transit services along Broward Boulevard, 95 Express, and within the Park-and-Ride Lot/Transit Station areas are currently experiencing recurring congestion that reduces transit vehicle speeds, increases operating costs, and makes scheduling of buses from a system level challenging. The existing geometry and operational features do not allow optimal bus travel times, multimodal connectivity, or access to bus stops and transfers. The purpose of this study is to address these transit needs.

I-95 within the project limits currently operates at Level of Service (LOS) F. Broward Boulevard within the project limits also operates at LOS F. Without improvements, the driving conditions will continue to operate well below acceptable LOS targets into the future. Congestion on these routes also impact emergency evacuations.

This study will address multimodal and safety needs such as the lack of sufficient bicycle and pedestrian facilities on Broward Boulevard and along SW 1st Street. In addition, the study will address safety concerns that are generated by the at grade weave condition that currently exists between the Sunrise Boulevard and Broward Boulevard interchanges from 95 Express traffic. 95 Express traffic will also be circulating through a low speed Park-and-Ride lot which poses potential pedestrian conflicts.

1.3 Planning Consistency

Currently Adopted LRTP-CFP	COMMENTS
Yes	Mention of the SIS Funding Strategy First Five Year Plan on Page 47 of the currently adopted Commitment 2040 LRTP. SIS Funding Strategy First Five Year Plan displays the funding of PE, ENV, and ROW.

	Currently Approved	$	FY	COMMENTS
PE (Final Design)				
TIP	Y	8,600,000.00	2021	See attached TIP Page.
STIP	Y	8,600,000.00	2021	See attached STIP Page.
R/W				
TIP	Y	1,000,000.00	2022	See attached TIP Page.
STIP	Y	12,301,102.00	2022	See attached STIP Page.
Construction				
TIP	N			See attached TIP Page. Expected $108,761,695.00 in FY 2024 based on Draft Tentative Work Program.
STIP	Y	107,291,805.00	>2022	See attached STIP Page. Expected $108,761,695.00 in FY 2024 based on Draft Tentative Work Program.

2. Environmental Analysis Summary

Issues/Resources	Significant Impacts?* Yes	No	Enhance	NoInv
3. Social and Economic				
1. Social	☐	☐	☒	☐
2. Economic	☐	☐	☒	☐
3. Land Use Changes	☐	☒	☐	☐
4. Mobility	☐	☐	☒	☐
5. Aesthetic Effects	☐	☒	☐	☐
6. Relocation Potential	☐	☒	☐	☐
7. Farmland Resources	☐	☐	☐	☒
4. Cultural Resources				
1. Section 106 of the National Historic Preservation Act	☐	☒	☐	☐
2. Section 4(f) of the USDOT Act of 1966	☐	☒	☐	☐
3. Section 6(f) of the Land and Water Conservation Fund	☐	☐	☐	☒
4. Other Protected Public Lands	☐	☐	☐	☒
5. Natural Resources				
1. Protected Species and Habitat	☐	☒	☐	☐
2. Wetlands and Other Surface Waters	☐	☒	☐	☐
3. Essential Fish Habitat (EFH)	☐	☒	☐	☐
4. Floodplains	☐	☒	☐	☐
5. Sole Source Aquifer	☐	☒	☐	☐
6. Water Quality and Stormwater	☐	☒	☐	☐
7. Aquatic Preserves	☐	☐	☐	☒
8. Outstanding Florida Waters	☐	☐	☐	☒
9. Wild and Scenic Rivers	☐	☐	☐	☒
10. Coastal Barrier Resources	☐	☐	☐	☒
6. Physical Resources				
1. Highway Traffic Noise	☐	☒	☐	☐
2. Air Quality	☐	☒	☐	☐
3. Contamination	☐	☒	☐	☐
4. Utilities and Railroads	☐	☒	☐	☐
5. Construction	☐	☒	☐	☐

USCG Permit

☒ A USCG Permit IS NOT required.

☐ A USCG Permit IS required.

*** Impact Determination:** Yes = Significant; No = No Significant Impact; Enhance = Enhancement; NoInv = Issue absent, no involvement. Basis of decision is documented in the referenced attachment(s).

3. Social and Economic

The project will not have significant social and economic impacts. Below is a summary of the evaluation performed.

3.1 Social

The social factors evaluated in the Social Cultural Effects Report (SCER) are demographics, community cohesion, safety, and community goals/quality of life, among others.

This project will support increasing social and economic demands expected due to continued population and employment growth in this area. The proposed project is anticipated to improve traffic flow and safety for the surrounding communities and businesses. Temporary modifications to provide access to businesses and local services may be needed during construction. The Riverside Park and Riverland neighborhoods are the residential areas most likely to be affected by short term construction impacts.

There are no residential relocations resulting from the project and therefore the demographic make-up of the community is expected to remain the same under the No Action Alternative or the Preferred Alternative.

The Preferred Alternative would help enhance most of the stated factors by improving the pedestrian and bicycle facilities provided on the Broward Boulevard bridge structure, reserving space in the median for a future transit station that has ample space to accommodate the desired vertical circulation between Broward Boulevard and the Park-and-Ride lot, and by providing a northbound exit ramp from the 95 Express Lanes that connects to Broward Boulevard. In contrast, new ramps required to provide ingress and egress to the 95 Express Lanes will result in highway structures being located closer to existing residential areas north of Broward Boulevard near NW 6th Street /Sistrunk Boulevard, albeit within existing FDOT right-of-way. Landscaping will be installed to minimize the visual intrusion of these structures and is included as a commitment in this PD&E Study. The eastbound Broward Boulevard to southbound 95 Express traffic would continue to use SW 1st Street as a means of access through a newly added roundabout. This connection requires a modification to SW 1st Street eastbound at SW 22nd Avenue, converting the access point to allow for eastbound Right-In/Right-Out traffic movements only.

Mitigation of the visual impacts and the continuance of community cohesion combined with meeting several of the community's objectives (landscaping, bicycle lanes, sidewalks), as well as the enhancement of safety and community goals, and an enhanced quality of life. Reasonably foreseeable actions from local plans promote revitalization of the area and increasing quality of life. No minority or low-income populations have been identified that would be adversely impacted by the proposed project, as determined above. Therefore, in accordance with the provisions of Executive Order 12898 and FHWA Order 6640.23a, no further Environmental Justice analysis is required. Therefore, the project in conjunction with other reasonably foreseeable future actions would not have social impacts.

3.2 Economic

The SCER evaluated the effects that the Preferred Alternative could have on the economic conditions of the study area, including impacts to businesses, longer-term economic impacts, construction impacts, impacts to the tax base or property values, and cumulative impacts.

The project is anticipated to enhance travel patterns and access to employment and government centers via I-95, Tri-Rail and transit. The I-95 at Broward Boulevard Interchange consists of high-priority transportation facilities and services of statewide importance. Potential employment opportunities, including short-term, construction-related work are also expected.

During the Project Development phase, public outreach has been an ongoing effort conducted by FDOT District Four in coordination with the Broward County Metropolitan Planning Organization and the City of Fort Lauderdale to solicit input from local residents and businesses regarding potential economic enhancements/impacts as a result of the project.

Access to businesses and government services will be maintained during construction.

The Preferred Alternative is anticipated to require a relocation of three businesses on the southwest corner of Broward Boulevard and NW/SW 18th Street and will require a partial take of a gas station property located in the southeast corner of the same intersection. The business relocations and the partial take will adversely affect the property taxes collected on these parcels. The *Conceptual Stage Relocation Plan* highlights that there is a variety of properties up for sale or rent in the same area and this may aide in the retention of the three businesses in the area. The Preferred Alternative will also take a small area in northwest corner of Broward Boulevard and NW/SW 18th Street. This property is owned and operated by The Salvation Army. As a non-profit entity, the Salvation Army does not pay property taxes. Therefore, this property acquisition will not affect the tax base. The majority of the construction will occur within the FDOT right-of-way and access to existing businesses will be provided at all times during construction.

The project is anticipated to enhance economic conditions for businesses by creating temporary employment and easing congestion. Reasonably foreseeable actions from local plans promote continued economic growth in the area. The project does not provide new access and therefore will not result in long-term economic impacts in terms of spurring new development. Therefore, the project would not have economic impacts.

3.3 Land Use Changes

The project is compatible with the City of Fort Lauderdale's Comprehensive Plan.

The study area is mostly built out and future land use plans are similar to existing land use.

The Preferred Alternative overall does not result in significant land use changes as it is mainly located within the existing right-of- way. The Salvation Army and the gas station partial takes will not result in any land use changes. The relocation of the three businesses would convert the commerce land use of the parcels into transportation land use.

Since the area is already built out and the future land use plan is similar to the existing use with slight variation, land use patterns would be expected to remain similar. Therefore, no land use impacts are anticipated.

3.4 Mobility

The project will improve intermodal mobility and safety through the proposed bicycle and pedestrian improvements, connections between the 95 Express Lanes and Broward Boulevard, and circulation in the Park-and-Ride lot.

The Systems Interchange Modification Report (SIMR), approved on June 12, 2019, provides operational and safety analyses for the project for the design year of 2040. The operational conditions show improvement with the Preferred Alternative in terms of less delay during the PM peak period, improved Level of Service (LOS) at four interchanges, and improved safety due to reduced congestion.

For vehicular traffic in the study area, the Preferred Alternative may affect accessibility for one property in both the short and long-term horizons, The Salvation Army property, as aforementioned. In this instance the access to the site is not impacted, rather a portion of a drive aisle that provides access to the front of the building from the parking areas on the side and back is required to accommodate the proposed improvements. This drive aisle is located partially within FDOT-owned right-of-way and the remainder within the private property limits. There are other means of access to the parking areas from the property so the proposed impact would not affect the ability of the property to be utilized in the future. FDOT will continue to work with The Salvation Army to address this impact during the right-of-way and design phases of the project.

There is a slight modification to SW 1st Street eastbound at SW 22nd Avenue, converting the access point to allow for eastbound Right-In/Right-Out traffic movements only as this is to remain the route for eastbound Broward Boulevard traffic to connect to southbound 95 Express.

Mobility, for all other portions of the study area, may be temporarily affected during construction; however, FDOT will ensure that each business retains access during the construction period.

For transit riders, there is the potential for improved accessibility as a component of the Preferred Alternative. The space reserved in the median on the Broward Boulevard Bridge over the SFRC for a future premium transit station, as previously mentioned, would accommodate a direct connection between the upper level of Broward Boulevard and the multitude of transit services offered at the Park-and-Ride Lot lower level. The project also includes bike lanes along the Broward Boulevard Bridge over both the SFRC and I-95 increasing the accessibility of the study area for bicycles. This improvement also allows transit riders to use their bicycles to access destinations in downtown Fort Lauderdale from Tri-

Rail, Amtrak, or the 95 Express Bus.

For pedestrians, mobility will be improved by wider sidewalks on the bridge structures over the SFRC and I-95, and additional sidewalks along SW 1st Street.

The Preferred Alternative will improve traffic patterns by allowing 95 Express Lane users to access Broward Boulevard from a direct ramp as opposed to circulating through the Park-and-Ride Lot as is currently required. The overall result is not a significant change in travel patterns given the number of employment and leisure destinations accessed via Broward Boulevard. Public parking would remain the same under the Preferred Alternative. There will be no impact to on-street parking provided along NW 6th Street/Sistrunk Boulevard and the proposed modifications to the Park-and-Ride Lot are not anticipated to reduce the number of spaces provided.

Related regional projects include 95 Express and limited-stop bus service on Broward Boulevard. The 95 Express lanes are currently being constructed within the study area from south of Broward Boulevard to south of Glades Road. Additional improvements from south of Stirling Road to south of Broward Boulevard are expected to begin construction in 2019. The limited- stop bus service on Broward Boulevard provides service from downtown Fort Lauderdale, the Central Terminal, to the West Regional Terminal located in Plantation. Both of these projects improve mobility in the area and connect to this proposed project. Therefore, there will be enhanced conditions on mobility and regional transportation.

3.5 Aesthetic Effects

The project area is urban in nature and aesthetic effects are anticipated to be minimal.

The Preferred Alternative would affect the visual quality and character of the study area in the following ways: addition of the elevated braided ramps in two locations; shadow from the elevated braided ramps in one location; removal of existing landscaping to accommodate the elevated braided ramp in one location; and placement of support structures for the elevated braided ramps in two locations. To assist the project team and the public in understanding the impact that these improvements would have on the visual character of the study area, a series of renderings were created that illustrate the potential build conditions and they were presented at the Public Hearing and the small stakeholder meetings. There were no concerns about the visual impacts raised by the public. Further description of details and renderings of these aesthetic impacts are located in the Social Cultural Effects Evaluation Report.

3.6 Relocation Potential

All of the proposed improvements are designed to utilize existing FDOT right-of-way, except for the Salvation Army property take, the gas station partial take, and the three business relocations previously mentioned in Section 3.2. There are no residential property relocations required for the Preferred Alternative. Since the project involves some amount of right-of-way acquisition but will carry out a right-of-way and Relocation Program, impacts would be moderate.

For detail on the Right of Way and Relocation Program, please see the Conceptual Stage Relocation Plan.

In order to minimize the unavoidable effects of Right of Way acquisition and displacement of people, the Florida Department of Transportation (FDOT) will carry out a Right of Way and Relocation Assistance Program in accordance with Florida Statute 421.55, Relocation of displaced persons, and the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Public Law 91-646 as amended by Public Law 100-17).

3.7 Farmland Resources

Farmland impacts resulting from the project was conducted pursuant to the Farmland Protection Policy Act of 1981 (7 CFR Part 658).

The project does not meet the definition of farmland as defined in 7 CFR Part 658 and the provisions of the Farmland Protection Policy Act of 1981 do not apply because the entire project area is located in the urbanized area of Ft. Lauderdale with no designated farmlands adjacent to the project corridor.

4. Cultural Resources

The project will not have significant impacts to cultural resources. Below is a summary of the evaluation performed.

4.1 Section 106 of the National Historic Preservation Act

A Cultural Resource Assessment Survey (CRAS), conducted in accordance with 36 CFR Part 800, was performed for the project, and the resources listed below were identified within the project Area of Potential Effect (APE). FDOT found that some of these resources meet the eligibility criteria for inclusion in the National Register of Historic Places (NRHP), and State Historic Preservation Officer (SHPO)/Tribal Historic Preservation Officer (THPO) has concurred with this determination. After application of the Criteria of Adverse Effect, and in consultation with SHPO/THPO, FDOT has determined that the proposed project will have No Adverse Effect on these resources.

The original CRAS was reviewed by the SHPO, who concurred with the findings on November 17, 2017 in the attached concurrence letter. No newly or previously recorded archaeological sites were identified within the archaeological APE. Background research and a reconnaissance survey determined that the APE has a low probability for archaeological sites. Subsurface testing was not feasible within the archaeological APE due to the presence of existing pavement, sidewalks, landscaping, berms, and buried utilities. The CRAS identified a total of 52 historic resources within the historic APE. The identified historic resources include one cemetery (North Woodlawn Cemetery- 8BD4879), two resource groups (Seaboard Air Line [CSX] Railroad-8BD4649 and the Salvation Army Complex- 8BD6346), and 49 buildings (8BD1452 and 8BD6298-8BD6344). Four of the historic resources were previously recorded (8BD1452, 8BD3414, 8BD4649, and 8BD4879), and 48 are newly recorded (8BD6298-8BD6344 and 8BD6347).

Three historic resources, Seaboard Airline Railroad Station at 200 SW 21st Terrace (8BD1452), Seaboard Air Line (CSX) Railroad (8BD4649), and North Woodlawn Cemetery (8BD4879), were previously
determined National Register-eligible by the SHPO. All other historic resources located within the current APE are considered individually ineligible for inclusion in the National Register. Almost all the newly recorded historic buildings are representative of common postwar constructed architecture that does not possess sufficient significance for individual listing in the National Register.

All newly identified historic resources received Florida Master Site File forms.

In November of 2018, there was an addendum to the CRAS Report. The CRAS Addendum specifically evaluated the design options for the eastbound Broward Boulevard to southbound 95 Express movement. The Addendum received concurrence on February 27, 2019.

Within the APE of the addendum, there were 36 historical resources identified; 32 newly recorded historic buildings (8BD6748-8BD6779) and four previously recorded historic resources: Seaboard Airline Railroad Station (8BD1452), Seaboard Air Line (CSX) Railroad (8BD4649), 1800-1803 W Broward Boulevard (8BD6339), and Salvation Army Complex (8BD6347). Two historic resources, Seaboard Airline Railroad Station at 200 SW 21st Terrace (8BD1452) and Seaboard Air Line (CSX) Railroad (8BD4649), were previously determined National Register-eligible by the SHPO.

A Section 106 Evaluation and Determination of Effects Case Study was conducted in February of 2018. The case study looked at potential effects that the improvements may have on the identified National Register-eligible and -listed historic resources were evaluated. The proposed project will have no adverse effect on the Seaboard Air Line (CSX) Railroad (8BD4649) and North Woodlawn Cemetery (8BD4879). An adverse effect to the Seaboard Airline Railroad Station (8BD1452) is unlikely and it is recommended further consultation take place in order to ensure the design of canopy structure will be sensitive to the historic station building.

The Seminole Tribe of Florida Tribal Historic Preservation Officer (THPO) gave concurrence to the CRAS and to the Addendum on April 24, 2019. Correspondence with the THPO is attached.

Based on the findings of the CRAS and the Case Study, there are no significant impacts anticipated for any cultural resources.

4.2 Section 4(f) of the USDOT Act of 1966, as amended

The following evaluation was conducted pursuant to Section 4(f) of the U.S. Department of Transportation Act of 1966, as amended, and 23 CFR Part 774.

A memorandum, dated September 2017, was prepared by FDOT documenting the evaluation and coordination related to all potential Section 4(f) sites located around the project area.

The following park/recreational resources have been identified within one mile of the project area:

- Delevoe Park (2520 NW 6th Street; owned and managed by Broward County)
- Sweeting Park (433 NW 23rd Avenue; owned and managed by City of Ft. Lauderdale)
- North Fork Riverfront Park (200 NW 18th Avenue; owned and managed by City of Ft. Lauderdale)
- Townsend Park (1500 Argyle Drive, owned and managed by City of Ft. Lauderdale)
- Sailboat Bend Preserve (1401 SW 2nd Street; owned and managed by City of Ft. Lauderdale)
- North Fork School Park (101 NW 15th Avenue; owned and managed by City of Ft. Lauderdale)
- Riverside Park (555 SW 11th Avenue; owned and managed by City of Ft. Lauderdale)
- Guthrie - Blake Park (2801 SW 2nd Street; owned and managed by City of Ft. Lauderdale)
- Lincoln Park (600 NW 19th Avenue; owned and managed by City of Ft. Lauderdale)
- Little Lincoln Park (1721 NW 6th Street; owned and managed by City of Ft. Lauderdale)
- Provident Park (1412 NW 6th Street; owned and managed by City of Ft. Lauderdale)
- Mizell Center (1409 NW 6th Street; owned and managed by City of Ft. Lauderdale)
- Walker Park (1001 NW 4th Street; owned and managed by City of Ft. Lauderdale)
- Stranahan High School (1500 SW 5th Place; owned and managed by Broward County School Board with athletic fields)
- North Fork Elementary (101 NW 15th Avenue, no recreational facilities adjacent to project area)

As discussed above, with the exception of North Fork Elementary and the Delevoe Park, all of the resources listed are located within the buffer of the project area but because of their distance to the project area, no Section 4(f) use is expected from these resources. Although North Fork Elementary is adjacent to the project area, there will be no Section 4 (f) involvement as it does not have any recreational facilities impacted by the project and there will be no land taken from the property.

The project team coordinated with Broward County Parks and Recreation Department regarding Delevoe Park. As part of the Pond Siting Evaluation process, the Project team evaluated the potential for joint use stormwater within Delevoe Park, which is a Broward County owned and managed park. Because of the proposal in the park, a Section 4(f) Determination of Applicability (DOA) form was prepared and submitted to Office of Environmental Management (OEM) on August 30, 2017, and approved on September 19, 2017. The DOA form also included a recommendation to pursue a Section 4(f) *de minimis* use for the proposed use of the park property because of the need for a joint use stormwater easement within the park. A Section 4(f) *de minimis* Notification Letter was submitted from the District to Broward County Parks and Recreation Department. The purpose of this letter was to notify the Official with Jurisdiction (OWJ) over the park, that the FDOT intended to pursue a Section 4(f) *de minimis* use as proposed drainage into the park (see attached *de minimis* notification letter). The public was given an opportunity to review this drainage concept in the park during the Public Workshop held on September 14, 2017. On the same day, in response to the *de minimis* notification letter, Broward County submitted a formal letter of objection to the *de minimis* use (see Broward County objection letter in the project file). At the Public Hearing, the project team presented off-site areas for stormwater management needs and selected the preferred location on the southwest corner of SW 18th Avenue and Broward Boulevard. The FDOT decided to not pursue the pond within the Delevoe park property, therefore, there will be no Section 4(f) involvement with this resource.

4.3 Section 6(f) of the Land and Water Conservation Fund Act of 1965

There are no properties in the project area that are protected pursuant to Section 6(f) of the Land and Water Conservation Fund of 1965.

4.4 Other Protected Public Lands

There are no other protected public lands in the project area.

5. Natural Resources

The project will not have significant impacts to natural resources. Below is a summary of the evaluation performed:

5.1 Protected Species and Habitat

The following evaluation was conducted pursuant to Section 7 of the Endangered Species Act of 1973 as amended as well as other applicable federal and state laws protecting wildlife and habitat.

Based on the Natural Resource Evaluation (NRE) that was conducted, eleven federally listed animals and two plant species were determined to potentially occur within, or within the vicinity of, the project area based on United States Fish and Wildlife Service (USFWS) sources. However, little suitable habitat remains available for use by listed species in this developed project area. Cursory wildlife surveys were conducted in April 2017 and December 2017.

Based on the limited available habitat and the proposed improvements, it was determined that the project will have "no effect" on the following federally listed species: Everglades Snail Kite (*Rostrhamus sociabilis plumbeus*); American Alligator (*Alligator mississippiensis*); American Crocodile (*Crocodylus acutus*); Hawksbill (*Eretmochelys imbricata*), Leatherback (*Dermochelys coriacea*), Green (*Chelonia mydas*), and Loggerhead Sea Turtles (*Caretta caretta*); Beach Jacquemontia (*Jacquemontia reclinata*); and Tiny Polygala (*Polygala smallii*). It was determined that the project "may effect, not likely to adversely affect" the following species: Wood Stork (*Mycteria americana*); West Indian Manatee; Smalltooth Sawfish; and the Eastern Indigo Snake (*Drymarchon corais couperi*). USFWS concurred with these effects determinations on May 2, 2018 (see concurrence letter attached).

The effects determinations for the Wood Stork, West Indian Manatee, and Eastern Indigo Snake were made based on their respective programmatic effect determination keys. These effect determination keys are attached. The effect determination for the Smalltooth Sawfish is based on previous coordination with NMFS regarding this species in this project area for the 95 Express Phase 3A Project. Coordination was held for this current Study's impacts and NMFS determined that impacts are within the previously mitigated impact area and the potential impacts to the Smalltooth sawfish are within the extent previously considered by the I-95 Phase 3A project. This concurrence was documented in the attached Memorandum to File - National Marine Fisheries Service Coordination. Concurrence was provided by NMFS on May 2, 2018.

To minimize potential impacts to the smalltooth sawfish, the NMFS Sea Turtle and Smalltooth Sawfish Construction Condition (attached) will be followed with respect to any in-water construction activities and FDOT commits to these conditions. To minimize impacts to the Wood Stork, any impacts to suitable foraging habitat (SFH) occurring within stormwater management areas are anticipated to be mitigated through offsetting stormwater management areas. To minimize any adverse effects to the West Indian Manatee during construction, the FDOT will adhere to the Standard Manatee Conditions for In-Water Work (See Appendix D in NRE). To minimize adverse effects to the Eastern Indigo Snake during construction, the FDOT will adhere to the Standard Protection Measures for the Eastern Indigo Snake (See Appendix B in NRE).

The Florida Fish and Wildlife Conservation Commission (FWC) maintains the list of animals designated as federally endangered, federally threatened, state threatened, or species of special concern. While the USFWS has primary responsibility for Florida species that are federally endangered or threatened, the FWC works in partnership to help

conserve these species. Some listed and non-listed species are also considered managed species because of the well-developed programs that address their conservation, management, or recovery. Recently, FWC also developed a comprehensive Imperiled Species Management Plan (FWC, 2016) for the state's 57 state-listed species. The state-listed species and their effect determinations are summarized in the table below.

Summary of Federally and State Listed Species and Their Effect Determination

Scientific Name	Common Name	Status	Likelihood of Occurrence	Effort Determination
Fish				
Pristis pectinata	Smalltooth Sawfish	FE	Low	NLAA
Avian				
Mycteria americana	Wood Stork	FT	Moderate	NLAA
Rostrhamus sociabilis plumbeus	Everglades Snail Kite	FE	Low	NE
Sternula antillarum	Least Tern	ST	Low	NE
Egretta caerulea	Little Blue Heron	ST	Low	NE
Egretta tricolor	Tricolored Heron	ST	Low	NE
Egretta rufescens	Reddish Egret	ST	Low	NE
Platalea ajaja	Roseate Spoonbill	ST	Low	NE
Rynchops niger	Black Skimmer	ST	Low	NE
Haematopuspalliatus	American Oystercatcher	ST	Low	NE
Athene cunicularia floridana	Burrowing Owl	ST	Low	NE
Mammals				
Trichechus manatus	West Indian Manatee	FT	Moderate	NLAA
Reptiles				
Drymarchon corais couperi	Eastern Indigo Snake	FT	Low	NLAA
Alligator mississippiensis	American Alligator	FT (SA)	Low	NE
Crocodylus acutus	American Crocodile	FT	Low	NE
Chelonia mydas	Green Sea Turtle	FE	Low	NE
Eretmochelys imbricata	Hawksbill Sea Turtle	FE	Low	NE
Dermochelys coriacea	Leatherback Sea Turtle	FE	Low	NE
Caretta caretta	Loggerhead Sea Turtle	FT	Low	NE
Gopherus polyphemus	Gopher Tortoise	ST	Low	NE
Plants				
Jacquemontia reclinata	Beach Jacquemontia	FE	Low	NE
Polygala smallii	Tiny Polygala	FE	Low	NE

Note: FT= Federally-designated Threatened; FE= Federally-designated Endangered; ST = State-designated Threatened; SE= State-designated Endangered; SA= Similarity of Appearance

Source: Florida Fish and Wildlife Conservation Commission. Florida's Endangered and Threatened Species. Official Lists, January 2017; U.S. Fish and Wildlife Service, County Listed Species; and Florida's Imperiled Species Management Plan 2016.

The likelihood of occurrence for all possible state listed species in the project area is low and no effect is anticipated.

5.2 Wetlands and Other Surface Waters

The following evaluation was conducted pursuant to Presidential Executive Order 11990 of 1977 as amended, Protection of Wetlands and the USDOT Order 5660.1A, Preservation of the Nation's Wetlands.

The Preferred Alternative was evaluated for potential impacts to wetlands and other surface waters. One wetland exists as a fringe mangrove on the banks of the tidal North Fork of the New River. Seven surface waters exist within the project area, including the North Fork of the New River and six permitted stormwater management areas containing hydrophytic vegetation. The Preferred Alternative encroaches upon the fringe mangrove wetland (W-1) and North Fork of the New River (SW-4), however, they are already planned to be fully impacted and mitigated by the I-95 Express Phase 3A-1 project (FPID No. 433108-5-52-01), authorized under South Florida Water Management District (SFWMD) Environmental Resource Permit No.06-01465-S and United States Army Corps of Engineers (USACE) Dredge & Fill Permit No. SAJ 2014-01584. No impacts are anticipated to occur at surface waters (SW) 1, 2 or 6.The remaining surface waters (SW-3, SW-5, and SW-7) will be filled in and offset through the new drainage pond to be constructed as part of the Preferred Alternative on the southwest quadrant of Broward Boulevard and SW 18th Avenue.

The direct impacts of acreages to wetlands and surface waters in the project area are displayed in the table below.

Direct Impacts Acreages to Wetlands and Surface Waters within a 500-foot Buffer of the Project Area

ID	Impact Area (Acres)
W-1	**0.004**
SW-3	0.28
SW-4	0.02
SW-5	0.02
SW-7	0.08
Total Impacts	**0.404**

5.3 Essential Fish Habitat (EFH)

An Essential Fish Habitat (EFH) Assessment has been prepared and consultation has been completed in accordance with the Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA). It has been determined that this project will not have adverse effects to EFH. Should any changes occur during the design and permitting process that affect the consultation, re-initiation of the consultation process will be coordinated with National Marine Fisheries Service (NMFS).

The National Marine Fisheries Service (NMFS) has designated areas of this location as EFH, due to the presence of fringe mangroves. While the Preferred Alternative will result in shading and pile driving impacts to the North Fork of the New River, any impacts to critical habitats and EFH have already been mitigated by the I-95 Express Phase 3A-1 project. NMFS indicated that re-initiation of EFH consultation will not be required based on the previous consultation for the I-95 Express Phase 3A project and that ESA consultation for the Smalltooth sawfish will not require re-initiation if the means and methods for the proposed widening are the same as those used by the I-95 Phase 3A project. The proposed I-95 Broward Boulevard Interchange project is anticipated to use the same construction means and methods as described in the I-95 Phase 3A project. Therefore, the bridge widening associated with this project does not meet the criteria to trigger re-initiation of consultation with the NMFS. EFH concurrence was received on March 23, 2018. The documentation is provided in Appendix H of the NRE.

5.4 Floodplains

Floodplain impacts resulting from the project were evaluated pursuant to Executive Order 11988 of 1977, Floodplain Management.

The Location Hydraulic Report (LHR) identifies that the project falls within the Federal Emergency Management Administration (FEMA) defined Zones AE and AH. Zone AE is a special flood hazard area subject to inundation by the 100-year flood, with determined base flood elevations. Zone AH is a special flood hazard area, also subject to inundation by the 100-year flood, that experiences flood depths of 1 to 3 feet (which are usually areas of ponding), with determined base flood elevations. The project will result only in minimal encroachments to floodplains; 1.90 acres of Zone AE and 1.92 acres of Zone AH. These base floodplain encroachments will be constrained to along the east and west sides of I-95, and within the median of the I-95 mainline, as well as along Broward Boulevard. Encroachments resulting from the construction of the project will be fully compensated within the proposed stormwater management facilities to ensure there will be no increase or significant change to flood elevations and/or limits. Therefore, this encroachment is not significant. For additional clarification please refer to the FEMA FIRM maps included with the LHR under Attachment B.

5.5 Sole Source Aquifer

Biscayne Aquifer

The Biscayne Aquifer underlies all of Broward County, thus the project lies inside its designated boundaries. This aquifer is a designated Sole Source Aquifer, i.e., it is the sole or principal drinking water source for a populated area. There are no well head protection areas within the project limits.

The Efficient Transportation Decision Making (ETDM) Programming Screening Summary Report was published on June 6, 2016 (#14226). For the issue of Water Quality and Quantity, the U.S. Environmental Protection Agency's (EPA) degree of effect was determined to be Minimal, and the EPA provided the following comment:

"Additional impervious surfaces within the proposed project will add to contaminant loading and alter flow. Storm water management system should be optimized to minimize impact on water quality and provide the retention necessary to manage water flow properly and in accordance with federal, state and local regulation."

All proposed stormwater management facilities will provide the necessary water quality treatment volume and limit the post-development peak discharge rate into the South Fork of the New River and the North Fork of the New River to the pre-development peak discharge rate. Water quality treatment and discharge attenuation will be provided via existing and proposed dry detention/retention ponds and French Drains.

Based on the conceptual drainage design evaluation for the proposed improvements, the stormwater management facilities will meet FDOT drainage criteria as well as SFWMD permit criteria. The improvements will have no negative drainage impacts to the surrounding areas and the proposed stormwater management facilities will have the capacity to adequately treat and attenuate roadway runoff within the project limits. Therefore, water quality impacts to downstream receiving waters are not anticipated to occur. As such, no adverse impacts to the Biscayne Aquifer are anticipated as a result of the proposed project.

A request for a Sole Source Aquifer Review/Concurrence Letter was sent to the EPA on August 12, 2019. In a response dated November 26, 2019, the EPA concurred that there will be no substantial impact to the Biscayne Aquifer as a result of the proposed project due to proper implementation of best management practices (BMPs) contained in the FDOT Design Manual Chapter 320 and FDOT Standard Specifications for Road and Bridge Construction.

5.6 Water Quality and Stormwater

Several types of stormwater management facilities alternatives are commonly used on roadway projects. The more commonly used alternatives in south Florida, particularly for roadway projects, include wet detention ponds, dry detention ponds, retention ponds, and French drains (exfiltration trenches). However, each of these stormwater management facility types has different design criteria and application.

Based on the proposed improvements, impacts to existing stormwater management facilities, available existing and proposed right-of-way, modification and expansion of the existing stormwater management facilities to create additional storage volume will be necessary in order to accommodate additional water quality treatment, discharge attenuation and floodplain compensation.

Based on the conceptual drainage design evaluation for the proposed interchange improvements, the stormwater management facilities required to meet FDOT drainage criteria, as well as SFWMD permit criteria, can be fully accommodated within the I-95, Park-and-Ride, and Broward Boulevard existing and proposed roadway right-of- way. It is therefore anticipated that no adverse effects will occur to the water quality within the project area.

5.7 Aquatic Preserves

There are no aquatic preserves in the project area.

5.8 Outstanding Florida Waters

There are no Outstanding Florida Waters (OFW) in the project area.

5.9 Wild and Scenic Rivers

There are no designated Wild and Scenic Rivers in the project area.

5.10 Coastal Barrier Resources

There are no Coastal Barrier Resources in the project area.

6. Physical Resources

The project will not have significant impacts to physical resources. Below is a summary of the evaluation performed for these resources.

6.1 Highway Traffic Noise

The following evaluation was conducted pursuant to 23 CFR 772 and Section 335.17, F.S., Procedures for Abatement of Highway Traffic Noise and Construction Noise.

As detailed in the Noise Study Report, the design year traffic noise levels (2040) for the Preferred Alternative will approach or exceed the Noise Abatement Criteria (NAC) at 41 residences and at one special land use within the project limits. Consequently, the feasibility and reasonableness of noise barriers were considered for those noise sensitive sites predicted to be impacted.

Four separate Common Noise Environments (CNEs) were used to assess noise barriers for the noise sensitive sites that approach or exceed the NAC:

- E4S - Represents the 19 impacted residences in the Riverbend Community;
- E4N - Represents the 16 residences in the Liberty Park Community;
- E5 - Represents the Woodlawn Cemetery; and
- W4 - Represents the six residences in River Garden/Sweeting Estates and Washington Park.

Noise barriers at three of the CNEs (E4S, E4N, and W4) were determined to be feasible and cost reasonable and/or represent replacement noise barriers and are recommended for further consideration during the design phase and for public input. Noise barriers recommended for CNE-E4S and -W4 represent replacement noise barriers for the existing and planned shoulder mounted noise barriers that are required to be replaced to construct the improvements associated with the Preferred Alternative. The recommended noise barriers benefit 27 of the 41 residences with reduction from the existing noise barrier impacted by the Preferred Alternative. The elevated roadways in the vicinity of these communities and the 8-foot- tall height limitation on bridge and Mechanically Stabilized Earth walls limit the ability to provide benefits to all of the impacted residences in these communities. The estimated cost of the recommended noise barriers is $1,935,600.

Noise barriers were not found to be cost reasonable at the Woodlawn Cemetery (CNE-E5). The usage of the cemetery was less than required to be cost reasonable; therefore, a noise barrier is not recommended for further consideration or construction at this location. Based on the noise analyses performed to date, there appears to be no apparent solutions available to mitigate the noise impacts at this cemetery or the 14 impacted residences in the vicinity of the existing and proposed noise barriers. The traffic noise impacts to these noise sensitive sites are an unavoidable consequence of the project.

FDOT will adhere to the construction of feasible noise abatement measures at the noise impacted locations identified above contingent upon the following conditions:

- Final recommendations on the construction of abatement measures is determined during the project's Final Design and through the public involvement process;
- Detailed noise analyses during the Final Design process support the need, feasibility and reasonableness of providing abatement;
- Cost analysis indicates that the cost of the noise barrier(s) will not exceed the cost reasonable criterion;
- Community input supporting types, heights, and locations of the noise barrier(s) is provided to the District Office; and
- Safety and engineering aspects as related to the roadway user and the adjacent property owner have been reviewed and any conflicts or issues resolved.

It is likely that the noise abatement measures for the identified locations will be constructed if found feasible based on the contingencies listed above. If, during the Final Design phase, any of the contingency conditions listed above cause abatement to no longer be considered reasonable or feasible for a given location(s), such determination(s) will be made prior to requesting approval for construction advertisement. Commitments regarding the exact abatement measure locations, heights, and type (or approved alternatives) will be made during project reevaluation and at a time before the construction advertisement is approved.

6.2 Air Quality

This project is not expected to create adverse impacts on air quality because the project area is in attainment for all National Ambient Air Quality Standards (NAAQS) and because the project is expected to improve the Level of Service (LOS) and reduce delay and congestion on all facilities within the study area.

An Air Quality Technical Memorandum was developed in January of 2018 to document the findings of the air quality analysis. Broward County is currently designated as being in attainment for the following criteria air pollutants: ozone, nitrogen dioxide, particulate matter (2.5 microns in size and 10 microns in size), sulfur dioxide, carbon monoxide, and lead. The Preferred Alternative was subjected to a carbon monoxide (CO) screening model that makes various conservative worst-case assumptions related to site conditions, meteorology, and traffic. The FDOT's screening model, CO Florida 2012, uses the United States Environmental Protection Agency (USEPA) software [Motor Vehicle Emission Simulator (MOVES) version 2010a and CAL3QHC2] to produce estimates of one-hour and eight-hour CO concentrations at default air quality receptor locations. The one-hour and eight-hour estimates can be directly compared to the one- and eight-hour National Ambient Air Quality Standards for CO that are 35 parts per million (ppm) and 9 ppm, respectively.

The highest total approach traffic volume for the Preferred Alternative was associated with the I-95 and Broward Boulevard interchange. It was also evaluated for both the opening year 2020 and the design year 2040. Estimates of CO were predicted for the default receptors that are located 10 feet to 150 feet from the edge of the roadway. Based on the results from the screening model, the highest project-related CO one- and eight-hour levels are not predicted to meet or exceed the one- or eight-hour National Ambient Air Quality Standards for this pollutant with the Preferred Alternative. As such, the project "passes" the screening model.

Construction activities will cause short-term air quality impacts in the form of dust from earthwork and unpaved roads. These impacts will be minimized by adherence to all applicable State regulations and to the FDOT Standard Specifications for Road and Bridge Construction.

6.3 Contamination

Available records reported many sources associated with hazardous waste management, petroleum storage systems/spills, cleaning or dry cleaning activities, and environmental contamination within a 500 foot radius of the project corridor. An evaluation of site characteristics for these sources and associated environmental information (e.g. undocumented or documented soil, groundwater, and/or hazardous material impacts) identified 78 sources/facilities, as displayed in the table below, with a risk rating distribution as follows: 13 - High, 17 - Medium, 27 - Low, and 21 - No.

Potential Contamination Sites

Site No.	Site Name	Location	Risk Rating
1	FDOT ROW (Former) Reliance Supply Company	1050 SW 20th Way Ft. Lauderdale, FL 33312	Medium
2	All White Manufacturing / All - White Roofs & MFG	1507 SW 21st Avenue Ft. Lauderdale, FL 33312	No
3	3 Brothers Custom Interior and Exterior Yacht Painting (Former) Florida Electric Service Company Inc.	1491 SW 21st Avenue Ft. Lauderdale, FL 33312	Medium
4	Steve's Garage / Steve's Automotive Inc.	1359 SW 21st Terrace Ft. Lauderdale, FL 33312	No
5	FDOT ROW (Former) Holland Builders (Former) The Steering Wheel	1350 SW 20th Terrace Ft. Lauderdale, FL 33312	Medium
6	FDOT ROW (Former) Rad-Air	1321 SW 20th Terrace Ft. Lauderdale, FL 32212	High
7	R. Hamann & Sons Demolition (Former) 1-800 Asphalt Inc.	1309 SW 21st Terrace Ft. Lauderdale, FL 33312	Medium
8	FDOT ROW (Former) Hamid Imports	1300 SW 20th Terrace Ft. Lauderdale, FL 33312	High
9	FDOT ROW (Former) BP #00367219 (Former) A One Gulf (Former) Herbies Gulf Station (Former) Davies Matt Gulf Service	2120 Davie Boulevard Ft. Lauderdale, FL 33312	Medium
10	FDOT Broward Boulevard I-95 Overpass (Former) Exxon #5587 (Former) Davie Boulevard Exxon Service (Former) Taylor Tom Boulevard Enco Service (Former) PT Texaco Service (Former) Welchs Dick Texaco Service	2010-2015 Davie Boulevard Ft. Lauderdale, FL 33312	High

11	FDOT Broward Boulevard I-95 Overpass (Former) Carl's Riverside Standard Service (Former) Riverside Standard Service (Former) Mike's Standard Oil	1900 Davie Boulevard Ft. Lauderdale, FL 33312	High
12	FDOT ROW (Former) Texaco #240211355 (Former) Tenneco Station #145	1880 Davie Boulevard Ft. Lauderdale, FL 33312	Medium
13	Tech Center - Shell-Davie Auto Care (Former) STM Automotive & Radiator (Former) Davie I-95 Shell (Former) Hokes Shell Service Station (Former) Bocar Shell Service Station (Former) Clarks Shell Service Station	2101 Davie Boulevard Ft. Lauderdale, FL 33312	Medium
14	Abandoned Gas Station (Former) Exxon Station / Texaco-Debs (Former) Dawn Donuts Exxon (Former) Exxon-Siler (Former) Sunmark Industries (Former) Sunoco Service Station (Former) Midway Sunoco Service	1905 Davie Boulevard Ft. Lauderdale. FL 33312	Medium
15	Speedy's Food Store (Former) Kwality Kwick Cleaners	1879-1881 Davie Boulevard Ft. Lauderdale, FL 33312	No
16	Cyril's Auto Repair / Cyril's Automotive 811999-Deon BRA165 AT&T Mobility - Deon New Cingular Wireless Deon	1111 SW 21st Avenue Ft. Lauderdale, FL 33312	Low
17	FDOT ROW (Former) Bryan Electric, Inc.	2015 SW 11th Court Ft. Lauderdale, FL 33312	High
18	FDOT ROW (Former) Steve's Garage	2010 SW 11th Street Ft. Lauderdale, FL 33312	Low
19	FDOT ROW (Former) Harrell Rick's Auto Sales Inc.	2003 SW 11th Street Ft. Lauderdale, FL 33312	Low
20	Dixie Plywood and Lumber Company	2121 SW 10th Court 950-990 SW 21st Terrace Ft. Lauderdale, FL 33312	Low
21	Transflo Terminal Services, Inc. (TTSI) (Former) Arrow Material Services (Former) Carmen's Siding (Former) Bulk Intermodal (Former) Distribution Services First Recovery	890 SW 21st Avenue, Ft. Lauderdale, FL 33312	High
22	FDOT I-95 Corridor (Former) American Land Cruisers / Cruise America (Former) Coney Island Racetrack	1000 SW 20th Way Ft. Lauderdale, FL 33312	Medium
23	Interplex Proto-Stamp, Inc. (Former) Sun Belt Interplex, Inc.	900-920 SW 21st Terrace Ft. Lauderdale, FL 333312	No
24	Stranahan High School Broward County School Board	1800 SW 5th Place Fort Lauderdale, FL 33312	No
25	Megawattage (Former) Laumar Roofing Services Inc. (Former) Georgia Pacific Gypsum Corp.	850 SW 21st Terrace Ft. Lauderdale, FL 33312	No

26	Matrix-Z LLC (Former) Laumar Roofing Systems, LLC (Former) Florida Home Insulation (Former) Lank Como Oil Co.	800 SW 21st Terrace Ft. Lauderdale, FL 33312	Low
27	Jet Dock Systems Verizon Wireless - Esler Site (Former) Broward Power Equipment Inc.	790 SW 21st Terrace Ft. Lauderdale, FL 33312	Low
28	Colaianni Italian Floor Tile Manufacturing (Former) Super Stone Inc.	700 SW 21st Terrace Ft. Lauderdale, FL 33312	No
29	CSX Transportation Railyard	300 SW 21st Terrace Ft. Lauderdale, FL 33312	High
30	New Cingular Wireless #16120 - Riverland Identity Graphics & Printing Acoustic Engineering Company of FL Squeegee Science	500 SW 21st Terrace Ft. Lauderdale, FL 33312	No
31	Jam Environmental & Vacuum Services LLC	250 SW 21st Terrace Ft. Lauderdale, FL 33312	Low
32	AA Carbonics	256 SW 21st Terrace Ft. Lauderdale, FL 33312	No
33	Neptune Boat Lifts (Former) Huron Machine Products, Inc. (Former) Jam Environmental & Vacuum Services LLC	228 SW 21st Terrace Ft. Lauderdale, FL 33312	No
34	FDOT (Former) CSX Transportation (Former) Tire Eliminators Inc.	401 SW 21st Terrace Ft. Lauderdale, FL 33312	Low
35	Roberts Brothers Auto Service	226 SW 21st Terrace Ft. Lauderdale, FL 33312	No
36	D&D Mobile Welding and Fabrication Inc. (Former) Professional Funeral Services Inc.	222 & 225 SW 21st Terrace Ft. Lauderdale, FL 33312	No
37	Omni Boat Canvas (Former) Newmil Marine	214 SW 21st Terrace Ft. Lauderdale, FL 33312	No
38	JAS Powder Coating, LLC	2019 SW 21st Terrace Ft. Lauderdale, FL 33312	No
39	Riverbend Retail Development	SW Corner of West Broward Boulevard and 24th Avenue Ft. Lauderdale, FL 33312	Low
40	Truck/Auto Accident-Spill	I-95 at Broward Boulevard Exit Ft. Lauderdale, FL 33312	Low
41	FDOT Transportation Corridor (Former) Everglades Fertilizer Co.	2001 W Broward Boulevard Ft. Lauderdale, FL 33312	High
42	Sunnyreach Acres - Housing Authority, City of Ft. Lauderdale	100 SW 18th Avenue Ft. Lauderdale, FL 33312	Low
43	Spill	1544 Argyle Drive Ft. Lauderdale, FL	Low
44	Spill	1560 Argyle Drive Ft. Lauderdale, FL	Low
45	RaceTrac #665	2300 W Broward Boulevard Ft. Lauderdale, FL 33312	No

46	Broward Boulevard Park-and-Ride (Former) C&L Transportation (Former) King Pancallo Gulf Super Service (Former) West Broward Gulf Service (Former) Johnnie & Mack Paint & Body	2101 W Broward Boulevard (Former 2121 & 2165 W Broward Boulevard) Ft. Lauderdale, FL 33312	Medium
47	CSX Rail Corridor	Rail corridor - 100 feet north and south of the Broward Boulevard Intersection, Parallel to I-95 Ft. Lauderdale, FL	High
48	Spill	I-95 at Broward Boulevard Ft. Lauderdale, FL	Low
49	SCI FI Megaplex T. (Former) Max LLC	1830 W Broward Boulevard Ft. Lauderdale, FL 33312	Low
50	Vacant Building (Former) Neals American Service (Former) RD American Service (Former) Bill's Amoco Service Garage	1800 W Broward Boulevard Ft. Lauderdale, FL 33312	High
51	Marathon-Broward #572 (Former) ACM Auto Repair (Former) Automated Petrol (Former) BP Amoco #958 (Former) Peters Amoco III (Former) Amocos West Broward Service Center	1776 W Broward Boulevard Ft. Lauderdale, FL 33312	Medium
52	Seven Seas Yacht Sales, Inc.	1500 W Broward Boulevard Ft. Lauderdale, FL 33312	No
53	Broward Tires & Auto Repair / Tire Express of Broward, Inc. (Former) R&R Lube Express Inc. [2006] (Former) Tech Master Auto Repair [2003] (Former) Precision Tune Auto Care [1999]	1490 W Broward Boulevard Ft. Lauderdale, FL 33312	No
54	Vacant Low (Former) Transmission King	2501 W Broward Boulevard Ft. Lauderdale, FL 33312	No
55	Fashion Cleaners Inc.	2427 W Broward Boulevard Ft. Lauderdale, FL 33312	Low
56	Riverbend Corporate Park (Former) Broward Boulevard Shopping Center (Former) Zayre Dept Store #691 (Former) Fashion Cleaners (Former) Frank's Spic N Span (Former) CL Coin Laundry (Former) Ted's Pure Oil Station (Former) Tony's Service & Repairs	2201-2327 W Broward Boulevard Ft. Lauderdale, FL 33312	Medium
57	The Salvation Army Corporate Connection Lines, Inc. (Land & Sea Petrol) MCM Construction / Equipment Yard (Former) Ryder Truck (Former) Fabrication Plus (Former) Yellow Freight System Inc. (Former) Deb-Li Enterprises Inc. (Former) Kauff's Towing (Former) Charlie Frymyer Paving, Inc. (Former) National Lift Truck Service	1901 W Broward Boulevard Ft. Lauderdale, FL 33312	Medium

58	A1A Atlantic Moving & Storage	111 NW 25th Avenue Ft. Lauderdale, FL 33311	No
59	Broward Regional Juvenile Detention Center	222 NW 22nd Avenue Ft. Lauderdale, FL 33311	Low
60	Vacant Land - City of Ft. Lauderdale Community Redevelopment Agency (Former) Nursing Home	2137 NW 4th Street Ft. Lauderdale, FL 33311	Low
61	Vacant Land - City of Fort Lauderdale Community Redevelopment Agency (Former) Haygood Property (Former) JDS Pure Oil Service (Former) Chucks Cities Service (Former) Modern Garage Service Station (Former) Seymores Union 76 (Former) JD's Union 76	2130-2140 NW 6th Street Ft. Lauderdale, FL 33311	High
62	City of Fort Lauderdale Wastewater Treatment Plant and Repump Station (Former) Fort Lauderdale Incinerator (Former) Fort Lauderdale Trash Transfer Station (Former) Fort Lauderdale Waste Tire Collection Center	1901-2102 NW 6th Street Ft. Lauderdale, FL 33311	Medium
63	Lincoln Park / Durrs Neighborhood Brownfield	I-95 to NW 17th Avenue NW 6th Street to NW 8th Street Ft. Lauderdale, FL 33311	Medium
64	Residence (Former) Eluetts Service Station (Former) Taylor Bros Service Station	631 NW 22nd Road Ft. Lauderdale, FL 33311	No
65	Spill	601 21st Terrace Ft. Lauderdale, FL 33311	Low
66	Salvage Auto Repair, Inc. / Salvage Auto Center	640 NW 21st Terrace 2115 NW 6th Place Ft. Lauderdale, FL 33311	Low
67	Ferrous Processing and Trading Co., FPT Fort Lauderdale LLC, dba Sunrise Recycling	700 NW 21st Terrace Ft. Lauderdale, FL 33311	High
68	Auto Service/Storage Facility	701 NW 20th Avenue Ft. Lauderdale, FL 33311	Low
69	Sign-D-Sign	715 NW 20th Avenue Ft. Lauderdale, FL 33311	Low
70	Rodney's Relocation Services Inc. (Former) Salt & Pepper Body Shop	2001 NW 7th Place Ft. Lauderdale, FL 33311	Low
71	Vacant Land (Former) Diamond Towing	2201 NW 8th Street Ft. Lauderdale, FL 33311	No
72	Bridge Point I-95 (Former) U.S. Concrete Pipe Co.	2200 W Sunrise Boulevard Ft. Lauderdale, FL 33311	Medium
73	Vacant Lot	820 NW 20th Terrace Ft. Lauderdale, FL 33311	Medium
74	Battery Express Well Made Cabinets T-Shirt Screen Printing (Former) CJ Paint & Body Shop	1920-1922 NW 9th Street Ft. Lauderdale, FL 33311	Low

75	Sunrise Used Auto Parts	977 NW 19th Avenue Ft. Lauderdale, FL 33311	High
76	Truck/Auto Accident-Spill	I-95 South of Sunrise Boulevard Ft. Lauderdale, FL 33311	Low
77	Spill	I-95 and Sunrise Boulevard Ft. Lauderdale, FL 33311	Low
78	S.B.Hatergate, Inc. Truck Spill	I-95 at Sunrise Boulevard Ft. Lauderdale, FL 33311	Low

A Level II Assessment is recommended for 13 sources/facilities (i.e. 8-High, 5-Medium) that have the potential to adversely impact the project due to their proximity to subsurface construction activities. The remaining 17 sources/facilities with High or Medium risk ratings should be re-evaluated for impacts to the project when the construction design and methods are finalized. If the re-evaluation indicates any of the 17 sources/facilities has the potential to adversely impact the project, a Level II Assessment is recommended. The Level II Assessment should include the advancement of environmental soil borings and discrete groundwater sampling at specific locations within the project corridor that require subsurface construction (i.e. soil excavation and/or dewatering activities) near sources identified as having potential contamination. The Level II Assessment should include the collection and analysis of soil and groundwater samples for the appropriate analytical group parameters. Level II Assessments will be conducted by the Department as warranted during design to further consider potential contamination involvement associated with Right of Way Acquisition and Construction.

Knowing the extent of impacted media at these areas of concern during the design phase can expedite handling, disposal and/or treatment requirements, as well as protecting worker safety during construction. It can also identify locations within the project corridor where certain construction methods may exacerbate contaminant plumes and identify measures to mitigate those effects.

6.4 Utilities and Railroads

Based on field evaluation there is an electrical distribution overhead line crossing I-95 approximately 650 feet north of Davie Boulevard and a high voltage electrical transmission line crossing I-95 over the NW 6th St. Bridge as well as overhead power lines crossing Broward Boulevard just east of SW 22nd Avenue.

The Preferred Alternative can possibly impact the distribution overhead line crossing I-95 approximately 650 feet north of Davie Boulevard and a high voltage electrical transmission line crossing I-95 over the NW 6th St. Bridge. Underground utilities may be impacted by drainage modifications, new signal mast arms, and overhead sign structures. Resurfacing could also impact existing manholes located within the pavement. Coordination during the design phase will be required with the utility owners.

All proposed improvements provide new Broward Boulevard bridges over the South Florida Rail Corridor. The new bridges will have a vertical clearance of 23.5 feet, less than the 24.25 feet required for potential future electrification, to avoid impacts to the existing eastbound Broward Boulevard to northbound I-95 flyover ramp. This will require a design variation.Concurrence was received by the South Florida Regional Transportation Authority on March 14,2019 and the letter is attached.

6.5 Construction

Construction activities may cause short-term air quality impacts in the form of dust from earthwork and unpaved roads. These impacts will be minimized by adherence to applicable state regulations and to the FDOT Standard Specifications for Road and Bridge Construction.

Short-term impacts associated with construction of the proposed improvements are anticipated including potential erosion of areas cleared for construction, temporary increases in noise levels, and fugitive dust from use of heavy construction equipment. Temporary impacts to traffic flow, mobility, and travel patterns (including temporary detours) are anticipated during construction activities and would occur along existing Interstate, Broward Boulevard, and other roads and at the interchange ramps and intersections during construction activities.

The FDOT *Standard Specifications for Road and Bridge Construction*, latest edition, has standard construction practices which take into consideration many of the direct construction impacts and provides measures to minimize effects. Best management practices will be employed during construction to ensure minimization of impacts.

7. Engineering Analysis Support

The engineering analysis supporting this environmental document is contained within the Preliminary Engineering Report.

8. Permits

The following environmental permits are anticipated for this project:

Federal Permit(s)	Status
USACE Section 10 or Section 404 Permit	To be acquired

Local Permit(s)	Status
SFWMD ERP NO. 06-01465-S Modification	To be acquired
SFWMD WATER USE PERMIT NO. 06-06340-W Modification	To be acquired

Permits Comments

- USACOE Dredge & Fill Permit (SAJ-2017-01640(SP-LSL) (I-95 Phase 3C) - Modification; SAJ-2014-01584(SP-GGL) (I-95 Phase 3A) - Modification)
- USCG Bridge Permit Exemption Concurrence for I-95 Bridge over NFNR

9. Public Involvement

The following is a summary of public involvement activities conducted for this project:

Summary of Activities Other than the Public Hearing
A Public Involvement Plan (PIP) was developed at the beginning of the study with the purpose of outlining the public involvement approach to be taken. The PIP was updated and amended throughout the project development process to incorporate the latest public involvement policies, techniques and comments as they evolved through the life of the project, and to guide the design of special events and study groups that were identified during the course of the study. Public outreach activities were designed to ensure that the public was informed, provided opportunities to comment and ask questions, and so the FDOT could use these comments to guide the study. These outreach activities commenced at the onset of the PD&E Study and continued during the development and evaluation of alternatives and the selection of the Preferred Alternative.

The first public meeting was held on November 9, 2016. Three public meetings and two technical workshops were held prior to the public hearing. The public meetings included a Public Kick-Off Meeting and two Alternatives Public Workshops; a second Alternatives Public Workshop was held due to the occurrence of Hurricane Irma the week prior to the initial Alternatives Public Workshop. The two technical workshops were held with transportation partners regarding the proposed improvements to the Park- and-Ride lot at the interchange. All of the formal public meetings were advertised in the Sun- Sentinel and notification letters were sent to property owners within 300 feet of the right-of-way, which included over 1,120 addresses. Public notices were also distributed at the Tri-Rail station and placed on cars parked in the Park-and-Ride lot.

A kick off meeting for agency and elected officials was held on November 3, 2016 at the City of Fort Lauderdale City Hall. The purpose of the meeting was to inform attendees about the purpose and need for the project, the study area limits, and receive comments about the project. The meeting was attended by three representatives from the City of Fort Lauderdale. They expressed enthusiasm about potential solutions and asked if a parking deck was still a possible option. This led to a discussion about a Broward Boulevard median station at 2nd level for premium transit that could include an elevator to the Park-and-Ride level (1st level). There was also discussion about replacing the existing Broward Boulevard bridge structures over I-95 and the SFRC to support future light rail. It was noted that the alternatives considered would include replacement of both existing bridges to accommodate future rail, if warranted. Noted concerns included The Salvation Army's concern about the intersection at Broward Boulevard and NW 18th Avenue, Riverland residents' sensitivity to noise, and the development coming to the west of I-95 between 21st Avenue and 31st Avenue. The City commented that their bicycle and pedestrian standards should be applied to make this area better.

The Public Kick-Off Meeting was held on November 9, 2016, at 5:30 p.m. at the Reverend Samuel Delevoe Memorial Park located at 2520 NW 6 Street, Fort Lauderdale, FL 33311. This park is located immediately adjacent to the study area. The purpose of the meeting was to provide the community an opportunity to learn about the improvements being studied and the PD&E process in general, and to provide an opportunity to raise initial concerns and issues that should be considered as part of the study. More than 25 people attended the meeting and several questions were asked regarding noise abatement, project schedule and cost, and improvements to the Park-and- Ride lot. No written comments were received.

Two Alternatives Public Workshops were held for this project. The first workshop was held on September 14, 2017, at 5:30 p.m. at the Reverend Samuel Delevoe Memorial Park located at 2520 NW 6 Street, Fort Lauderdale, FL 33311.

Hurricane Irma impacted South Florida a few days before the scheduled workshop and many areas were still without power. However, it was decided to move forward with the workshop since the meeting facility did have power and there was not sufficient time to notify the public of its cancellation. The primary purpose of the meeting was to provide the public an opportunity to review the alternatives under consideration and to provide comments about the project. Comments received during this workshop were focused on stormwater and the use of the pond in the park. Several representatives from Broward County stated objections to the use of the pond for project drainage.

The second Alternatives Public Workshop was held on November 14, 2017, at the same time and in the same location as the first workshop. This workshop followed the same format, starting with an open house followed by a formal presentation, and presented the same materials and information from the workshop in September. Comments received during this workshop were focused on potential right-of-way impacts, damage to landscaping that screens I-95 from the adjacent neighborhoods, and other construction projects in the area.

A summary of the questions and comments raised during this workshop and all materials present at the public meetings is provided with the Social Cultural Evaluation Report.

The initial MPO coordination meeting was held with the MPO staff on September 5, 2017, to present the alternatives under consideration to the MPO prior to the Alternatives Public Workshop. Presentations were made to the Citizens Advisory Committee and Technical Advisory Committee as well as the MPO Board in early 2019, for the purpose of reviewing the alternatives evaluated and the proposed Preferred Alternative prior to the public hearing.

In addition to the formal public meetings standard for PD&E studies, the project team has held several meetings with small groups and individuals as well as staff from the City of Fort Lauderdale regarding this project. Meetings have consisted of adjacent property owners that were tied to the 95 Express project and with the community regarding Woodlawn Cemetery to introduce them to the project and review the findings of an interchange feasibility study conducted for Sunrise Boulevard.

The project team also held meetings in December 2018-March 2019 with adjacent Homeowner Associations and neighborhood groups prior to the Public Hearing to review the potential visual impacts of the proposed braided ramps on the neighborhoods north of Broward Boulevard. Notifications for the Public Hearing were delivered to churches in the area with the option of having a presentation by the project team to their congregation upon request.

Date of Public Hearing: 03/18/2019
Summary of Public Hearing

The I-95 at Broward Boulevard Interchange PD&E Study Public Hearing was held on Monday, March 18, 2019 at the African American Research Library and Cultural Center located at 2650 Sistrunk Boulevard, Fort Lauderdale, FL 33311. The Hearing began as an open house at 5:30 p.m., with a formal presentation at 6:00 p.m. followed by a comments period.

The purpose of this Public Hearing was to provide elected and appointed officials, property owners and other interested parties an opportunity to review the proposed improvements and make written or oral comments about the study and the alternatives being proposed.

The display boards included an aerial roll plot of the study area, existing sound barriers, the alternative improvements to the Park-and-Ride Lot, proposed new traffic movements between 95 Express and the existing Interchange entrance and

exit ramps, location of potential offsite pond sites, renderings of proposed bridges near NW 6th Street and I-95, and the project schedule. Prior to the presentation, attendees discussed the project one on one with the FDOT Project Manager, Department staff, and Project Consultant staff. Attendees were provided a handout on the PD&E Study, which included information on the Preferred Alternative.

The Public Hearing was attended by approximately 55 residents, interested parties, local agency partners, FDOT, and consultants. One representative from the City of Fort Lauderdale and one from Broward County Transit were in attendance. After the presentation, the floor was opened to comments. There were two members of the public that shared their comments at the microphone. Their comments were made part of the official record and noted in the transcripts of the hearing. See the Social Cultural Evaluation Reportfor the comments provided by the public along with the comment responses, presentation, boards, and project handouts.

Notification of the Hearing was published twice in the *Sun Sentinel* as a 1/4 page legal advertisement, on the FDOT public notices website, in the Florida Administrative Register, and on the Project's website. An approximate 975-piece mailing and over 100 emails to elected officials, agencies, Native American representatives, and other interested parties were sent. Notices were also placed on the windshields of parked cars station at the Park-and-Ride lots a week before the hearing.

10. Project Commitments

1. FDOT commits to provide landscaping as a buffer from the neighborhood on the east side (south of NW 6th Street) for the braided ramp connecting to the Northbound 95 Express Lane from Broward Boulevard.
2. FDOT commits during the final design phase to continue to solicit input and feedback from stakeholders regarding the beautification of the entrance to the City of Fort Lauderdale.
3. FDOT commits to the following construction conditions relating to the Sea Turtle and the Smalltooth Sawfish:

   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.
4. The FDOT will implement the most current versions of the following protection measures which will be included in the construction documents and implemented during construction: The Florida Fish and Wildlife Conservation Commission(FWC) Standard Manatee Conditions for In-Water Work and the US Fish and Wildlife Service (USFWS) Standard Protection Measures of the Eastern Indigo Snake.
5. FDOT commits to invite the City of Fort Lauderdale to participate and assist in the public notification of the Public Hearing during the Design Phase for the eastbound SW 1st Street Right-In/Right-Out modification at the SW 22nd Avenue and SW 1st Street Intersection.

11. Technical Materials

The following technical materials have been prepared to support this environmental document.

Conceptual Stage Relocation Plan
Sociocultural Effects Evaluation
Cultural Resource Assessment Survey Addendum
Section 4(f) Determination of Applicability
Cultural Resources Assessment Survey
Natural Resources Evaluation
Location Hydraulics Report
Noise Study Report
Air Quality Technical Memorandum
Contamination Screening Evaluation Report
Preliminary Engineering Report
Public Involvement Plan

Attachments

Project Information
95 Express Map

Planning Consistency
Project Plan Consistency Documentation_TIP
Project Plan Consistency Documentation_SIS
Project Plan Consistency Documentation_STIP
Project Plan Consistency Documentation_LRTP

Cultural Resources
Addendum SHPO Concurrence Letter
SHPO Concurrence Letter

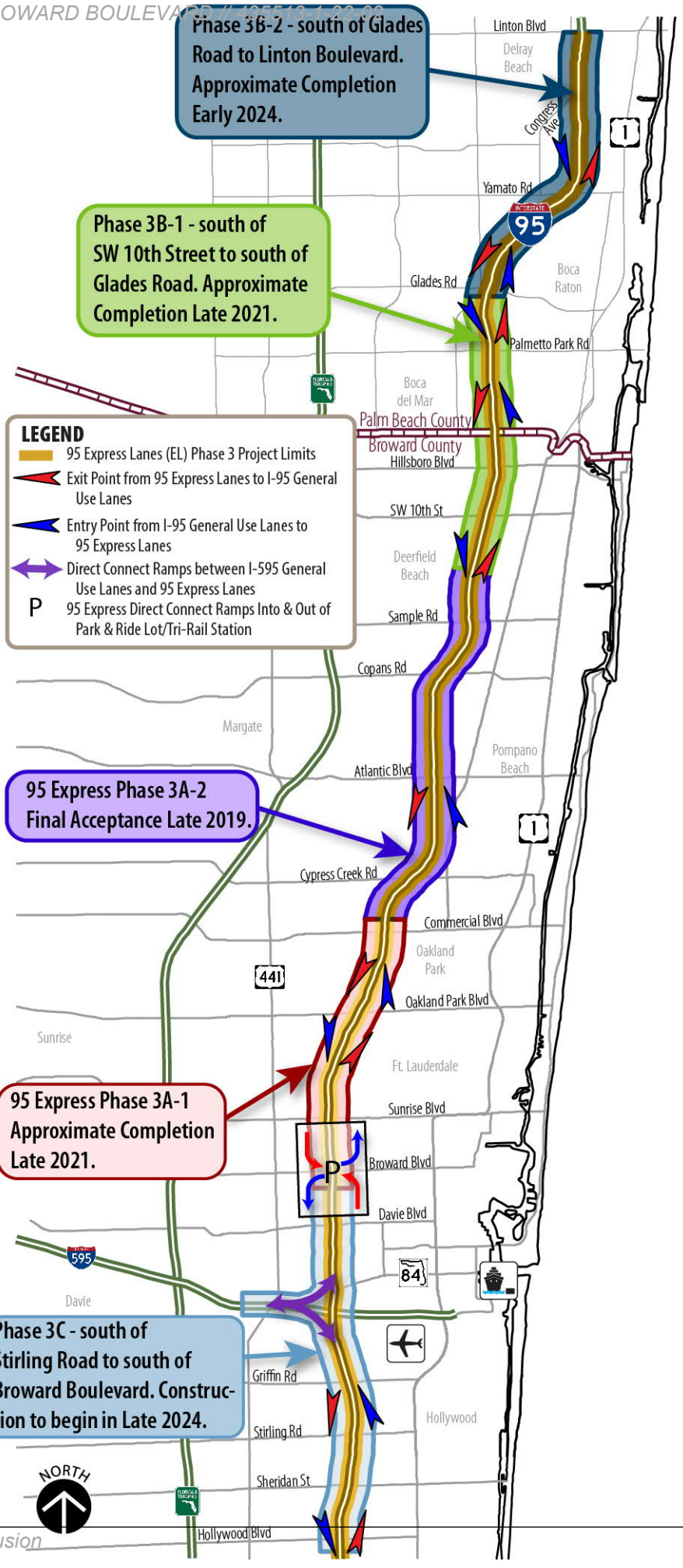
Natural Resources
EPA Sole Source Aquifer Concurrence Letter
Species Concurrence Letter
USFWS Wood Stork, Eastern Indigo Snake, and West Indian Manatee Programmatic Effect Determination
Sea Turtle and Smalltooth Sawfish Construction Conditions
Memorandum to File National Marine Fisheries Service Coordination

Physical Resources
Other Supporting Documentation for Railroads - FDOT/SFRTA E-mail Coordination
Other Supporting Documentation for Railroads - SFRTA E-mail Concurrence
Other Supporting Documentation for Railroads - Broward Boulevard Over SFRC Railroad Plan and Elevation

Public Involvement
Public Hearing Transcript
Public Hearing Certification

Project Information Appendix

Contents:


Phase 3B-2 - south of Glades Road to Linton Boulevard. Approximate Completion Early 2024.
Phase 3B-1 - south of SW 10th Street to south of Glades Road. Approximate Completion Late 2021.
95 Express Phase 3A-2 Final Acceptance Late 2019.
95 Express Phase 3A-1 Approximate Completion Late 2021.
Phase 3C - south of Stirling Road to south of Broward Boulevard. Construction to begin in Late 2024.
LEGEND
95 Express Lanes (EL) Phase 3 Project Limits
Exit Point from 95 Express Lanes to I-95 General Use Lanes
Entry Point from I-95 General Use Lanes to 95 Express Lanes
Direct Connect Ramps between I-595 General Use Lanes and 95 Express Lanes
P 95 Express Direct Connect Ramps Into & Out of Park & Ride Lot/Tri-Rail Station
Linton Blvd
Delray Beach
Congress Ave
Yamato Rd
Glades Rd
Boca Raton
Palmetto Park Rd
Boca del Mar
Palm Beach County
Broward County
Hillsboro Blvd
SW 10th St
Deerfield Beach
Sample Rd
Copans Rd
Margate
Pompano Beach
Atlantic Blvd
Cypress Creek Rd
Commercial Blvd
Oakland Park
Oakland Park Blvd
Sunrise
Ft. Lauderdale
Sunrise Blvd
Broward Blvd
Davie Blvd
Davie
Griffin Rd
Stirling Rd
Hollywood
Sheridan St
Hollywood Blvd
NORTH
95
595
441
84
1

Planning Consistency Appendix

Contents:

Phase	Fund Source	2019	2020	2021	2022	2023	Total
SR-9/I-95 @ SHERIDAN JOINT USE DEVELOPMENT - FM# 4085932 (TIP#)						***Non-SIS***	***RSP***
Type of Work: CORRIDOR/SUBAREA PLANNING					**Lead Agency: FDOT**		
Project Type: Imported					**LRTP#: Pg. 5**		
ROW	DIH	10,000	10,000	10,000	10,000	0	**40,000**
Total		**10,000**	**10,000**	**10,000**	**10,000**	**0**	**40,000**
	Prior Years Cost	*467,945*	*Future Years Cost*			*Total Project Cost*	*507,945*
SR-9/I-95 @ SR-834 SAMPLE RD FROM SOUTH OF NB EXIT RAMP TO NB ENTRANCE - FM# 4369581 (TIP#)					**Length: 3.378**	***SIS***	
Type of Work: INTERCHANGE JUSTIFICA/MODIFICA					**Lead Agency: MANAGED BY FDOT**		
Project Type: Imported					**LRTP#: Pg. 47**		
INTERCHANGE MODIFICATION: REALIGN, WIDEN & RELOCATE GORE OF NB EXIT RAMP, COMBINE THE EB TO NB AND WB TO NB ENTRANCE RAMP INTO A PHYSICALLY SEPARATED ROADWAY. SEE SEG COMMENTS FOR MORE DESCRIPTION							
RRU	DSB2	20,000	570,000	0	0	0	**590,000**
ROW	DIH	74,160	0	0	0	0	**74,160**
ROW	DDR	1,024,556	241,673	0	0	0	**1,266,229**
CST	DSB2	0	0	17,419,099	0	0	**17,419,099**
CST	ACNP	0	0	1,801,930	0	0	**1,801,930**
Total		**1,118,716**	**811,673**	**19,221,029**	**0**	**0**	**21,151,418**
	Prior Years Cost	*2,108,847*	*Future Years Cost*			*Total Project Cost*	*23,260,265*
SR-9/I-95 @ SR-842/BROWARD BOULEVARD - FM# 4355131 (TIP#)					**Length: .946**	***SIS***	
Type of Work: INTERCHANGE IMPROVEMENT					**Lead Agency: MANAGED BY FDOT**		
Project Type: Imported					**LRTP#: Pg. 47**		
ULTIMATE IMPROVEMENTS							
PE	DSB2	0	0	8,450,000	0	0	**8,450,000**
PE	ACNP	0	0	150,000	0	0	**150,000**
ENV	ACNP	0	0	20,000	50,000	0	**70,000**
ROW	BNIR	0	0	0	1,000,000	0	**1,000,000**
Total		**0**	**0**	**8,620,000**	**1,050,000**	**0**	**9,670,000**
	Prior Years Cost	*3,097,711*	*Future Years Cost*	*123,023,552*		*Total Project Cost*	*135,791,263*
SR-9/I-95 AND SR-862/I-595 MITIGATION AT POND APPLE VIA PB - FM# 4093543 (TIP#)					**Length: 1.647 MI**	***SIS***	
Type of Work: ENVIRONMENTAL MITIGATION					**Lead Agency: MANAGED BY FDOT**		
Project Type: Imported					**LRTP#: Pg. 47**		
MNT	DDR	164,179	0	0	0	0	**164,179**
Total		**164,179**	**0**	**0**	**0**	**0**	**164,179**
	Prior Years Cost	*1,967,161*	*Future Years Cost*			*Total Project Cost*	*2,131,340*

District 4 SIS Interstate Plan

MAP ID	FACILITY	DESCRIPTION	2019	2020	2021	2022	2023	TOTAL STATE MANAGED	TOTAL DISTRICT MANAGED	TOTAL LOCAL FUNDS	PD&E	PE	ENV	ROW	CON
4363081	Eastbound SR-84 to Southbound SR-93/I-75 On-ramp	Modify Interchange	$278	$5,690	$0	$0	$0	$0	$5,968	$0		●	●		●
4208093	I-595/SR-862/ P3 from E. of I-75 to W. of I-95	Managed Lanes	$86,697	$83,945	$85,417	$87,745	$92,570	$411,697	$24,677	$0		●			●
4327091	I-75/SR-93 East Side Ramp Improvements at Griffin Road	Modify Interchange	$14,767	$0	$0	$0	$0	$0	$14,767	$0		●			●
4093542	I-95/I-595 Express Lanes Direct Connect,I-95 Fr Stirling to Broward Bl	Modify Interchange	$10,599	$7,026	$800	$4,600	$0	$4,739	$18,286	$0			●	●	●
4397571	SR-84/ramp U9 from I-595 C-d Road Eb to I-595 Eb And SR-84 Eb	Modify Interchange	$2,965	$0	$0	$0	$0	$0	$2,965	$0		●			●
4111892	SR-862/I-595 E/w Central Broward Transit Analysis	Project Dev. & Env.	$15	$0	$0	$0	$0	$0	$15	$0	●				
4127331	SR-9/I-95 @ 10th Ave North In Lake Worth	Modify Interchange	$1,020	$0	$2,650	$5,406	$890	$6,907	$3,058	$0	●	●		●	
4369631	SR-9/I-95 @ 6th Avenue South	Modify Interchange	$11	$0	$5,512	$1,284	$12,731	$18,842	$696	$0	●	●	●	●	●
4397591	SR-9/I-95 @ Belvedere Rd Nb off-ramp	Modify Interchange	$0	$209	$60	$1,750	$0	$0	$2,019	$0		●	●		●
2319321	SR-9/I-95 @ Gateway Blvd. Interchange	Modify Interchange	$152	$10,081	$971	$40,462	$0	$49,286	$2,381	$0	●	●	●	●	●
4132571	SR-9/I-95 @ Hypoluxo Road	Modify Interchange	$340	$0	$2,250	$587	$360	$3,213	$325	$0	●	●	●	●	
4132581	SR-9/I-95 @ Lantana Road	Modify Interchange	$1,018	$0	$2,030	$7,493	$360	$8,644	$2,257	$0	●	●	●	●	
4353841	SR-9/I-95 @ Linton Boulevard Interchange	Modify Interchange	$18,874	$2,109	$547	$0	$0	$11,884	$9,647	$0		●	●	●	●
4358031	SR-9/I-95 @ Northlake Boulevard Interchange	Modify Interchange	$94	$9,851	$8,641	$31,891	$0	$50,385	$91	$0	●	●	●	●	●
4130482	SR-9/I-95 @ Oslo Road Interchange	Modify Interchange	$5,621	$5,757	$0	$0	$200	$404	$11,174	$0	●	●		●	●
4132601	SR-9/I-95 @ Palm Beach Lakes Blvd	Modify Interchange	$0	$0	$0	$0	$1,366	$1,366	$0	$0		●			
4132651	SR-9/I-95 @ Pga Boulevard/central Boulevard	Modify Interchange	$9,042	$315	$0	$0	$250	$9,219	$388	$0	●	●	●	●	●
4355161	SR-9/I-95 @ SR-80/southern Blvd. Interchg. Ultim. Imprvmt.	Modify Interchange	$11	$755	$7,625	$3,512	$4,137	$16,028	$11	$0	●	●	●	●	
4347221	SR-9/I-95 @ SR-806/atlantic Avenue Interchange	Modify Interchange	$925	$0	$0	$0	$0	$31	$894	$0		●		●	●
4124204	SR-9/I-95 @ SR-808/glades Road	Modify Interchange	$33,707	$1,036	$0	$0	$0	$28,901	$5,843	$0		●	●	●	●
4363031	SR-9/I-95 @ SR-824/pembroke Road	Add Turn Lane	$2,553	$0	$0	$0	$0	$300	$2,252	$0		●			●
4369581	SR-9/I-95 @ SR-834/sample Rd Fr S of Nb Exit Ramp to N of Nb Ent. Ramp	Modify Interchange	$1,332	$812	$19,221	$0	$0	$1,802	$19,562	$0		●		●	●
4355131	SR-9/I-95 @ SR-842/broward Boulevard	Modify Interchange	$0	$0	$8,620	$1,050	$0	$1,220	$8,450	$0		●	●	●	
4355141	SR-9/I-95 @ Sunrise Blvd. Interchange Improvement	Modify Interchange	$34	$11,510	$0	$0	$0	$2,118	$9,425	$0	●	●	●		●
4369621	SR-9/I-95 @copans Rd Fr S of Nb Exit Ramp to N of Sb to Wb Exit Ramp	Modify Interchange	$948	$20,466	$0	$0	$0	$3,236	$18,178	$0		●	●		●
4391711	SR-9/I-95 at Davie Boulevard	Modify Interchange	$0	$0	$0	$0	$330	$330	$0	$0	●				
4391721	SR-9/I-95 at Oakland Park Boulevard	Modify Interchange	$0	$0	$0	$0	$330	$330	$0	$0	●				
4353371	SR-9/I-95 at St Lucie West Blvd	Modify Interchange	$46	$0	$50	$13,891	$0	$0	$10,886	$3,100			●		●
4331088	SR-9/I-95 Fr Miami-dade/broward County Line to Palm Beach County Line	Preliminary Engineering	$2,815	$3,000	$1,500	$0	$0	$6,253	$1,062	$0		●			●
4331091	SR-9/I-95 from Broward/palm Beach County Line to Linton Blvd.	Managed Lanes	$503	$0	$0	$0	$0	$500	$3	$0		●			
4331096	SR-9/I-95 from Broward/palm Beach County Line to North of Linton Blvd.	Preliminary Engineering	$1,820	$1,000	$1,000	$0	$0	$3,500	$320	$0		●			●
4259281	SR-9/I-95 from Miami-dade/broward Cl to SR-842/broward Blvd	Project Dev. & Env.	$0	$0	$0	$2,030	$0	$0	$2,030	$0	●				
4365191	SR-9/I-95 from S of 45th Street to N of 45th St	Modify Interchange	$16	$0	$6,000	$2,488	$0	$8,388	$116	$0	●	●	●	●	
4358081	SR-9/I-95 from S. of SR-870/commercial Blvd. to N. of Cypress Creek Rd	Project Dev. & Env.	$10,547	$0	$0	$0	$0	$0	$10,547	$0	●	●			
4369031	SR-9/I-95 from S. of SR-858/hallandale Bch Blvd to N.of Hollywood Blvd	Project Dev. & Env.	$0	$8,100	$0	$0	$0	$0	$8,100	$0		●			
4331095	SR-9/I-95 from South of Glades Rd. to South of Linton Blvd.	Add 2 Special Use Lanes	$107,123	$792	$3,000	$200	$2,000	$0	$113,115	$0	●	●	●	●	●
4369641	SR-9/I-95 from South of Sw 10th Street to North of Hillsboro Blvd.	Modify Interchange	$29,111	$0	$0	$2,750	$0	$26,393	$5,468	$0	●	●	●	●	

All Values in Thousands of "As Programmed" Dollars

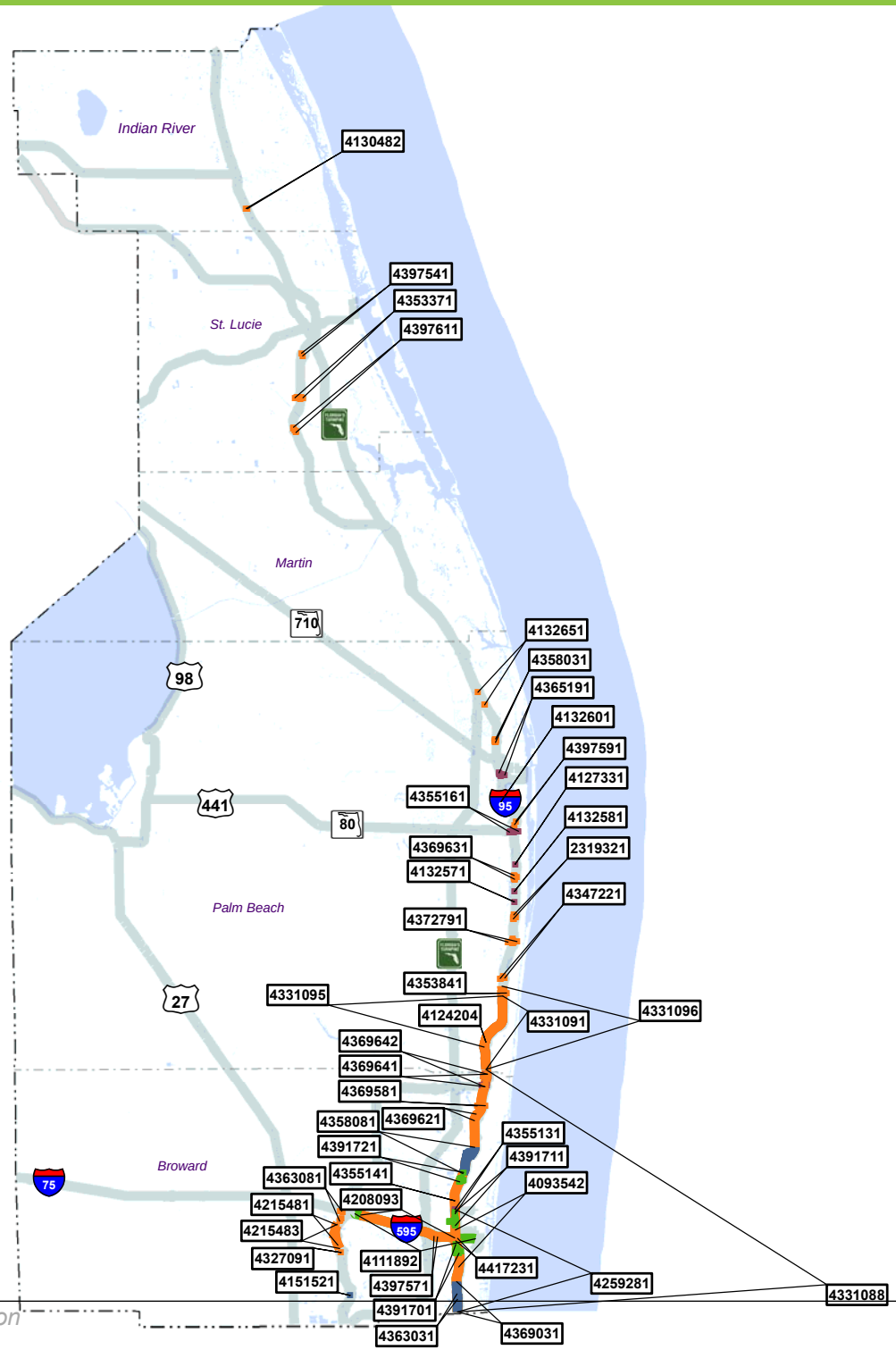
PD&E - Project Development & Environmental;
PE - Preliminary Engineering;
ENV - Environmental Mitigation;
ROW - Right-of-Way;
CON - Construction & Support (may Include Grants);
TOTAL LOCAL FUNDS include all funds that start with LF fund code;

District 4 SIS Interstate Plan

MAP ID	FACILITY	DESCRIPTION	2019	2020	2021	2022	2023	TOTAL STATE MANAGED	TOTAL DISTRICT MANAGED	TOTAL LOCAL FUNDS	PD&E	PE	ENV	ROW	CON
4369642	SR-9/I-95 from South of Sw 10th Street to North of Hillsboro Blvd.	Modify Interchange	$0	$0	$0	$3,000	$390,408	$193,408	$100,000	$100,000					●
4372791	SR-9/I-95 from South of Woolbright Road to North of Woolbright Road	Modify Interchange	$1,033	$0	$1,120	$19,698	$5,310	$26,128	$1,033	$0	●	●		●	●
4391701	SR-9/I-95 from South of Sheridan Street to North of Griffin Road	Modify Interchange	$0	$0	$0	$500	$2,500	$3,000	$0	$0	●				
4397541	SR-9/I-95 Northbound And Southbound off-ramps at Midway Rd.	Modify Interchange	$0	$260	$30	$1,130	$0	$0	$1,420	$0		●	●		●
4397611	SR-9/I-95 Northbound And Southbound off-ramps at Gatlin Blvd.	Modify Interchange	$1	$0	$40	$3,221	$0	$0	$3,263	$0		●	●		●
4417231	SR-9/I-95 Northbound off-ramp to Eastbound I-595	Add 2 to Build 6 Lanes	$289	$0	$0	$1,431	$0	$0	$1,719	$0		●			●
4215483	SR-93/I-75 from N of Griffin Rd. to N of Sw 14th/indian Trace	Managed Lanes	$0	$0	$431	$0	$5,691	$3,528	$2,594	$0		●			●
4151521	SR-93/I-75 Interchng @SR-820 Pines Blvd F N of Miramar Pkwy T N of Pin	Modify Interchange	$5,550	$0	$0	$0	$0	$0	$5,550	$0		●			
4215481	SR-93/I-75 Intrchng @ Royal Palm Blvd Fr Griffin Rd to N of Sw 14 St	Modify Interchange	$42	$11,898	$0	$0	$0	$0	$0	$11,940		●	●		●
		ANNUAL TOTALS	$349,899	$184,612	$157,515	$236,119	$519,433	$901,980	$430,555	$115,040					

All Values in Thousands of "As Programmed" Dollars

PD&E - Project Development & Environmental;
PE - Preliminary Engineering;
ENV - Environmental Mitigation;
ROW - Right-of-Way;
CON - Construction & Support (may Include Grants);
TOTAL LOCAL FUNDS include all funds that start with LF fund code;



DISTRICT 4

First Five Years
Interstate Plan

STRATEGIC INTERMODAL SYSTEM

Capacity Improvement Projects

Adopted Work Program

FY 2018/2019 through FY 2022/2023
(as of July 1, 2018)

LEGEND

Project Phase

- Project Development & Environment
- Environmental Mitigation
- Preliminary Engineering
- Right-Of-Way
- Construction

NOTES

Projects color coded by highest project phase.

Some projects may overlap on map.

Project costs are subject to change.

0 5 10 20
Miles

FDOT HIGHWAY SIS

FDOT Emergency Travel Alert: For information on the current situation, please visit the following page - Alerts.

Florida Department of

TRANSPORTATION

Web Application

Federal Aid Management Office Cynthia Lorenzo - Manager

STIP Project Detail and Summaries Online Report

Selection Criteria	
Current STIP Financial Project: 435513 1	**Detail Report Related Items Shown**

HIGHWAYS

Item Number: 435513 1 **Project Description:** SR-9/I-95 @ SR-842/BROWARD BOULEVARD

District: 04 **County:** BROWARD **Type of Work:** INTERCHANGE - ADD LANES **Project Length:** 4.778MI

Extra Description: ULTIMATE INTERCHANGE IMPROVEMENTS WIDEN/RESURFACE SR-842 BRID GES OVER I-95 AND OVER SFRC/P&R. WIDEN/RESURFACE SB EXIT RAMP . NEW DIRECT CONNECTION BRAIDED RAMPS TO/FROM EXPRESS LANES A ND GENERAL PURPOSE EXIT AND ENTRANCE RAMPS. RESURFACE LANES T O PARK & RIDE LOT.

		Fiscal Year						
Phase / Responsible Agency		**<2019**	**2019**	**2020**	**2021**	**2022**	**>2022**	**All Years**
CONSTRUCTION / MANAGED BY FDOT								
Fund Code:	ACNP - ADVANCE CONSTRUCTION NHPP						61,698,842	**61,698,842**
	STED - 2012 SB1998-STRATEGIC ECON COR						45,592,963	**45,592,963**
	Phase: CONSTRUCTION Totals						**107,291,805**	**107,291,805**
ENVIRONMENTAL / MANAGED BY FDOT								
Fund Code:	ACNP - ADVANCE CONSTRUCTION NHPP				30,000	50,000		**80,000**
	DS - STATE PRIMARY HIGHWAYS & PTO	29,188						**29,188**
	Phase: ENVIRONMENTAL Totals	**29,188**			**30,000**	**50,000**		**109,188**
P D & E / MANAGED BY FDOT								
Fund Code:	DDR - DISTRICT DEDICATED REVENUE	2,773,577						**2,773,577**

	DIH - STATE IN-HOUSE PRODUCT SUPPORT	85,728	28,947	6,530				**121,205**
	DS - STATE PRIMARY HIGHWAYS & PTO	198,177	226,630					**424,807**
	Phase: P D & E Totals	**3,057,482**	**255,577**	**6,530**				**3,319,589**
PRELIMINARY ENGINEERING / MANAGED BY FDOT								
Fund Code:	ACNP - ADVANCE CONSTRUCTION NHPP				8,600,000			**8,600,000**
RIGHT OF WAY / MANAGED BY FDOT								
Fund Code:	BNIR - INTRASTATE R/W & BRIDGE BONDS					1,000,000		**1,000,000**
	DDR - DISTRICT DEDICATED REVENUE					1,132,640	9,880,462	**11,013,102**
	DIH - STATE IN-HOUSE PRODUCT SUPPORT					288,000		**288,000**
	Phase: RIGHT OF WAY Totals					**2,420,640**	**9,880,462**	**12,301,102**
RAILROAD & UTILITIES / MANAGED BY FDOT								
Fund Code:	ACNP - ADVANCE CONSTRUCTION NHPP						11,100,000	**11,100,000**
	STED - 2012 SB1998-STRATEGIC ECON COR						5,250,000	**5,250,000**
	Phase: RAILROAD & UTILITIES Totals						**16,350,000**	**16,350,000**
	Item: 435513 1 Totals	**3,086,670**	**255,577**	**6,530**	**8,630,000**	**2,470,640**	**133,522,267**	**147,971,684**
	Project Totals	**3,086,670**	**255,577**	**6,530**	**8,630,000**	**2,470,640**	**133,522,267**	**147,971,684**
	HIGHWAYS Totals	**3,086,670**	**255,577**	**6,530**	**8,630,000**	**2,470,640**	**133,522,267**	**147,971,684**
	Grand Total	**3,086,670**	**255,577**	**6,530**	**8,630,000**	**2,470,640**	**133,522,267**	**147,971,684**

This site is maintained by the Federal Aid Management Office, located at 605 Suwannee Street, MS 21, Tallahassee, Florida 32399. For additional information please e-mail questions or comments to:
Cynthia Lorenzo: cynthia.lorenzo@dot.state.fl.us or call 850-414-4448

Reload STIP Selection Page

Office Home: Office of Work Program

- Contact Us
- Employment
- MyFlorida.com
- Performance
- Statement of Agency
- Web Policies & Notices

Florida Department of Transportation

Consistent, Predictable, Repeatable

Eligible project screening

Candidate projects considered for funding will be screened against such items as:

- Demonstrated project purpose and need;
- Demonstrated inclusion within local plans/program/studies;
- Demonstrated public support; and
- Demonstrated ability to fund project operation and maintenance.

Eligible project evaluation

Once basic eligibility screening is complete, further analysis will be conducted based upon available safety, traffic and transit data, followed by subsequent project scoring and ranking. FDOT involvement in this analysis will result in a determination of feasibility for proposed improvements. This analysis will ultimately conclude with further assessment by us in relation to such subjective measures, such as equitable geographic distribution of proposed projects and EJ and Title VI considerations from a system's level perspective.

As the specifics of this new Complete Streets and other Localized Initiatives Program are developed and refined, other planning partners and agencies will be engaged for involvement or feedback. This will ensure a transparent process is developed, including a project selection procedure that is understandable to the public, with accompanying information on award selection discussion and scoring. Projects identified in the previous plan, *Transformation 2035*, may be considered in the ranking of the new annual award process. We intend to identify potential funding recipients and adequately assist in education through such means as direct outreach or conducting workshops.

Facilities extending beyond the MPO planning area

There are a number of agencies and private entities responsible for the development of transportation projects that have impacts beyond our planning area. Most of the following systems (and their operators) are direct recipients of Federal funds or loans, have independent authority and/or an ownership interest to develop financially constrained plans including operation and maintenance. The fiscally constrained plans developed for these facilities are incorporated into *Commitment 2040* in their entirety by reference.

Strategic Intermodal System

FDOT is the agency responsible for the designation, implementation and management of the Florida Transportation Plan which includes the Strategic Intermodal System (SIS). The SIS is an intermodal network of transportation facilities that flows from one mode to the next with the goal of providing the highest degree of mobility for people and goods traveling throughout Florida. The SIS is an integral piece of Florida's goal to enhance economic competitiveness and quality of life for its citizens.

Florida Statutes §339.62 through §339.65 define FDOT's role to designate the SIS, to plan and fund its components. The last major update to the SIS 2040 Cost Feasible Plan

was completed in 2013, which lists affordable projects. It identified more than $2.3 billion of investments planned for interstates, Turnpike facilities, Port Everglades, Fort Lauderdale-Hollywood International Airport and the Florida East Coast Railroad (FEC).[26]

Construction of I-595; completed in 2014

Port Everglades

Port Everglades contributes substantially to the region's economy, is a leading container port in Florida and is one of the most active cargo ports in the United States. Additionally, Port Everglades is a major cruise port. The Port is thus a significant economic asset to the region. Port Everglades is a self-funded enterprise of Broward County government that maintains a master plan which guides its investment strategies and lists affordable projects.[27]

Port Everglades

Fort Lauderdale-Hollywood International Airport

Just as Port Everglades is essential to the mobility of freight and passengers, the Fort Lauderdale-Hollywood International Airport is also a facility with regional impacts on the flow of people, goods and the economy. We continue to collaborate with the airport on its growth which, ultimately, will lead to business attraction, promote economic growth and create new jobs. The airport is also a self-funded enterprise of Broward County government that maintains a master plan which directs its investment strategies and lists affordable projects.[28]

[26]For additional additional information the SIS, visit http://www.dot.state.fl.us/planning/sis/.
[27]For additional information on Port Everglades' Master Plan, visit www.broward.org/port/masterplan/Pages/Default.aspx.

[28]For additional information on Fort Lauderdale/Hollywood International Airport's Master Plan, visit www.broward.org/Airport/Community/Pages/MasterPlanUpdate.aspx.

Cultural Resources Appendix

Contents:

FDOT

Florida Department of Transportation

RON DESANTIS
GOVERNOR

3400 West Commercial Boulevard
Fort Lauderdale, FL 33309

KEVIN J. THIBAULT
SECRETARY

February 6, 2019

Dr. Timothy Parsons, Director and
State Historic Preservation Officer
Division of Historical Resources
500 South Bronough Street
Tallahassee, Florida 32301

Subject: **Request for Review**
Cultural Resources Assessment Survey Addendum
SR-9/I-95 at SR-842/Broward Boulevard PD&E Study
Financial Management #: 435513-1-22-02
Broward County, Florida

Attention: Adrianne Daggett

Dear Ms. Daggett;

In November 2017, the Florida Department of Transportation, (FDOT), District Four submitted a Cultural Resources Assessment Survey for the SR-9/I-95 at SR-842/Broward Boulevard PD&E Study. The CRAS identified 52 historic resources within the APE, three if which are considered eligible for listing in the National Register of Historic Places (NRHP). One of these resources, the North Woodlawn Cemetery (8BD4879) has since been listed in the NRHP. On November 17, 2017, SHPO concurred with the findings in the CRAS. A Section 106 Case Study report was submitted and approved on April 4, 2018.

Based on a new concept being evaluated in the PD&E Study, FDOT District Four completed the enclosed Addendum. The CRAS Addendum identified a total of 36 historic resources within the historic APE. The identified historic resources include 32 newly recorded historic buildings (8BD6748-8BD6779) and four previously recorded historic resources: Seaboard Airline Railroad Station (8BD1452), Seaboard Air Line (CSX) Railroad (8BD4649), 1800–1803 W Broward Boulevard (8BD6339), and Salvation Army Complex (8BD6347). Two historic resources, Seaboard Airline Railroad Station at 200 SW 21st Terrace (8BD1452) and Seaboard Air Line (CSX) Railroad (8BD4649), were previously determined National Register–eligible by the SHPO. The Seaboard Airline Railroad Station (8BD1452) was determined eligible for the National Register in 1999. The portion of the Seaboard Air Line (CSX) Railroad (8BD4649) within the current APE was previously documented and found National Register–eligible as a result of the *CRAS of the SR 9/I-95 PD&E Study from Stirling Road to North of Oakland Park Boulevard.* The field survey conducted as part of the current CRAS Addendum found that no notable alterations have taken place to any of these two significant historic

resources since the time of their previous evaluations. Therefore, both resources remain eligible for inclusion in the National Register. However, the proposed improvements will not adversely affect these eligible resources.

The remaining 34 historic resources located within the current APE have been determined or are considered individually ineligible for inclusion in the National Register. All the newly recorded historic buildings are representative of common post-World War II Masonry Vernacular architecture that does not possess sufficient significance for individual listing in the National Register. Many of these buildings also exhibit exterior modifications that compromise their historic integrity.

A visual assessment in the vicinity of the project APE along SW 21st Way and SW 1st Court was undertaken in order to evaluate National Register historic district potential in the Woodland Park subdivision. The majority of the historic residences in the neighborhood have sustained additions and alterations. Therefore, the neighborhood does not meet the criteria for a National Register historic district. As such, newly recorded historic resources within the APE in this neighborhood are ineligible for listing in the National Register as part of a historic district.

District Four requests your concurrence with the determinations in the enclosed report. If there are any questions, please feel free to contact me at (954) 777-4324 or Lynn Kelley at (954) 777-4334.

Sincerely,

Ann Broadwell

Ann Broadwell
Environmental Administrator
FDOT - District 4

Enclosures
cc. file

Section 106 Case Study Addendum
I-95 @ SR-842/Broward Boulevard PD&E
FM 435513.1

The Florida State Historic Preservation Officer finds the attached Cultural Resources Assessment Reports complete and sufficient and concurs with the recommendations and findings provided in this cover letter for SHPO/DHR Project File Number 2015-03596E **.**

SHPO Comments:

FS **Timothy A. Parsons**
State Historic Preservation Officer
Florida Division of Historical Resources

2/27/2019
Date

Florida Department of Transportation

RICK SCOTT
GOVERNOR

3400 West Commercial Blvd.
Fort Lauderdale, FL 33309

MIKE DEW
SECRETARY

November 1, 2017

Dr. Timothy Parsons, Director and
State Historic Preservation Officer
Division of Historical Resources
500 South Bronough Street
Tallahassee, Florida 32301

Subject: **Request for Review**
Cultural Resource Assessment Survey
SR-9/I-95 @ SR 842/Broward Boulevard PD&E Study
FM # 435513.1
Broward County, Florida

Attention: Ginny Jones

Dear Ms. Jones;

FDOT, District Four is currently conducting a Project Development & Environment (PD&E) Study to evaluate alternatives for improvements to the Broward Boulevard at I-95 interchange in the City of Fort Lauderdale. The primary purpose of this study is to develop and evaluate design concepts to improve traffic flow to and from I-95 and along Broward Boulevard, connectivity between the 95 Express Lanes and Broward Boulevard, and intermodal connectivity. The primary need for this project is to enhance system linkage and modal interrelationships at the I-95/Broward Boulevard interchange.

The project area extends along SR-9/I-95 from just south of Davie Boulevard to just south of Sunrise Boulevard, a distance of approximately two miles, and along Broward Boulevard from West of SW 24th Avenue to East of NW/SW 18th Avenue, a distance of approximately one-half mile. The study area includes the median ramp connections to the Park & Ride lots from I-95 north and south of Broward Boulevard. As part of the PD&E study, a comprehensive Cultural Resources Assessment Survey (CRAS) was completed for your review and approval. The objective of the CRAS was to identify cultural resources within the project APE and assess their eligibility for listing in the National Register according to the criteria set forth in 36 CFR Section 60.4.

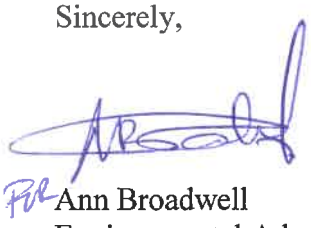
Cultural Resources Assessment Survey
I-95 @ Broward Blvd. PD&E Study
FM 435513.1

No newly or previously recorded archaeological sites were identified within the archaeological APE. Subsurface testing was not feasible within the archaeological APE due to the presence of existing pavement, sidewalks, berms, landscaping, and buried utilities. The pedestrian survey of the archaeological APE confirmed the developed nature of the project corridor and confirmed the low potential for finding intact archaeological sites.

The CRAS identified a total of 52 historic resources within the historic APE. The identified historic resources include one cemetery (North Woodlawn Cemetery–8BD4879), two resource groups (Seaboard Air Line [CSX] Railroad–8BD4649 and the Salvation Army Complex–8BD6346), and 49 buildings (8BD1452 and 8BD6298–8BD6344). Four of the historic resources were previously recorded (8BD1452, 8BD3414, 8BD4649, and 8BD4879), and 48 are newly recorded (8BD6298–8BD6344 and 8BD6347). Three historic resources, Seaboard Airline Railroad Station at 200 SW 21st Terrace (8BD1452), Seaboard Air Line (CSX) Railroad (8BD4649), and North Woodlawn Cemetery (8BD4879), were previously determined National Register–eligible by the SHPO. The current CRAS found that all three of these significant resources remain eligible for inclusion in the National Register. The remaining 49 historic resources located within the current APE are considered individually ineligible for inclusion in the National Register.

A discussion of the potential effects to these resources will be completed when the preferred alternative is selected. If there are any questions, please feel free to contact me at (954) 777-4324 or Lynn Kelley at (954) 777-4334.

Sincerely,



Ann Broadwell
Environmental Administrator
FDOT - District 4

Enclosures
cc. file

Cultural Resources Assessment Survey
I-95 @ Broward Boulevard PD&E Study
FM 435513.1

The Florida State Historic Preservation Officer finds the attached Cultural Resources Assessment Reports complete and sufficient and concurs with the recommendations and findings provided in this cover letter for SHPO/DHR Project File Number 2015-39596.

SHPO Comments:

FOR Deputy SHPO

Timothy A. Parsons
State Historic Preservation Officer
Florida Division of Historical Resources

11/17/2017
Date

Natural Resources Appendix

Contents:

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

NOV 26 2019

Ms. Ann Broadwell
Environmental Administrator
Florida Department of Transportation
District 4
3400 West Commercial Boulevard
Fort Lauderdale, FL 33309

Subject: Sole Source Aquifer Review/Concurrence for SR-9/I-95 at SR-842/Broward Boulevard.

Dear Ms. Broadwell:

The U.S. Environmental Protection Agency, Region 4 received Florida Department of Transportation's (FDOT) August 12, 2019 request to review the above referenced project pursuant to Section 1424(e) of the Safe Drinking Water Act. The review is to determine if the project lies within the boundaries (recharge and streamflow source zones) of an EPA designated Sole Source Aquifer (SSA), and to determine if the project poses potential adverse health or environmental impacts. A SSA is the sole or principal water source for a designated area. If the aquifer is contaminated, there could be a significant hazard to public health and an economic burden for those using the aquifer as a drinking water source.

The project has been determined to lie **inside** the designated boundaries of the Biscayne Aquifer and based on the information provided, may cause a significant impact to the aquifer system when the bridge foundations are installed as part of this project. However, with proper implementation of best management practices (BMPs), these potential impacts can be adequately reduced or properly mitigated. To that effect, the EPA is requiring that, when installing bridge foundations, FDOT must adhere to the list of BMPs as related to groundwater protection when required. These BMPs were provided with the application and are also listed below:

1. FDOT Design Manual Chapter 320 Stormwater Pollution Prevention Plan (SWPPP)
2. FDOT Standard Specification for Road and Bridge Construction,
   a. SECTION 6 CONTROL OF MATERIALS
   b. SECTION 104 PREVENTION, CONTROL, AND ABATEMENT OF EROSION AND WATER POLLUTION
   c. SECTION 455 STRUCTURES FOUNDATIONS

Furthermore, all debris from any demolition of the existing structures shall be properly contained and removed from the site prior to construction of the new structure. If applicable, all county flood plain management plans and public notification processes must be followed. During construction, it is EPA's understanding and expectation that those responsible for the project will strictly adhere to all Federal, State, and local government permits, ordinances, planning designs, construction codes, operation &

maintenance requirements, and engineering as well as any contaminant mitigation recommendations outlined by federal and state agency reviews. All best management practices for erosion and sedimentation control must be followed. State and County environmental offices should be contacted to address proper drainage and storm water designs. Additionally, the project manager should contact State and local environmental officials to obtain a copy of any local Wellhead Protection Plans. The following website provides information regarding the Florida Department of Environmental Protection's Source Water Assessment and Protection Program. http://www.dep.state.fl.us/swapp/Default.htm

The EPA finds that, if the conditions outlined above are adhered to, there will be no significant impact to the aquifer system. Please note that this "no significant impact" finding has been determined based on compliance with the requirements outlined above, and on the information provided. Further, this finding relates to Section 1424(e) of the Safe Drinking Water Act only. If there are any significant changes to the project, the EPA Region 4 office should be notified for further review. Other regulatory groups within the EPA responsible for administering other programs may, at their own discretion and under separate cover, provide additional comments.

Thank you for your concern with the environmental impacts of this project. If you have any questions, please contact Mr. Khurram Rafi at 404-562-9283 or Rafi.Khurram@epa.gov or Mr. Larry Cole at 404-562-9474 or Cole.Larry@epa.gov.

Sincerely,

Alanna M. Conley, Chief
Groundwater, UIC and GIS Section
Safe Drinking Water Branch
EPA, Region 4, Atlanta, GA

2015-CPA-0321
Broward

Florida Department of

RICK SCOTT
GOVERNOR

3400 West Comme
Fort Lauderdale F

March 23, 2018

Roxanna Hinzman, Field Supervisor
South Florida Ecological Services Office
United States Fish and Wildlife Service
1339 20th Street
Vero Beach, FL 32960-3559

Attn: John Wrublik

Subject: **ESA Section 7 Consultation / Concurrence Request**
Project Name: SR 9/I-95 (MP 9.310 to MP 11.282) @ SR 842/Broward Boulevard from West of SW 24th Avenue to East of NW/SW 18th Avenue (MP 4.886 to MP 5.392) Project Development & Environment (PD&E) Study
County: Broward County
ETDM No. 14226
Financial Project Identification Number: 435513-1-22-02

Dear Mr. Wrublik,

The Florida Department of Transportation (FDOT), District Four, is currently conducting a Project Development and Environment (PD&E) Study that is evaluating potential improvements to the SR 9/I-95 and SR-842/Broward Boulevard Interchange in the City of Fort Lauderdale, Broward County, Florida. The PD&E study limits extend along SR 9/I-95, from just south of Davie Boulevard to just south of Sunrise Boulevard, a distance of approximately two miles, and along Broward Boulevard from NW 24th Avenue to SW 18th Avenue, a distance of approximately one half mile. The primary purpose of this study is to develop and evaluate design concepts that will improve traffic flow to and from I-95, as well as along Broward Boulevard, increase connectivity between the I-95 Express Lanes and Broward Boulevard, and improve intermodal connectivity. The improved connectivity and traffic flow will be achieved via widening along Broward Boulevard and I-95, new ramps to connect the I-95 Express Lanes, and the re-alignment of existing ramps.

As part of this project and in accordance with 50 CFR Part 402, the Endangered Species Act of 1973, as amended, and the FDOT PD&E Manual, Part 2 – Chapter 16 "Protected Species and Habitat" (June 14, 2017), an assessment of federally protected wildlife and plant species involvement was conducted. The objectives of this assessment were to determine if any protected species inhabit the project site, to determine if any protected species present would be adversely impacted by the proposed project, and if necessary, develop recommendations for avoidance and minimization of potential impacts. The assessment of listed species can be found in the attached

U.S. Fish and Wildlife Service
1339 20th Street
Vero Beach, Florida 32960
772-562-3909 Fax 772-562-4288

FWS Log No. 2015-I-0321

The U.S. Fish and Wildlife Service has reviewed the information provided and finds that the proposed action is not likely to adversely affect any federally listed species or designated critical habitat protected by the Endangered Species Act of 1973 (Act), as amended (16 U.S.C. 1531 et. seq.). A record of this consultation is on file at the South Florida Ecological Service Office.

This fulfills the requirements of section 7 of the Act and further action is not required. If modifications are made to the project, if additional information involving potential effects to listed species becomes available, or if a new species is listed, reinitiation of consultation may be necessary.

Roxanna Hinzman, Field Supervisor — Date 5/2/2018

Natural Resource Evaluation (NRE) for the USFWS review. The following summarizes the effects determinations and request for concurrence for the federally-listed species with the potential to occur in the project area or be impacted by the project.

Description of Project Area

The project is located in a highly urbanized area of Broward County. The project area consists of developed parcels and properties, such as residential, institutional, commercial, industrial and light industrial, and transportation, as well as recreational areas. The project area contains less than eight acres of potential habitat including 3.6 acres of Open (urban) Land (FLUCFCS: 190), 2.1 acres of Upland Hardwood Forests (FLUCFCS: 420), and 5.6 acres of Water (FLUCFCS: 510 & 530) within a 500-foot buffer of the project area. Xeric habitats were not observed during the field reviews. Upland swales and parcels of open land occur throughout the project limits. These are typically planted with sod and appear to be routinely maintained.

One wetland exists within the project areas as disturbed, fringe mangroves along the banks of the North Fork of the New River. Six surface waters exist within the project area, including the North Fork of the New River and five permitted stormwater management areas containing hydrophytic vegetation. The proposed build alternatives will encroach upon the existing fringe mangrove wetland, the North Fork of the New River, and two of the stormwater management areas. However, these areas were identified for impacts by the I-95 Express Phase 3A-1 project (FPID No. 433108-5-52-01) and were mitigated under the South Florida Water Management District (SFWMD) Environmental Resource Permit No.06-01465-S and United States Army Corps of Engineers (USACE) Dredge & Fill Permit No. SAJ 2014-01584. The remaining surface waters are also being impacted by the I-95 Express Phase 3A-1 project and will be mitigated through offsetting stormwater management areas to be constructed as part of the proposed build alternative.

Protected Species that May Be Present

The USFWS County Listed Species, FDOT Environmental Screening Tool (EST), and environmental comments in the Programming Screen Summary Report (Project #14226 – SR-9/I-95 and SR 842/Broward Boulevard Interchange) were reviewed to develop a list of species and critical habitat that "may be present" within the project area. The federally-listed species that have a potential to occur in the project corridor are the wood stork, Smalltooth sawfish, West Indian manatee, Eastern indigo snake, Everglades snail kite, American crocodile, Hawksbill, Leatherback, Green, and Loggerhead sea turtles, Beach jacquemontia, and tiny polygala.

Wood Stork: The project is located within the Core Foraging Area (CFA) of two nesting wood stork colonies: "Sawgrass Ford" and "Emerald Estates 1 and 2 Griffin". Both colonies were active as of 2016. The stormwater swales may provide potential Suitable Foraging Habitat (SFH), although their location within, or adjacent to, I-95 and/or the South Florida Rail Corridor decreases their suitability. The proposed project will potentially impact less than one-half acre of SFH for the wood stork. While the surface waters provide foraging habitat, potential for nesting by these species is low due to the close proximity to a roadway and highly developed urban setting. Individuals, or nests, of this species were not observed during the field reviews. Any impacts to SFH occurring within stormwater management areas are anticipated to be mitigated through offsetting stormwater management areas, similar to the I-95 Express Phase 3A-1 project. To protect individual wood storks during construction, Technical Special Provisions (TSPs) will be

incorporated into the construction plans and bid documents. Since SFH occurs within the project area, although minimal in value, and the project is within two wood stork CFA's, based on the key from the USFWS South Florida Programmatic Concurrence letter (May 18, 2010), the project "***may affect, not likely to adversely affect***" the wood stork.

Smalltooth Sawfish: The project area encompassing the North Fork of the New River includes mangroves which serve as Essential Fish Habitat (EFH) for the Smalltooth sawfish. Within the project area west of I-95, mangrove habitat is low quality due to the presence of invasive species and limited, discontinuous fringes of mangroves present along the shorelines of the I-95 crossing of the tidal flow way. The project is not located within designated critical habitat for this species.

The proposed improvements will result in a total of 0.004 acre of fill impacts to the existing fringe mangrove wetlands along the banks of the North Fork of the New River and 0.02 acre of shading impacts to the open water portion of the North Fork of the New River. As mentioned above, the existing mangroves are already planned to be fully impacted by the I-95 Express Phase 3A-1 project (FPID No. 433108-5-52-01) and were mitigated under the SFWMD Environmental Resource Permit No.06-01465-S and USACE Dredge & Fill Permit No. SAJ 2014-01584. Therefore, the project is not anticipated to impact any additional EFH or require additional mitigation. However, due to the additionally proposed pile driving activities in the open water portion of the North Fork of the New River and the potential use of the river by the Smalltooth sawfish, the NMFS *Sea Turtle and Smalltooth Sawfish Construction Conditions* (March, 2006) will be followed with respect to any in-water construction activities. With the implementation of these construction conditions to minimize potential impacts, the project "***may affect, not likely to adversely affect***" the Smalltooth sawfish. This determination is consistent with the NMFS Concurrence letter dated February 4, 2015 to the FDOT for the improvements associated with I-95 Express Phase 3A-1 within the North Fork of the New River. The February 4, 2015 letter concluded that the Smalltooth sawfish is not likely to be adversely affected by the proposed action. On March 12, 2018, Jennifer Schull of NMFS agreed that based on the previous consultation for the I-95 Express Phase 3A-1 project, no consultation for this project is required.

West Indian Manatee: The USFWS has designated critical habitat for the West Indian manatee in the North Fork of the New River. The North Fork of the New River provides potential manatee access to the waterways crossing underneath I-95. Manatee Protection Zones, enforced by the Florida Fish and Wildlife Commission (FWC), apply to this river and begin east and extend west of I-95 at the river crossing. Due to limited/absence of foraging opportunities within the tidal river, manatees, if present, are traveling through this area on a transient basis. Individuals of this species were not observed during the field reviews. To avoid potential impacts to this species, the FDOT agrees to follow the the *Standard Manatee Conditions for In-Water Work* (FWC, 2013) during implementation of the project, and TSPs) will be incorporated into the contractor's bid documents. Due to the limited impact on low quality mangrove habitat and nature of the project, based on the USACE State of Florida Effect Determination Key for the Manatee in Florida (April 2013) the project "***may affect, not likely to adversely affect***" the West Indian mantee.

Eastern Indigo Snake: The Eastern indigo snake has a low potential of occurrence within the project corridor due to the urbanized nature of the project area and limited suitable habitat. These snakes often inhabit gopher tortoise burrows. Xeric habitats, gopher tortoise burrows, and/or

Eastern indigo snakes were not observed during the field reviews. Any dry upland retention areas are located within the right-of-way of I-95 and are components of the road's drainage system. To avoid potential impacts to this species, the FDOT agrees to follow the *Standard Protection Measures for the Eastern Indigo Snake* (USFWS 2013) during implementation of the project. Due to the limited low quality habitat and minimal impact, based on the Eastern Indigo Snake Programmatic Effect Determination Key (USFWS 2017) the project "***may affect, not likely to adversely affect***" the Eastern indigo snake.

Everglade Snail Kite: The FDOT EST identifies the project limits as being within the USFWS Consultation Area for this species, but not within any areas of critical habitat for this species. The project does not impact their preferred habitat including large, open, shallow freshwater marshes and lakes. Due to the lack of suitable habitat within the project area, the project will have "***no effect***" on the Everglades snail kite.

American Crocodile: The project area is not located within a consultation area of the American crocodile. The North Fork of the New River is located within, and adjacent to, the I-95 right-of-way. The potential for this species to be found within or adjacent to the project area is low. Due to the urbanized environment and the limited impact on suitable habitat, the project will have "***no effect***" on the American crocodile.

Hawksbill, Leatherback, Green, and Loggerhead Sea Turtles: The North Fork of the New River can provide sea turtle access to the project corridor; however, this is highly unlikely. No nesting habitats or individuals of these species were observed during the project's field reviews. To minimize any potential for adverse effects to these species, the NMFS *Sea Turtle and Smalltooth Saw Fish Construction Conditions* (March, 2006) will be adhered to for any in-water work during the construction phase of this project. Due to the lack of suitable nesting habitat and minimal impact on useable habitat, the project will have "***no effect***" on the Hawksbill, Leatherback, Green, and Loggerhead sea turtles.

Beach Jacquemontia: The vegetative communities where this species occurs including the lee side of stable, vegetated dunes, disturbed openings in maritime hammock, coastal strand, and coastal scrub were not identified within, or adjacent to, the project area. Individuals of this species were not observed during the project area field reviews. Based on the lack of suitable habitat and low potential for impacts, the project will have "***no effect***" on the Beach jacquemontia.

Tiny Polygala: The vegetative communities where this species occurs including open sand and pine rockland, scrub, sandhill, and open coastal spoil pile habitats with little, to no organic litter, were not identified within, or adjacent to, the project area. Individuals of this species were not observed during the project area field reviews. Based on the lack of suitable habitat and low potential for impacts, the project will have "***no effect***" on the tiny polygala.

We request that USFWS concur with the determinations that the project will have "***no effect***" on the Everglade snail kite, American crocodile, Hawksbill, Leatherback, Green, and Loggerhead sea turtles, Beach jacquemontia, and tiny polygala and with the determination that the project "***may affect, but is not likely to adversely affect***" the wood stork, Smalltooth sawfish, West Indian manatee, and Eastern indigo snake. Additional information regarding these species are included in

the attached NRE for your review. If you have any questions about this project or require further information, please contact me at (954) 777-4325 or via email at Ann.Broadwell@dot.state.fl.us.

Sincerely,

Ann Broadwell
Environmental Administrator
FDOT – District 4

United States Department of the Interior

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

May 18, 2010

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

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

Dear Mr. Kinard:

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

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

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

Wood stork

Habitat

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

trees that occur in stands located either in swamps or on islands surrounded by relatively broad expanses of open water (Ogden 1991, 1996; Rodgers et al. 1996). Successful colonies are those that have limited human disturbance and low exposure to land-based predators. Nesting colonies protected from land-based predators are characterized as those surrounded by large expanses of open water or where the nest trees are inundated at the onset of nesting and remain inundated throughout most of the breeding cycle. These colonies have water depths between 0.9 and 1.5 meters (3 and 5 feet) during the breeding season.

Successful nesting generally involves combinations of average or above-average rainfall during the summer rainy season and an absence of unusually rainy or cold weather during the winter-spring breeding season (Kahl 1964; Rodgers et al. 1987). This pattern produces widespread and prolonged flooding of summer marshes, which maximize production of freshwater fishes, followed by steady drying that concentrate fish during the season when storks nest (Kahl 1964). Successful nesting colonies are those that have a large number of foraging sites. To maintain a wide range of foraging sites, a variety of wetland types should be present, with both short and long hydroperiods. The Service (1999) describes a short hydroperiod as a 1 to 5-month wet/dry cycle, and a long hydroperiod as greater than 5 months. During the wet season, wood storks generally feed in the shallow water of the short-hydroperiod wetlands and in coastal habitats during low tide. During the dry season, foraging shifts to longer hydroperiod interior wetlands as they progressively dry-down (though usually retaining some surface water throughout the dry season).

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

Conservation Measures

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

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

In an effort to reduce correspondence in effect determinations and responses, the Service is providing the Wood Stork Effect Determination Key below. If the use of this key results in a Corps determination of "no effect" for a particular project, the Service supports this determination. If the use of this Key results in a determination of NLAA, the Service concurs with this determination[1]. This Key is subject to revisitation as the Corps and Service deem necessary.

The Key is as follows:

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

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

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

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

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

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

[5] Suitable foraging habitat (SFH) includes wetlands that typically have shallow-open water areas that are relatively calm and have a permanent or seasonal water depth between 5 to 38 cm (2 to 15 inches) deep. Other shallow non-wetland water bodies are also SFH. SFH supports and concentrates, or is capable of supporting and concentrating small fish, frogs, and other aquatic prey. Examples of SFH include, but are not limited to freshwater marshes, small ponds, shallow, seasonally flooded roadside or agricultural ditches, seasonally flooded pastures, narrow tidal creeks or shallow tidal pools, managed impoundments, and depressions in cypress heads and swamp sloughs.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Monitoring and Reporting Effects

For the Service to monitor cumulative effects, it is important for the Corps to monitor the number of permits and provide information to the Service regarding the number of permits issued where the effect determination was: "may affect, not likely to adversely affect." We request that the Corps send us an annual summary consisting of: project dates, Corps identification numbers, project acreages, project wetland acreages, and project locations in latitude and longitude in decimal degrees.

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

Sincerely yours,

Paul Souza
Field Supervisor
South Florida Ecological Services Office

Enclosures

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

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HABITAT MANAGEMENT GUIDELINES FOR THE WOOD STORK IN THE SOUTHEAST REGION

HABITAT MANAGEMENT GUIDELINES FOR THE WOOD STORK IN THE SOUTHEAST REGION

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for the

Southeast Region
U.S. Fish and Wildlife Service

Cover design by
Florida Power & Light Company
Miami, Florida

HABITAT MANAGEMENT GUIDELINES FOR THE WOOD STORK IN THE SOUTHEAST REGION

Introduction

A number of Federal and state laws and/or regulations prohibit, cumulatively, such acts as harrassing, disturbing, harming, molesting, pursuing, etc., wood storks, or destroying their nests (see Section VII). Although advisory in nature, these guidelines represent a biological interpretation of what would constitute violations of one or more of such prohibited acts. Their purpose is to mainain and/or improve the environmental conditions that are required for the survival and well-being of wood storks in the southeastern United States, and are designed essentially for application in wood stork/human activity conflicts (principally land development and human intrusion into stork use sites). The emphasis is to avoid or minimize detrimental human-related impacts on wood storks. These guidelines were prepared in consultations with state wildlife agencies and wood stork experts in the four southeastern states where the wood stork is listed as Endangered (Alabama, Florida, Georgia, South Carolina).

General

The wood stork is a gregarious species, which nests in colonies (rookeries), and roosts and feeds in flocks, often in association with other species of long-legged water birds. Storks that nest in the southeastern United States appear to represent a distinct population, separate from the nearest breeding population in Mexico. Storks in the southeastern U.S. population have recently (since 1980) nested in colonies scattered throughout Florida, and at several central-southern Georgia and coastal South Carolina sites. Banded and color-marked storks from central and southern Florida colonies have dispersed during non-breeding seasons as far north as southern Georgia, and the coastal counties in South Carolina and southeastern North Carolina, and as far west as central Alabama and northeastern Mississippi. Storks from a colony in south-central Georgia have wintered between southern Georgia and southern Florida. This U.S. nesting population of wood storks was listed as endangered by the U.S. Fish and Wildlife Service on February 28, 1984 (*Federal Register* 49(4):7332-7335).

Wood storks use freshwater and estuarine wetlands as feeding, nesting, and roosting sites. Although storks are not habitat specialists, their needs are exacting enough, and available habitat is limited enough, so that nesting success and the size of regional populations are closely regulated by year-to-year differences in the quality and quantity of suitable habitat. Storks are especially sensitive to environmental conditions at feeding sites; thus, birds may fly relatively long distances either daily or between regions annually, seeking adequate food resources.

All available evidence suggests that regional declines in wood stork numbers have been largely due to the loss or degradation of essential wetland habitat. An understanding of the qualities of good stork habitat should help to focus protection efforts on those sites

that are seasonally important to regional populations of wood storks. Characteristics of feeding, nesting, and roosting habitat, and management guidelines for each, are presented here by habitat type.

I. Feeding habitat.

A major reason for the wood stork decline has been the loss and degredation of feeding habitat. Storks are especially sensitive to any manipulation of a wetland site that results in either reduced amounts or changes in the timing of food availability.

Storks feed primarily (often almost exclusively) on small fish between 1 and 8 inches in length. Successful foraging sites are those where the water is between 2 and 15 inches deep. Good feeding conditions usually occur where water is relatively calm and uncluttered by dense thickets of aquatic vegetation. Often a dropping water level is necessary to concentrate fish at suitable densities. Conversely, a rise in water, especially when it occurs abruptly, disperses fish and reduces the value of a site as feeding habitat.

The types of wetland sites that provide good feeding conditions for storks include: drying marshes or stock ponds, shallow roadside or agricultural ditches, narrow tidal creeks or shallow tidal pools, and depressions in cypress heads or swamp sloughs. In fact, almost any shallow wetland depression where fish tend to become concentrated, either through local reproduction or the consequences of area drying, may be used by storks.

Nesting wood storks do most of their feeding in wetlands between 5 and 40 miles from the colony, and occasionally at distances as great as 75 miles. Within this colony foraging range and for the 110-150 day life of the colony, and depending on the size of the colony and the nature of the surrounding wetlands, anywhere from 50 to 200 different feeding sites may be used during the breeding season.

Non-breeding storks are free to travel much greater distances and remain in a region only for as long as sufficient food is available. Whether used by breeders or non-breeders, any single feeding site may at one time have small or large numbers of storks (1 to 100+), and be used for one to many days, depending on the quality and quantity of available food. Obviously, feeding sites used by relatively large numbers of storks, and/or frequently used areas, potentially are the more important sites necessary for the maintenance of a regional population of birds.

Differences between years in the seasonal distribution and amount of rainfall usually mean that storks will differ between years in where and when they feed. Successful nesting colonies are those that have a large number of feeding site options, including sites that may be suitable only in years of rainfall extremes. To maintain the wide range of feeding site options requires that many different wetlands, with both relatively short and long annual hydroperiods, be preserved. For example, protecting only the larger wetlands, or those with longer annual hydroperiods, will result in the eventual loss of smaller, seemingly less important wetlands. However, these small scale wetlands are crucial as the only available feeding sites during the wetter periods when the larger habitats are too deeply flooded to be used by storks.

II. Nesting habitat.

Wood storks nest in colonies, and will return to the same colony site for many years so long as that site and surrounding feeding habitat continue to supply the needs of the birds. Storks require between 110 and 150 days for the annual nesting cycle, from the period of courtship until the nestlings become independent. Nesting activity may begin as early as December or as late as March in southern Florida colonies, and between late February and April in colonies located between central Florida and South Carolina. Thus, full term colonies may be active until June-July in south Florida, and as late as July-August at more northern sites. Colony sites may also be used for roosting by storks during other times of the year.

Almost all recent nesting colonies in the southeastern U.S. have been located either in woody vegetation over standing water, or on islands surrounded by broad expanses of open water. The most dominant vegetation in swamp colonies has been cypress, although storks also nest in swamp hardwoods and willows. Nests in island colonies may be in more diverse vegetation, including mangroves (coastal), exotic species such as Australian pine (*Casuarina*) and Brazilian Pepper (*Schinus*), or in low thickets of cactus (*Opuntia*). Nests are usually located 15-75 feet above ground, but may be much lower, especially on island sites when vegetation is low.

Since at least the early 1970's, many colonies in the southeastern U.S. have been located in swamps where water has been impounded due to the construction of levees or roadways. Storks have also nested in dead and dying trees in flooded phosphate surface mines, or in low, woody vegetation on mounded, dredge islands. The use of these altered wetlands or completely "artificial" sites suggests that in some regions or years storks are unable to locate natural nesting habitat that is adequately flooded during the normal breeding season. The readiness with which storks will utilize water impoundments for nesting also suggests that colony sites could be intentionally created and maintained through long-term site management plans. Almost all impoundment sites used by storks become suitable for nesting only fortuitously, and therefore, these sites often do not remain available to storks for many years.

In addition to the irreversible impacts of drainage and destruction of nesting habitat, the greatest threats to colony sites are from human disturbance and predation. Nesting storks show some variation in the levels of human activity they will tolerate near a colony. In general, nesting storks are more tolerant of low levels of human activity near a colony when nests are high in trees than when they are low, and when nests contain partially or completely feathered young than during the period between nest construction and the early nestling period (adults still brooding). When adult storks are forced to leave their nests, eggs or downy young may die quickly (<20 minutes) when exposed to direct sun or rain.

Colonies located in flooded environments must remain flooded if they are to be successful. Often water is between 3 and 5 feet deep in successful colonies during the nesting season. Storks rarely form colonies, even in traditional nesting sites, when they are dry, and may abandon nests if sites become dry during the nesting period. Flooding in colonies may be most important as a defense against mammalian predators. Studies of stork colonies in Georgia and

Florida have shown high rates of raccoon predation when sites dried during the nesting period. A reasonably high water level in an active colony is also a deterrent against both human and domestic animal intrusions.

Although nesting wood storks usually do most feeding away from the colony site (>5 miles), considerable stork activity does occur close to the colony during two periods in the nesting cycle. Adult storks collect almost all nesting material in and near the colony, usually within 2500 feet. Newly fledged storks, near the end of the nesting cycle, spend from 1-4 weeks during the fledging process flying locally in the colony area, and perched in nearby trees or marshy spots on the ground. These birds return daily to their nests to be fed. It is essential that these fledging birds have little or no disturbance as far our as one-half mile within at least one or two quadrants from the colony. Both the adults, while collecting nesting material, and the inexperienced fledglings, do much low, flapping flight within this radius of the colony. At these times, storks potentially are much more likely to strike nearby towers or utility lines.

Colony sites are not necessarily used annually. Regional populations of storks shift nesting locations between years, in response to year-to-year differences in food resources. Thus, regional populations require a range of options for nesting sites, in order to successfully respond to food availability. Protection of colony sites should continue, therefore, for sites that are not used in a given year.

III. Roosting habitat.

Although wood storks tend to roost at sites that are similar to those used for nesting, they also use a wider range of site types for roosting than for nesting. Non-breeding storks, for example, may frequently change roosting sites in response to changing feeding locations, and in the process, are inclined to accept a broad range of relatively temporary roosting sites. Included in the list of frequently used roosting locations are cypress "heads" or swamps (not necessarily flooded if trees are tall), mangrove islands, expansive willow thickets or small, isolated willow "islands" in broad marshes, and on the ground either on levees or in open marshes.

Daily activity patterns at a roost vary depending on the status of the storks using the site. Non-breeding adults or immature birds may remain in roosts during major portions of some days. When storks are feeding close to a roost, they may remain on the feeding grounds until almost dark before making the short flight. Nesting storks traveling long distances (>40 miles) to feeding sites may roost at or near the latter, and return to the colony the next morning. Storks leaving roosts, especially when going long distances, tend to wait for mid-morning thermals to develop before departing.

IV. Management zones and guidelines for feeding sites.

To the maximum extent possible, feeding sites should be protected by adherence to the following protection zones and guidelines:

A. There should be no human intrusion into feeding sites when storks are present. Depending upon the amount of screening vegetation, human activity should be no closer than between 300 feet (where solid vegetation screens exist) and 750 feet (no vegetation screen).

B. Feeding sites should not be subjected to water management practices that alter traditional water levels or the seasonally normal drying patterns and rates. Sharp rises in water levels are especially disruptive to feeding storks.

C. The introduction of contaminants, fertilizers, or herbicides into wetlands that contain stork feeding sites should be avoided, especially those compounds that could adversely alter the diversity and numbers of native fishes, or that could substantially change the characteristics of aquatic vegetation. Increase in the density and height of emergent vegetation can degrade or destroy sites as feeding habitat.

D. Construction of tall towers (especially with guy wires) within three miles, or high power lines (especially across long stretches of open country) within one mile of major feeding sites should be avoided.

V. Management zones and guidelines for nesting colonies.

A. Primary zone: This is the most critical area, and must be managed according to recommended guidelines to insure that a colony site survives.

1. Size: The primary zone must extend between 1000 and 1500 feet in all directions from the actual colony boundaries when there are no visual or broad aquatic barriers, and never less than 500 feet even when there are strong visual or aquatic barriers. The exact width of the primary zone in each direction from the colony can vary within this range, depending on the amount of visual screen (tall trees) surrounding the colony, the amount of relatively deep, open water between the colony and the nearest human activity, and the nature of the nearest human activity. In general, storks forming new colonies are more tolerant of existing human activity, than they will be of new human activity that begins after the colony has formed.

2. Recommended Restrictions:

a. Any of the following activities within the primary zone, at any time of the year, are likely to be detrimental to the colony:

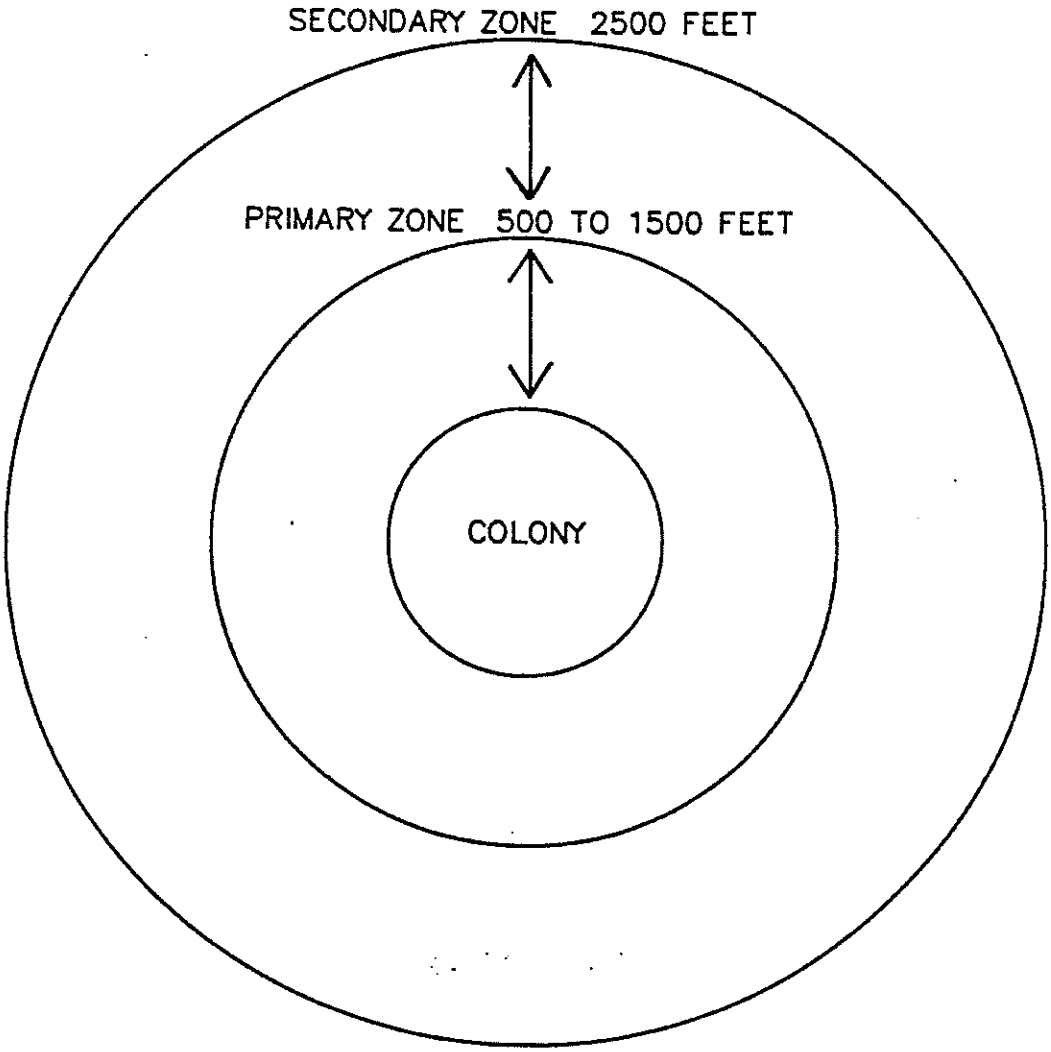
(1) Any lumbering or other removal of vegetation, and

(2) Any activity that reduces the area, depth, or length of flooding in wetlands under and surrounding the colony, except where periodic (less than annual) water control may be required to maintain the health of the aquatic, woody vegetation, and

(3) The construction of any building, roadway, tower, power line, canal, etc.

b. The following activities within the primary zone are likely to be detrimental to a colony if they occur when the colony is active:

(1) Any unauthorized human entry closer than 300 feet of the colony, and


SECONDARY ZONE 2500 FEET
PRIMARY ZONE 500 TO 1500 FEET
COLONY

(2) Any increase or irregular pattern in human activity anywhere in the primary zone, and

(3) Any increase or irregular pattern in activity by animals, including livestock or pets, in the colony, and

(4) Any aircraft operation closer than 500 feet of the colony.

B. Secondary Zone: Restrictions in this zone are needed to minimize disturbances that might impact the primary zone, and to protect essential areas outside of the primary zone. The secondary zone may be used by storks for collecting nesting material, for roosting, loafing, and feeding (especially important to newly fledged young), and may be important as a screen between the colony and areas of relatively intense human activities.

1. Size: The secondary zone should range outward from the primary zone 1000-2000 feet, or to a radius of 2500 feet of the outer edge of the colony.

2. Recommended Restrictions:

a. Activities in the secondary zone which may be detrimental to nesting wood storks include:

(1) Any increase in human activities above the level that existed in the year when the colony first formed, especially when visual screens are lacking, and

(2) Any alteration in the area's hydrology that might cause changes in the primary zone, and

(3) Any substantial (>20 percent) decrease in the area of wetlands and woods of potential value to storks for roosting and feeding.

b. In addition, the probability that low flying storks, or inexperienced, newly-fledged young will strike tall obstructions, requires that high-tension power lines be no closer than one mile (especially across open country or in wetlands) and tall trans-mission towers no closer than 3 miles from active colonies. Other activities, including busy highways and commercial and residential buildings may be present in limited portions of the secondary zone at the time that a new colony first forms. Although storks may tolerate existing levels of human activities, it is important that these human activities not expand substantially.

VI. Roosting site guidelines.

The general characteristics and temporary use-patterns of many stork roosting sites limit the number of specific management recommendations that are possible:

A. Avoid human activities within 500-1000 feet of roost sites during seasons of the year and times of the day when storks may be present. Nocturnal activities in active roosts may be especially disruptive.

B. Protect the vegetative and hydrological characteristics of the more important roosting sites--those used annually and/or used by flocks of 25 or more storks. Potentially, roosting sites may, some day, become nesting sites.

VII. Legal Considerations.

A. Federal Statutes

The U.S. breeding population of the wood stork is protected by the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.)(Act). The population was listed as endangered on February 28, 1984 (49 Federal *Register* 7332); wood storks breeding in Alabama, Florida, Georgia, and South Carolina are protected by the Act.

Section 9 of the Endangered Species Act of 1973, as amended, states that it is unlawful for any person subject to the jurisdiction of the United States to take (defined as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.") any listed species anywhere within the United States.

The wood stork is also federally protected by its listing (50 CFR 10.13) under the Migratory Bird Treaty Act (167 U.S.C. 703-711), which prohibits the taking, killing or possession of migratory birds except as permitted.

B. State Statutes

1. State of Alabama

Section 9-11-232 of Alabama's Fish, Game, and Wildlife regulations curtails the possession, sale, and purchase of wild birds. "Any person, firm, association, or corporation who takes, catches, kills or has in possession at any time, living or dead, any protected wild bird not a game bird or who sells or offers for sale, buys, purchases or offers to buy or purchase any such bird or exchange same for anything of value or who shall sell or expose for sale or buy any part of the plumage, skin, or body of any bird protected by the laws of this state or who shall take or willfully destroy the nests of any wild bird or who shall have such nests or eggs of such birds in his possession, except as otherwise provided by law, shall be guilty of a misdemeanor...

Section 1 of the Alabama Nongame Species Regulation (Regulation 87-GF-7) includes the wood stork in the list of nongame species covered by paragraph (4). " It shall be unlawful to take, capture, kill, possess, sell, trade for anything of monetary value, or offer to sell or trade for anything of monetary value, the following nongame wildlife species (or any parts or reproductive products of such species) without a scientific collection permit and written permission from the Commissioner, Department of Conservation and Natural Resources,..."

2. State of Florida

Rule 39-4.001 of the Florida Wildlife Code prohibits "taking, attempting to take, pursuing, hunting, molesting, capturing, or killing (collectively defined as "taking"), transporting, storing, serving, buying, selling,

possessing, or wantonly or willingly wasting any wildlife or freshwater fish or their nests, eggs, young, homes, or dens except as specifically provided for in other rules of Chapter 39, Florida Administrative Code.

Rule 39-27.011 of the Florida Wildlife Code prohibits "killing, attempting to kill, or wounding any endangered species." The "Official Lists of Endangered and Potentially Endangered Fauna and Flora in Florida" dated 1 July 1988, includes the wood stork, listed as "endangered" by the Florida Game and Fresh Water Fish Commission.

3. State of Georgia

Section 27-1-28 of the Conservation and Natural Resources Code states that "Except as otherwise provided by law, rule, or regulation, it shall be unlawful to hunt, trap, fish, take, possess, or transport any nongame species of wildlife..."

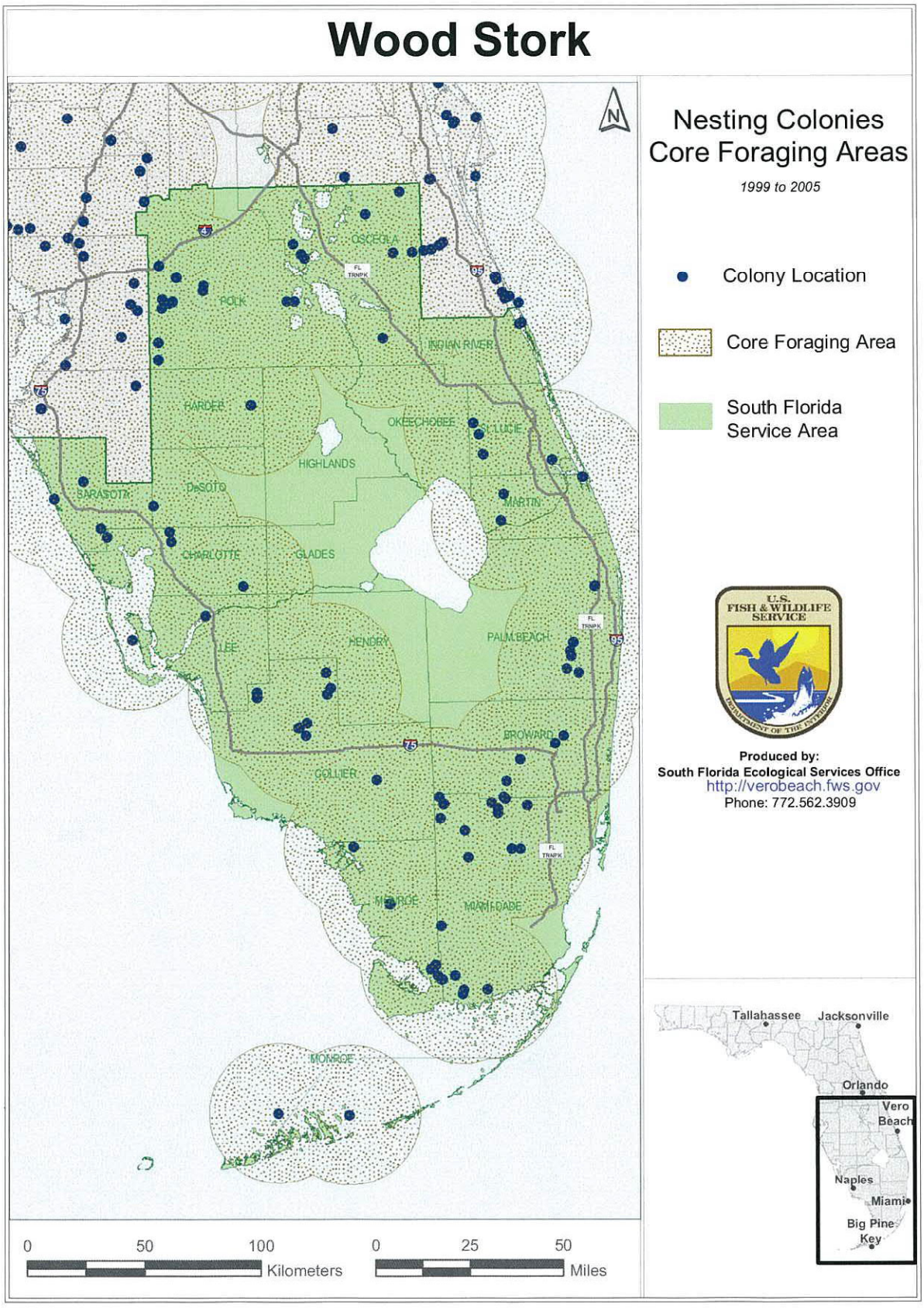
Section 27-1-30 states that, "Except as otherwise provided by law or regulation, it shall be unlawful to disturb, mutilate, or destroy the dens, holes, or homes of any wildlife; "

Section 27-3-22 states, in part, "It shall be unlawful for any person to hunt, trap, take, possess, sell, purchase, ship, or transport any hawk, eagle, owl, or any other bird or any part, nest, or egg thereof...".

The wood stork is listed as endangered pursuant to the Endangered Wildlife Act of 1973 (Section 27-3-130 of the Code). Section 391-4-13-.06 of the Rules and Regulations of the Georgia Department of Natural Resources prohibits harassment, capture, sale, killing, or other actions which directly cause the death of animal species protected under the Endangered Wildlife Act. The destruction of habitat of protected species on public lands is also prohibited.

4. State of South Carolina

Section 50-15-40 of the South Carolina Nongame and Endangered Species Conservation Act states, "Except as otherwise provided in this chapter, it shall be unlawful for any person to take, possess, transport, export, process, sell, or offer of sale or ship, and for any common or contract carrier knowingly to transport or receive for shipment any species or subspecies of wildlife appearing on any of the following lists: (1) the list of wildlife indigenous to the State, determined to be endangered within the State...(2) the United States' List of Endangered Native Fish and Wildlife... (3) the United States' List of Endangered Foreign Fish and Wildlife ..."


Wood Stork
Nesting Colonies
Core Foraging Areas
1999 to 2005
Colony Location
Core Foraging Area
South Florida
Service Area
OSCEOLA
POLK
INDIAN RIVER
HARDEE
OKEECHOBEE
ST. LUCIE
HIGHLANDS
DeSOTO
SARASOTA
MARTIN
CHARLOTTE
GLADES
LEE
HENDRY
PALM BEACH
BROWARD
COLLIER
MONROE
MIAMI-DADE
U.S. FISH & WILDLIFE SERVICE
Produced by:
South Florida Ecological Services Office
http://verobeach.fws.gov
Phone: 772.562.3909
Tallahassee
Jacksonville
Orlando
Vero Beach
Naples
Miami
Big Pine Key
0 50 100 Kilometers
0 25 50 Miles

Enclosure 3

Wood Stork Foraging Analysis: Excerpts of concepts and procedure as presented by the Service in this appendix may be viewed in detail in any one of our recent Biological Opinions for project related impacts to the wood stork. These documents can be found at the internet website address http://www.fws.gov/filedownloads/ftp%5verobeach.

Foraging Habitat

Researchers have shown that wood storks forage most efficiently and effectively in habitats where prey densities are high and the water shallow and canopy open enough to hunt successfully (Ogden et al. 1978, Browder 1984, Coulter 1987). Prey availability to wood storks is dependent on a composite variable consisting of density (number or biomass/m^2) and the vulnerability of the prey items to capture (Gawlik 2002). For wood storks, prey vulnerability appears to be largely controlled by physical access to the foraging site, water depth, the density of submerged vegetation, and the species-specific characteristics of the prey. For example, fish populations may be very dense, but not available (vulnerable) because the water depth is too deep (greater than 30 cm) for storks or the tree canopy at the site is too dense for storks to land. Calm water, about 5-40 cm (2-16 in) in depth, and free of dense aquatic vegetation is ideal (Coulter and Bryan 1993).

Coulter and Bryan's (1993) study suggested that wood storks preferred ponds and marshes, and visited areas with little or no canopy more frequently. Even in foraging sites in swamps, the canopy tended to be sparse. They suggested that open canopies may have contributed to detection of the sites and more importantly may have allowed the storks to negotiate landing more easily than at closed-canopy sites. In their study, the median amount of canopy cover where wood stork foraging was observed was 32 percent. Other researchers (P.C. Frederick, University of Florida, personal communication 2006; J.A. Rodgers, FWC, personal communication 2006) also confirm that wood storks will forage in woodlands, though the woodlands have to be fairly open and vegetation not very dense. Furthermore, the canopies must be open enough for wood storks to take flight quickly to avoid predators.

Melaleuca-infested Wetlands: As discussed previously, wetland suitability for wood stork foraging is partially dependent on vegetation density. Melaleuca is a dense-stand growth plant species, effectively producing a closed canopy and dense understory growth pattern that generally limits a site's accessibility to foraging by wading birds. However, O'Hare and Dalrymple (1997) suggest moderate infestations of melaleuca may have little effect on some species' productivity (*i.e.*, amphibians and reptiles) as long as critical abiotic factors such as hydrology remain. They also note as the levels of infestation increase, usage by wetland dependent species decreases. Their studies also showed that the number of fish species present in a wetland system remain stable at certain levels of melaleuca. However, the availability of the prey base for wood storks and other foraging wading birds is reduced by the restriction of access caused from dense and thick exotic vegetation. Wood storks and other wading birds can forage in these systems in open area pockets (*e.g.*, wind blow-downs), provided multiple conditions are optimal (*e.g.*, water depth, prey density). In O'Hare and Dalrmyple's study (1997), they identify five cover types (Table 1) and

provide information on the number of wetland dependent bird species and the number of individuals observed within each of these vegetation classes (Table 2).

Table 1: Vegetation classes

DMM	75-100 percent mature dense melaleuca coverage
DMS or (SDM)	75-100 percent sapling dense melaleuca coverage
P75	50-75 percent melaleuca coverage
P50	0-50 percent melaleuca coverage
MAR (Marsh)	0-10 percent melaleuca coverage

The number of wetland-dependent species and individuals observed per cover type is shown below in columns 1, 2, and 3 (Table 2). To develop an estimate of the importance a particular wetland type may have (based on density and aerial coverage by exotic species) to wetland dependent species, we developed a foraging suitability value using observational data from O'Hare and Dalrymple (1997). The Foraging Suitability Value as shown in column 5 (Table 2) is calculated by multiplying the number of species by the number of individuals and dividing this value by the maximum number of species and individuals combined (12*132=1584). The results are shown below for each of the cover types in O'Hare and Dalrymple (1997) study (Table 1). As an example, for the P50 cover type, the foraging suitability is calculated by multiplying 11 species times 92 individuals for a total of 1,012. Divide this value by 1,584, which is the maximum number of species times the maximum number of individuals (12*132 = 1,584). The resultant is 0.6389 or 64 percent 11*92=1012/1584*100=63.89).

Table 2: Habitat Foraging Suitability

Cover Type	# of Species (S)	# of Individuals (I)	S*I	Foraging Suitability
DMM	1	2	2	0.001
DMS	4	10	40	0.025
P75	10	59	590	0.372
P50	11	92	1,012	0.639
MAR	12	132	1,584	1.000

This approach was developed to provide us with a method of assessing wetland acreages and their relationship to prey densities and prey availability. We consider wetland dependent bird use to be a general index of food availability. Based on this assessment we developed an exotic foraging suitability index (Table 3):

Table 3. Foraging Suitability Percentages

Exotic Percentage	Foraging Suitability (percent)
Between 0 and 25 percent exotics	100
Between 25 and 50 percent exotics	64
Between 50 and 75 percent exotics	37
Between 75 and 90 percent exotics	3
Between 90 and 100 percent exotics	0

In our assessment however, we consider DMM to represent all exotic species densities between 90 and 100 percent and DMS to represent all exotic species densities between 75 and 90 percent. In our evaluation of a habitat's suitability, the field distinction between an exotic coverage of

90 percent and 100 percent in many situations is not definable, therefore unless otherwise noted in the field reports and in our analysis; we consider a suitability value of 3 percent to represent both densities.

Hydroperiod: The hydroperiod of a wetland can affect the prey densities in a wetland. For instance, research on Everglades fish populations using a variety of quantitative sampling techniques (pull traps, throw traps, block nets) have shown that the density of small forage fish increases with hydroperiod. Marshes inundated for less than120 days of the year average ± 4 fish/m^2; whereas, those flooded for more than 340 days of the year average ± 25 fish/m^2 (Loftus and Eklund 1994, Trexler et al. 2002).

The Service (1999) described a short hydroperiod wetland as wetlands with between 0 and 180-day inundation, and long hydroperiod wetlands as those with greater than 180-day inundation. However, Trexler et al. (2002) defined short hydroperiod wetlands as systems with less than 300 days per year inundation. In our discussion of hydroperiods, we are considering short hydroperiod wetlands to be those that have an inundation of 180 days or fewer.

The most current information on hydroperiods in south Florida was developed by the SFWMD for evaluation of various restoration projects throughout the Everglades Protection Area. In their modeling efforts, they identified the following seven hydroperiods:

Table 4. SFWMD Hydroperiod Classes – Everglades Protection Area

Hydroperiod Class	Days Inundated
Class 1	0-60
Class 2	60-120
Class 3	120-180
Class 4	180-240
Class 5	240-300
Class 6	300-330
Class 7	330-365

Fish Density per Hydroperiod: In the Service's assessment of project related impacts to wood storks, the importance of fish data specific to individual hydroperiods is the principle basis of our assessment. In order to determine the fish density per individual hydroperiod, the Service relied on the number of fish per hydroperiod developed from throw-trap data in Trexler et al.'s (2002) study and did not use the electrofishing data also presented in Trexler et al.'s study that defined fish densities in catch per unit effort, which is not hydroperiod specific. Although the throw-trap sampling generally only samples fish 8 cm or less, the Service believes the data can be used as a surrogate representation of all fish, including those larger than 8 cm, which are typically sampled by either electrofishing or block net sampling.

We base this evaluation on the following assessment. Trexler et al.'s (2002) study included electrofishing data targeting fish greater than 8 cm, the data is recorded in catch per unit effort and in general is not hydroperiod specific. However, Trexler et al. (2002) notes in their assessment of the electrofishing data that in general there is a correlation with the number of fish per unit effort per changes in water depth. In literature reviews of electrofishing data by Chick et

al. (1999 and 2004), they note that electrofishing data provides a useful index of the abundance of larger fish in shallow, vegetated habitat, but length, frequency, and species compositional data should be interpreted with caution. Chick et al. (2004) also noted that electrofishing data for large fish (> 8cm) provided a positive correlation of the number of fish per unit effort (abundance) per changes in hydropeiod. The data in general show that as the hydroperiod decreases, the abundance of larger fishes also decreases.

Studies by Turner et al. (1999), Turner and Trexler (1997), and Carlson and Duever (1979) also noted this abundance trend for fish species sampled. We also noted in our assessment of prey consumption by wood storks in the Ogden et al. (1976) study (Figure 4) (discussed below), that the wood stork's general preference is for fish measuring 1.5 cm to 9 cm, although we also acknowledged that wood storks consume fish larger than the limits discussed in the Ogden et al. (1976) study. A similar assessment is reference by Trexler and Goss (2009) noting a diversity of size ranges of prey available for wading birds to consume, with fish ranging from 6 to 8 cm being the preferred prey for larger species of wading birds, particularly wood storks (Kushlan et al. 1975).

Therefore, since data were not available to quantify densities (biomass) of fish larger than 8 cm to a specific hydroperiod, and Ogden et al.'s (1976) study notes that the wood stork's general preference is for fish measuring 1.5 cm to 9 cm, and that empirical data on fish densities per unit effort correlated positively with changes in water depth, we believe that the Trexler et al. (2002) throw-trap data represents a surrogate assessment tool to predict the changes in total fish density and the corresponding biomass per hydroperiod for our wood stork assessment.

In consideration of this assessment, the Service used the data presented in Trexler et al.'s (2002) study on the number of fish per square-meter per hydroperiod for fish 8 cm or less to be applicable for estimating the total biomass per square-meter per hydroperiod for all fish. In determining the biomass of fish per square-meter per hydroperiod, the Service relied on the summary data provided by Turner et al. (1999), which provides an estimated fish biomass of 6.5 g/m^2 for a Class 7 hydroperiod for all fish and used the number of fish per square-meter per hydroperiod from Trexler et al.'s data to extrapolate biomass values per individual hydroperiods.

Trexler et al.'s (2002) studies in the Everglades provided densities, calculated as the square-root of the number of fish per square meter, for only six hydroperiods; although these cover the same range of hydroperiods developed by the SFWMD. Based on the throw-trap data and Trexler et al.'s (2002) hydroperiods, the square-root fish densities are:

Table 5. Fish Densities per Hydroperiod from Trexler et al. (2002)

Hydroperiod Class	Days Inundated	Fish Density
Class 1	0-120	2.0
Class 2	120-180	3.0
Class 3	180-240	4.0
Class 4	240-300	4.5
Class 5	300-330	4.8
Class 6	330-365	5.0

Trexler et al.'s (2002) fish densities are provided as the square root of the number of fish per square meter. For our assessment, we squared these numbers to provide fish per square meter, a simpler calculation when other prey density factors are included in our evaluation of adverse effects to listed species from the proposed action. We also extrapolated the densities over seven hydroperiods, which is the same number of hydroperiods characterized by the SFWMD. For example, Trexler et al.'s (2002) square-root density of a Class 2 wetland with three fish would equate to a SFWMD Model Class 3 wetland with nine fish. Based on the above discussion, the following mean annual fish densities were extrapolated to the seven SFWMD Model hydroperiods:

Table 6. Extrapolated Fish Densities for SFWMD Hydroperiods

Hydroperiod Class	Days Inundated	Extrapolated Fish Density
Class 1	0-60	2 fish/m^2
Class 2	60-120	4 fish/m^2
Class 3	120-180	9 fish/m^2
Class 4	180-240	16 fish/m^2
Class 5	240-300	20 fish/m^2
Class 6	300-330	23 fish/m^2
Class 7	330-365	25 fish/m^2

Fish Biomass per Hydroperiod: A more important parameter than fish per square-meter in defining fish densities is the biomass these fish provide. In the ENP and WCA-3, based on studies by Turner et al. (1999), Turner and Trexler (1997), and Carlson and Duever (1979), the standing stock (biomass) of large and small fishes combined in unenriched Class 5 and 6 hydroperiod wetlands averaged between 5.5 to 6.5 grams-wet-mass/m^2. In these studies, the data was provided in g/m^2 dry-weight and was converted to g/m^2 wet-weight following the procedures referenced in Kushlan et al. (1986) and also referenced in Turner et al. (1999). The fish density data provided in Turner et al. (1999) included both data from samples representing fish 8 cm or smaller and fish larger than 8 cm and included summaries of Turner and Trexler (1997) data, Carlson and Duever (1979) data, and Loftus and Eklund (1994) data. These data sets also reflected a 0.6 g/m^2 dry-weight correction estimate for fish greater than 8 cm based on Turner et al.'s (1999) block-net rotenone samples.

Relating this information to the hydroperiod classes developed by the SFWMD, we estimated the mean annual biomass densities per hydroperiod. For our assessment, we considered Class 7 hydroperiod wetlands based on Turner et al. (1999) and Trexler et al. (2002) studies to have a mean annual biomass of 6.5 grams-wet-mass/m^2 and to be composed of 25 fish/m^2. The remaining biomass weights per hydroperiod were determined as a direct proportion of the number of fish per total weight of fish for a Class 7 hydroperiod (6.5 grams divided by 25 fish equals 0.26 grams per fish).

For example, given that a Class 3 hydroperiod has a mean annual fish density of 9 fish/m^2, with an average weight of 0.26 grams per fish, the biomass of a Class 3 hydroperiod would be 2.3 grams/m^2 (9*0.26 = 2.3). Based on the above discussion, the biomass per hydroperiod class is:

Table 7. Extrapolated Mean Annual Fish Biomass for SFWMD Hydroperiods

Hydroperiod Class	Days Inundated	Extrapolated Fish Biomass
Class 1	0-60	0.5 gram/m^2
Class 2	60-120	1.0 gram/m^2
Class 3	120-180	2.3 grams/m^2
Class 4	180-240	4.2 grams/m^2
Class 5	240-300	5.2 grams/m^2
Class 6	300-330	6.0 grams/m^2
Class 7	330-365	6.5 grams/m^2

Wood stork suitable prey size: Wood storks are highly selective in their feeding habits and in studies on fish consumed by wood storks, five species of fish comprised over 85 percent of the number and 84 percent of the biomass of over 3,000 prey items collected from adult and nestling wood storks (Ogden et al. 1976). Table 8 lists the fish species consumed by wood storks in Ogden et al. (1976).

Table 8. Primary Fish Species consumed by Wood Storks from Ogden et al. (1976)

Common name	Scientific name	Percent Individuals	Percent Biomass
Sunfishes	*Centrarchidae*	14	44
Yellow bullhead	*Italurus natalis*	2	12
Marsh killifish	*Fundulus confluentus*	18	11
Flagfish	*Jordenella floridae*	32	7
Sailfin molly	*Poecilia latipinna*	20	11

These species were also observed to be consumed in much greater proportions than they occur at feeding sites, and abundant smaller species [*e.g.*, mosquitofish (*Gambusia affinis*), least killifish (*Heterandria formosa*), bluefin killifish (*Lucania goodei*)] are under-represented, which the researchers believed was probably because their small size did not elicit a bill-snapping reflex in these tactile feeders (Coulter et al. 1999). Their studies also showed that, in addition to selecting larger species of fish, wood storks consumed individuals that are significantly larger (>3.5 cm) than the mean size available (2.5 cm), and many were greater than 1-year old (Ogden et al. 1976, Coulter et al. 1999). However, Ogden et al. (1976) also found that wood storks most likely consumed fish that were between 1.5 and 9.0 cm in length (Figure 4 in Ogden et al. 1976).

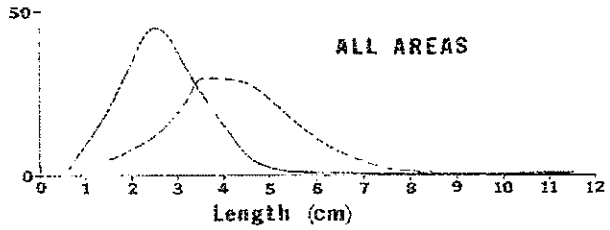


FIGURE 4. Length frequency distribution of fish available to and consumed by Wood Storks in different habitats.

In Ogden et al.'s (1976) Figure 4, the dotted line is the distribution of fish consumed and the solid line is the available fish. Straight interpretation of the area under the dotted line curve

represents the size classes of fish most likely consumed by wood storks and is the basis of our determination of the amount of biomass that is within the size range of fish most likely consumed by wood storks, which in this example is a range size of 1.5 to 9.0 cm in length.

Wood stork suitable prey base (biomass per hydroperiod): To estimate that fraction of the available fish biomass that might be consumed by wood storks, the following analysis was conducted. Trexler et al.'s (2002) 2-year throw trap data of absolute and relative fish abundance per hydroperiod distributed across 20 study sites in the ENP and the WCAs was considered to be representative of the Everglades fish assemblage available to wood storks (n = 37,718 specimens of 33 species). Although Trexler et al.'s (2002) data was based on throw-trap data and representative of fish 8 cm or smaller, the Service believes the data set can be used to predict the biomass/m^2 for total fish (those both smaller and larger than 8 cm). This approach is also supported, based on our assessment of prey consumption by wood storks in Ogden et al.'s (1976) study (Figure 4), that the wood storks general preference is for fish measuring 1.5 cm to 9 cm and is generally inclusive of Trexler et al.'s (2002) throw-trap data of fish 8 cm or smaller.

To estimate the fraction of the fish biomass that might be consumed by wood storks, the Service, using Trexler et al.'s (2002) throw-trap data set, determined the mean biomass of each fish species that fell within the wood stork prey size limits of 1.5 to 9.0 cm. The mean biomass of each fish species was estimated from the length and wet mass relationships for Everglades' icthyofauna developed by Kushlan et al. (1986). The proportion of each species that was outside of this prey length and biomass range was estimated using the species mean and variance provided in Table 1 in Kushlan et al. (1986). These biomass estimates assumed the length and mass distributions of each species was normally distributed and the fish biomass could be estimated by eliminating that portion of each species outside of this size range. These biomass estimates of available fish prey were then standardized to a sum of 6.5 g/m^2 for Class 7 hydroperiod wetlands (Service 2009).

For example, Kushlan et al. (1986) lists the warmouth (*Lepomis gulosus*) with a mean average biomass of 36.76 g. In fish samples collected by Trexler et al. (2002), this species accounted for 0.048 percent (18/37,715=0.000477) of the Everglades freshwater ichthyofauna. Based on an average biomass of 36.76 g (Kushlan et al. 1986), the 0.048 percent representation from Trexler et al. (2002) is equivalent to an average biomass of 1.75 g (36.76*0.048) or 6.57 percent (1.75/26.715) of the estimated average biomass (26.715 g) of Trexler et al.'s (2002) samples (Service 2009).

Standardizing these data to a sample size of 6.5 g/m^2, the warmouth biomass for long hydroperiod wetlands would be about 0.427 g (Service 2009). However, the size frequency distribution (assumed normal) for warmouth (Kushlan et al. 1986) indicate 48 percent are too large for wood storks and 0.6 percent are too small (outside the 1.5 cm to 9 cm size range most likely consumed), so the warmouth biomass within the wood stork's most likely consumed size range is only 0.208 g (0.427*(0.48+0.006)=0.2075) in a 6.5 g/m^2 sample. Using this approach summed over all species in long hydroperiod wetlands, only 3.685 g/m^2 of the 6.5 g/m^2 sample consists of fish within the size range likely consumed by wood storks or about 57 percent (3.685/6.5*100=56.7) of the total biomass available.

An alternative approach to estimate the available biomass is based on Ogden et al. (1976). In their study (Table 8), the sunfishes and four other species that accounted for 84 percent of the biomass eaten by wood storks totaled 2.522 g of the 6.5 g/m^2 sample (Service 2009). Adding the remaining 16 percent from other species in the sample, the total biomass would suggest that 2.97 g of a 6.5 g/m^2 sample are most likely to be consumed by wood storks or about 45.7 percent (2.97/6.5=0.4569)

The mean of these two estimates is 3.33g/m^2 for long hydroperiod wetlands (3.685 + 2.97 = 6.655/ 2 = 3.33). This proportion of available fish prey of a suitable size (3.33 g/m^2 / 6.5 g/m^2 = 0.51 or 51 percent) was then multiplied by the total fish biomass in each hydroperiod class to provide an estimate of the total biomass of a hydroperiod that is the appropriate size and species composition most likely consumed by wood storks.

As an example, a Class 3 SFWMD model hydroperiod wetland with a biomass of 2.3 grams/m^2, adjusted by 51 percent for appropriate size and species composition, provides an available biomass of 1.196 grams/m^2. Following this approach, the biomass per hydroperiod potentially available to predation by wood storks based on size and species composition is:

Table 9. Wood Stork Suitable Prey Base (fish biomass per hydroperiod)

Hydroperiod Class	Days Inundated	Fish Biomass
Class 1	0-60	0.26 gram/m^2
Class 2	60-120	0.52 gram/m^2
Class 3	120-180	1.196 grams/m^2
Class 4	180-240	2.184 grams/m^2
Class 5	240-300	2.704 grams/m^2
Class 6	300-330	3.12 grams/m^2
Class 7	330-365	3.38 grams/m^2

Wood Stork-Wading Bird Prey Consumption Competition: In 2006, (Service 2006), the Service developed an assessment approach that provided a foraging efficiency estimate that 55 percent of the available biomass was actually consumed by wood storks. Since the implementation of this assessment approach, the Service has received comments from various sources concerning the Service's understanding of Fleming et al.'s (1994) assessment of prey base consumed by wood storks versus prey base assumed available to wood stork and the factors included in the 90 percent prey reduction value.

In our original assessment, we noted that, "*Fleming et al. (1994) provided an estimate of 10 percent of the total biomass in their studies of wood stork foraging as the amount that is actually consumed by the storks. However, the Fleming et al. (1994) estimate also includes a second factor, the suitability of the foraging site for wood storks, a factor that we have calculated separately. In their assessment, these two factors accounted for a 90 percent reduction in the biomass actually consumed by the storks. We consider these two factors as equally important and are treated as equal components in the 90 percent reduction; therefore, we consider each factor to represent 45 percent of the reduction. In consideration of this approach, Fleming et al.'s (1994) estimate that 10 percent of the biomass would actually be consumed by the storks would be added to the 45 percent value for an estimate that 55 percent (10 percent plus the remaining 45 percent) of the available biomass would actually be consumed by the storks and is the factor we believe represents the amount of the prey base that is actually consumed by the stork.*"

In a follow-up review of Fleming et al.'s (1994) report, we noted that the 10 percent reference is to prey available to wood storks, not prey consumed by wood storks. We also noted the 90 percent reduction also includes an assessment of prey size, an assessment of prey available by water level (hydroperiod), an assessment of suitability of habitat for foraging (openness), and an assessment for competition with other species, not just the two factors considered originally by the Service (suitability and competition). Therefore, in re-evaluating of our approach, we identified four factors in the 90 percent biomass reduction and not two as we previously considered. We believe these four factors are represented as equal proportions of the 90 percent reduction, which corresponds to an equal split of 22.5 percent for each factor. Since we have accounted previously for three of these factors in our approach (prey size, habitat suitability, and hydroperiod) and they are treated separately in our assessment, we consider a more appropriate foraging efficiency to represent the original 10 percent and the remaining 22.5 percent from the 90 percent reduction discussed above. Following this revised assessment, our competition factor would be 32.5 percent, not the initial estimate of 55 percent.

Other comments reference the methodology's lack of sensitivity to limiting factors, i.e., is there sufficient habitat available across all hydroperiods during critical life stages of wood stork nesting and does this approach over emphasize the foraging biomass of long hydroperiod wetlands with a corresponding under valuation of short hydroperid wetlands. The Service is aware of these questions and is examining alternative ways to assess these concerns. However, until futher research is generated to refine our approach, we continue to support the assessment tool as outlined.

Following this approach, Table 10 has been adjusted to reflect the competition factor and represents the amount of biomass consumed by wood storks and is the basis of our effects assessments (Class 1 hydroperiod with a biomass 0.26 g, multiplied by 0.325, results in a value of 0.08 g [0.25*.325=0.08]) (Table 10).

Table 10 Actual Biomass Consumed by Wood Storks

Hydroperiod Class	Days Inundated	Fish Biomass
Class 1	0-60	0.08 gram/m^2
Class 2	60-120	0.17 gram/m^2
Class 3	120-180	0.39 grams/m^2
Class 4	180-240	0.71 grams/m^2
Class 5	240-300	0.88 grams/m^2
Class 6	300-330	1.01 grams/m^2
Class 7	330-365	1.10 grams/m^2

Sample Project of Biomass Calculations and Corresponding Concurrence Determination

Example 1:

An applicant is proposing to construct a residential development with unavoidable impacts to 5 acres of wetlands and is proposing to restore and preserve 3 acres of wetlands onsite. Data on the onsite wetlands classified these systems as exotic impacted wetlands with greater than 50

percent but less than 75 percent exotics (Table 3) with an average hydroperiod of 120-180 days of inundation.

The equation to calculate the biomass lost is: The number of acres, converted to square-meters, times the amount of actual biomass consumed by the wood stork (Table 10), times the exotic foraging suitability index (Table 3), equals the amount of grams lost, which is converted to kg.

Biomass lost (5*4,047*0.39 (Table 10)*0.37 (Table 3)=2,919.9 grams or 2.92 kg)

In the example provided, the 5 acres of wetlands, converted to square-meters (1 acre= 4,047 m^2) would provide 2.9 kg of biomass (5*4,047*0.39 (Table 10)*0.37 (Table 3)= 2,919.9 grams or 2.9 kg), which would be lost from development.

The equation to calculate the biomass from the preserve is the same, except two calculations are needed, one for the existing biomass available and one for the biomass available after restoration.

Biomass Pre: (3*4,047*0.39(Table 10)*0.37 (Table 3)=1,751.95grams or 1.75 kg)

Biomass Post: (3*4,047*0.39 (Table 10)*1(Table 3)=4,734.99 grams or 4.74 kg)

Net increase: 4.74 kg-1.75 kg = 2.98 kg Compensation Site

Project Site Balance 2.98 kg- 2.92 kg = 0.07kg

The compensation proposed is 3 acres, which is within the same hydroperiod and has the same level of exotics. Following the calculations for the 5 acres, the 3 acres in its current habitat state, provides 1.75 kg (3*4,047*0.39 (Table 10)*0.37 (Table 3)=1,751.95grams or 1.75 kg) and following restoration provides 4.74 kg (3*4,047*0.39 (Table 10)*1(Table 3)=4,734.99 grams or 4.74 kg), a net increase in biomass of 2.98 kg (4.74-1.75=2.98).

Example 1: 5 acre wetland loss, 3 acre wetland enhanced – same hydroperiod - NLAA

Hydroperiod	Existing Footprint		On-site Preserve Area				Net Change*	
			Pre Enhancement		Post Enhancement			
	Acres	Kgrams	Acres	Kgrams	Acres	Kgrams	Acres	Kgrams
Class 1 - 0 to 60 Days								
Class 2 - 60 to 120 Days								
Class 3 - 120 to 180 Days	5	2.92	3	1.75	3	4.74	(5)	0.07
Class 4 - 180 to 240 Days								
Class 5 - 240 to 300 Days								
Class 6 - 300 to 330 Days								
Class 7 - 330 to 365 days								
TOTAL	**5**	**2.92**	**3**	**1.75**	**3**	**4.74**	**(5)**	**0.07**

*Since the net increase in biomass from the restoration provides 2.98 kg and the loss is 2.92 kg, there is a positive outcome (4.74-1.75-2.92=0.07) in the same hydroperiod and Service concurrence with a NLAA is appropriate.

Example 2:

In the above example, if the onsite preserve wetlands were a class 4 hydroperiod, which has a value of 0.71. grams/m^2 instead of a class 3 hydroperiod with a 0.39 grams/m^2 [Table 10]), there would be a loss of 2.92 kg of short hydroperiod wetlands (as above) and a net gain of 8.62 kg of long-hydroperiod wetlands.

Biomass lost: (5*4,047*0.39 (Table 10)*0.37 (Table 3)=2,919.9 grams or 2.92 kg)

The current habitat state of the preserve provides 3.19 kg (3*4,047*0.71 (Table 10)*0.37 (Table 3)=3,189.44 grams or 3.19 kg) and following restoration the preserve provides 8.62 kg (3*4,047*0.71 (Table 10)*1(Table 3)= 8,620.11 grams or 8.62 kg, thus providing a net increase in class 4 hydroperiod biomass of 5.43 kg (8.62-3.19=5.43).

Biomass Pre: (3*4,047*0.71(Table 10)*0.37 (Table 3) = 3,189.44 grams or 3.19 kg)

Biomass Post: (3*4,047*0.71 (Table 10)*1(Table 3)=8,620.11 grams or 8.62 kg)

Net increase: 8.62 kg-3.19 kg = 5.43 kg

Project Site Balance 5.43 kg- 2.92 kg = 2.51 kg

Example 2: 5 acre wetland loss, 3 acre wetland enhanced – different hydroperiod – May Affect

Hydroperiod	Existing Footprint		On-site Preserve Area				Net Change*	
			Pre Enhancement		Post Enhancement			
	Acres	Kgrams	Acres	Kgrams	Acres	Kgrams	Acres	Kgrams
Class 1 - 0 to 60 Days								
Class 2 - 60 to 120 Days								
Class 3 - 120 to 180 Days	5	2.92					(5)	-2.92
Class 4 - 180 to 240 Days			3	3.19	3	8.62	0	5.43
Class 5 - 240 to 300 Days								
Class 6 - 300 to 330 Days								
Class 7 - 330 to 365 days								
TOTAL	**5**	**2.92**	**3**	**3.19**	**3**	**8.62**	**(5)**	**2.51**

In this second example, even though there is an overall increase in biomass, the biomass loss is a different hydroperiod than the biomass gain from restoration, therefore, the Service could not concur with a NLAA and further coordination with the Service is appropriate.

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August 1, 2017

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

Subject: Consultation Key for the Eastern Indigo Snake – Revised

Dear Mr. Kinard:

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

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

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

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

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

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

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

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

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

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

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

Scope of the Key

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

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

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

Habitat

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

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

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

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

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

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

Even though thermal stress may not be a limiting factor throughout the year in south Florida, eastern indigo snakes still seek and use underground refugia. On the sandy central ridge of central Florida, eastern indigo snakes use gopher tortoise burrows more (62 percent) than other underground refugia (Layne and Steiner 1996). Other underground refugia used include armadillo (*Dasypus novemcinctus*) burrows near citrus groves, cotton rat (*Sigmodon hispidus*) burrows, and land crab (*Cardisoma guanhumi*) burrows in coastal areas (Layne and Steiner 1996; Wilson and Porras 1983). Natural ground holes, hollows at the base of trees or shrubs, ground litter, trash piles, and crevices of rock-lined ditch walls are also used (Layne and Steiner 1996). These refugia are used most frequently where tortoise burrows are not available, principally in low-lying areas off the central and coastal ridges.

Minimization Measures

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

Determinations

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

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

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

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

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

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

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

B. Permit will be conditioned for use of the Service's most current guidance for Standard Protection Measures For The Eastern Indigo Snake (currently 2013) during site preparation and project construction.....go to C

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

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

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

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

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

E. Any permit will be conditioned such that all gopher tortoise burrows, active or inactive, will be excavated prior to site manipulation in the vicinity of the burrow[1]. If an eastern indigo snake is encountered, the snake must be allowed to vacate the area prior to additional site manipulation in the vicinity. Any permit will also be conditioned such that holes, cavities, and snake refugia other than gopher tortoise burrows will be inspected each morning before planned site manipulation of a particular area, and, if occupied by an eastern indigo snake, no work will commence until the snake has vacated the vicinity of proposed work.....**NLAA**[2]

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

End Key

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

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

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

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

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

Sincerely,

Roxanna Hinzman
Field Supervisor
South Florida Ecological Services

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

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THE CORPS OF ENGINEERS, JACKSONVILLE DISTRICT, AND THE STATE OF FLORIDA EFFECT DETERMINATION KEY FOR THE MANATEE IN FLORIDA
April 2013

Purpose and background of the key

The purpose of this document is to provide guidance to improve the review of permit applications by U.S. Army Corps of Engineers' (Corps) Project Managers in the Regulatory Division regarding the potential effects of proposed projects on the endangered West Indian manatee (*Trichechus manatus*) in Florida, and by the Florida Department of Environmental Protection or its authorized designee or Water Management District, for evaluating projects under the State Programmatic General Permit (SPGP) or any other Programmatic General Permits that the Corps may issue for administration by the above agencies. Such guidance is contained in the following dichotomous key. The key applies to permit applications for in-water activities such as, but not limited to: (1) dredging [new or maintenance dredging of not more than 50,000 cubic yards], placement of fill material for shoreline stabilization, and construction/placement of other in-water structures as well as (2) construction of docks, marinas, boat ramps and associated trailer parking spaces, boat slips, dry storage or any other watercraft access structures or facilities.

At a certain step in the key, the user is referred to graphics depicting important manatee areas or areas with inadequate protection. The maps can be downloaded from the Corps' web page at http://www.saj.usace.army.mil/Missions/Regulatory/SourceBook.aspx. We intend to utilize the most recent depiction of these areas, so should these areas be modified by statute, rule, ordinance and/or other legal mandate or authorization, we will modify the graphical depictions accordingly. These areas may be shaded or otherwise differentiated for identification on the maps.

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

Scope of the key

This key should only be used in the review of permit applications for effect determinations on manatees and should not be used for other listed species or for other aquatic resources such as Essential Fish Habitat (EFH). Corps Project Managers should ensure that consideration of the project's effects on any other listed species and/or on EFH is performed independently. This key may be used to evaluate applications for all types of State of Florida (State Programmatic General Permits, noticed general permits, standard general permits, submerged lands leases, conceptual and individual permits) and Department of the Army (standard permits, letters of permission, nationwide permits, and regional general permits) permits and authorizations. The final effect determination will be based on the project location and description; the potential effects to manatees, manatee habitat, and/or manatee critical habitat; and any measures (such as project components, standard construction precautions, or special conditions included in the authorization) to avoid or minimize effects to manatees or manatee critical habitat. Projects that key to a "may affect" determination equate to "likely to adversely affect" situations, and those projects should not be processed under the SPGP or any other programmatic general permit. For

all “may affect” determinations, Corps Project Managers shall refer to the Manatee Programmatic Biological Opinion, dated March 21, 2011, for guidance on eliminating or minimizing potential adverse effects resulting from the proposed project. If unable to resolve the adverse effects, the Corps may refer the applicant to the U.S. Fish and Wildlife Service (Service) for further assistance in attempting to revise the proposed project to a “may affect, not likely to adversely affect” level. The Service will coordinate with the Florida Fish and Wildlife Conservation Commission (FWC) and the counties, as appropriate. Projects that provide new access for watercraft and key to “may affect, not likely to adversely affect” may or may not need to be reviewed individually by the Service.

MANATEE KEY
Florida[1]
April 2013

The key is not designed to be used by the Corps' Regulatory Division for making their effect determinations for dredging projects greater than 50,000 cubic yards, the Corps' Planning Division in making their effect determinations for civil works projects or by the Corps' Regulatory Division for making their effect determinations for projects of the same relative scope as civil works projects. These types of activities must be evaluated by the Corps independently of the key.

A. Project is not located in waters accessible to manatees and does not directly or indirectly affect manatees (see Glossary).....*No effect*

Project is located in waters accessible to manatees **or** directly or indirectly affects manatees ..... B

B. Project consists of one or more of the following activities, all of which are *May affect*:

1. blasting or other detonation activity for channel deepening and/or widening, geotechnical surveys or exploration, bridge removal, movies, military shows, special events, etc.;

2. installation of structures which could restrict or act as a barrier to manatees;

3. new or changes to existing warm or fresh water discharges from industrial sites, power plants, or natural springs or artesian wells (but only if the new or proposed change in discharge requires a Corps permit to accomplish the work);

4. installation of new culverts and/or maintenance or modification of existing culverts (where the culverts are 8 inches to 8 feet in diameter, ungrated and in waters accessible, or potentially accessible, to manatees)[2];

5. mechanical dredging from a floating platform, barge or structure[3] that restricts manatee access to less than half the width of the waterway;

6. creation of new slips or change in use of existing slips, even those located in a county with a State-approved Manatee Protection Plan (MPP) in place and the number of slips is less than the MPP threshold, to accommodate docking for repeat use vessels, (*e.g.*, water taxis, tour boats, gambling boats, etc; or slips or structures that are not civil works projects, but are frequently used to moor large vessels (>100') for shipping and/or freight purposes; does not include slips used for docking at boat sales or repair facilities or loading/unloading at dry stack storage facilities and boat ramps); [Note: For projects within Bay, Dixie, Escambia, Franklin, Gilchrist, Gulf, Hernando, Jefferson, Lafayette, Monroe (south of Craig Key), Nassau, Okaloosa, Okeechobee, Santa Rosa, Suwannee, Taylor, Wakulla or Walton County, the reviewer should proceed to Couplet C.]

7. any type of in-water activity in a Warm Water Aggregation Area (WWAA) or No Entry Area (see Glossary and accompanying Maps[4]); [Note: For residential docking facilities in a Warm Water Aggregation Area that is not a Federal manatee sanctuary or No Entry Area, the reviewer should proceed to couplet C.]

8. creation or expansion of canals, basins or other artificial shoreline and/or the connection of such features to navigable waters of the U.S.; [Note: For projects proposing a single residential dock, the reviewer should proceed to couplet C; otherwise, project is a *May Affect*.]

9. installation of temporary structures (docks, buoys, etc.) utilized for special events such as boat races, boat shows, military shows, etc., but only when consultation with the U.S. Coast Guard and FWS has not occurred; [Note: See programmatic consultation with the U.S. Coast Guard on manatees dated May 10, 2010.].

Project is other than the activities listed above C

C. Project is located in an Important Manatee Area (IMA) (see Glossary and accompanying Maps[4]) ..... D

Project is not located in an Important Manatee Area (IMA) (see Glossary and accompanying Maps[4]) ..... G

D. Project includes dredging of less than 50,000 cubic yards ..... E

Project does not include dredging ..... G

E. Project is for dredging a residential dock facility or is a land-based dredging operation ..... N

Project not as above ..... F

F. Project proponent **does not elect** to follow all dredging protocols described on the maps for the respective IMA in which the project is proposed ..... *May affect*

Project proponent **elects** to follow all dredging protocols described on the maps for the respective IMA in which the project is proposed ..... G

G. Project provides new[5] access for watercraft, *e.g.*, docks or piers, marinas, boat ramps and associated trailer parking spaces, new dredging, boat lifts, pilings, floats, floating docks, floating vessel platforms, boat slips, dry storage, mooring buoys, or other watercraft access (residential boat lifts, pilings, floating docks, and floating vessel platforms installed in existing slips are not considered new access) or improvements allowing increased watercraft usage ..... H

Project does not provide new[5] access for watercraft, *e.g.*, bulkheads, seawalls, riprap, maintenance dredging, boardwalks and/or the maintenance (repair or rehabilitation) of currently serviceable watercraft access structures provided all of the following are met: (1) the number of slips is not increased; (2) the number of existing slips is not in question; and (3) the improvements do not allow increased watercraft usage ..... N

H. Project is located in the Braden River Area of Inadequate Protection (Manatee County) (see Glossary and accompanying AIP Map[4])
..... *May affect*

Project is not located in the Braden River Area of Inadequate Protection (Manatee County) (see Glossary and accompanying AIP Map[4]) I

I. Project is for a multi-slip facility (see Glossary) ..... J

Project is for a residential dock facility or is for dredging (see Glossary) ..... N

J. Project is located in a county that currently has a State-approved MPP in place (BREVARD, BROWARD, CITRUS, CLAY, COLLIER, DUVAL, INDIAN RIVER, LEE, MARTIN, MIAMI-DADE, PALM BEACH, ST. LUCIE, SARASOTA, VOLUSIA) or shares contiguous waters with a county having a State-approved MPP in place (LAKE, MARION, SEMINOLE)[6] ..... K

Project is located in a county not required to have a State-approved MPP L

K. Project has been developed or modified to be consistent with the county's State-approved MPP **and** has been verified by a FWC review (or FWS review if project is exempt from State permitting) **or** the number of slips is below the MPP threshold ..... N

Project has not been reviewed by the FWC or FWS **or** has been reviewed by the FWC or FWS **and** determined that the project is not consistent with the county's State-approved MPP ..... *May affect*

L. Project is located in one of the following counties: CHARLOTTE, DESOTO[7], FLAGLER, GLADES, HENDRY, HILLSBOROUGH, LEVY, MANATEE, MONROE[7], PASCO[7], PINELLAS ..... M

Project is located in one of the following counties: BAY, DIXIE, ESCAMBIA, FRANKLIN, GILCHRIST, GULF, HERNANDO, JEFFERSON, LAFAYETTE, MONROE (south of Craig Key), NASSAU, OKALOOSA, OKEECHOBEE, PUTNAM, SANTA ROSA, ST. JOHNS, SUWANNEE, TAYLOR, WAKULLA, WALTON ..... N

M. The number of slips does not exceed the residential dock density threshold (see Glossary) ..... N

The number of slips exceeds the residential dock density threshold (see Glossary) ..... *May affect*

N. Project impacts to submerged aquatic vegetation[8], emergent vegetation or mangrove will have beneficial, insignificant, discountable[9] or no effects on the manatee[10] ..... O

Project impacts to submerged aquatic vegetation[8], emergent vegetation or mangrove may adversely affect the manatee[10] ..... *May affect*

O. Project proponent **elects** to follow standard manatee conditions for in-water work[11] and requirements, as appropriate for the proposed activity, prescribed on the maps[4] ..... P

Project proponent **does not elect** to follow standard manatee conditions for in-water work[11] and appropriate requirements prescribed on the maps[4] ..... *May affect*

P. If project is for a new or expanding[5] multi-slip facility and is located in a county with a State-approved MPP in place **or** in Bay, Dixie, Escambia, Franklin, Gilchrist, Gulf, Hernando, Jefferson, Lafayette, Monroe (south of Craig Key), Nassau, Okaloosa, Okeechobee, Putnam, St. Johns, Santa Rosa, Suwannee, Taylor, Wakulla or Walton County, the determination of "*May affect, not likely to adversely affect*" is appropriate[12] and no further consultation with the Service is necessary.

If project is for a new or expanding[5] multi-slip facility and is located in Charlotte, Desoto, Flagler, Glades, Hendry, Hillsborough, Levy, Manatee, Monroe (north of Craig Key), Pasco, or Pinellas County, further consultation with the Service is necessary for "*May affect, not likely to adversely affect*" determinations.

If project is for repair or rehabilitation of a multi-slip facility and is located in an Important Manatee Area, further consultation with the Service is necessary for "*May affect, not likely to adversely affect*" determinations. If project is for repair or rehabilitation of a multi-slip facility and: (1) is not located in an Important Manatee Area; (2) the number of slips is not increased; (3) the number of existing slips is not in question; and (4) the improvements to the existing watercraft access structures do not allow increased watercraft usage, the determination of "*May affect, not likely to adversely affect*" is appropriate[12] and no further consultation with the Service is necessary.

If project is a residential dock facility, shoreline stabilization, or dredging, the determination of "*May affect, not likely to adversely affect*" is appropriate[12] and no further consultation with the Service is necessary. Note: For residential dock facilities located in a Warm Water Aggregation Area or in a No Entry area, seasonal restrictions may apply. See footnote 4 below for maps showing restrictions.

If project is other than repair or rehabilitation of a multi-slip facility, a new[5] multi-slip facility, residential dock facility, shoreline stabilization, or dredging, and does not provide new[5] access for watercraft or

improve an existing access to allow increased watercraft usage, the determination of "*May affect, not likely to adversely affect*" is appropriate[12] and no further consultation with the Service is necessary.

[1] On the St. Mary's River, this key is only applicable to those areas that are within the geographical limits of the State of Florida.

[2] All culverts 8 inches to 8 feet in diameter must be grated to prevent manatee entrapment. To effectively prevent manatee access, grates must be permanently fixed, spaced a maximum of 8 inches apart (may be less for culverts smaller than 16 inches in diameter) and may be installed diagonally, horizontally or vertically. For new culverts, grates must be attached prior to installation of the culverts. Culverts less than 8 inches or greater than 8 feet in diameter are exempt from this requirement. If new culverts and/or the maintenance or modification of existing culverts are grated as described above, the determination of "*May affect, not likely to adversely affect*" is appropriate[11] and no further consultation with the Service is necessary.

[3] If the project proponent agrees to follow the standard manatee conditions for in-water work as well as any special conditions appropriate for the proposed activity, further consultation with the Service is necessary for "*May affect, not likely to adversely affect*" determinations. These special conditions may include, but are not limited to, the use of dedicated observers (see Glossary for definition of dedicated observers), dredging during specific months (warm weather months vs cold weather months), dredging during daylight hours only, adjusting the number of dredging days, does not preclude or discourage manatee egress/ingress with turbidity curtains or other barriers that span the width of the waterway, etc.

[4] Areas of Inadequate Protection (AIPs), Important Manatee Areas (IMAs), Warm Water Aggregation Areas (WWAAs) and No Entry Areas are identified on these maps and defined in the Glossary for the purposes of this key. These maps can be viewed on the Corps' web page. If projects are located in a No Entry Area, special permits may be required from FWC in order to access these areas (please refer to Chapter 68C-22 F.A.C. for boundaries; maps are also available at FWC's web page).

[5] New access for watercraft is the addition or improvement of structures such as, but not limited to, docks or piers, marinas, boat ramps and associated trailer parking spaces, boat lifts, pilings, floats, floating docks, floating vessel platforms, (maintenance dredging, residential boat lifts, pilings, floating docks, and floating vessel platforms installed in existing slips are not considered new access), boat slips, dry storage, mooring buoys, new dredging, etc., that facilitates the addition of watercraft to, and/or increases watercraft usage in, waters accessible to manatees. The repair or rehabilitation of any type of currently serviceable watercraft access structure is not considered new access provided all of the following are met: (1) the number of slips is not increased; (2) the number of existing slips is not in question; and (3) the improvements to the existing watercraft access structures do not result in increased watercraft usage.

[6] Projects proposed within the St. Johns River portion of Lake, Marion, and Seminole counties and contiguous with Volusia County shall be evaluated using the Volusia County MPP.

[7] For projects proposed within the following areas: the Peace River in DeSoto County; all areas north of Craig Key in Monroe County, and the Anclote and Pithlachascotee Rivers in Pasco County, proceed to Couplet M. For all other locations in DeSoto, Monroe (south of Craig Key) and Pasco Counties, proceed to couplet N.

[8] Where the presence of the referenced vegetation is confirmed within the area affected by docks and other piling-supported minor structures and the reviewer has concluded that the impacts to SAV, marsh or mangroves would not adversely affect the manatee or its critical habitat, proceed to couplet O.

Where the presence of the referenced vegetation is confirmed within the area affected by docks and other piling-supported minor structures and the reviewer has concluded that the impacts to SAV, marsh or mangroves would adversely affect the manatee or its critical habitat, the applicant can elect to avoid/minimize impacts to that vegetation. In that instance, where impacts are unavoidable and the applicant elects to abide by or employ construction techniques that exceed the criteria in the following documents, the reviewer should conclude that the impacts to SAV, marsh or mangroves would not adversely affect the manatee or its critical habitat and proceed to couplet O.

- "Construction Guidelines in Florida for Minor Piling-Supported Structures Constructed in or over Submerged Aquatic Vegetation (SAV), Marsh or Mangrove Habitat," prepared jointly by the U.S. Army Corps of Engineers and the National Marine Fisheries Service (August 2001) [refer to the Corps' web page], and

- "Key for Construction Conditions for Docks or Other Minor Structures Constructed in or over Johnson's seagrass (*Halophila johnsonii*)," prepared jointly by the National Marine Fisheries Service and U.S. Army Corps of Engineers (October 2002), for those projects within the known range of Johnson's seagrass occurrence (Sebastian Inlet to central Biscayne Bay in the lagoon systems on the east coast of Florida) [refer to the Corps' web page],

Where the presence of the referenced vegetation is confirmed within the area affected by docks and other piling-supported minor structures and the reviewer has concluded that the impacts to SAV, marsh or mangroves would adversely affect the manatee or its critical habitat, and the applicant does not elect to follow the above Guidelines, the Corps will need to request formal consultation on the manatee with the Service as *May affect.*

For activities other than docks and other piling-supported minor structures proposed in SAV, marsh, or mangroves (*e.g.*, new dredging, placement of riprap, bulkheads, etc.), if the reviewer determines the impacts to the SAV, marsh or mangroves will not adversely affect the manatee or its critical habitat, proceed to couplet O, otherwise the Corps will need to request formal consultation on the manatee with the Service as *May affect.*

[9] See Glossary, under "is not likely to adversely affect."

[10] Federal reviewers, when making your effects determination, consider effects to manatee designated critical habitat pursuant to section 7(a)(2) of the Endangered Species Act. State reviewers, when making your effects determination, consider effects to manatee habitat within the entire State of Florida, pursuant to Chapter 370.12(2)(b) Florida Statutes.

[11] See the Corps' web page for manatee construction conditions. At this time, manatee construction precautions c and f are not required in the following Florida counties: Bay, Escambia, Franklin, Gilchrist, Gulf, Jefferson, Lafayette, Okaloosa, Santa Rosa, Suwannee, and Walton.

[12] By letter dated April 25, 2013, the Corps received the Service's concurrence with "*May affect, not likely to adversely affect*" determinations made pursuant to this key for the following activities: (1) selected non-watercraft access projects; (2) watercraft-access projects that are residential dock facilities, excluding those located in the Braden River AIP; (3) launching facilities solely for kayaks and canoes, and (4) new or expanding multi-slip facilities located in Bay, Dixie, Escambia, Franklin, Gilchrist, Gulf, Hernando, Jefferson, Lafayette, Monroe (south of Craig Key), Nassau, Okaloosa, Okeechobee, Santa Rosa, Suwannee, Taylor, Wakulla or Walton County.

Additionally, in the same letter dated April 25, 2013, the Corps received the Service's concurrence for "*May affect, not likely to adversely affect*" determinations specifically made pursuant to Couplet G of the key for the repair or rehabilitation of currently serviceable multi-slip watercraft access structures provided all of the following are met: (1) the project is not located in an IMA, (2) the number of slips is not increased; (3) the number of existing slips is not in question; and (4) the improvements to the existing watercraft access structures do not allow increased watercraft usage. Upon receipt of such a programmatic concurrence, no further consultation with the Service for these projects is required.

GLOSSARY

Areas of inadequate protection (AIP) – Areas within counties as shown on the maps where the Service has determined that measures intended to protect manatees from the reasonable certainty of watercraft-related take are inadequate. Inadequate protection may be the result of the absence of manatee or other watercraft speed zones, insufficiency of existing speed zones, deficient speed zone signage, or the absence or insufficiency of speed zone enforcement.

Boat slip – A space on land or in or over the water, other than on residential land, that is intended and/or actively used to hold a stationary watercraft or its trailer, and for which intention and/or use is confirmed by legal authorization or other documentary evidence. Examples of boat slips include, but are not limited to, docks or piers, marinas, boat ramps and associated trailer parking spaces, boat lifts, floats, floating docks, pilings, boat davits, dry storage, etc.

Critical habitat – For listed species, this consists of: (1) the specific areas within the geographical area occupied by the species, at the time it is listed in accordance with the provisions of section 4 of the Endangered Species Act (ESA), on which are found those physical or biological features (constituent elements) (a) essential to the conservation of the species and (b) which may require special management considerations or protection; and (2) specific areas outside the geographical area occupied by the species at the time it is listed in accordance with the provisions of section 4 of the ESA, upon a determination by the Secretary that such areas are essential for the conservation of the species. Designated critical habitats are described in 50 CFR 17 and 50 CFR 226.

Currently serviceable – Currently, serviceable means usable as is or with some maintenance, but not so degraded as to essentially require reconstruction.

Direct effects – The direct or immediate effects of the project on the species or its habitat.

Dredging – For the purposes of this key, the term dredging refers to all in-water work associated with dredging operations, including mobilization and demobilization activities that occur in water or require vessels.

Emergent vegetation – Rooted emergent vascular macrophytes such as, but not limited to, cordgrass (*Spartina alterniflora and S. patens*), needle rush (*Juncus roemerianus*), swamp sawgrass (*Cladium mariscoides*), saltwort (*Batis maritima*), saltgrass (*Distichlis spicata*), and glasswort (*Salicornia virginica*) found in coastal salt marsh-related habitats (tidal marsh, salt marsh, brackish marsh, coastal marsh, coastal wetlands, tidal wetlands).

Formal consultation – A process between the Services and a Federal agency or applicant that: (1) determines whether a proposed Federal action is likely to jeopardize the continued existence of listed species or destroy or adversely modify designated critical habitat; (2) begins with a Federal agency's written request and submittal of a complete initiation package; and (3) concludes with the issuance of a biological opinion and incidental take statement by either of the Services. If a proposed Federal action may affect a listed species or designated critical habitat, formal consultation is required (except when the Services concur, in writing, that a proposed

action "is not likely to adversely affect" listed species or designated critical habitat). [50 CFR 402.02, 50 CFR 402.14]

Important manatee areas (IMA) – Areas within certain counties 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. These areas are heavily utilized for feeding, transiting, mating, calving, nursing or resting as indicated by aerial survey data, mortality data and telemetry data. Some of these areas may be federally-designated sanctuaries or state-designated "seasonal no entry" zones. Maps depicting important manatee areas and any accompanying text may contain a reference to these areas and their special requirements. Projects proposed within these areas must address their special requirements.

Indirect effects – Those effects that are caused by or will result from the proposed action and are later in time, but are still reasonably certain to occur. Examples of indirect effects include, but are not limited to, changes in water flow, water temperature, water quality (*e.g.*, salinity, pH, turbidity, nutrients, chemistry), prop dredging of seagrasses, and manatee watercraft injury and mortality. Indirect effects also include watercraft access developments in waters not currently accessible to manatees, but watercraft access can, is, or may be planned to waters accessible to manatees by the addition of a boat lift or the removal of a dike or plug.

Informal consultation – A process that includes all discussions and correspondence between the Services and a Federal agency or designated non-Federal representative, prior to formal consultation, to determine whether a proposed Federal action may affect listed species or critical habitat. This process allows the Federal agency to utilize the Services' expertise to evaluate the agency's assessment of potential effects or to suggest possible modifications to the proposed action which could avoid potentially adverse effects. If a proposed Federal action may affect a listed species or designated critical habitat, formal consultation is required (except when the Services concur, in writing, that a proposed action "is not likely to adversely affect" listed species or designated critical habitat). [50 CFR 402.02, 50 CFR 402.13]

In-water activity – Any type of activity used to construct/repair/replace any type of in-water structure or fill; the act of dredging.

In-water structures – watercraft access structures – Docks or piers, marinas, boat ramps, boat slips, boat lifts, floats, floating docks, pilings (depending on use), boat davits, etc.

In-water structures – other than watercraft access structures – Bulkheads, seawalls, riprap, groins, boardwalks, pilings (depending on use), etc.

Is likely to adversely affect – The appropriate finding in a biological assessment (or conclusion during informal consultation) if any adverse effect to listed species may occur as a direct or indirect result of the proposed action or its interrelated or interdependent actions and the effect is not: discountable, insignificant, or beneficial (see definition of "is not likely to adversely affect"). An "is likely to adversely affect" determination requires the initiation of formal consultation under section 7 of the ESA.

Is not likely to adversely affect – The appropriate conclusion when effects on listed species are expected to be discountable, insignificant, or completely beneficial. **Discountable effects** are those extremely unlikely to occur. **Insignificant effects** relate to the size of the impact and should never reach the scale where take occurs. **Beneficial effects** are contemporaneous positive effects without any adverse effects to the species. Based on best judgment, a person would not (1) be able to meaningfully measure, detect, or evaluate insignificant effects or (2) expect discountable effects to occur.

Manatee Protection Plan (MPP) – A manatee protection plan (MPP) is a comprehensive planning document that addresses the long-term protection of the Florida manatee through law enforcement, education, boat facility siting, and habitat protection initiatives. Although MPPs are primarily developed by the counties, the plans are the product of extensive coordination and cooperation between the local governments, the FWC, the Service, and other interested parties.

Manatee Protection Plan thresholds – The smallest size of a multi-slip facility addressed under the purview of a Manatee Protection Plan (MPP). For most MPPs, this threshold is five slips or more. For Brevard, Clay, Citrus, and Volusia County MPPs, this threshold is three slips or more.

Mangroves – Rooted emergent trees along a shoreline that, for the purposes of this key, include red mangrove (*Rhizophora mangle*), black mangrove (*Avicennia germinans*) and white mangrove (*Laguncularia racemosa*).

May affect – The appropriate conclusion when a proposed action may pose <u>any</u> effects on listed species or designated critical habitat. When the Federal agency proposing the action determines that a "may affect" situation exists, then they must either request the Services to initiate formal consultation or seek written concurrence from the Services that the action "is not likely to adversely affect" listed species. For the purpose of this key, all "may affect" determinations equate to "likely to adversely affect" and Corps Project Managers should request the Service to initiate formal consultation on the manatee or designated critical habitat. **No effect** – the appropriate conclusion when the action agency determines its proposed action will not affect a listed species or designated critical habitat.

Multi-slip facility – Multi-slip facilities include commercial marinas, private multi-family docks, boat ramps and associated trailer parking spaces, dry storage facilities and any other similar structures or activities that provide access to the water for multiple (five slips or more, except in Brevard, Clay, Citrus, and Volusia counties where it is three slips or more) watercraft. In some instances, the Corps and the Service may elect to review multiple residential dock facilities as a multi-slip facility.

New access for watercraft – New dredging and the addition, expansion or improvement of structures such as, but not limited to, docks or piers, marinas, boat ramps and associated trailer parking spaces, boat lifts, pilings, floats, floating docks, floating vessel platforms, (residential boat lifts, pilings, floats, and floating vessel platforms installed in existing slips are not considered new access), boat slips, dry storage, mooring buoys, etc., that facilitates the addition of watercraft to, and/or increases watercraft usage in, waters accessible to manatees.

Observers – During dredging and other in-water operations within manatee accessible waters, the standard manatee construction conditions require all on-site project personnel to watch for manatees to ensure that those standard manatee construction conditions are met. Within important manatee areas (IMA) and under special circumstances, heightened observation is needed. **Dedicated Observers** are those having some prior experience in manatee observation, are dedicated only for this task, and must be someone other than the dredge and equipment operators/mechanics. **Approved Observers** are dedicated observers who also must be approved by the Service (if Federal permits are involved) and the FWC (if state permits are involved), prior to work commencement. Approved observers typically have significant and often project-specific observational experience. Documentation on prior experience must be submitted to these agencies for approval and must be submitted a minimum of 30 days prior to work commencement. When dedicated or approved observers are required, observers must be on site during all in-water activities, and be equipped with polarized sunglasses to aid in manatee observation. For prolonged in-water operations, multiple observers may be needed to perform observation in shifts to reduce fatigue (recommended shift length is no longer than six hours). Additional information concerning observer approval can be found at FWC's web page.

Residential boat lift – A boat lift installed on a residential dock facility.

Residential dock density ratio threshold – The residential dock density ratio threshold is used in the evaluation of multi-slip projects in some counties without a State-approved Manatee Protection Plan and is consistent with 1 boat slip per 100 linear feet of shoreline (1:100) owned by the applicant.

Residential dock facility – A residential dock facility means a private residential dock which is used for private, recreational or leisure purposes for single-family or multi-family residences designed to moor no more than four vessels (except in Brevard, Clay, Citrus, and Volusia counties which allow only two vessels). This also includes normal appurtenances such as residential boat lifts, boat shelters with open sides, stairways, walkways, mooring pilings, dolphins, etc. In some instances, the Corps and the Service may elect to review multiple residential dock facilities as a multi-slip facility.

Submerged aquatic vegetation (SAV) – Rooted, submerged, aquatic plants such as, but not limited to, shoal grass (*Halodule wrightii*), paddle grass (*Halophila decipiens*), star grass (*Halophila engelmanni*), Johnson's seagrass (*Halophila johnsonii*), sago pondweed (*Potamogeton pectinatus*), clasping-leaved pondweed (*Potamogeton perfoliatus*), widgeon grass (*Ruppia maritima*), manatee grass (*Syringodium filiforme*), turtle grass (*Thalassia testudinum*), tapegrass (*Vallisneria americana*), and horned pondweed (*Zannichellia palustris*).

Warm Water Aggregation Areas (WWAAs) and **No Entry Areas** – Areas within certain counties where increased densities of manatees occur due to the proximity of artificial or natural warm water discharges or springs and are considered necessary for survival. Some of these areas may be federally-designated manatee sanctuaries or state-designated seasonal "no entry" manatee protection zones. Projects proposed within these areas may require consultation in order to offset expected adverse impacts. In addition, special permits may be required from the FWC in order to access these areas.

Watercraft access structures – Docks or piers, marinas, boat ramps and associated trailer parking spaces, boat slips, boat lifts, floats, floating docks, pilings, boat davits, dry storage, etc.

Waters accessible to manatees – Although most waters of the State of Florida are accessible to the manatee, there are some areas such as landlocked lakes that are not. There are also some weirs, salinity control structures and locks that may preclude manatees from accessing water bodies. If there is any question about accessibility, contact the Service or the FWC.

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
O:\forms\Sea Turtle and Smalltooth Sawfish Construction Conditions.doc

MEMORANDUM TO FILE

Project: SR 9/I-95 (MP 9.310 to MP 11.282) @ SR 842/Broward Boulevard from West of SW 24th Avenue to East of NW/SW 18th Avenue (MP 4.886 to MP 5.392) Project Development & Environment (PD&E) Study
County: Broward County
ETDM No.: 14226
FPID: 435513-1-22-02
Date: March 27, 2018
Subject: National Marine Fisheries Service Coordination

The Florida Department of Transportation (FDOT), District Four, is currently conducting a Project Development and Environment (PD&E) Study that is evaluating potential improvements to the SR 9/I-95 at SR 842/Broward Boulevard Interchange in the City of Fort Lauderdale, Broward County, Florida. The proposed interchange improvements will be compatible with and is included within the limits of the I-95 Express Phase 3A project (FPID No. 433108-5-52-01) which began construction in mid-2016.

As part of the I-95 Broward Boulevard Interchange project, a Natural Resource Evaluation (NRE) was prepared. The NRE identified environmental features and listed species within the project limits and documented the potential impacts to wetlands, listed species, and Essential Fish Habitat (EFH). The NRE was prepared in accordance with:

- 50 CFR Part 402, the Endangered Species Act of 1973, as amended, and the FDOT PD&E Manual, Part 2 – Chapter 16 "Protected Species and Habitat" (June 14, 2017);
- FDOT PD&E Manual, Part 2 – Chapter 17 "Essential Fish Habitat" (June 14, 2017); and
- Executive Order 11990, Protection of Wetlands, dated May 23, 1977, US Department of Transportation Order 56601.A, Preservation of the Nation's Wetlands, dated August 24, 1978, and the FDOT PD&E Manual, Part 2 - Chapter 9 "Wetlands and Other Surface Waters" (June 14, 2017).

Typically, as part of the PD&E Study process, the NRE is submitted to the appropriate regulatory agencies including the National Marine Fisheries Service (NMFS) for review. For this project, submittal of the NRE to the NMFS was not required based on preliminary coordination. The purpose of this Memorandum to File is to summarize the preliminary coordination with the NMFS documenting why no further consultation on this project is required.

The SR 9/I-95 at SR 842/Broward Boulevard Interchange project proposes widening of the southbound bridge over the North Fork of the New River. The southbound off ramp to Broward Boulevard is to be widened ~12-feet to the west beyond the widening of the I-95 Express Phase 3A project (See Bridge Widening Exhibit – **Appendix F** of the NRE). Widening of the bridge would result in 0.004 acre of impact to fringe mangroves. These fringe mangroves are within the I-95 Express Phase 3A project fill impact area as shown in the United States Army Corps of Engineers (USACE) Dredge and Fill Permit Sketches on Sheet 14 and within the existing I-95 limited access right-of-way. **Exhibit 1** (from the NRE) is Sheet 14 in the USACE Dredge and Fill Permit Sketches for the I-95 Express Phase 3A project and shows the extent of the fill impacts. **Exhibit 2** (from the NRE) shows the I-95 Express Phase 3A project's permitted dredge and fill impacts overlaid with the proposed I-95 Broward Boulevard improvements. The mangroves

between the railroad right-of-way and I-95 southbound are identified as polygons 14M, 15M, and 16M. There are 0.05 acre of mangrove impacts (See Sheets 70 and 71 in USACE Permit Application below - from **Appendix G** in the NRE) at the North Fork of the New River (i.e. polygons 11M, 12M, 14M, 15M, and 16M), resulting in a total impact to mangroves of 0.14 acre from the I-95 Express 3A project.

Impacts to mangroves associated with the I-95 Broward Boulevard proposed improvements have already been identified as part of the I-95 Express Phase 3A project, authorized under South Florida Water Management District (SFWMD) Environmental Resource Permit No.06-01465-S and USACE Dredge & Fill Permit No. SAJ 2014-01584. In addition, the Environmental Considerations document (**See Appendix G** in the NRE) associated with these permits indicated that the "mangroves between the existing bridge and the railroad track located to the west of the bridge have been included as direct impacts." Therefore, the project is not anticipated to impact any additional EFH or require additional mitigation. However, due to the additionally proposed pile driving activities in the open water portion of the North Fork of the New River and the potential use of the river by the Smalltooth sawfish, the NMFS *Sea Turtle and Smalltooth Sawfish Construction Conditions* will be followed with respect to any in-water construction activities (**Appendix E** in the NRE). With the implementation of these construction conditions to minimize potential impacts, the project "***may affect, not likely to adversely affect***" the Smalltooth sawfish. This determination is consistent with the NMFS Concurrence letter dated February 4, 2015 to the FDOT for the improvements associated with I-95 Express Phase 3A project within the North Fork of the New River (See **Appendix H** in the NRE). The February 4, 2015 letter concluded that the Smalltooth sawfish is not likely to be adversely affected by the proposed action.

Preliminary coordination with the NMFS was performed to discuss EFH consultation and ESA consultation for the Smalltooth sawfish. The following summarizes coordination between the NMFS and FDOT regarding consultation for this project.

On March 23, 2018, Jennifer Schull of the NMFS stated in email correspondence (Attachment 1) that EFH consultation will not be required based on the previous consultation for the I-95 Express Phase 3A project. In this email, it was stated that:

> "During the consultation process for the I-95 Phase 3A project, the NMFS provided an essential fish habitat (EFH) consultation letter (SAJ-2014-01584, Oct 24, 2014). That consultation concurred with the FDOT's approach to avoid, minimize and mitigate the impacts to 0.14 acres of mangrove EFH within the project corridor. These impacts fully account for the impacts that will be incurred by the proposed widening over the NFNR (except for a negligible 0.004 ac of mangrove impacts). The NMFS will not require EFH consultation for the new widening project since EFH impacts have been accounted for during the I-95 Phase 3A project consultation process."

In addition, a follow-up email from Jennifer Schull of the NMFS on March 26, 2018 (Attachment 2) indicated that ESA consultation for the Smalltooth sawfish will not require re-initiation if the means and methods for the proposed widening are the same as those used by the I-95 Phase 3A project. In this email, it was stated that:

> "During the consultation process for the I-95 Phase 3A project, the NMFS provided an ESA consultation letter of concurrence (SER-2014-14907; 2/4/15) for smalltooth sawfish.

I-95 Broward Boulevard Interchange PD&E Study, FM 435513-1-22-02, ETDM #14426
National Marine Fisheries Service Coordination
March 27, 2018

> The original letter of concurrence contains the following statement regarding re-initiation of consultation: "consultation must be reinitiated if a take occurs or new information reveals effects of the action not previously considered, or the identified action is subsequently modified in a manner that causes an effect to the listed species or critical habitat in a manner or to an extent not previously considered, or if a new species is listed or critical habitat designated that may be affected by the identified action. "
>
> It is up to the action agency to ultimately decide, but it appears the proposed widening action, as described using the same means and methods as the previous project, may not meet the re-initiation criteria. If FDOT makes that determination, we suggest FDOT write a memo for their internal file describing the rationale for not re-initiating consultation and add it to FDOT records pertaining to the I-95 Phase 3A project."

The proposed I-95 Broward Boulevard project is anticipated to use the same construction means and methods as described in the I-95 Phase 3A project. Therefore, the bridge widening associated with this project does not meet the criteria to trigger re-initiation of consultation with the NMFS. As mentioned above, impacts to EFH are within the previously mitigated impact area and the potential impacts to the Smalltooth sawfish are within the extent previously considered by the I-95 Phase 3A project. Therefore, FDOT, will not re-initiate consultation and is retaining this "Memorandum to File" describing their rationale for the record as suggested by the NMFS.

I-95 Broward Boulevard Interchange PD&E Study, FM 435513-1-22-02, ETDM #14426
National Marine Fisheries Service Coordination
March 27, 2018

Attachment 1

From: Jennifer Schull of NMFS Regarding EFH Consultation (March 23, 2018)

From: Jennifer Schull - NOAA Federal [mailto:jennifer.schull@noaa.gov]
Sent: Friday, March 23, 2018 4:13 PM
To: Broadwell, Ann L <Ann.Broadwell@dot.state.fl.us>; Ascanio, Fernando <Fernando.Ascanio@dot.state.fl.us>; Kelley, Lynn <Lynn.Kelley@dot.state.fl.us>
Cc: Pace Wilber - NOAA Federal <pace.wilber@noaa.gov>; Jennifer Schull <jennifer.schull@noaa.gov>
Subject: Technical Assistance on EFH - I-95 and Broward Blvd Interchange PD&E

Dear Ann,
The NMFS has reviewed the documentation for the proposed widening of the southbound I-95 road and bridge over the North Fork of the New River (NFNR). The project will widen the bridge over the NFNR by approximately 12 feet and is a modification of the I-95 Phase 3A project. During the consultation process for the I-95 Phase 3A project, the NMFS provided an essential fish habitat (EFH) consultation letter (SAJ-2014-01584, Oct 24, 2014). That consultation concurred with the FDOT's approach to avoid, minimize and mitigate the impacts to 0.14 acres of mangrove EFH within the project corridor. These impacts fully account for the impacts that will be incurred by the proposed widening over the NFNR (except for a negligible 0.004 ac of mangrove impacts). The NMFS will not require EFH consultation for the new widening project since EFH impacts have been accounted for during the I-95 Phase 3A project consultation process. We appreciate the opportunity to provide these comments.

I will send a separate email regarding our evaluation of the need for an ESA consultation.

Sincerely,

Jennifer Schull

--
Jennifer Schull
NOAA Fisheries Southeast Regional Office
Habitat Conservation Division
400 N. Congress Avenue STE 110
West Palm Beach, FL 33401
561 249-1652

I-95 Broward Boulevard Interchange PD&E Study, FM 435513-1-22-02, ETDM #14426
National Marine Fisheries Service Coordination
March 27, 2018

Attachment 2

From: Jennifer Schull of NMFS Regarding ESA Consultation for the Smalltooth Sawfish (March 26, 2018)

From: Jennifer Schull - NOAA Federal [mailto:jennifer.schull@noaa.gov]
Sent: Monday, March 26, 2018 9:36 AM
To: Broadwell, Ann L <Ann.Broadwell@dot.state.fl.us>; Ascanio, Fernando <Fernando.Ascanio@dot.state.fl.us>; Kelley, Lynn <Lynn.Kelley@dot.state.fl.us>; Quigley, Jill <jill.quigley@hdrinc.com>; Suero, Will <Will.Suero@hdrinc.com>
Cc: Pace Wilber - NOAA Federal <pace.wilber@noaa.gov>; Jennifer Schull <jennifer.schull@gmail.com>
Subject: Technical Assistance on ESA - I-95 and Broward Blvd Interchange

Dear Ann,
The NMFS has reviewed the documentation for the proposed widening of the southbound I-95 road and bridge over the North Fork of the New River (NFNR). The project will widen the bridge over the NFNR by approximately 12 feet and is a modification of the I-95 Phase 3A project. During the consultation process for the I-95 Phase 3A project, the NMFS provided an ESA consultation letter of concurrence (SER-2014-14907; 2/4/15) for smalltooth sawfish.

The original letter of concurrence contains the following statement regarding re-initiation of consultation: "consultation must be reinitiated if a take occurs or new information reveals effects of the action not previously considered, or the identified action is subsequently modified in a manner that causes an effect to the listed species or critical habitat in a manner or to an extent not previously considered, or if a new species is listed or critical habitat designated that may be affected by the identified action. "

It is up to the action agency to ultimately decide, but it appears the proposed widening action, as described using the same means and methods as the previous project, may not meet the re-initiation criteria. If FDOT makes that determination, we suggest FDOT write a memo for their internal file describing the rationale for not re-initiating consultation and add it to FDOT records pertaining to the I-95 Phase 3A project.

We appreciate the opportunity to provide these comments. Any additional questions or concerns can be addressed to Jennifer Schull (jennifer.schull@noaa.gov, 561-249-1652).

--
Jennifer Schull
NOAA Fisheries Southeast Regional Office
Habitat Conservation Division
400 N. Congress Avenue STE 110
West Palm Beach, FL 33401
561 249-1652

Physical Resources Appendix

Contents:

From:	Mousseau, Leila
To:	Robbert, Jeffrey; Suero, Will
Cc:	Sonnett, Anson; Olkuch, Birgit; Tessoff, Daniel; Corrales, Emilio F.; Jake Perez; Danielsen, John; Henriquez Valencia, Melisa
Subject:	RE: I-95 at Broward Blvd. PD&E - Alignment and RR coordination topics
Date:	Wednesday, March 20, 2019 10:17:18 AM
Attachments:	image001.jpg

In that case, yes. If there are any changes to the scope, please let us know.

Thanks,

Leilamar Mousseau, E.I.
Railroad Coordinator
Office of Modal Development
Florida Department of Transportation - District 4
3400 W. Commercial Blvd
Ft. Lauderdale, FL 33309
954-777-4401
Leilamar.Mousseau@dot.state.fl.us

From: Robbert, Jeffrey
Sent: Tuesday, March 19, 2019 10:33 AM
To: Mousseau, Leila <Leilamar.Mousseau@dot.state.fl.us>; Suero, Will <Will.Suero@hdrinc.com>
Cc: Sonnett, Anson <Anson.Sonnett@dot.state.fl.us>; Olkuch, Birgit <Birgit.Olkuch@dot.state.fl.us>; Tessoff, Daniel <Daniel.Tessoff@dot.state.fl.us>; Corrales, Emilio F. <Emilio.Corrales@hdrinc.com>; Jake Perez <JPerez@BPAMiami.com>; Danielsen, John <John.Danielsen@hdrinc.com>; Henriquez Valencia, Melisa <Melisa.Henriquez@hdrinc.com>
Subject: RE: I-95 at Broward Blvd. PD&E - Alignment and RR coordination topics

Leila,

We are still a few years away from RFP preparation. I think Will just needs confirmation that SFRTA has no other comments on the plan as submitted.

Thanks,
Jeff

Jeffrey C. Robbert, PE
Consultant Management
FDOT District 4
954-777-4648 office
561-727-9801 mobile

From: Mousseau, Leila

Sent: Tuesday, March 19, 2019 8:56 AM
To: Suero, Will <Will.Suero@hdrinc.com>
Cc: Sonnett, Anson <Anson.Sonnett@dot.state.fl.us>; Olkuch, Birgit <Birgit.Olkuch@dot.state.fl.us>; Robbert, Jeffrey <Jeffrey.Robbert@dot.state.fl.us>; Tessoff, Daniel <Daniel.Tessoff@dot.state.fl.us>; Corrales, Emilio F. <Emilio.Corrales@hdrinc.com>; Jake Perez <JPerez@BPAMiami.com>; Danielsen, John <John.Danielsen@hdrinc.com>; Henriquez Valencia, Melisa <Melisa.Henriquez@hdrinc.com>
Subject: RE: I-95 at Broward Blvd. PD&E - Alignment and RR coordination topics

Hi Will,

We still need to coordinate the flagman services. I see that there is $100,000 allocated for phase 57 programmed for FY2024. Is this a Design Build project? If so, we need to review and approve the DB RFP language to include instructions to the contractor for RR flagging. We will issue a Rail Clear Letter at that point.

Thanks,

Leilamar Mousseau, E.I.
Railroad Coordinator
Office of Modal Development
Florida Department of Transportation - District 4
3400 W. Commercial Blvd
Ft. Lauderdale, FL 33309
954-777-4401
Leilamar.Mousseau@dot.state.fl.us

From: Suero, Will [mailto:Will.Suero@hdrinc.com]
Sent: Friday, March 15, 2019 7:56 AM
To: Mousseau, Leila <Leilamar.Mousseau@dot.state.fl.us>
Cc: Sonnett, Anson <Anson.Sonnett@dot.state.fl.us>; Olkuch, Birgit <Birgit.Olkuch@dot.state.fl.us>; Robbert, Jeffrey <Jeffrey.Robbert@dot.state.fl.us>; Tessoff, Daniel <Daniel.Tessoff@dot.state.fl.us>; Corrales, Emilio F. <Emilio.Corrales@hdrinc.com>; Jake Perez <JPerez@BPAMiami.com>; Danielsen, John <John.Danielsen@hdrinc.com>; Henriquez Valencia, Melisa <Melisa.Henriquez@hdrinc.com>
Subject: RE: I-95 at Broward Blvd. PD&E - Alignment and RR coordination topics

Hi Leila,

Looks like we have approval from SFRTA. Please confirm that this concludes our RR coordination for this PD&E Study.

Thanks,

Will Suero, P.E
D 954.233.4934 **M** 954.668.5223

hdrinc.com/follow-us

From: Mousseau, Leila [mailto:Leilamar.Mousseau@dot.state.fl.us]
Sent: Thursday, March 14, 2019 5:13 PM
To: Suero, Will <Will.Suero@hdrinc.com>
Cc: Sonnett, Anson <Anson.Sonnett@dot.state.fl.us>; Olkuch, Birgit <Birgit.Olkuch@dot.state.fl.us>; Robbert, Jeffrey <Jeffrey.Robbert@dot.state.fl.us>; Tessoff, Daniel <Daniel.Tessoff@dot.state.fl.us>; Corrales, Emilio F. <Emilio.Corrales@hdrinc.com>; Jake Perez <JPerez@BPAMiami.com>; Danielsen, John <John.Danielsen@hdrinc.com>; Henriquez Valencia, Melisa <Melisa.Henriquez@hdrinc.com>
Subject: RE: I-95 at Broward Blvd. PD&E - Alignment and RR coordination topics

Will,
See SFRTA's comments attached.

Thanks,

Leilamar Mousseau, E.I.
Railroad Coordinator
Office of Modal Development
Florida Department of Transportation - District 4
3400 W. Commercial Blvd
Ft. Lauderdale, FL 33309
954-777-4401
Leilamar.Mousseau@dot.state.fl.us

From: Suero, Will [mailto:Will.Suero@hdrinc.com]
Sent: Friday, February 22, 2019 7:33 AM
To: Mousseau, Leila <Leilamar.Mousseau@dot.state.fl.us>
Cc: Sonnett, Anson <Anson.Sonnett@dot.state.fl.us>; Olkuch, Birgit <Birgit.Olkuch@dot.state.fl.us>; Robbert, Jeffrey <Jeffrey.Robbert@dot.state.fl.us>; Tessoff, Daniel <Daniel.Tessoff@dot.state.fl.us>; Corrales, Emilio F. <Emilio.Corrales@hdrinc.com>; Jake Perez <JPerez@BPAMiami.com>; Danielsen, John <John.Danielsen@hdrinc.com>; Henriquez Valencia, Melisa <Melisa.Henriquez@hdrinc.com>
Subject: RE: I-95 at Broward Blvd. PD&E - Alignment and RR coordination topics

Hello Leila. We are working to optimize our span arrangement and Broward Blvd. profile to achieve 15' separation between the three tracks as well as the 25' outer track separation, as well as the 24'-3" VC. We will provide you an updated Plan/Elevation sheet next week reflecting our revised concept.

Thanks,

Will

From: Mousseau, Leila [mailto:Leilamar.Mousseau@dot.state.fl.us]
Sent: Tuesday, February 19, 2019 1:10 PM
To: Suero, Will <Will.Suero@hdrinc.com>
Cc: Sonnett, Anson <Anson.Sonnett@dot.state.fl.us>; Olkuch, Birgit <Birgit.Olkuch@dot.state.fl.us>; Robbert, Jeffrey <Jeffrey.Robbert@dot.state.fl.us>; Tessoff, Daniel <Daniel.Tessoff@dot.state.fl.us>; Corrales, Emilio F. <Emilio.Corrales@hdrinc.com>; Jake Perez <JPerez@BPAMiami.com>; Danielsen, John <John.Danielsen@hdrinc.com>
Subject: RE: I-95 at Broward Blvd. PD&E - Alignment and RR coordination topics

Hi Will,

Just to confirm: you can change the design to accommodate 15', correct?

In that case, would you like me to share this information with SFRTA? Or do you want to wait to have the plans in ERC?

Thanks,

Leilamar Mousseau, E.I.
Railroad Coordinator
Office of Modal Development
Florida Department of Transportation - District 4
3400 W. Commercial Blvd
Ft. Lauderdale, FL 33309
954-777-4401
Leilamar.Mousseau@dot.state.fl.us

From: Suero, Will [mailto:Will.Suero@hdrinc.com]
Sent: Wednesday, February 13, 2019 9:51 AM
To: Mousseau, Leila <Leilamar.Mousseau@dot.state.fl.us>
Cc: Sonnett, Anson <Anson.Sonnett@dot.state.fl.us>; Olkuch, Birgit <Birgit.Olkuch@dot.state.fl.us>; Robbert, Jeffrey <Jeffrey.Robbert@dot.state.fl.us>; Tessoff, Daniel <Daniel.Tessoff@dot.state.fl.us>; Corrales, Emilio F. <Emilio.Corrales@hdrinc.com>; Jake Perez <JPerez@BPAMiami.com>; Danielsen, John <John.Danielsen@hdrinc.com>
Subject: RE: I-95 at Broward Blvd. PD&E - Alignment and RR coordination topics

Good morning Leila, meant to reply yesterday and message got stuck in Drafts.

We can absorb the extra 2' for a total mainline double track separation of 15', instead of the 13' we referred to below, into our bridge span arrangement and still accommodate the 24'-3" VC. Our total HC over the three track MP would be 78'. As such we do not believe a variation of any of the applicable criteria is required. Please review this request from that perspective and advise if you need additional information prior to sending this to SFRTA.

Thanks,

Will Suero, PE
Senior Project Manager

HDR
3250 W. Commercial Blvd., Suite 100
Ft. Lauderdale, FL 33309
D 954-233-4934 **M** 954-668-5223
will.suero@hdrinc.com

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From: Mousseau, Leila [mailto:Leilamar.Mousseau@dot.state.fl.us]
Sent: Tuesday, February 12, 2019 7:13 AM
To: Suero, Will <Will.Suero@hdrinc.com>
Cc: Sonnett, Anson <Anson.Sonnett@dot.state.fl.us>; Olkuch, Birgit <Birgit.Olkuch@dot.state.fl.us>; Robbert, Jeffrey <Jeffrey.Robbert@dot.state.fl.us>; Tessoff, Daniel <Daniel.Tessoff@dot.state.fl.us>
Subject: RE: I-95 at Broward Blvd. PD&E - Alignment and RR coordination topics

Good morning Will,
Birgit noted that Option 1 with 13' track center spacings **does not** meet current CSX standards. A 13' mainline track center would need to be reviewed as a separate deviation from the standards. Per SFOMA, CSX has the right to review any changes to the mainline tracks and they may take exception to this.

cid:image001.jpg@01D4C853.5600F0D0

Could you provide pros/cons for your options from a roadway perspective so that we can discuss the various options with Stacy?
Thanks,

Leilamar Mousseau, E.I.
Railroad Coordinator
Office of Modal Development
Florida Department of Transportation - District 4
3400 W. Commercial Blvd
Ft. Lauderdale, FL 33309
954-777-4401
Leilamar.Mousseau@dot.state.fl.us

From: Suero, Will [mailto:Will.Suero@hdrinc.com]
Sent: Tuesday, February 5, 2019 4:16 PM
To: Tessoff, Daniel <Daniel.Tessoff@dot.state.fl.us>; Robbert, Jeffrey <Jeffrey.Robbert@dot.state.fl.us>; Mousseau, Leila <Leilamar.Mousseau@dot.state.fl.us>
Cc: Sonnett, Anson <Anson.Sonnett@dot.state.fl.us>; Olkuch, Birgit <Birgit.Olkuch@dot.state.fl.us>
Subject: RE: I-95 at Broward Blvd. PD&E - Alignment and RR coordination topics

Hello Dan and Leila. Couple items that may help clarify and simplify things:

- Option 1 is preferred, as it meets but ultimate Horizontal to accommodate three tracks per the ultimate master plan, and it also meets the 24'-3" min. VC over the tracks. See highlighted text below from my January 28th email.
- Not sure we need Stacy to approve Option 1 as we are compliant with both H and V minimum clearances. I see the next step as sharing the concept with SFRTA, for their concurrence that we meet both H and V clearance requirements.
- This is a PD&E Study and this matter will need to be revisited and reconfirmed during final design. The Design or potential Design-Build team are likely to make adjustments to all of these elements, and ultimately the final design scope and potential RFP would hold them to the same requirements we are achieving with our recommended alternative. That being the case, I suggest we get SFRTA to review before we decide we have other criteria to meet or a variation to request.

Thanks,

Will Suero, PE
Senior Project Manager

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will.suero@hdrinc.com

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From: Tessoff, Daniel [mailto:Daniel.Tessoff@dot.state.fl.us]
Sent: Tuesday, February 5, 2019 2:49 PM
To: Robbert, Jeffrey <jeffrey.robbert@dot.state.fl.us>; Mousseau, Leila <Leilamar.Mousseau@dot.state.fl.us>
Cc: Sonnett, Anson <anson.sonnett@dot.state.fl.us>; Suero, Will <Will.Suero@hdrinc.com>; Olkuch, Birgit <Birgit.Olkuch@dot.state.fl.us>
Subject: RE: I-95 at Broward Blvd. PD&E - Alignment and RR coordination topics

Jeff,

I am hesitant for us to make any decisions at this level – this has significant implications for both the design of this project, and future use of the SFRC. We had a similar situation where a roadway design project (Golden Glades Interchange) encroached on the South Florida Rail Corridor right-of-way and ultimately the decision bubbled up to the director level whether the roadway lanes could further encroach on the SFRC. We had presented Stacy with the facts and had her make a decision.

I think the best thing can we do is:

1. You/Will/Anson take a look and review my 1/31/19 summary of the options I outlined below to make sure I have characterized the scenarios correctly (Option 1 & Option 2)
2. You/Will/Anson add any additional pros or cons for both options that you can see from a roadway design perspective (this certainly is not my expertise and would defer to your group for this info!)
3. I added some pertinent pros/cons from the RR perspective – I can add something related to the station platform height compared to (up to) a 1' track raise as well, but if high speed rail were to come, and the additional tracks added, this station would have a complete re-design anyways.
4. Once list is finalized, we propose to Stacy for decision
5. Design project and move forward based on decision made

Thanks,

Daniel J. Tessoff
Railroad Specialist

Florida Department of Transportation, District 4
Office of Modal Development
3400 W. Commercial Boulevard
Fort Lauderdale, FL 33309
Office: 954.777.4667
Mobile: 248.470.4670
Daniel.Tessoff@dot.state.fl.us // www.dot.state.fl.us

From: Robbert, Jeffrey
Sent: Tuesday, February 5, 2019 11:00 AM
To: Tessoff, Daniel <Daniel.Tessoff@dot.state.fl.us>; Mousseau, Leila <Leilamar.Mousseau@dot.state.fl.us>
Cc: Sonnett, Anson <Anson.Sonnett@dot.state.fl.us>; Suero, Will <Will.Suero@hdrinc.com>
Subject: RE: I-95 at Broward Blvd. PD&E - Alignment and RR coordination topics

Dan,

Based on the SFRC Clearance Policy, the 24-3 allows for 1' of future track raise.

This vertical clearance is for new construction, provides for
eventual installation of 25kV cantenary, allows for up to 1 foot of track raise, and is based on the
American Railway Engineering and Maintenance of Way Association recommended load gauge of 21
feet.

Given that we are adjacent to a station platform, is future raising of the track even feasible? If not, then the 23'-8" we can provide should be adequate.

Thanks,
Jeff

Jeffrey C. Robbert, PE
Consultant Management
FDOT District 4
954-777-4648 office
561-727-9801 mobile

From: Robbert, Jeffrey
Sent: Tuesday, February 5, 2019 9:13 AM
To: Suero, Will <Will.Suero@hdrinc.com>
Cc: Sonnett, Anson <Anson.Sonnett@dot.state.fl.us>; Mousseau, Leila <Leilamar.Mousseau@dot.state.fl.us>
Subject: Fw: I-95 at Broward Blvd. PD&E - Alignment and RR coordination topics

Will,

Attached is response from Leila from earlier today.

Thanks,
Jeff

Jeffrey C. Robbert, PE
FDOT Consultant Management
954-777-4648 office
561-727-9801 mobile

From: Mousseau, Leila
Sent: Tuesday, February 5, 2019 8:15 AM
To: Robbert, Jeffrey

Cc: Tessoff, Daniel
Subject: FW: I-95 at Broward Blvd. PD&E - Alignment and RR coordination topics

Jeffrey,
See the response from our Rail Consultant Dan Tessoff below. Let us know if you have any questions.

Thanks,

Leilamar Mousseau, E.I.
Railroad Coordinator
Office of Modal Development
Florida Department of Transportation - District 4
3400 W. Commercial Blvd
Ft. Lauderdale, FL 33309
954-777-4401
Leilamar.Mousseau@dot.state.fl.us

From: Tessoff, Daniel
Sent: Thursday, January 31, 2019 10:35 AM
To: Mousseau, Leila <Leilamar.Mousseau@dot.state.fl.us>
Subject: RE: I-95 at Broward Blvd. PD&E - Alignment and RR coordination topics

Leila,

This is a very interesting proposal. Ultimately, I believe this will need to be a policy decision made by Stacy. I outlined some pros and cons of each proposal:

Option #1: Reduced design horizontal clearance of 76' (existing is 66'6") while obtaining FDOT policy compliant vertical clearance of 24'3"

Pros:

- Vertical clearance would be compliant with FDOT vertical clearance policy
- Future catenary can be installed underneath this bridge

Cons:

- Significant additional work to existing EB Broward Blvd-NB I-95 Flyover Bridge in order to match 24'3" design clearance
- Additional restriction in ability to raise Broward Blvd bridge by maintaining existing EB to NB Flyover just east of I-95

- Extended MOT, likely taking bridge out of svc for multiple weeks
- 13' track center spacings is not ideal for mainline use. The double tracking project typically designed to 15' track centers (see attached 2006-5-19 As-Built Plans – Broward Blvd (STA 132-133).pdf & also CSX Standard 2605.jpg). Squeezing that 3rd track in there would require 13' track centers if we are to maintain a 25' lateral offset on each side. 13' mainline track centers would need to be reviewed as a separate deviation from standards.
- Majority of Overhead Bridges upstream and downstream are not compliant with the vertical clearance policy (see attached 2018-11-9 Overhead Bridge Inventory Rev 5.pdf) for existing OHB clearances on SFRC. Some of the OHB clearances are within the 21' range. My point here is that if the 24'3" policy is to be met SFRC-Wide, significant bridge reconstruction on an industrial scale will be needed!

Option #2: Design horizontal span of 97'1" (existing is 66'6") with a non-FDOT policy compliant design vertical clearance of 23'8" (existing is 23'7")

Pros:

- From what I read in Will Suero's and Jeffrey's write ups is that the current design wouldn't require that significant additional work and MOT outlined in the cons for option 1 above. You might want to have them review this pro/con write up to ensure the design pros/cons are correctly summarized for both options.
- It looks like the horizontal clearance on the east side is increasing with wider span as well – maybe even a 4th track could be added on east side?
- There is ample clearance to achieve 15' track centers for 3 tracks with the wider span length of 97'1" when compared with existing span of 66'6" or 76'

Cons:

- Not compliant with FDOT vertical clearance policy
- Additional engineering and modification will be needed in the event that catenary is required to be installed (need to ask an engineer familiar with catenary design whether this clearance would even permit installation of catenary)

Thanks,

Daniel J. Tessoff
Railroad Specialist

Florida Department of Transportation, District 4
Office of Modal Development
3400 W. Commercial Boulevard
Fort Lauderdale, FL 33309
Office: 954.777.4667
Mobile: 248.470.4670

Daniel.Tessoff@dot.state.fl.us // www.dot.state.fl.us

From: Mousseau, Leila
Sent: Wednesday, January 30, 2019 11:25 AM
To: Tessoff, Daniel <Daniel.Tessoff@dot.state.fl.us>
Subject: FW: I-95 at Broward Blvd. PD&E - Alignment and RR coordination topics

Dan,
Could you assist me with this review?

Thanks,

Leilamar Mousseau, E.I.
Railroad Coordinator
Office of Modal Development
Florida Department of Transportation - District 4
3400 W. Commercial Blvd
Ft. Lauderdale, FL 33309
954-777-4401
Leilamar.Mousseau@dot.state.fl.us

From: Olkuch, Birgit
Sent: Wednesday, January 30, 2019 11:14 AM
To: Mousseau, Leila <Leilamar.Mousseau@dot.state.fl.us>
Subject: RE: I-95 at Broward Blvd. PD&E - Alignment and RR coordination topics

Leila,

I did not respond yet. I responded to his initial request (see attached). Would you mind reviewing or assign it to Dan for review?

Birgit Olkuch, P.E.
Rail Administration Manager
Office of Modal Development
Florida Department of Transportation, District 4
3400 West Commercial Blvd
Fort Lauderdale, FL 33309
Tel: (954)777-4689

Fax: (954)777-4095
Birgit.Olkuch@dot.state.fl.us

From: Mousseau, Leila
Sent: Tuesday, January 29, 2019 10:51 AM
To: Olkuch, Birgit <Birgit.Olkuch@dot.state.fl.us>
Cc: Tessoff, Daniel <Daniel.Tessoff@dot.state.fl.us>
Subject: FW: I-95 at Broward Blvd. PD&E - Alignment and RR coordination topics

Birgit,
I believe you already received a copy of this email. I'm not sure if you already responded to Will Suero.

Thanks,

Leilamar Mousseau, E.I.
Railroad Coordinator
Office of Modal Development
Florida Department of Transportation - District 4
3400 W. Commercial Blvd
Ft. Lauderdale, FL 33309
954-777-4401
Leilamar.Mousseau@dot.state.fl.us

From: Robbert, Jeffrey
Sent: Monday, January 28, 2019 4:55 PM
To: Mousseau, Leila <Leilamar.Mousseau@dot.state.fl.us>
Subject: FW: I-95 at Broward Blvd. PD&E - Alignment and RR coordination topics

Leila,

Attached is plan and profile for Broward Blvd bridge over SFRC. As shown we do not meet the vertical clearance, but we can if we narrow the horizontal clearance. Please review and we can discuss.

Thanks,
Jeff

Jeffrey C. Robbert, PE
Consultant Management
FDOT District 4

954-777-4648 office
561-727-9801 mobile

From: Suero, Will [mailto:Will.Suero@hdrinc.com]
Sent: Monday, January 28, 2019 11:32 AM
To: Braun, Steve <Steve.Braun@dot.state.fl.us>; Sonnett, Anson <Anson.Sonnett@dot.state.fl.us>; Robbert, Jeffrey <Jeffrey.Robbert@dot.state.fl.us>; Olkuch, Birgit <Birgit.Olkuch@dot.state.fl.us>
Cc: Jake Perez <JPerez@BPAMiami.com>; Corrales, Emilio F. <Emilio.Corrales@hdrinc.com>; Henriquez Valencia, Melisa <Melisa.Henriquez@hdrinc.com>; Danielsen, John <John.Danielsen@hdrinc.com>
Subject: RE: I-95 at Broward Blvd. PD&E - Alignment and RR coordination topics

EXTERNAL SENDER: Use caution with links and attachments.

Good morning. We went back and checked a couple other items that have a an impact on the RR clearance analysis for the Broward Blvd. bridge replacement over the SFRC, as follows:

- Existing Horizontal Clearance is 66.5' at this location (between existing span), as shown on the attached Plan/Elevation exhibit.

- Proposed Horizontal Clearance using our current span arrangement is 97.1', also shown on the attached Plan/Elevation exhibit.

- Existing RR section includes two tracks below the Broward Blvd. Bridge, and the ultimate 4-track section master plan identifies three tracks at this location for the ultimate build out (refer to attached PDF).

- Minimum span width required for three tracks (without crash walls) = 25' Lateral offset + 13' (Track 1 to 2) + 13' (track 2 to 3) + 25' Lateral offset = 76'

- Reducing our span width from 97.1' to 76' would allow us to achieve the 24'-3" VC over the three tracks. If the D4 Rail Office and SFRTA approve this 76' HC, we will be able to meet the 24'-3" electrification criteria for the three tracks. This span arrangement is compliant with Policy Topic 000-725-003j (attached from Birgit Olkuch's email) for both Horizontal and Vertical criteria.

Hello Birgit – please proceed with a review of the attached information and items in this email trail, for D4 Rail Office review and then submittal to SFRTA. I found the same issue with the 4-track master plan, and concluded that there tracks are identified at this bridge. The project

we are working on is the I-95 at Broward Blvd. PD&E Study, with Public Hearing scheduled for March 18, 2019. An excerpt from a recent presentation is attached reflecting the Broward Blvd. improvements (which include replacement of the bridge over the SFRC). Let me know if you would like to discuss or require additional information prior to sending to SFRTA.

Thanks,

Will Suero, P.E
D 954.233.4934 **M** 954.668.5223

hdrinc.com/follow-us

From: Suero, Will
Sent: Thursday, January 24, 2019 3:12 PM
To: 'Braun, Steve' <Steve.Braun@dot.state.fl.us>; Sonnett, Anson <Anson.Sonnett@dot.state.fl.us>; Jeffrey C. Robbert - JCR (jeffrey.robbert@dot.state.fl.us) <jeffrey.robbert@dot.state.fl.us>
Cc: 'Jake Perez' <JPerez@BPAMiami.com>; Corrales, Emilio F. <Emilio.Corrales@hdrinc.com>; Henriquez Valencia, Melisa <Melisa.Henriquez@hdrinc.com>; Danielsen, John <John.Danielsen@hdrinc.com>
Subject: I-95 at Broward Blvd. PD&E - Alignment and RR coordination topics

Good afternoon,

Prior to our sending the plans for replacement of the Broward Blvd. bridges over the SFRC to the D4 Rail Office, we wanted to point out that the proposed bridge has a vertical clearance of 23'-8". The existing Broward Blvd. bridge over the SFRC has a VC of 23'-7". Due to the potential future electrification of the SFRC for High Speed Rail, the FDM requires 24'-3" VC. We have worked hard to optimize the VC to meet the future 24'-3" criteria, and have concluded that raising if the additional 8" would cause us to modify the superstructure of the existing eastbound Broward Blvd. to northbound I-95 flyover bridge. Our vertical alignment control point in establishing our proposed Broward Blvd. profile over both the SFRC and I-95 NB/SB was the gore and begin bridge elevation of the EB to NB flyover. Raising the gore and bridge deck in the first spans of the flyover would require an extended MOT impact, likely requiring the bridge to be out of service for multiple weeks. Note that we are also restricted in our ability to raise the Broward Blvd. bridge by maintaining the existing EB to NB flyover where it goes over Broward Blvd., just east of I-95.

At this time we are indicating in the PER that the bridge Vertical Clearance will require a

Design Variation to the 24'-3" VC requirement for the SFRC. We are bringing this to your attention now prior to finalizing the PER for Public Hearing display, and wanted to get your concurrence on the required approach to requesting a DV for this location. We also wanted your concurrence on the approach to pursue a Design Variation, prior to sending the plans to the Rail Office and eventually SFRTA.

Attached please find the proposed Bridge Plan and Elevation Sheet for the replacement bridge of Broward Blvd. over the SFRC. Our plan is to send this sheet to D4 Rail Office next week, for them to coordinate with SFRTA (that is the process as I understand it).

Thanks in advance and let us know if you would like to meet to discuss further.

Will Suero, PE
Senior Project Manager

HDR
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will.suero@hdrinc.com

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From: Lulo Michael
To: Mousseau, Leila
Subject: FW: FM# 435513-1 I-95 at Broward Blvd. PD&E - Alignment and RR coordination topics
Date: Thursday, March 14, 2019 2:53:03 PM
Attachments: B1PlanElev01.pdf

EXTERNAL SENDER: Use caution with links and attachments.

Hello Leila,

SFRTA has no major concerns. Please see Bill's comments below. Let me know if you have any questions. Thanks

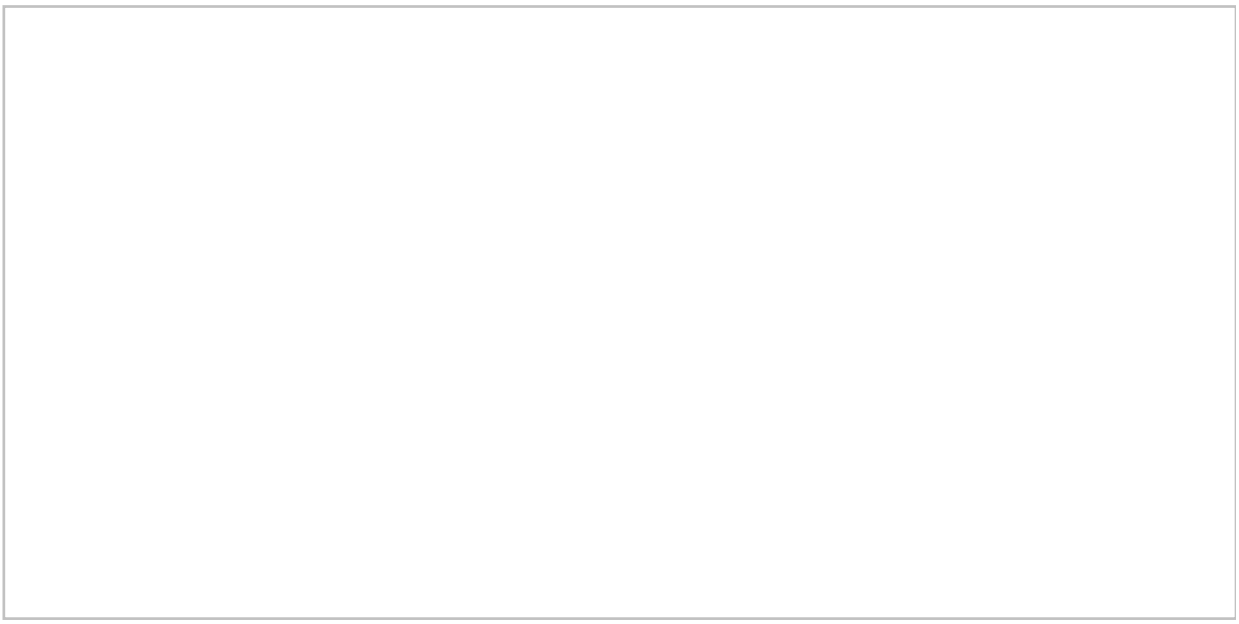
From: William LeJeune [mailto:wlejeune@HNTB.com]
Sent: Thursday, March 14, 2019 2:48 PM
To: Lulo Michael <lulom@sfrta.fl.gov>
Cc: Aaron Epstein <aepstein@HNTB.com>
Subject: FW: FM# 435513-1 I-95 at Broward Blvd. PD&E - Alignment and RR coordination topics

Mike
Below is my review of FDOT proposed Broward Blvd. overpass SX1012.06

Review of FDOT plans for replacement bridge of Broward Blvd. over the SFRC

- Horizonal – Better than existing ROW – Existing usable ROW 82.1' – Proposed usable ROW to 97.1'
- Vertical clearance Better than existing - Existing V.C. of 23.5' - Proposed 24.75'
- No issue with three track configuration.

Conclusion: No issues note with the Broward Blvd Bridge Overpass



Existing view of the3 Broward Blvd Overpass

Bill LeJeune
Sr. Project Manager - HNTB Rail/SFRTA
801 NW 33rd Street,
Pompano Beach, Fl. 33064

From: Mousseau, Leila [mailto:Leilamar.Mousseau@dot.state.fl.us]
Sent: Thursday, March 14, 2019 11:32 AM
To: Lulo Michael <lulom@sfrta.fl.gov>; Aaron Epstein <aepstein@HNTB.com>; William LeJeune <wlejeune@HNTB.com>
Cc: Olkuch, Birgit <Birgit.Olkuch@dot.state.fl.us>; Tessoff, Daniel <Daniel.Tessoff@dot.state.fl.us>; Suero, Will <Will.Suero@hdrinc.com>; Sonnett, Anson <Anson.Sonnett@dot.state.fl.us>
Subject: FM# 435513-1 I-95 at Broward Blvd. PD&E - Alignment and RR coordination topics

Good morning,

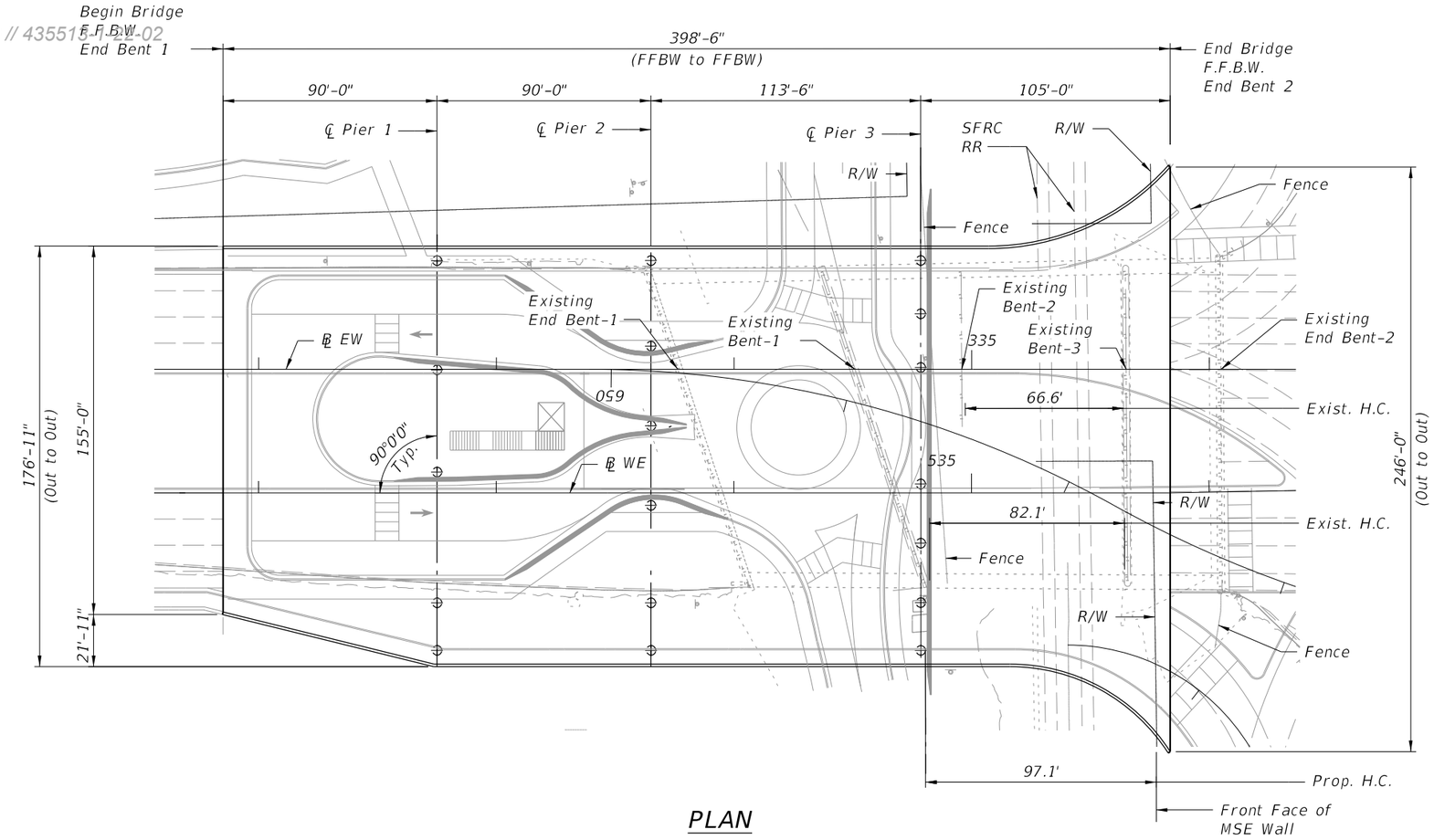
Attached please find the proposed Bridge Plan and Elevation Sheet for the replacement bridge of Broward Blvd. over the SFRC.

The current Plan/Elevation sheet can accommodate the 15' HC between the three tracks as noted, and also achieve the 24'-3" VC (actually 24'-9"). It also provides approximately 97' of Horizontal Clearance with the proposed span arrangement, versus the current approximately 67' of HC.

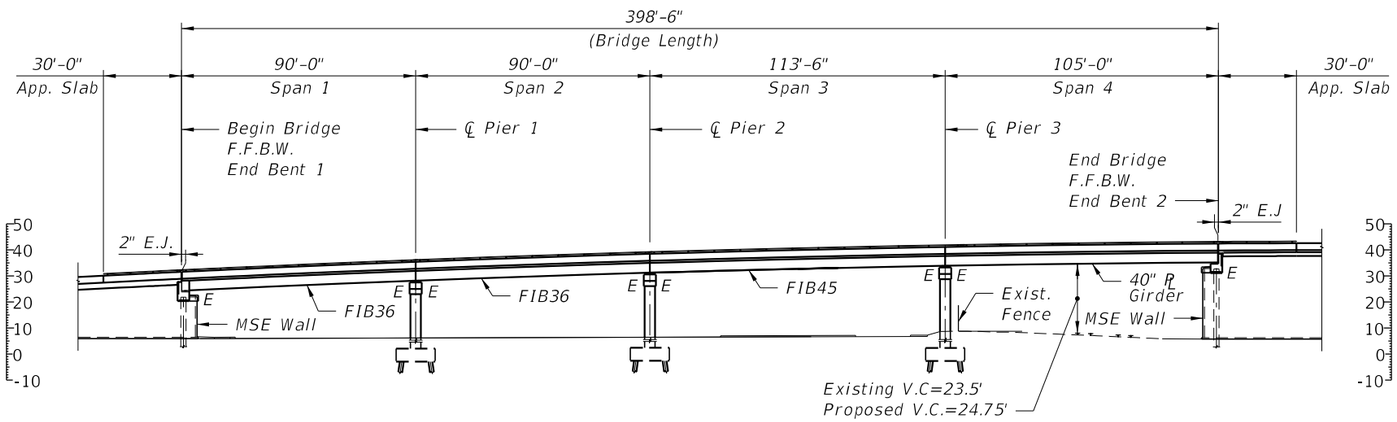
Please review and provide comments by 3/29/19.

Thanks,

Leilamar Mousseau, E.I.
Railroad Coordinator
Office of Modal Development
Florida Department of Transportation - District 4
3400 W. Commercial Blvd
Ft. Lauderdale, FL 33309
954-777-4401
Leilamar.Mousseau@dot.state.fl.us



PLAN



ELEVATION

Bridge No. 860257

REVISIONS						BOLTON PEREZ & ASSOCIATES	DRAWN BY: HOL	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SHEET TITLE: PLAN AND ELEVATION	REF. DWG. NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	7205 CORPORATE CENTER DRIVE, SUITE 201 MIAMI, FLORIDA 33126	CHECKED BY: JP	ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
						CERTIFICATE OF AUTHORIZATION 7904 JOAQUIN PEREZ, P.E. P.E. LICENSE NUMBER 37336	DESIGNED BY: JP		BROWARD	435513-1-22-02	PROJECT NAME: BROWARD BOULEVARD OVER SFRC RR	SHEET NO.: B-1
							CHECKED BY: JP					

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Public Involvement Appendix

Contents:

THE FLORIDA DEPARTMENT OF TRANSPORTATION

PUBLIC HEARING

MONDAY, MARCH 18, 2019

6:03 p.m. - 6:42 p.m.

AFRICAN AMERICAN RESEARCH LIBRARY
AND CULTURAL CENTER

2650 Sistrunk Boulevard
Fort Lauderdale, Florida 33311

IN RE: SR-9/I-95 at SR84/Broward Boulevard Interchange From West of NW/SW 24th Avenue to East of NE/SW 18th Avenue Project Development and Environment Study.

Transcribed By:
SANDRA D. SUAREZ, Court Reporter
Notary Public, State of Florida

Bailey & Associates Reporting, Inc.
Fort Lauderdale, Florida
Phone - (954) 358-9090

APPEARANCE:

Anson Sonnett, Project Manager
Will Suero
Jeffery Robbert

(Thereupon, the above-styled proceedings were had as follows):

MR. SONNETT: Good evening. The Florida Department of Transportation would like to welcome you to the public hearing for the State Road 9 I95 Interchange and State Road 842 Broward Boulevard project development and environment PD&E Study.

My name is Anson Sonett, I'm the project manager for the Florida Department of Transportation. This public hearing is for financial project management No. 43315435513-1-22-42.

Here with me tonight are Jeffery Robbert, project manager. And Will Suero, project manager.

And other representatives of the FDOT and consultant project team.

At this time we would like to recognize any federal, state, county or city officials who may be present tonight.

Are there any officials who would like to be recognized?

Now we will begin with the presentation. You may want to sit closer if you have difficulty seeing.

VIDEO PRESENTATION

VOICEOVER: Good evening, the Florida Department of Transportation or the FDOT, would like to welcome you to the public hearing for the State Road 9 I-95 interchange, at State Road 842 Broward Boulevard, Project Development and Environment Study.

The project proposes improvements to the I95 at Broward Boulevard interchange in the City of Fort Lauderdale in Broward County.

The project limits along I95 are from just south of Davie Boulevard to just south of Sunrise Boulevard and along Broward Boulevard from Northwest/Southwest 24th Avenue to just east of Northwest/Southwest 18th Avenue.

The purpose of this public hearing is to share information with the general public about the proposed improvement; it's conceptual design; all alternatives under study under; and the potential beneficial and adverse social economic and environmental impacts upon the community.

The public hearing also serves as an official forum providing an opportunity for members of the public to express their opinions regarding the project. Public participation at this hearing is

encouraged and solicited without regard to race, color, nation origin, age, sex, religion, disability or family status.

Persons wishing to express their concerns may do so by contacting either the Florida Department of Transportation, District Four Office, or the Tallahassee Office of the Florida Department of Transportation. This contact information is also provided in the project brochure and on a sign displayed at this hearing.

This public hearing was advertised consistent with the federal and state requirements shown on this slide.

This environmental study has been conducted by FDOT District Four in compliance with all applicable federal environmental laws and pursuant to 23 US Code 327, and the implementing memorandum of understanding between FDOT and the Federal Highway Administration signed on December 14th, 2016.

The FDOT office of Environmental Management in Tallahassee is the approving authority.

There are three primary components to tonights hearing:

First, the open house, which occurred prior to

this presentation where you were invited to view the project, displays and to speak directly with the project team and provide your comments in writing or to the court reporter.

Second, this presentation which, will explain the project purpose and need, study alternatives, potential impact, both beneficial and adverse and purposed methods to mitigate adverse project impacts; and third a formal comment period following this presentation where you will have the opportunity to provide oral statements at the microphone or you may provide your comments directly to the court reporter or in writing.

The project development and environment or PD&E Study is a process developed by the Florida Department of Transportation to evaluate the social, environmental, economic and engineering impacts associated with a proposed transportation improvement.

In addition to complying with the National Environmental Policy Act of 1969, the objectives of a PD&E Study are to support decisions concerning if, where and what improvements should be built to address the identified transportation needs.

The primary purpose of this study is to

develop and evaluate design concepts to improve traffic flow to and from I95 and along Broward Boulevard. Facilitate more direct connectivity between the 95 Express Lanes and Broward Boulevard and expand intermodal connectivity. The primary need for this project is to enhance system linkage and modal interrelationships at the I95 Broward Boulevard interchange.

All alternatives have been subjected to a comprehensive evaluation to determine the best viable alternative. Engineering, environmental, social economic factors and costs have all been considered in selecting preferred alternative.

The Broward Metropolitan Planning organization works with FDOT and local governments to fund and implement projects identified through various plans. The project was presented to the Broward MPO on February 14th, 2019. The proposed improvements are included in the currently adopted 2040 Long Range Transportation Plan. State and local transportation improvement plans and the strategic intermodal system adopted five-year plan.

We are currently in the Project Development and Environment PD&E phase of the project development process. In this phase the design

options and their social and environmental effects are examined. The preferred alternative is selected at the end of this phase. The project then progresses to the design phase where the preferred alternative is further developed, detailed construction plans are prepared and any right-of-way is acquired if needed. The project is then constructed as approved from the design phase, once the project is constructed it is maintained and operated by the department.

We are currently at the public hearing stage of the PD&E process. Before this hearing, the public was invited to attend the public kick-off meeting in November of 2016, and the Alternatives Workshop in September and November of 2017. Comments from the public were considered in the development of the alternatives on display today.

The public hearing is the final opportunity to during the PD&E process for the public to provide comments about the study and the recommended transportation improvements.

The PD&E Study has developed the alternatives listed for the I95 mainline, the Broward Boulevard interchange and for the I95 At Broward Boulevard Transit Station Park-and-Ride Lot, these

alternatives will be described in detail on the following slides.

No Action Alternative is a baseline alternative that does not propose any improvements to the existing facility. Along with the proposed improvements, the No Action is studied and assessed to verify if it meets the purpose and need of the this PD&E study.

The advantages of the No Action Alternative are that it requires no expenditure of public funds for design, right-of-way acquisition, construction of utility relocation. In addition, there would be no direct or indirect impacts to the environment or socioeconomic impacts from the project.

The disadvantage of the No Action Alternative are that it does not alleviate the congestion, operational, safety and mobility issues currently experienced at the interchange during peak hours.

If no improvements are made, these conditions will continue to deteriorate. Consequently, the No Action Alternative does not satisfy the purpose and need for this project.

The Transportation Systems Management and Operations or TSM&O Alternative, incorporates the use of technology in order to alleviate traffic

problems and congestion. This technology includes the modification of signal phasing, signal control a fiber optic network, CCTV Monitoring, Dynamic messaging signs and speed volume monitoring devices.

The TSM&O Alternative alone, does not meet the purpose and need of the project. All of the components of the TSM&O Alternative are included in all of the Build Alternatives.

This line diagram of I95 shows all the entrances and exit points for the 95 Express Lanes Phase III system currently under construction in this area.

One of the needs for this PD&E Study is to improve the interconnectivity between the Broward Boulevard interchange and the 95 Express system.

The I95 mainline proposed improvements start just south of Davie Boulevard. The proposed improvement in this section is the installation of the new ramp providing egress from the northbound 95 Express lanes to the existing Broward Boulevard exit ramp for eastbound and westbound Broward Boulevard movements. This northbound elevated braided ramp provides access to eastbound and westbound Broward Boulevard, without requiring

drivers to circulate through the Broward Boulevard Park-and-Ride Lot and transit station.

The on and off ramps connecting to Broward Boulevard are proposed to be modified in a similar manner for each of the Interchanged Build Alternatives. The increased number of lanes to improve capacity of the entry and exit ramps will be discussed later in this presentation.

Mainline I95 will see the addition of a new ramp that connects westbound Broward Boulevard traffic with southbound 95 Express and I95 traffic providing for a smooth transition over the general use lanes below.

The northern portion of the I95 mainline has two braided ramps that will provide a direct connection to Broward Boulevard for the 95 Express traffic in both directions. The ramps help relieve congestion on the mail line traffic by providing this direct connection instead of having the 95 Express traffic weave across the mainline to get to Broward Boulevard. Photo renderings of these braided ramp structures are displayed at this public hearing.

The image to the left shows the entrance movements in blue arrows, and exit movements in red

arrows of the 95 Express lanes South of Broward Boulevard, and the image to the right are the movements to the north. These movements demonstrate the use of the braided ramps that were previously described as part of the I95 mainline Preferred Alternative.

The following slides represent the three interchanged configuration alternatives developed and evaluated with this study. The first of these, a tight diamond interchange is similar to what exists now and would add signal timing improvement and turn lanes. Benefits of this alternative include no significant changes in existing driver patterns and expanded storage and functionality of the exit ramps. He disadvantage is the inability to meet the anticipated long term traffic growth of the interchange.

This displace left turn interchange would have westbound to southbound traffic crossing over to the other side of the road in advance. The displaced traffic would then be able to make a left turn onto the ramp to southbound 95 Express and I95, without having to cross oncoming traffic.

This alternative increases the number of right turn lanes for the eastbound to southbound entrance

ramp to I95, resulting in dual right turn lanes. For this alternative, the westbound to southbound left turn lanes remain as dual left turn lanes as currently exist. Benefits include improved operational results for the two ramp intersections. Disadvantages include unfamiliar drivers not expecting a different traffic pattern and also an inability to meet the anticipated long term traffic growth of the interchange.

The Modified Displaced Left Turn Alternative for the Broward Boulevard Interchange incorporates several features, all entrance ramps onto I95 would remain as they exist today, with the exception of one new ramp.

The modified ramp is the northbound exit ramp to westbound Broward Boulevard. This movement would occur via a new bridge crossing over I95 south of the eastbound Broward Boulevard lanes, and cross to the westbound Broward Boulevard at the southbound intersection. This interchange configuration eliminates a movement from the northbound ramp terminal intersection, and combines multiple concurrent movements at the southbound ramp terminal intersection, resulting in the most efficient interchange configuration. Benefits

include satisfying the anticipated long-term traffic growth of this interchange. Disadvantages include unfamiliar drivers not expecting the new configuration for northbound exit to westbound Broward Boulevard, this will be mitigated by use of appropriate striping and pavement messaging.

The Modified Left Turn is this PD&E Study's preferred alternative for the I95 at Broward Boulevard interchange. Note that the alternative replaces the Broward Boulevard Bridge over the South Florida Rail corridor as well as the bridge over I95.

The interchange would also include bicycle lanes and sidewalks and wide median west of I95 that could serve as a potential transit station in the future as part of potential future regional transit improvements along Broward Boulevard.

The following slides depict the movement that can occur at the intersection between Broward Boulevard, I95 and the 95 Express lanes, based on this preferred alternative configuration.

The traffic coming off of northbound I95 to westbound Broward Boulevard will be displaced to run parallel to and south of Broward Boulevard, and will queue at the southbound ramp intersection

where it will have its own signal phase in order to cross eastbound traffic. The northbound exit ramp will remain as it exists today with a double left turn and a triple right turn lane.

This movement shows the I95 northbound general purpose entrance for east and westbound Broward Boulevard traffic. These movements exist in the intersection today.

The southbound I95 exit would provide more capacity with the use of triple right-turn lanes and triple left-turn lanes onto westbound and eastbound Broward Boulevard respectively.

Eastbound Broward Boulevard to the Southbound I95 General Purpose will have an additional right-turn lane, providing more traffic capacity. The preferred alternative also proposes changes to Southwest 21st Terrace and to Southwest First Street with the addition of a roundabout that helps the flow of traffic and will facilitate the existing movement to remain for eastbound Broward Boulevard onto the 95 Express southbound lanes through the existing ramp. There are two different options being considered for the intersection of Southwest 22nd Avenue and Southwest First Street for access to and from the Riverland neighborhood.

One option is a potential closure of 22nd Avenue traffic onto Southwest First Street. The second option is a right only into Southwest 22nd Avenue and right only out onto Southwest First Street allowing for no left turns. The FDOT welcomes feedback from the public and stakeholders on these two options for Southwest 22nd Avenue at Southwest First Street as a comment through this public hearing.

A new ramp is being proposed for westbound Broward Boulevard onto southbound I95. Motorist approaching the left turn lanes will be sorted to their respective turning lanes via overhead signs and pavement messaging, that will identify the inside left-turn lane for the southbound to 95 Express connection depicted here by the blue arrow or to the two outside left turn lanes depicted by the green arrow for access to I95 general use lanes and the southbound roadways connecting to I595.

Access to the 95 Express Lanes from the Park-and-Ride and transit station areas on both sides of Broward Boulevard are to remain as they exist today. 95 Express will be accessed through the existing former HOV ramps in place for connections both northbound and southbound.

The 95 Express exit to the Park-and-Ride Lot and transit station areas on both sides of Broward Boulevard will also remain the same and be accessed by the former HOV ramps.

The Department measures the performance of a roadway with a Level of Service or LOS grade. There are six levels of service ranging from A to F. "A" being the best performing and "F" being the worst performing.

This shows a side by side comparison of all the alternatives and how they will operate in 2040 traffic. Alternative 2B Modified Displaced left is the only alternative that meets or exceeds the Departments Level of Service D target across the board.

The PD&E Study developed a master plan concept for the Park-and-Ride Lot and Transit Station. In this alternative the area underneath, the reconstructed Broward Boulevard bridge structure is proposed to be used for the 95 Express Bus stops.

This concept provides for an improved and covered transit on and off area. The concept also includes a Kidd-and-Ride facility as well as a roundabouts to provide acceptable levels for traffic flow.

As mentioned earlier the preferred alternative calls for the replacement of the Broward Boulevard Bridge over the South Florida Rail Corridor or the SFRC, as well as the bridge over I95. The typical sections on this screen display the changes that will occur on each bridge. Both bridges will accommodate seven-foot buffered bicycle lanes as well as six to eight foot sidewalks in each direction. The sidewalks will also be protected from vehicular traffic through the use of concrete barriers where feasible.

The typical section for the bridge over the SFRC includes the area for the potential future median transit station that was displayed with the interchange preferred alternative.

The PD&E Study looks at the potential social, economic and environmental impacts of this project. The environmental considerations shown on this slide have been assessed for impacts.

The PD&E Study concluded that the following environmental considerations have no involvement in this project: Farmlands, Section 4(f) or parks, Aquatic Preserves and Outstanding Florida Waters, Wild and Scenic Rivers and Coastal Barrier Resources.

The PD&E Study also concluded that the following environmental considerations have no effect on this project: Water quality and quantity, Coastal Zone Consistency, and Archaeological and Historical Resources.

The project is anticipated to have minimal effects to the surrounding communities. Expected enhanced community elements include mobility, economic factors, community goals and safety. Enhancements to the community that will help to offset negative effects include the previously mentioned wider sidewalks along the bridges over the SFRC and I95, the addition of bicycle lanes to these same bridges and improvements to the Park-and-Ride Lot that will enhance the experience and functionality of transit users and operators. The wider and protected sidewalks will improve safety in the area as well.

Potentially affected community elements include visual impacts from the addition of new ramps. Proposed mitigation measures include additional noise barriers and landscape improvements to reduce the effects of the anticipated noise and visual impacts. Renderings of the existing and proposed visual elements are on

display here today.

The evaluation found one wetland that exists ad a fringe mangrove on the banks of the tidal North Fork of the New River. Six surface waters exist within the project area, including the North Fork of the New River and five permitted storm water management areas containing aquatic vegetation.

The proposed build alternatives encroach upon the fringe mangrove wetland, North Fork of the new River, and two of the storm water management areas, whoever they are already planned to be impacted and mitigated by the I95 Express Phase 3A-1 project.

The remaining surface waters ale also already being impacted y the I95 Express Phase 3A-1 project and will be mitigated through offsetting storm water management areas to be constructed as part of the proposed build alternative.

The majority of the project is located outside of the floodplain; however, there are seven small areas of floodplain encroachment. Five of these areas are in Zone AE, which is an area subject to inundation by the 100-year flood with base flood elevations determined.

The other two areas are considered Zone AH

which is an area subject to the 100-year flood that experiences flood depths of one to three feet. Floodplain encroachments resulting from the construction of the project will be fully compensated within the proposed stormwater management facilities to ensure there will be no increase or significant change to flood elevations or limites.

The District had conducted an evaluation of the natural resources within the project area. The evaluation assessed the potential impacts to protected species and their habitats. Thirteen federally listed species have the potential to occur within the project area. No critical habitat occurs in the project area. The elevation reports that the Wood Stark, West Indian Manatee, Smalltooth Sawfish, and the Eastern Indigo Snake may be impacted but are not likely to be adversely affected.

FDOT will continue to monitor the presence of any endangered or federally listed species and of any other environmental concerns that may arise and will adhere to all the protection measures set in place for each species or event during construction.

The Natural Resource Evaluation also looked at the Essential Fish Habitats that could occur in the project area. Essential Fish Habitats are waters and substrate necessary to fish for spawning, breading, feedings or growth to maturity. The proposed improvements will result in an impact of .004 acres to the fringe mangroves and .02 acres of shading impacts to the open water portion of the North Folk of the New River. The areas being impacted as a result of the proposed improvements have already been mitigated for by the 95 Express Phase 3A project. Since no new impacts will occur, the project is not anticipated to impact any additional Essential Fish Habitats.

The project is expected to improve traffic flow and relieve congestion to and from the mainline, which should reduce operational greenhouse gas emissions.

The project is located in an area which is designated attainment for all of the National Ambient Air Quality Standards under the criteria provided in the Clean Air Act. Therefore, the Clean Air Act conformity requirements do not apply to the project.

A study was performed to assess the potential

traffic noise impacts associated with the Preferred Build Alternative with a proposed roadway improvements 41 residences within four residential communities and the Woodlawn Cemetery will experience design year 2040 traffic noise levels that required consideration of noise reducing measures. Noise barriers are recommended for further consideration during the design phase of the project at the Riverbend, Liberty Park, River Gardens/Sweeting Estates, and Washington Park communities.

The location of the recommended noise barriers including the replacement of the existing noise barriers impacted by the roadway improvements are depicted on this screen as well as on the exhibits on display at this public hearing.

The estimated cost of the recommended noise barriers is $1,935,600. Noise barriers were not found to be cost reasonable at the Woodlawn Cemetery and were not recommended for further consideration or construction at this location.

An evaluation within a 500 foot radius of the project corridor was done for hazardous waste management, petroleum storage system, spills, cleaning or dry cleaning activities and

environmental contamination. This evaluation identified 78 sites with the potential risk of being contaminated with the hazards mentioned.

Based of these identified risks, construction activities may encounter soil or groundwater contamination, which can potentially impact work or health, the environment and construction schedule and costs of these sites are not addressed during the design. Further assessment will be done during the design phase.

The PD&E Study has assessed all possible utility impacts in the project area. Utility conflict will be addressed and incorporated appropriately into the design of the preferred alternative.

Additional offsite stormwater quality treatment is required to accommodate the reconstruction of Broward Boulevard within the project limits due to insufficient stormwater storage within the existing Broward Boulevard right of way. Three alternative stormwater pond sites have been identified as shown in this exhibit, and the preferred alternative is the site immediately southwest of the Broward Boulevard and Southwest 18th Avenue intersection labeled here as

Site No. 1. There are three business located on this site.

One of the unavoidable consequences on a project such as this is the necessary relocation of families or businesses. On this project, we anticipate the relocation of zero families and Property Acquisition Policies Act of 1970, commonly known as the Uniform Act.

If you are required to make any type of move as a result of the Department of Transportation Project, you can expect to be treated in a fair and helpful manner and in compliance with the Uniform Relocation Assistance Act, if a move is required, you will be contacted by an Appraiser who will inspect your property. We encourage you to be present during the inspection and provide information about the value of your property.

You may also be eligible for relocation advisory services and payment benefits. If you're being moved and you're unsatisfied with the Department's determination of your eligibility for payment or the amount of that payment, you may appeal that determination. You will be promptly furnished necessary forms and a notified of the procedures to be followed in making that appeal. A

special word of caution, if you move before you receive notification of the relocation benefits that you might be entitled to, your benefits may be jeopardized.

The relocation specialist who are supervising this program are here tonight. They will be happy to answer your questions and will also furnish you with copies of relocation assistance brochures.

Evaluation of transportation projects to select the most desirable alternative is based on a wide range of criterial that reflects concerns of all the key stakeholders. The criteria used to evaluate the proposed alternatives are located on this screen.

An alternatives matrix was developed to compare the alternatives across the range of issues affected by the project that were just displayed.

In terms of environmental issues, all of the alternatives have very similar and minimal impacts, and all three Build Alternatives would have the same right of way impacts. Cost estimates were prepared for all build alternatives and the estimated cost of all three Build Alternatives would range between $125 and $130 million. Based on these numbers, cost was not a determining factor

in the selection of the preferred alternative. All build alternatives provide better facilities for bicyclists and pedestrians and they would all provide a better riding surface, new signing and markings and improved overall safety.

In terms of operational improvements, Alternative 2B Modified Displaced Left, the Preferred Alternative proposes the best operational results with an improved level of service.

The environmental documents detailing the review of all resources analyzed have been available for public review since Monday, February 25th, 2019, and will continue to be on display for 10 days after the public hearing at African American Research Library and Cultural Center located at 2650 Northwest Sixth Street, Fort Lauderdale, Florida 33311. And at the FDOT District Four office located at 3400 West Commercial Boulevard, Fort Lauderdale, Florida, until March 28th, 2019.

The documents are also available for review on the project website and at tonights hearing.

There have been various opportunities for the public to provide input on this project. Several public meetings have been held, dating from

November 2016 until tonight. We welcome your oral or written comments that will help us make this important decision. At the conclusion of this presentation our personnel will distribute speaker cards to those in the audience who have not received one and would like to make a statement. A court reporter will record your statement and a verbatim transcript will be made of all oral proceedings at this hearing. If you do not wish to speak at the microphone, you may provide your comments in writing or directly to the court reporter at the comment table. Every comment method carries equal weight.

Written comments received or postmarked no later than ten days following the date of this public hearing will become a part of the public record for this hearing. All written comments should be mailed to the address shown on this slide or in your handout.

The next step is to incorporate your input on this public hearing into our decision-making process. After the comment period closes and you're input has been considered a decision will be made and the final PD&E documents will be sent to the FDOT office of Environmental Management, which

based on the MOU signed with FHWA on December 14, 2016, has approval authority on this project granting the location and design concept acceptance and the study is expected to finish in the summer of 2019.

All written comments should be addressed to Anson Sonnett at the address shown on this slide and in the handout. Comments may also be emailed to Anson.sonnett@dot.state.fl.us by Thursday, March 28th, 2019.

MR. SONNETT: This concludes our presentation. We now offer you the opportunity to make a statement. Anyone desiring to make a statement or present views regarding the location, conceptual design or social, economic and environmental effect of the improvements will now have an opportunity to do so.

If you are holding a speaker's card, please give it to a member of the project team. If you have not received a speaker's card and wish to speak, please raise your hand so you can receive a card to fill out.

Written statements may be presented in lieu or in addition to oral statements. All written material received at the public hearing and at the

Florida Department of Transportation District Office Located at 3400 West Commercial Boulevard, Fort Lauderdale, Florida 33309, postmarked no later than Thursday, March 28th, 2019, will b come a part of the public record for this hearing.

All written comments should be addressed to Anson Sonnett. Comments may also be emailed to Anson.sonnett@dot.state.fl.us.

We will now call upon those who have turned in speaker's cards. When you come forward, please state your name and address. If you present an organization, municipality or other public body, please provide that information as well. We ask that you limit our input to three minutes.

If you have additional comments you may continue after other people have had an opportunity to comment.

Please, come to the microphone so the court reporter will be able to get a complete record of your comments.

Esthel Brennen.

MS. BRENNEN: Hello. Esthel Brennen, I'm the President of The Riverside Park Residence Association. And my comment, and I guess question is, well, we had a few of your representatives come

and speak at our Civic Association meeting in January, and one particular topic that I've been talking to FDOT about is some land that's by Southwest 20th Avenue and 95 with potential green space. I'm under the understanding that it's a retention area for this and other projects, and it's also my understanding at the meeting that it was said to us that, you know, being able to hold on to those pieces of property made it so that residents wouldn't have to have their property taken away, given that, you know, FDOT already owned some land on that 95 corridor area for water rentention.

And it's come to my attention that there is a very well respected resident in our community that's actually had his property being looked at, which is an actual natural habitat, being looked at as taken away for this project.

So I just wanted to -- I'm a little confused how, you know, we were told in our one meeting that there was a retention area, our community wouldn't be affected by anybody's land being taken away, and now I'm hearing otherwise this past week.

MR. SONNETT: Okay. So we could speak -- we'll go back to the room with the boards and we

could address individual questions and then follow up. Any comments made here will get a formal written response as well.

MS. BRENNEN: Okay.

MR. SONNETT: But this is kind of a more formal structure.

MS. BRENNEN: Okay.

MR. SONNETT: But we'll follow up with you and make sure we get you all of the answers.

MS. BRENNEN: Okay. Thank you.

MR. SONNETT: Thank you very much for you comments as well.

So Latomas Chancey -- Chancey. Oh, Thomas. Sorry Thomas.

MR. CHANCEY: Thomas Chancey, landscape architect, tree preservationist, consulting arborist.

As you well know, I have soft space there at the corner. As you well know, over the years I've worked with FDOT and used my own money and our neighborhood's money on many occasions to to take trees that they were going to bulldozed and just thrown away and moved them into not only the neighborhood, but to the green area of the area that you're talking about.

We discussed this. I have no problems with it. My concern is, as a designer and working for fifty -- almost 60 years with different design groups around the country and other countries, I think that it's very important that we take a quick look -- and the Urban Forestry Association for all of the different urban forest in all the cities of Florida met for college assignments a couple week or so ago, and we all discussed it, and the research is clear that when you have a piece of property that's loaded with trees, that those trees can take more water out of the ground then you put them in there and let it evaporate. It's very positive.

So my goal would be if you're drainage is where it is, like she said, you got land, there is ways that you can change slightly that land that you own, and get that water that might become flowing in there, that's one.

Number two, the land that I have that's been used to train and teach people and kids and schools and arbor programs and everything with the city, the county and all, that property is being used for that purpose. And my concern is that we maintain that vegetation for its benefits, and it's the

benefits for what you're doing, and I just wanted to make that clear. Thanks.

MR. SONNETT: Thank you very much. Thank you for your time.

MS. HADDAD: Anyone else?

MR. SONNETT: Does anyone else desire to speak?

If so, state your name and address and complete a speaker's card after you've given your statement for the public record.

A verbatim transcript of this hearing's oral proceedings together with all written material received as part of the hearing record and all studies, displays and informational material provided at the hearing will be made a part of the project decision making process. And will be available at the district office for the public review upon request.

Thank you for attending this public hearing and for providing your input into this project.

It is now 6:41. I herby officially close the public hearing for I95 at Broward Boulevard.

Thank you again and have a good evening. And I want to thank African American Library for hosting us. And we'll be back in the room to

answer questions and go over any questions that anyone has.

Thank you. Thank you.

MS. HADDAD: If you want a comment sheet, they'll be on the table out front.

MR. SONNETT: And the court reporter is right down here if you wanted to make any comments.

(Thereupon, the FDOT Public Hearing was concluded at 6:42 p.m.)

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C E R T I F I C A T E

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I, SANDRA D. SUAREZ, Court Reporter, State of Florida at Large, certify that I was authorized to and did stenographically report the foregoing proceedings and that the transcript is a true and complete record of my stenographic notes.

Dated this 1st day of April, 2019.

SANDRA D. SUAREZ, Court Reporter

PUBLIC HEARING CERTIFICATION

650-050-56
ENVIRONMENTAL MANAGEMENT
08/17

SR-9/I-95 @ SR-842/BROWARD BOULEVARD

Project Developmentand Environment (PD&E) Study

from SR 9 / I-95 from south of Davie Boulevard to south of Sunrise Boulevard and on SR 842/Broward Boulevard from west of SW 24 Avenue to east of NW/SW 18 Avenue

Broward County, Florida

Financial Management No.: 435513-1-22-02

I certify that a public hearing was conducted on 03/18/2019, beginning at 06:00 PM for the above project. A transcript was made and the document attached is a full, true, and complete transcript of what was said at the hearing.

Anson Sonnett
(Name)

June 4, 2019
Date

W. Anson Sonnett
(Title of FDOT Representative)

Link to Public Hearing Transcript

1 - 43551312202-CE2-D4-FDOT_PUBLIC_HEARING_3.18.19-2019-0501.pdf