MEMORANDUM FOR RECORD

SUBJECT: FDOT, District 4 Department of the Army Environmental Assessment and Statement of Findings for Permit Application SAJ-2015-01094 (SP-RLT)

This document constitutes the Environmental Assessment, 404(b)(1) Guidelines Evaluation, Public Interest Review, and Statement of Findings for the following:

1.0 Application as described in public notice: 27 August 2015

1.1 Applicants: Florida Department of Transportation (FDOT) District 4
Attn: Binod Basnet
3400 W. Commercial Blvd.
Ft. Lauderdale, Florida 33309

Palm Beach County (County)
Attn: Morton Rose
2300 North Jog Road
West Palm Beach, Florida 33411

1.2 Location and Affected Waterway: The project would affect waters of the United States (WOTUS) associated with the M-Canal, the Pond Cypress Natural Area (PCNA) and Grassy Waters Preserve (GWP). The project site is located along SR 7 and along a new proposed extension of SR 7, in an alignment north of the existing SR 7 in Sections 1, 12, 13, and 24, Township 43 South, Range 41 East; Sections 19, 30, and 31, Township 42 South, Range 42 East; and Section 6, Township 43 South, Range 42 East; Palm Beach County, Florida.

1.2.1 Approximate Central Coordinates:

Latitude: 26.74622°
Longitude: -80.20499°

1.3 Existing conditions: State Road 7 is an existing two-lane undivided roadway that currently terminates at 60th Street North. The existing road runs north-south between the Pond Cypress Natural Area to the east and residential communities to the west (Segment 1). North of the existing roadway terminus, in the location of the proposed new roadway extension (Segment 2), GWP is located to the east and the Ibis Golf and Country Club to the west. The WOTUS including wetlands consist of freshwater open water, marsh, and forested systems. Land use/land cover types in and around the roadway corridor were classified using the Florida Department of Transportation (FDOT) Florida Land Use, Cover and Forms Classification System (FLUCFCS, 1999).

The vast majority of land cover within the Right of way (ROW) is wetland (FLUCFCS 6000; approximately 67 percent) and includes (in order of predominance): Hydric pine flatwoods (625; 32 percent); freshwater marsh (6410; 19 percent); and mixed wetland shrubs (6172; 16 percent). Streams and waterways (5100) account for approximately 9.0 percent of the area and pine flatwoods (4110) account for 2.0 percent of the area. The remaining uses (approximately 22 percent) consist of spoil mound (7430), and utilities, roads and highways (8100).

Some portions of the project area include nuisance/exotic species due to disturbance. Brazilian pepper (*Schinus terebinthifolius*) and melaleuca (*Melaleuca quinquenervia*) are the two notable nuisance species with presence exceeding 75 percent in some areas along the northern project area. The most notable nuisance/exotic species in the southern portion of the project area is Australian pine (*Casuarina equisetifolia*). A more detailed description of the project area wetlands is provided below:

Freshwater Marsh, 6410

The freshwater marsh habitat was further classified into subcategories based upon the dominant vegetation type observed, defined as follows:

- FLUCFCS 6410A – freshwater marsh dominated by native herbaceous vegetation; and

- FLUCFCS 6410B – freshwater marsh dominated by exotic herbaceous vegetation.

Typical desirable native wetland species covering significant acreage in the FLUCFCS 6410A subcategory include soft rush (*Juncus effusus*), sawgrass (*Cladium jamaicnense*), and maidencane (*Panicum hemitomon*), transitioning to pickerelweed (*Pontederia cordata*) in deeper water areas. Other observed species include beakrushes (*Rhynchospora microcarpa, R. colorata*), and spikerushes (*Eleocharis* spp.), water hyssop (*Bacopa monnieri*), St. John's-wort (*Hypericum perforatum*), and bogbuttons (*Lachnocaulon* spp.). While these marshes are dominated by groundcover species, some patches of shrubs do occur, particularly at the wetland edges, and consist primarily of Carolina willow (*Salix caroliniana*), myrsine (*Myrsine cubana*), and wax myrtle (*Myrica cerifera*). Decline in wetland quality generally occurs at the upland/wetland ecotone where invasive species tend to proliferate.
Some emergent marsh habitat was observed to be exotic-dominated (greater than 66 percent vegetative coverage) and grouped into the FLUCFCS 6410B subcategory. Nuisance/exotic vegetation observed included Peruvian primrose willow (*Ludwigia peruviana*), torpedograss (*Panicum repens*), cattail (*Typha* sp.), common reed (*Phragmites australis*), and Brazilian pepper.

Hydric Pine Flatwoods, FLUCFCS 6250

The forested hydric pine habitat was further classified into subcategories based upon the dominant vegetation type observed, defined as follows:

- FLUCFCS 6250A – hydric pine wetlands dominated by native forest canopy vegetation; and

- FLUCFCS 6250B – hydric pine wetlands dominated by altered forest canopy vegetation and predominance of slash pine.

These further classifications are described as follows:

- FLUCFCS 6250A – Wetlands with a co-dominance of slash pine and dahoon holly (*Ilex cassine*). Typical observed canopy species include slash pine, dahoon holly, and cabbage palm (*Sabal palmetto*). Subcanopy and groundcover species observed include offspring of canopy species, coco plum, saw palmetto (*Serenoa repens*), fetterbush (*Lyonia lucida*), wax myrtle, myrsine, gallberry (*Ilex glabra*), maidencane, yellow-eyed grass (*Xyris* sp.), beakrushes, St. John's-wort, bloodroot (*Sanguinaria canadensis*), and wiregrass (*Aristida stricta*); and

- FLUCFCS 6250B – Altered wetlands with a predominance of slash pine due to historic silviculture. Hydric Pine Flatwoods, by definition in the FLUCFCS manual, 1999, has a forest canopy with a sparse to moderate canopy of Slash pine. Typical observed canopy species include slash pine, dahoon holly, and cabbage palm. Subcanopy and groundcover species observed include offspring of canopy species, coco plum, saw palmetto, fetterbush, wax myrtle, myrsine, gallberry, maidencane, yellow-eyed grass, beakrushes, St. John's-wort, bloodroot, and wiregrass.

<u>Mixed Wetland Shrub, 6172</u>
This wetland habitat is typically dominated by invasive/exotics such as Brazilian pepper. Other vegetation types include melaleuca, Australian pine, old world climbing fern (*Lygodium microphyllum*), as well as occasional Carolina willow, native myrsine, wax myrtle, and cocoplum. Nuisance/exotic vegetation coverage is typically greater than 66 percent. This wetland habitat exhibits poor quality, as reflected by and directly attributable to the dominance of nuisance/exotic Carolina willow and Brazilian pepper.

<u>Waterway, 5100</u>
These open water features are channelized canals with steep banks and varying amounts of emergent and/or floating vegetative cover. Typically, the water features consist of the M-Canal and vegetated ditches that occur in the right-of-way north of the M-Canal. The M-Canal has maintained banks and is predominantly open water with minimal (0-10 percent) vegetative coverage. The vegetated ditches consist of non-maintained banks that are dominated by exotic vegetation and 50-75 percent coverage by rooted and floating vegetation (a mix of native and nuisance/exotic emergent wetland species). A majority of the unconsolidated bottom in these surface waters held standing water in excess of three feet deep at the time of the field reviews.

<u>Pine Flatwoods, 4110</u>
Pine flatwoods typical to the project right-of-way have a relatively open canopy (approximately 30 percent) with an understory of saw palmetto. Within the project right-of-way, this land use type is typically transitional between disturbed upland and hydric forests. The dominant canopy species observed within the project right-of-way is slash pine with occasional cabbage palms. Understory species observed include wax myrtle, coco plum, and gallberry. Groundcover is dominated by saw palmetto.

1.3.1 Project History: The following project history summary is based on applicants' provided input and published SR 7 studies. The history of the SR 7 extension project

contains several studies conducted to examine the feasibility of extending SR 7 beyond Okeechobee Boulevard. The proposed extension was first identified in 1969 within the Year 1985 West Palm Beach Urban Transportation Study. The FDOT previously examined the extension of SR 7 during the 1990s until the project was placed on hold in October 2000. At the start of the study, 23 alternatives were proposed. During the first agency workshop on August 24, 1998, two additional alternatives were suggested by the participants for a total of 25 alternatives. During the third interagency meeting on February 24, 1999, the alternatives were ranked and 8 were selected to advance forward in the evaluation.

In January, 2000, the FDOT initiated a formal Project Development and Environmental (PD&E) study of the remaining 8 alternatives and began to prepare an Environmental Impact Statement (EIS) for the extension of SR 7 to SR 710. However, the project PD&E study and EIS were suspended in October, 2000, after the Palm Beach Metropolitan Planning Organization (MPO) approved a motion to stop the PD&E Study.

Due to increasing purchases of public lands for conservation north of Northlake Boulevard, the study area was reduced, contributing significantly to the avoidance of direct impacts to wetlands and further reducing the potential secondary/cumulative impacts of future development in the area.

Subsequently in 2005, FDOT commenced a second PD&E study with the support of the county and the MPO. Using the previous feasibility studies (25 alternatives reduced to 8 alternatives), four alternatives were selected to be evaluated, in addition to a no-build alternative. Based on review of the project's historical study documents, the four alternatives were selected as the most reasonable alternatives to carry forward in the PD&E study process.

The four alternatives were screened through the Efficient Transportation Decision Making (ETDM) process in 2006. Alternatives 2 and 4 were disputed by several agencies and considered fatally flawed due to the level of impact to conservation lands, wetlands, and wildlife habitat. Alternatives 1 and 3 were acceptable to the agencies. Although Corridors 1 and 2 had less wetland and floodplain impacts compared to Corridor 3, they both resulted in significant residential relocations. The public overwhelmingly expressed opposition to Alternatives 1 and 2, due to the number of potential residential relocations.

The Federal Highway Administration (FHWA) distributed the Advance Notification for the SR 7 PD&E study on 16 June 2005. This study was evaluated as an EA. Numerous technical and environmental studies were completed in association with this PD&E and input was received from multiple federal and state resource agencies (including the U.S. Army Corps of Engineers (Corps), U.S. Fish and Wildlife Service (USFWS), U.S. Environmental Protection Agency (EPA), National Marine Fisheries Service (NMFS), Florida Department of Environmental Protection (FDEP), other federal and state agencies, and two tribal governments) and incorporated into the proposed project design and mitigation plans. Several alternatives were analyzed, and

all impacts were addressed in the environmental document for FHWA consideration. The Class of Action (COA) for this project was determined in accordance with the FDOT PD&E Manual. The purpose of an EA is to determine the potential impacts of a proposed project when the significance of the impacts is unknown.

Through the PD&E process Alternative 3 was selected for further development and analysis because it best balanced the interests of the public and the environmental agencies. Following the selection of Alternative 3, three alignment alternatives within that corridor were analyzed; west, center and east. The west alignment alternative had the least wetland impacts and was therefore selected. The west alignment alternative was again modified to minimize impacts by reducing the median width from 42 feet to 22 feet and by re-sizing drainage treatment swales to meet South Florida Water Management District (SFWMD) standards plus capacity for 50 percent additional treatment. The combination of this minimization effort reduced the overall typical section from 320 feet wide to 120 feet wide. Total wetland impacts were reduced by 50 percent to 58.52 acres.

Through the EA process, the FHWA comprehensively evaluated pertinent information including social impacts assessments, Cultural Resource Assessment Surveys, Endangered Species assessments, traffic assessments, relocation and right of way assessments, Section 4(f) (public lands), safety assessments, and wetlands assessments for this project. Upon conclusion of its evaluation, FHWA determined the SR 7 Extension project would not cause significant impacts and therefore an Environmental Impact Statement (EIS) was not warranted. FHWA issued a FONSI on 19 February 2015.

On 11 May 2006, the Corps issued Permit SAJ-2002-08273, which authorized 97.91 acres of fill to allow the construction of a two-lane roadway from Okeechobee Blvd. to 60th Street, and required the preservation of 544 acres under a conservation easement to the Palm Beach County Board of County Commissioners. A component of the work proposed under this project (SAJ-2015-01094) is to widen the existing roadway from two- to four-lanes. No additional fill material into waters of the U.S. beyond what already occurred under the SAJ-2002-08273 authorization would be required to accomplish this portion of the proposed project.

1.4 Work Proposed: The applicants seek authorization to discharge fill material over 58.52 acres of non-tidal wetlands along the existing 4.4-mile and proposed 4.1-mile roadway corridor. The secondary impacts of the project will impact 161.87 acres of additional wetlands. The project would widen the existing two-lane roadway to a four-lane divided roadway from Okeechobee Boulevard to 60th Street North (Segment 1). In addition, the project would involve constructing a new section of four-lane divided roadway (Segment 2) north of the current roadway alignment from 60th Street North to Northlake Boulevard. The proposed project design includes the creation of stormwater management facilities within the existing right-of-way for water quality treatment and flow attenuation.

1.5 Avoidance and minimization statement from applicants: Extensive evaluation was conducted on the proposed project during the course of the PD&E Study to examine ways to eliminate or reduce wetland direct impacts. Four corridors were initially examined for the new alignment roadway segment, and these were vetted during public meetings and hearings and with a commenting group of public agency representatives (including the U.S. Army Corps of Engineers (Corps), U.S. Fish and Wildlife Service (USFWS), U.S. Environmental Protection Agency (EPA), National Marine Fisheries Service (NMFS), Florida Department of Environmental Protection (FDEP), other federal and state agencies, and two tribal governments) covering a wide variety of disciplines through the ETDM process. Once the corridor alignment was selected, various ways to reduce the typical section were considered for both the widening and new alignment segments. Similarly, wetland avoidance and minimization were considered during the development and evaluation of pond sites. The original estimate of 113.9 acres of wetland impacts were reduced, through the process described above, to 58.52 acres.

Avoidance and minimization measures pertaining to wetlands, protected species, and other wildlife include the following:

- Reduction in the median width from 42 feet down to 22 feet from 60th Street North to Northlake Boulevard (this is the minimum width allowed per FDOT design and safety standards);

- Reduction in the width of drainage treatment areas from 175 feet down to +/- 30 feet;

- Location of all stormwater outfalls are designed to discharge to the west of the proposed roadway to the existing and South Florida Water Management District (SFWMD) permitted, stormwater treatment system, to protect water quality in the natural areas;

- Elimination of a proposed pond site located within the FDOT Rangeline (line commonly referred to as the "Rangeline" since this line runs directly over and parallel to the line separating Range 41 and 42 of the Florida Public Land Survey System), right-of-way, just south of the curve before the M-Canal crossing, due to the additional associated wetland;

- Removal of a proposed shared used path on the east side of the roadway, replaced by narrower sidewalk;

- Use of the existing SR 7 county road by placing the alignment as far west as possible;

- Use of retained earth walls where feasible;

- Lowering the design elevation profile to reduce the impact footprint;

- Incorporation of a minimal lighting scheme that would transition from the lights of local residences east into the natural area. This lighting scheme would transition from the brighter lights of the local residencies to a dimmer lighting scheme moving east along the proposed new roadway and adjacent to the buffer between the roadway and PCNA and GPW;

- Reduction of secondary impacts to wetlands in GWP by placing the alignment as far west as possible;

- Incorporation of on-site mitigation through enhancement, restoration, and preservation of wetlands within the FDOT right-of-way north of the M-Canal that would further reduce roadway-related secondary impacts on GWP; and

- Inclusion of wildlife fencing along the east and south sides of the corridor (north and south of the M-Canal, respectively) and wildlife crossings that would allow the safe passage between GWP and the Ibis Mitigation Area.

Through these avoidance/minimization efforts, the following environmental benefits would be realized:

- Approximately 50% reduction in the typical section footprint would preserve approximately 170 feet of right-of-way (54.8 acres) adjacent to the GWP and the ROW would be protected through a conservation easement;

- Approximately 51% reduction in total acres of wetland impact;

- Approximately 92% reduction in potential encroachment to the PCNA;

- Greatest reduction in wetland impact to occur within the native-dominated higher quality marshes (approximately 87% impact reduction north of M-Canal) and hydric pine flatwoods (approximately 92% impact reduction north of M-Canal);

- Reduction of impact to preferred snail kite foraging habitat from nearly 10 acres to approximately 0.7 acres (93% reduction);

- Reduced median width to prevent widening the roadway to the inside of the travel lanes and therefore restricting the roadway to only four lanes in the future. This eliminates impact to 40 acres of wetlands and represents an approximate 36% decrease in direct wetland impacts;

- Part of FDOT's mitigation plan is to enhance, restore, and preserve the remaining Rangeline right-of-way adjacent to the GWP, an area encompassing 54.8 acres (See Figure 4, Section 10.1.6.). This would prevent any future roadway widening to the outside of the proposed travel lanes;

- Reduced secondary impact acreage in GWP wetlands by approximately 58% as a result of incorporating on-site mitigation (through wetland restoration, enhancement, and preservation) on the easternmost approximate 170 feet of right-of-way north of the M-Canal;

- Minimized impacts to wildlife through sensitive structure design, use of appropriate fencing (includes slats installed at the bottom of the fence to prevent small wildlife from passing through and to reduce vehicular lighting impacts), heightened barrier wall on the M-Canal bridge and approach, and vegetated buffers to lessen the potential for vehicular strike impacts;

- Construction of wildlife crossings at the M-Canal and the Ibis Mitigation Area outfall structure that would allow wildlife connectivity between natural areas;

- Improvement in the quality of wildlife foraging, roosting, and nesting habitat in the 54.8 acre on-site mitigation area; and

- Reduced unnecessary impact to wildlife through placement of the alignment as far west as possible within the ROW, closest to existing development.

1.6 Compensatory mitigation proposal from applicants: The compensatory mitigation being proposed to offset the 58.52 acres of direct wetland impact and the associated 161.87 acres of secondary impacts would be provided through the following:

1.6.1 The purchase of credits from the Loxahatchee Mitigation Bank (LMB). The LMB is the only federally approved bank that has a service area that includes the project corridor.

1.6.2 Allocation of existing credits at Palm Beach County's Pine Glades Permittee-Responsible Off-Site Mitigation Area (PROMA); and at SFWMD's Dupuis Reserve PROMA. For compensatory mitigation projects on public lands, federal facility management plans or integrated natural resources management plans may be used to provide long-term protection. Here, the public landowner and manager are the proposed permittees. In addition, the Corps has reviewed the current management plan and has determined it will provide long-term protection. The Pine Glades PROMA is protected by a Conservation Easement, dated 3 May 2011 and managed under the Palm Beach County's Management Plan for Pine Glades Natural Area, dated March 2008. The Dupuis PROMA is currently managed under the SFWMD's Dupuis Ten Year Management Plan (2014 – 2024), dated January 2014. These documents are made part of the project's administrative record.

1.6.3 Additional mitigation to minimize secondary impacts to Grassy Waters Preserve: This additional mitigation is being provided as additional minimization and additional wildlife habitat. On-site wetland mitigation through wetland creation, restoration, and enhancement in 54.8 acres of right-of-way which includes forested wetland restoration and creation, herbaceous wetland restoration and creation, freshwater marsh enhancement, shrub wetland enhancement, hydric pine enhancement, upland preservation, and wetland transitional area restoration.

1.6.4 Project wetland direct and secondary wetland impacts and corresponding proposed compensatory summary is outlined in the following table:

Wetland Impact Area	Impact Type	FLUCFCS	Impact Acres	Impact FL/Method	Mitigation Location	FG Units Deducted/ Method
County ROW	Direct	6410 & 5100 Herbaceous	10.98	8.60/UMAM (1:1)	Pine Glades PROMA	8.60/UMAM
FDOT ROW	Direct	6410A Herbaceous	0.29	Acreage Based Ratios (4:1)	Dupuis PROMA	1.16/UMAM (0.29 x 4=1.16)
FDOT ROW	Direct	6410B & 5100 Herbaceous	6.67	Acreage Based Ratios (4:1) to UMAM	Dupuis PROMA	26.68/UMAM (6.67 x 4=26.68)
County ROW	Secondary (0-300 feet)	6410 & 5100 Herbaceous	45.30	7.10/UMAM (1:1)	Pine Glades PROMA	7.10/UMAM
FDOT ROW	Secondary (0-50 feet)	6410 & 5100 Herbaceous	2.43	Acreage Based Ratios (0.5:1) to UMAM	Dupuis PROMA	1.22/UMAM (2.43 x 0.5=1.22)
FDOT ROW	Secondary (50-300 feet) (240-300 feet)	6410 & 5100 Herbaceous	22.61	Acreage Based Ratios (0.25:1) to UMAM	Dupuis PROMA	5.65/UMAM (22.61 x 0.25=5.65)
County ROW	Direct	6172 & 6250 Forested	29.63	18.69/UMAM (1:1)	Pine Glades PROMA	18.69/UMAM
FDOT ROW	Direct	6172 & 6250 Forested	10.95	Acreage Based Ratios (4:1) to UMAM	Dupuis PROMA	43.80/UMAM (10.95 x 4=43.80)
County ROW	Secondary (0-300 feet)	6172 & 6250 Forested	62.33	8.09/UMAM (1:1)	Pine Glades PROMA	8.09/UMAM
FDOT ROW	Secondary (0-50 feet)	6250 Forested	3.98	Acreage Based Ratios (0.5:1) to UMAM	Dupuis PROMA	1.99/UMAM (3.98 x 0.5=1.99)
FDOT ROW	Secondary (50-300 feet)	6250A Native Forested	9.29	Acreage Based Ratios (0.25:1) to UMAM	Dupuis PROMA	2.32/UMAM (9.29 x 0.25=2.32)
FDOT ROW	Secondary (50-300 feet)	6250B Altered (7.60 ac total) Forested	1.00	Acreage Based Ratios (0.25:1) to UMAM	Dupuis PROMA	0.25/UMAM (1.00 x 0.25=0.25)
FDOT ROW	Secondary (50-300 feet)	6250B	6.60	0.66/M-WRAP	Loxahatchee Mitigation Bank	0.66/M-WRAP

		Altered (7.60 ac total) Forested				
FDOT ROW	Secondary (240-300 feet)	6172 Forested	0.22	Acreage Based Ratios (0.25:1) to UMAM	Dupuis PROMA	0.06/UMAM (0.22 x 0.25=0.06)
FDOT ROW	Secondary (240-300 feet)	6250A Native Forested	5.29	Acreage Based Ratios (0.25:1) to UMAM	Dupuis PROMA	1.32/UMAM (5.29 x 0.25=1.32)
FDOT ROW	Secondary (240-300 feet)	6250B Altered Forested	2.82	Acreage Based Ratios (0.25:1) to UMAM	Dupuis PROMA	0.71/UMAM (2.82 x 0.25=0.71)

Totals:
Direct Impact Acres: 58.52
Secondary Impact Acres: 161.87
UMAM FG: 127.64
M-WRAP FG: 0.66

Notes:
1. FL: Functional Loss
2. FG: Functional Gain
3. FLUCCS: See Section 1.3 above.
4. PROMA: Permittee Responsible Off-Site Mitigation Area
5. UMAM: Uniform Mitigation Assessment Method
6. M-WRAP: Modified – Wetland Rapid Assessment Procedure
7. Acreage Based Ratios to UMAM In-Accordance With the Dupuis PROMA Credit Ledger.

1.7 National Environmental Policy Act (NEPA) purpose and need:

1.7.1 Project purpose as described by applicants: The purpose of the project is to extend SR 7 to Northlake Blvd. Currently, the north-south travel network between Okeechobee Blvd. and Northlake Blvd. is limited. Florida's Turnpike is located four miles to the east of SR 7 and Seminole Pratt Whitney Road is located six miles to the west.

1.7.2 Project need as described by applicants: The propose need for extension of SR 7 is consistent with the following transportation plans:

- Palm Beach County Comprehensive Plan (Transportation Element, Policy 1.4m)

- Palm Beach MPO Year 2035 Long Range Transportation Plan (LRTP) Cost Feasible Plan

- Palm Beach MPO Fiscal Year (FY) 2011-2015 Transportation Improvement Program (TIP)

For residents of the Village of Royal Palm Beach and the Acreage, the primary travel route from Okeechobee Blvd. to Northlake Blvd. includes a combination of Royal Palm Beach Blvd., Orange Blvd., and Coconut Blvd. This route is approximately eight miles long and includes six miles through a two lane undivided facility fronted by residential properties. Widening along this local route would result in significant impacts to the community including potential ROW and relocation impacts. The benefit of the proposed alignment is that it is located along the edge of existing developments within an existing corridor reserved for transportation purposes.

From a regional perspective, SR 7 is one of four major facilities connecting Miami-Dade, Broward, and Palm Beach Counties. Other north-south facilities, listed in order from west to east, include the Florida's Turnpike, Interstate 95 (I-95), and US 1. Travel demands within the project area will continue to grow and connecting SR 7 with Northlake Blvd. is vital to satisfying capacity and mobility needs. The proposed improvement would be usable and beneficial to the surrounding network and could function independently without the need for additional network improvement. The connection up to Northlake Blvd. is expected to operate acceptably, meeting the requirements for independent utility.

The proposed extension of SR 7 would also facilitate the hurricane evacuation process by providing additional capacity and connectivity in this area. There are no designated evacuation routes or evacuation shelters within the study area. The extension of SR 7 would facilitate the evacuation process by improving the linkage between Northlake Blvd. and Southern Blvd. (SR 80). Southern Blvd. is an east-west facility that traverses from the coast towards the interior part of the State.

1.7.3 Basic project purpose: The basic project purpose is roadway widening and new roadway alignment expansion.

1.7.4 Water-dependency determination: The proposed project is not water dependent.

1.7.5 Overall project purpose: The overall project purpose is to provide a north-south transportation corridor between Okeechobee Blvd. and Northlake Blvd in order to improve regional connectivity and meet traffic demands in northeastern Palm Beach County.

2.0 Authority: Section 404 of the Clean Water Act of 1972 (33 U.S.C. § 1344)

2.1 Jurisdictional Determination Information: The Corps completed a preliminary jurisdictional determination, dated 20 August 2015, prior to final action on the permit. Reference the administrative record.

3.0 Scope of Analysis – *The Scope of Analysis listed in this section represents the scope of the final project description.*

3.1. National Environmental Policy Act (NEPA) – *Scope determination for NEPA review is found at 33 CFR 325, Appendix B, Paragraph 7.b. The following factors are considered in determining whether sufficient federal "control and responsibility" exists:*

3.1.1 Factors:

a. Whether or not the regulated activity comprises "merely a link" in a corridor type project – Rationale: The proposed project consists of the construction of segments within a corridor roadway project, however, the regulated activity is located within portions along the entire corridor.

b. Whether there are aspects of the upland facility in the immediate vicinity of the regulated activity that affect the location and configuration of the regulated activity – Rationale: Aspects of the upland facility in the immediate vicinity of the regulated activity directly affect the location and configuration of the regulated activity because portions of the upland facility (roadway) would be expanded directly into WOTUS including wetlands along portions of the entire corridor.

c. The extent to which the entire project will be within Corps jurisdiction – Rationale: Due to the location and orientation of the roadway corridor crossing intermixed wetlands and uplands, the proposed project could not be constructed without work affecting both the regulated activity and the upland facility. Therefore, the Corps must review the entire project corridor.

d. The extent of cumulative Federal control and responsibility – Rationale: The extent of cumulative Federal control and responsibility includes authorities under the National Environmental Policy Act, the National Historic Preservation Act, the Endangered Species Act, the Magnuson-Stevens Fishery Conservation and Management Act, and Section 404 of the Clean Water Act.

3.1.2 Determination of scope – Based on an examination of NEPA (33 CFR Part 325, Appendix B) and applicable program guidance (e.g. Council on Environmental Quality's (CEQ) *Considering Cumulative Effects Under National Environmental Policy Act and the Standard Operating Procedures for the U.S. Army Corps of Engineers Regulatory Program, July 2009*), the Corps has determined that the appropriate scope for this project is over the entire project corridor.

Explanation: Due to the location and orientation of the roadway corridor as it crosses WOTUS including wetlands and the upland facility, the proposed project could not be constructed without work affecting both the regulated activity and the upland facility. Therefore, the Corps must review the entire project corridor.

3.2 National Historic Preservation Act (NHPA) "Permit Area" – *The NHPA scope is defined as "permit area". The permit area for an undertaking is defined in 33 CFR 325, Appendix C. The following three (3) tests must all be satisfied for an activity*

undertaken outside of waters of the United States to be included within the "permit area".

3.2.1 Tests *(check all that apply)*:

☑ a. The activity outside of waters of the United States would not occur but for the authorization of the work or structures within waters of the United States.
Explanation: The applicants have indicated that the need for the extended new roadway is to improve system linkage between Okeechobee Boulevard and Northlake Boulevard to address the growth of travel demands within west of the proposed project corridor. The new roadway could not be constructed without the 58.52 acres of non-tidal wetland impacts along the proposed selected corridor that includes uplands.

☑ b. The activity outside waters of the United States is integrally related to the proposed work or structures within waters of the United States (or, conversely, the proposed work or structures within waters of the United States must be essential to the completeness of the overall project or program).
Explanation: The new roadway could not be constructed without the 58.52 acres of non-tidal wetland impacts along the proposed selected corridor that includes uplands.

☑ c. The activity outside waters of the United States is directly associated (first order impact) with the proposed work or structures within waters of the United States.
Explanation: The applicants have indicated that the need for the extended new roadway is to improve system linkage between Okeechobee Boulevard and Northlake Boulevard to address the growth of travel demands west of the proposed project corridor. The new roadway could not be constructed without the 58.52 acres of non-tidal wetland impacts along the proposed selected corridor that includes uplands.

3.2.2 Scope Determination: Activities outside waters of the United States are included because all of the above tests apply to this project.

3.2.3 NHPA Scope Summary and Description: The established NHPA scope of analysis for this project encompasses the entire project corridor.

3.3 Endangered Species Act (ESA) "Action Area" – *The ESA scope is defined as "action area". The action area means all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action; and, is defined in for an undertaking is defined in 50 CFR 402.02, Definitions.*

3.3.1 Determined Scope: The established ESA scope of analysis or "action area" for this project encompasses the entire project corridor including both uplands and wetlands.

4.0 Public Involvement *(Public Notice required by 33 CFR 325.3)*:

4.1 Public Notice Information:

Application Received: 18 May 2015
Application Complete: 6 August 2015
Date Public Notice Issued: 27 August 2015
End Date for Public Notice Comment Period: 26 September 2015
Additional Information: Several requests for additional information (RAIs), RAI responses, and coordination meetings between the Corps, EPA, and FDOT were conducted from 16 Dec 2015 to 3 March 2017. The 3 March 2017 final FDOT RAI response proposed FDOT would incorporate federally approved mitigation bank credits along with on-site mitigation for buffer to the GPW and use of permittee-responsible off-site mitigation area (PROMA) credits.

4.2 Public Meeting(s): No
Discussion/Explanation: N/A

4.3 Public Notice Comments:

a. Comments Received From: Florida Fish and Wildlife Conservation Commission (FFWCC)
Date Received: 2 September 2015
Comment/Issue: The FWCC, via e-mail, forwarded a letter dated 6 May 2015, in which the Commission commented on the USFWS consultation on the nesting and habitat of the Everglade snail kite and wood stork. The Commission also commented on the potential impacts by the proposed projects on the State-listed gopher tortoise, Florida sandhill crane, least tern, limpkin, little blue heron, tricolored heron, snowy egret, roseate spoonbill, and white ibis. The FFWCC commented favorably on the applicants' efforts to mitigate for the loss of wetlands and habitat for the above listed species. The FFWCC commented on the potential for wading bird nesting to occur in the vicinity of the construction area. The FFWCC recommended that if nesting is observed, a minimum of 100 meters be maintained between the edge of the nesting area and any type of disturbance during the breeding season (March – August).

b. Comments Received From: State Historic Preservation Officer (SHPO)
Date Received: 4 September 2015
Comment/Issue: The Florida SHPO reviewed the proposed project for possible effects on historic properties listed, or eligible for listing, on the *National Register of Historic Places*. Based on previous reviews of the project, the opinion of the SHPO was that the proposed project would have no effect on historic properties listed, or eligible for listing, on the *National Register of Historic Places*.

c. Comments Received From: U.S. Fish and Wildlife Service (USFWS)
Date Received: 3 September 2015
Comment/Issue: The USFWS, via e-mail, informed the Corps that the Services listed species consultation with the FHWA (the lead federal agency for the project) has been completed and no further consultation by the Corps is necessary.

d. Comments Received From: National Marine Fisheries Services (NMFS)
Date Received: 10 September 2015

Comment/Issue: The NMFS, via e-mail, recommended that the new alignment continue north from the existing Acreage Reliever Road and not impact areas under conservation easement or associated with Grassy Waters Preserve. The NMFS opposes the expansion of the existing Acreage Reliever Road further into Pond Cypress Natural Area. Expansion should occur to the west demonstrating avoidance. The project would be mitigated at Dupuis Reserve, Pine Glades Natural Area, and onsite. This mitigation is reasonable but impacts have not been avoided to the maximum extent practicable.

e. Comments Received From: U.S. Environmental Protection Agency (EPA)
Date Received: 7 October 2015
Comment/Issue: The EPA has determined that the project, as currently proposed, does not comply with the 404(b)(1) Guidelines. The EPA finds this project may result in substantial and unacceptable adverse impacts to hydric pine flatwoods, sawgrass, and large tracts of the remaining freshwater wetlands. These wetlands are considered by EPA to be an aquatic resource of national importance (ARNI). This letter follows the field level procedures outlined in the August 1992 Memorandum of Agreement (MOA) between the Department of the Army and the EPA, Part IV, paragraph (3a) ("A" letter) regarding Section 404(q) of the Clean Water Act. Reference Section 4.9 below.

f. Comments Received From: U.S. Environmental Protection Agency (EPA)
Date Received: 28 October 2015
Comment/Issue: The EPA has determined that the project, as currently proposed, does not comply with the 404(b)(1) Guidelines. The EPA finds this project would result in substantial and unacceptable adverse impacts to hydric pine flatwoods, sawgrass, and large tracts of the remaining freshwater wetlands. These wetlands are considered an aquatic resource of national importance (ARNI). This letter follows the field level procedures outlined in the August 1992 MOA between the Department of the Army and the EPA, Part IV, paragraph (3b) ("B" letter) regarding Section 404(q) of the Clean Water Act. Reference Section 4.9 below.

g. Comments Received From: Dr. Myron F. Uman, PhD
Date Received: 22 September 2015
Comment/Issue: Dr. Uman sent a letter opposing the roadway into the Pond Cypress Natural Area, crossing of the M Canal and along the Grassy Waters Preserve. Dr. Uman raised concerns with the speed limit of the curvature roadway and bridge crossing the M Canal; adverse effects the roadway would have on the local water supply; additional roadway design requirements for protecting the local water supply; quantity and quality of stormwater runoff; and concerns with accident vehicles that might enter the Preserve and wetlands. He recommended the application be denied by the Corps with prejudice.

h. Comments Received From: Mr. Bill Newgent, Chairman, City Voice, Inc.
Date Received: 24 September 2015
Comment/Issue: Mr. Newgent sent a letter and e-mail opposing the new roadway and a request that the Corps deny the application for a Department of the Army permit for the proposed SR 7 extension. He cited the Grassy Waters Preserve as a critical

water supply water body and a “pristine” remnant of the Florida Everglades. He also cited Corps comments and USFWS letters made throughout the PD&E study phases relating to environmental and endangered species concerns.

i. Comments Received From: Mr. Jay L Chaskin
Date Received: 26 September 2015
Comment/Issue: Mr. Chaskin sent a letter opposing the new roadway and a request that the Corps deny the permit request and to recommend a no build. He stated the requested permit is not in the public interest. Mr. Chaskin cited that a permit would have adverse impact on the public interest in reference to water and risks of hazardous or contamination; traffic; and noise. He stated an Environmental Impact Statement is justified for the project and should be required by the Corps. He commented that planned bike paths and sidewalks should not be constructed to allow a greater shift to the east of the roadway and a swale be provided for water runoff. He has concerns that the SR 7 extension would encourage developers and impact the tranquility and quality of life for northern and western communities in Palm Beach County.

j. Comments Received From: Mr. Daniel W. Nurick
Date Received: 26 September 2015
Comment/Issue: Mr. Nurick sent a letter opposing the new roadway and a request that the Corps deny the application and deny any extension, expansion or construction of SR 7. He cited water, environment and economic concerns as the reasons the permit application should be denied.

k. Comments Received From: Ibis Property Owners Association, Inc.
Date Received: 29 September 2015
Comment/Issue: The letter was signed by the President of the Ibis Property Owners Association, Inc., Mr. Thomas S. Rohrer. The comments received included a statement that Ibis residents in 2012 expressed overwhelming opposition (92%) to the project siting and were in support of a “No Build” option. A summary of the Ibis Property Owners Association, Inc. comments include the risk of contamination to the Grassy Waters Preserve water supply and to wildlife; NEPA requirement to prepare a EIS; potential for traffic congestion on Northlake Boulevard; design of a future SR 7 and Northlake Boulevard intersection; the need for visual and noise buffer between the proposed SR 7 and the Ibis Community; dangerous traffic conditions at the east entry of the Ibis Community and inadequate turn lanes; increased flooding concerns in the Ibis Community with the construction of the new roadway; financial impacts to the Ibis Community resulting from guardhouse and gate relocation, possible pump station relocation, landscaping and berm relocation, removal of existing light poles, and the potential increase in Northern Palm Beach County Improvement District ad valorem taxes. In conclusion, the Ibis Property Owners Association, Inc. encouraged the Corps to enforce its recommendation of “No Build” or move the proposed roadway west of Ibis.

l. Comments Received From: Ironhorse Property Owners Association, Inc.
Date Received: 29 September 2015

Comment/Issue: The letter was signed by the Vice President of the Ironhorse Property Owners Association, Inc., Mr. Richard J. Litner. The purpose of Mr. Litner's letter was to request that the Corps deny the application for a Department of the Army permit for the proposed SR 7 extension. A summary of the Ironhorse Property Owners Association, Inc. comments include the risk of contamination to the Grassy Waters Preserve water quality and quantity; the risk of a possible truck spill of hazardous materials next to the Preserve; The Preserve's pristine habitat for countless plant, fish, animal, and bird species; the cumulative impacts of the additional roadway in addition to Northlake Boulevard; and, the precedent it would set for Palm Beach County to re-apply for the Roebuck and Jog Road extensions. In conclusion, the Ironhorse Property Owners Association, Inc. encourages the Corps to follow its own concerns and the concerns expressed by the USFWS.

m. Comments Received From: Lt Col (USAF Ret) Cort Durocher
Date Received: 29 September 2015
Comment/Issue: Lt Col (Ret) Durocher stated the proposed SR 7 extension requires a complete EIS. He cited letters from the Department of the Interior (DOI) and USFWS to the FHWA that the DOI and USFWS conclusion was that this project "clearly meets the definition of a major Federal action that significantly affects the quality of the human environment, thereby requiring and EIS." This opinion was based on USFWS input earlier in the PD&E Study and was not the final effects determinations provided to the FHWA through "formal" consultation. He also addressed the City's Water Catchment Area's (Preserve) stringent water quality standard for waters of the state. He indicated that the Preserve is a conservation area, not a recreational area. He concluded stating the cost of the project using the current proposed location would be much greater than an alternative routing to the West.

n. Comments Received From: Alexander & Cleaver Attorneys at Law
Date Received: 29 September 2015
Comment/Issue: The letter was signed by Gary R. Alexander, attorney and member of the Board of Directors of the Ibis Isle Homeowners Association (HOA). A summary of the HOA comments in reference to the proposed SR 7 extension and the concerns of the negative cumulative impacts and impacts on the environment includes noise and traffic; impacts on the Grassy Waters Preserve; impacts to other waters including the lakes that are part of SFWMD permitted stormwater management within the Ibis Community; impacts on wildlife and birds of Grassy Waters Preserve and the adjacent Ibis communities; and, the intrusion into the Preserve would also inhibit the normal interaction, movement, migration and relationship of that wildlife and bird community with the Ibis Isle Community. Mr. Alexander concluded with the request that the applicants' permit request be denied. Mr. Alexander also requested a public hearing (see Section 4.10) and that all the comments from the public notice be circulated with all the other federal resource agencies.

o. Comments Received From: Baywinds Homeowners Association, Inc.
Date Received: 23 September 2015
Comment/Issue: The letter was signed by the President of the Baywinds Homeowners Association, Mr. George Singer. The purpose of Mr. Singer's letter was

to request that the Corps deny the Department of the Army permit for the proposed SR 7 extension. A summary of the Baywinds Homeowners Association comments include the risk of contamination to the Grassy Waters Preserve; water quality and quantity; the risk of a possible truck spill of hazardous materials next to the Preserve; adverse impact to the Preserve's pristine habitat to countless plant, fish, animal, and bird species; the cumulative impacts of the additional roadway in addition to Northlake Boulevard; and, the precedent for Palm Beach County to re-apply for the Roebuck and Jog Road extensions. In conclusion, the Baywinds Homeowners Association, Inc. encourages the Corps to follow its own concerns and the concerns expressed by the USFWS.

p. Comments Received From: Everglades Law Center, Inc.
Date Received: 1 October 2015
Comment/Issue: The letter was signed by Ms. Lisa Interlandi. The letter stated these comments are provided on behalf of the Florida Wildlife Federation, the Sierra Club, and 1000 Friends of Florida in response to Public Notice SAJ-2015-01094 (SP-RLT) regarding the proposed SR 7 extension / expansion in Palm Beach County. The letter indicated that the impacts of the project to wetlands, endangered species habitat, Department of the Army authorized mitigation areas, and public water supplies, as well as the failure to conduct an Environmental Impact Statement (EIS) call for denial of the Section 404 permit. Furthermore, the comments indicated concerns regarding the existence of practicable alternatives; the risk of a possible truck spill of hazardous materials next to the Preserve; that the project would cause or contribute to significant degradation of the waters of the U.S.; that the project includes impacts to previously permitted Department of the Army mitigation sites; that issuance of a Department of the Army permit would be contrary to the public interest; the NEPA requirement for agencies considering undertaking "major Federal actions significantly affecting the quality of the human environment" to prepare a detailed EIS; failure to consider alternatives as part of the EIS; consideration of all significant impacts; effects of project induced traffic and development; if the project is built, induced traffic and development would quickly negate any traffic benefits that were created by the additional capacity; impacts of the project on the snail kites; other roadway impacts to include direct loss of wildlife habitat and wildlife, water quality and quantity degradation, vehicle emitting pollutants, vehicle noise, possibility of toxic spills into the water supply, and negative recreational impacts from noise and visual disturbances; the effect of indirect and cumulative effects that may occur if the project is constructed; induced development by the new road project would increase growth and development; significant loss of habitat, displacement, and death of plant and animal species to include endangered species; and, the proposed SR 7 extension would violate Executive Order 11990 because there are practicable alternatives, which reduce harm to wetlands. Ms. Interlandi summarized the comments by stating the impacts of the proposed project to wetlands, endangered species habitat, Department of the Army authorized mitigation areas and public water supplies, as well as the existence of practicable, less damaging alternatives and the failure to conduct an EIS call for denial of the Section 404 permit.

q. Comments Received From: Tetra Tech, Inc.
Date Received: 8 October 2015

Comment/Issue: The letter was signed by Ms. Kristin K. Bennett. Ms. Bennett's letter indicated that the FDOT mitigation proposal doesn't appear to meet the Compensatory Mitigation For Losses of Aquatic Resources rule set forth in 33 CFR 332. A summary of the Tetra Tech comments includes that the FDOT proposed permittee responsible onsite mitigation to create, restore, enhance and preserve wetlands and wetland transitional areas is not environmentally preferable over the purchase of mitigation credits at a federally approved mitigation bank. The letter further indicated that the Pine Glades Mitigation Area is permitted, planned and an in-place restoration site.

4.4 Corps acknowledgment of comments: The Corps acknowledged and addressed the comments received that are under its purview within the applicable sections of this Environmental Assessment and Statement of Findings.

4.5 Issues Identified by the Corps: The Corps identified the following issues and requested additional information from the applicants to facilitate review:

- Alternatives analysis in accordance with 33 CFR 320.4(a)(2)(ii); NEPA in accordance with 33 CFR 325, Appendix B; and, the Section 404(b)(1) Guidelines in accordance with 40 CFR 230.10(a).

- Demonstration of how the proposed compensatory mitigation plan is in compliance with 33 CFR 332.3(b)(2) through (b)(6) in reference to the order of preference for selection of compensatory mitigation.

4.6 Comments/Issues Forwarded to Applicants: Yes
Date Comments Forwarded: 16 December 2015

4.7 Applicants provided response to comments: Yes
Summary of response: The applicants, by letter dated 25 January 2016, provided a detailed response to the Corps Request for Additional Information (RAI). The applicants addressed the concerns provided by the resource agencies and public commenters. Below is a summary of the applicants' RAI responses.

a. *Alternative Analysis*.
Response: The applicants prepared extensive analysis and documentation of multiple corridors during the planning phase of this project. The four most viable alternatives were carried forward into the 2005 PD&E phase and studied in depth. The local governments, permitting agencies (including the U.S. Army Corps of Engineers (Corps), U.S. Fish and Wildlife Service (USFWS), U.S. Environmental Protection Agency (EPA), National Marine Fisheries Service (NMFS), Florida Department of Environmental Protection (FDEP), other federal and state agencies, and two tribal governments), and the public were involved throughout the entire PD&E process, including corridor evaluation. The final design of the project is in accordance with the preferred alignment as recommended by the PD&E study completed on 19 February 2015. A 2007 corridor report and the 2014 corridor report addendum prepared during

the PD&E study; and, the alternative analysis format requested by the Corps were included as attachments with the RAI response.

b. *Mitigation Order of Preference Justification.*

Response: The following RAI response was provided early in the permit application review process and the proposed mitigation has evolved to include the purchase of credits from the federally approved Loxahatchee Mitigation Bank (LMB). The SR 7 Extension project corridor is within the service area of the LMB, and the LMB currently has a sufficient quantity of forested and herbaceous wetland credits available to offset some secondary impacts. However, as stated in the SR 7 Extension Mitigation Plan, concern has been expressed that the habitat complexity and assemblages at LMB do not match that of the impact site. The impact site and the adjacent natural areas consist of a mosaic of herbaceous marshes, cypress domes, hydric pine flatwoods, and upland forested habitats. LMB contains freshwater marsh intermixed with occasional forested tree islands. LMB does not offer hydric pine habitat credits specifically, however the LMB does provide the general palustrine forested credits. Due to the avoidance and minimization measures incorporated into the project design, wetland mitigation needs have been drastically reduced. Both the DuPuis and Pine Glades Permittee-Responsible Off-site Mitigation Areas (PROMAs) have wetland functional lift 'units' available to meet the needs of this project (The PROMAs have lift that is available as they have not been previously allocated to another project). Therefore, there was no need for FDOT to advertise an 'invitation to bid' for mitigation banks.

The next mitigation option in order of preference is in-lieu fee program credits. There are no in-lieu fee programs available that have a service area that includes the SR 7 Extension project corridor. Therefore, this is not a viable option and does not meet the requirements of 33 CFR 332.3(b)(3).

The third compensatory mitigation option in order of preference is Permittee-Responsible mitigation under a watershed approach. The majority of the proposed compensatory mitigation is being proposed at the Pine Glades and Dupuis PROMA sites. Both of these PROMA sites have permitted success criteria that each site is fulfilling. These sites are also protected under conservation easement, ensuring the long-term sustainability and functionality of the wetlands within these sites. Pine Glades is located approximately 8 miles northwest of the impact site. Dupuis is located approximately 20 miles to the northwest of impact site. The Pine Glades PROMA, and Dupuis PROMA are all within the Loxahatchee River Watershed boundary. LMB is located outside the watershed limits, approximately 14.5 miles to the south of the southern boundary of this watershed. Therefore, the wetland restoration, enhancement, and preservation measures incorporated into the proposed PROMA sites are significant to the restoration and sustainability of the Loxahatchee River Watershed. Therefore all criteria in 33 CFR 332.3(b)(4) have been met, allowing for the use of the Dupuis and Pine Glades PROMAs for compensatory wetland mitigation on the SR 7 Extension project.

In accordance with 33 CFR 332.3(b)(4) and (b)(5), all compensatory mitigation should be allocated to permittee-responsible mitigation sites within the same watershed before on-site mitigation is considered. Although the majority of the needed wetland mitigation is proposed at Dupuis and Pine Glades, FDOT is also proposing on-site mitigation through wetland creation, restoration, enhancement, and preservation through a conservation easement. The on-site mitigation area is not being proposed due to lack of availability at the PROMA sites. Instead, its primary purpose is to provide additional water storage, water quality, and habitat benefits to the adjacent Grassy Waters Preserve. Because on-site mitigation would enhance the quality and functionality of the adjacent Preserve the FDOT believes it is a valuable and needed component to the overall mitigation strategy. In addition, it would increase the visual aesthetics of the wetland, which would be enjoyed by people using the SR 7 extension. It would also minimize the potential for vehicular bird strikes on protected wading birds and snail kites through the incorporation of a tall tree buffer that would force birds to fly up and over the roadway corridor. Finally, this portion of the mitigation strategy represents an ecologically responsible approach to the overall project; if this on-site mitigation proposal is not undertaken, a long strip of habitat that includes several exotic and invasive species would remain between the new roadway and Grassy Waters Preserve.

According to 33 CFR 332.3(a)(I), "When evaluating compensatory mitigation options, the district engineer will consider what would be environmentally preferable. In making this determination, the district engineer must assess the likelihood for ecological success and sustainability, the location of the compensation site relative to the impact site and their significance within the watershed, and the <u>costs of the compensatory mitigation project</u>." This response has already addressed how the proposed mitigation strategy meets the criteria for mitigation site location, significance to the watershed, and likelihood of ecological success and sustainability. Regarding the "costs of the compensatory mitigation project", FDOT has already funded all restoration activities at the Dupuis PROMA site. Therefore there is no additional cost to use this site for the SR 7 Extension project's compensatory mitigation needs. The wetland restoration activities have also already been completed at Pine Glades and would not require the allocation of additional funds to use the Pine Glades site for compensatory mitigation. Hence, use of the PROMA sites is significantly less expensive than purchasing credits at LMB (which currently cost an estimated $100,000 per credit). The FDOT is prepared to fund the costs associated with the creation and maintenance of the on-site mitigation area given the added water quality and habitat benefits that the proposed wetland creation, restoration, enhancement, and preservation would provide to the adjacent Grassy Waters Preserve and to enhance the visual aesthetics of the habitat.

c. *Need for the new roadway.*

Response: The purpose of the project is to extend SR 7 to Northlake Boulevard. Currently, the north- south travel network between Okeechobee Boulevard and Northlake Boulevard is limited. The need for the project is summarized as follows: (1) there is a clear necessity to improve system linkage between Okeechobee Boulevard and Northlake Boulevard; (2) travel demands within western Palm Beach County will

continue to grow; and (3) the Palm Beach Metropolitan Planning Organization (MPO) has identified this project as a critical priority.

d. *Need for an Environmental Impact Statement.*
Response: The SR 7 Extension PD&E study was evaluated as an Environmental Assessment (EA). Numerous technical and environmental studies were completed and their findings were extremely well documented. Input was received from multiple federal and state resource agencies and incorporated into the design and mitigation plans. Several alternatives were analyzed, and all associated impacts were addressed in the environmental document for Federal Highway Administration's (FHWA) consideration.

e. *Evaluation of the probable impacts, including cumulative impacts, of the proposed activity and its intended use on the public interest.*
Response: The proposed direct and secondary impacts to wetlands, wood stork foraging habitat, and snail kite foraging, nesting, and perching/roosting habitat are described in detail in the Mitigation Plan. A Cumulative Impact Analysis has been prepared for this project and it concludes that this project would not result in "unacceptable cumulative impacts" to wetlands, protected species habitat, or waters within the drainage basin. The applicants also attached a Public Interest Review document which addresses each of the general public interest criteria to ensure that the proposed SR 7 Extension project is not contrary to the public's interest.

f. *Segmentation of a large road project into smaller components to avoid proper cumulative impacts analysis.*
Response: As stated in the response to item 4.7.e. above, a comprehensive cumulative impact assessment was completed for the entire corridor during the PD&E study and concluded that no "unacceptable cumulative impacts" to wetlands, protected species habitat, or waters within the drainage basin would result from the proposed project. To adequately provide regional connectivity and system linkage, SR 7 needed to be extended from its previous northern terminus at Okeechobee Blvd. to Northlake Blvd. The "first segment" of the road, a two-lane roadway from Okeechobee Blvd. to 60th Street, was permitted in 2002 (USACE Permit No. SAJ-2002-8273). The first segment was a single and complete project with independent utility. Construction from Okeechobee Blvd. to Persimmon Blvd. was completed in 2005; construction from Persimmon Blvd. to 60th Street, was completed in 2014. The project proposed now would widen segment 1 from two to four lanes, and extend SR 7 from 60th Street to Northlake Blvd, which is described as segment 2 for construction purposes.

g. *Significant impacts to endangered and threatened species, including the Everglades snail kite.*
Response: On November 13, 2014, the USFWS issued a Biological Opinion that concluded that the proposed project is not likely to adversely affect, and would not jeopardize, any species of concern including the snail kite and wood stork. The applicants has made several commitments which would be adhered to in order to ensure that the impacts would be limited to those previously coordinated with the USFWS. These commitments include the following:

- All measures would be taken during construction to avoid contact with any listed species. In the event of locating a dead, injured, or sick threatened or endangered species, initial notification would be made to the nearest USFWS Law Enforcement Office in Vero Beach and secondary notification would be made to the FWC office in West Palm Beach.

- Care would be taken in handling sick or injured specimens (of any federally listed species) to ensure effective treatment and care or in the handling of dead specimens to preserve biological material in the best possible state for later analysis as to the cause of death. In conjunction with the care of sick or injured individuals, or preservation of biological materials from a dead animal, the finder has the responsibility to carry out instructions provided by Law Enforcement to ensure that evidence intrinsic to the specimen is not unnecessarily disturbed.

- All stormwater outfalls would be directed to the west to existing stormwater systems rather than to the wetlands located within Pond Cypress Natural Area or Grassy Waters Preserve.

- The standard FDOT Construction Precautions for the Eastern Indigo Snake would be adhered to during construction of the project.

- In order to protect the snail kite and its foraging habitat during the construction phase, the FDOT would commit to the following actions:

  1. Exotic plant species removal during construction within any native snail kite habitat remaining within the project ROW.

  2. Implementation of a project-specific Snail Kite Management Plan (refer to Appendix B of the Mitigation Plan) prior to and during construction. The management plan includes monitoring of nesting activity, guidance for construction scheduling, and contractor education;

  3. Annual snail kite nesting season surveys prior to, and during construction;

  4. Coordination with USFWS regarding the results of the surveys, and application of the buffers with regard to construction activities as appropriate;

  5. Weekly nest monitoring at any time the buffers have been employed; and

  6. Compilation of a final report, detailing all activities undertaken related to protection of the snail kite during construction, and as prescribed within the project-specific Snail Kite Management Plan (refer to Appendix D of the Mitigation Plan).

- Florida sandhill cranes have been observed foraging in the project area,

therefore, the impact area would be surveyed for sandhill crane nests prior to construction if construction begins within nesting season (January through June). If sandhill crane nests are located, the applicants would coordinate with FWC as appropriate.

- Should project construction begin just prior to or during the Bald Eagle nesting season (October 1 through March 15), a pre-construction nest survey would be conducted in appropriate habitat that is located within and up to 660 feet from the project limits. Should an active nest be located, the applicants would coordinate with USFWS, and conduct monitoring activities, if required, in accordance with the 2007 USFWS Bald Eagle Nest Monitoring Guidelines.

- An environmental scientist as part of the Construction Inspection and Engineering (CEI) team would be employed to monitor nesting activity of protected bird species.

- Restored wetlands within the 54.8 acres of unused ROW between the M-Canal and Northlake Blvd. would be monitored for usage by listed species.

- Conduct a pre-construction survey for the gopher tortoise and then completing any permitting and relocation activities as appropriate.

- The design includes wildlife fencing along the east and south sides of the corridor and wildlife crossings that would allow for the safe passage between the Ibis Mitigation Area and Grassy Waters Preserve.

- Lighting system design that reduces light trespass onto adjacent properties to the greatest extent possible.

- Additional features have been incorporated into the project design to further reduce impacts to wildlife. These are listed in the response to item 4.7.h below.

- Protected species and habitat impact avoidance and minimization measures incorporated during the project's planning and design phases are listed in the Mitigation Plan.

h. *Direct impacts to 58.52 acres of wetlands along the Pond Cypress Natural Area and Grassy Waters Preserve and the potential for secondary impacts including wildlife disturbance, road kill, noise, pollution, and toxic spills.*

Response: The proposed project would result in direct impacts to 58.52 acres of wetlands within existing transportation right-of-way. The Mitigation Plan details the proposed mitigation strategy to offset all direct wetland impacts. Secondary wetland impacts were assessed within a 300-ft buffer surrounding the proposed limits of construction and would be mitigated for as described in the Mitigation Plan through the deduction of credits from the PROMAs and purchase of credits from the LMB. The project's UMAM scores for the secondary impacts, account for the anticipated secondary impacts to the surrounding habitat and wildlife that may result from project-

related noise, lighting, and other traffic-related impacts. The direct and secondary impact wetland UMAM scores were previously reviewed by USACE in 2013 and deemed to be 'reasonable'. Both direct and secondary wetland impacts were significantly minimized by designing the roadway alignment along the western extent of the transportation right-of-way (closest to existing development) where existing wetland quality is reduced. Secondary impacts within Grassy Waters Preserve would also be greatly minimized through the implementation of wetland restoration, creation, and enhancement efforts in the on-site wetland mitigation area; these efforts would improve the habitat quality benefiting water quality and wildlife utilization. Both direct and secondary impacts to snail kite foraging, nesting, and perching/roosting habitat are being mitigated for separate from the wetland mitigation through the preservation of 216 acres of off-site Rangeline areas (described in further detail in the Mitigation Plan). This snail kite habitat mitigation is proposed to benefit the snail kite and is not required for compensatory wetland mitigation. To reduce wildlife disturbance and roadkills, the following elements have been incorporated into the proposed roadway design:

- Incorporation of two wildlife crossings, one beneath the M-Canal bridge and another beneath the spillway bridge near the Ibis outfall;

- Perimeter fencing to prevent wildlife from entering into the roadway. The fencing includes slats installed at the bottom to prevent small wildlife from passing through and reduce vehicular lighting impacts;

- Heightened barrier wall on the M-Canal bridge and approach;

- A vegetative buffer (tree/shrub combination) to force birds to fly up before flying over the roadway;

- Dry roadside retention to minimize potential for snail kite and wading bird foraging alongside the roadway.

- A stormwater design that directs all stormwater to the west and away from adjacent wetlands, resulting in no hydrological changes to surrounding natural area wetlands and snail kite habitat;

- An on-site wetland mitigation area that has been designed to lower existing marsh elevations, where appropriate, to be more conducive to apple snail proliferation and controlling exotic and nuisance vegetation coverage;

- Implementation of a project-specific snail kite management and protection plan, drafted in accordance with USFWS guidelines, to minimize snail kite injury/disturbance during construction;

- Fund a five year post-construction snail kite monitoring program to determine any project-related indirect impacts to snail kite habitat or behavior; and

- Provide an on-site biological monitor during construction.

Secondary impacts resulting from potential toxic spills, contaminants, and/or pollutants are not anticipated given the project's stormwater design. The concern of a toxic spill occurring and having an adverse impact to Grassy Waters Preserve and Pond Cypress Natural Area was raised early in the PD&E process by various stake holders and has thus been taken into account in the design of the roadway and drainage system. The stormwater design is discussed further in the response to Section 4.7.i below.

i. *Managing stormwater discharge from the road in a manner that won't degrade the water quality and quantity of the Pond Cypress Natural Area and Grassy Waters Preserve.*

Response: The Ibis Development Lake System was permitted under SFWMD Permit No. 50-02120-S to provide water quality treatment and quantity attenuation for 46.8 acres of the SR 7 Extension (new construction) storm water runoff. In an effort to address concerns raised regarding adverse impact to the drinking water supply, FDOT incorporated a dry swale along the east side of the roadway in the design as an additional effort to provide better runoff quality and spillage containment in the event of a spill. The dry swale would discharge to the Ibis Lake system through outfall structures raised approximately one foot above the bottom of the dry swale to allow retention time in the swale for contamination clean up. No direct discharge is proposed or allowed into Grassy Waters Preserve for SR 7 storm water runoff. The design of the drainage system would prevent any possibility of direct discharge through the use of berms, pumps and the elevations of the control structures and pipe system. This is over and above the treatment that Ibis runoff receives prior to discharge into Grassy Waters Preserve.

Given the fact that the swale volumes in each basin are much larger than the capacity of a tanker truck, any runoff from a spill would be contained within the swale. Additionally, each of the outfall structures within the swale would be designed with skimmers which would prevent pollutants from discharging to the outfall in the Ibis lake system. Additional roadway design features including a curb and gutter system and a guardrail along the eastern edge of the roadway would help contain vehicles within the roadway in the event of an accident. In the event of an accident involving a spillage of hazardous materials, or other pollutants, emergency responders would follow standard protocols to notify the appropriate agencies and initiate a clean-up. All spillage would be totally contained, isolated, and removed before any potential contamination could spread.

Please see the following Figures 1 and 2, which illustrates the swale and the flow path of a potential spill.

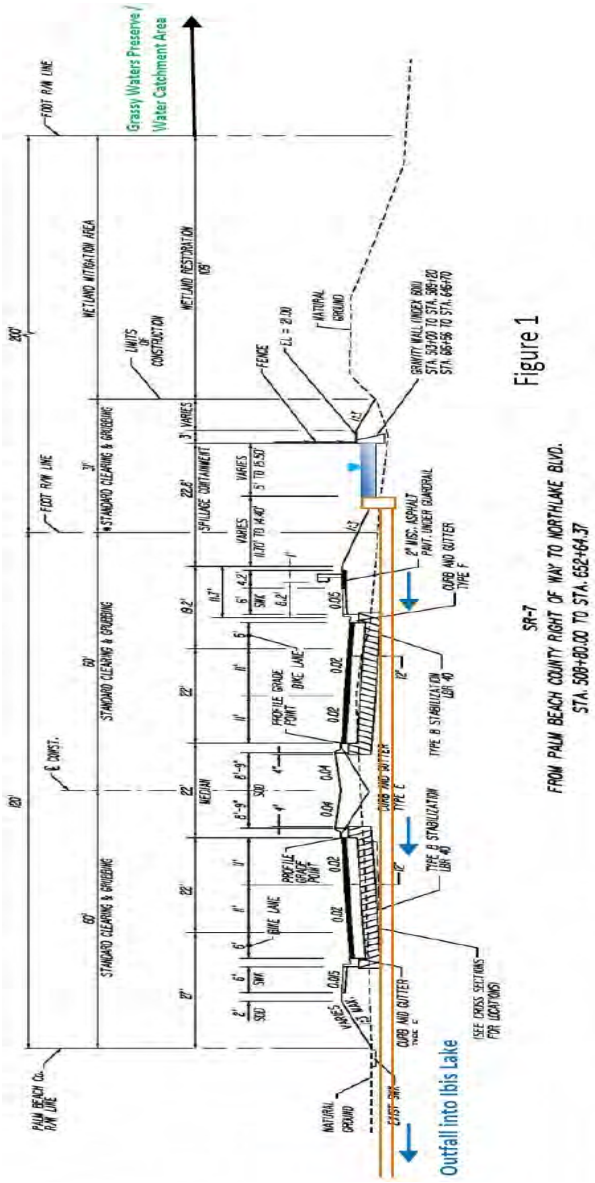
Grassy Waters Preserve / Water Catchment Area
Outfall into Ibis Lake
Figure 1
SR-7
FROM PALM BEACH COUNTY RIGHT OF WAY TO NORTHLAKE BLVD.
STA. 508+60.00 TO STA. 652+64.37

Figure 1

NORTHLAKE BOULEVARD
N
IBIS NORTH BASIN
SR 7 NORTH OUTFALL INTO IBIS
GRASSY WATERS PRESERVE / WATER CATCHMENT AREA
IBIS INTERNAL PUMP
IBIS SOUTH BASIN
PROPOSED SR 7 EXTENSION
SR 7 SOUTH OUTFALL INTO IBIS
IBIS OUTFALL
IBIS OUTFALL
IBIS PRESERVE OUTFALL
IBIS PRESERVE
M-CANAL

Figure 2

Figure 2

j. *Setting a precedent for extensions to Roebuck Road and Jog Road, which could add to the cumulative effects in the area.*

Response: The proposed Roebuck Road extension from Jog Road to SR 7 and the County's proposed extension of Jog Road from Roebuck Road to 45th Street are Palm Beach County road projects that function independently of the SR 7 Extension project. The permit applications for both these County projects were withdrawn. The extension of SR 7 has independent utility meaning that it functions on its own as a stand-alone project and, therefore, can be permitted as a separate project. With or without the extension of Roebuck Road and Jog Road, the extension of SR 7 would satisfy its purpose and need identified in the FHWA's FONSI, dated 19 Feb 2015. Furthermore, the Roebuck Road extension was directly tied to the three residential developments north of Okeechobee Blvd. and east of the Acreage Reliever Road (Riverwalk, Andros Isles and Baywinds). No additional developments would result from the proposed SR 7 Extension project. Right-of-way was set aside as part of the development orders or in the case of the area north of Riverwalk, through agreements between the City and County. In the case of Baywinds, the right-of-way was set aside and the stormwater management system was designed to accommodate Roebuck Road. The purpose of Roebuck Road was also stated as a reliever to Okeechobee Road. Thus, these road projects are not dependent upon the proposed project and would not be permitted or reviewed together with the SR 7 Extension.

Construction of the SR 7 Extension is not the stimulus for future development, but construction of past development (Ibis) is now the stimulus for SR 7 Extension. The need for the SR 7 Extension project is tied to the cumulative effects of the Ibis Development and the traffic it generates. When the Ibis Development was originally planned and permitted, transportation right-of-way was set aside adjacent to the development for the future SR 7 roadway. It is a requirement in the Ibis Development Order Resolution (ORB6229) to accept storm water runoff from SR 7.

k. *Effects on water supply and water quality for local residents, City of West Palm Beach, and the Towns of Palm Beach and South Palm Beach.*

Response: Given the proposed stormwater design described in the response to item Section 4.7.i, the proposed project would not negatively impact the water supply or water quality within Grassy Waters Preserve, which provides the potable water source for local residents and these municipalities. In addition, the proposed wetland creation and restoration activities within the on-site mitigation area would increase the water storage capacity of Grassy Waters Preserve by removing existing berms and re-establishing wetland grade. Backfilling the existing ditch, which is a source of stagnant

water with reduced quality, would enhance water quality. Berm removal and ditch backfill would re-establish hydrologic connectivity between wetlands in the transportation right-of-way and Grassy Waters Preserve. This, along with the proposed invasive/exotic species removal activities, would serve to enhance water quality in the area.

l. *Traffic and safety hazards for local addresses potential mitigation and remediation efforts in the unlikely event of a residents, drivers, passengers and pedestrians.*
Response: SR 7 has been designed in accordance with the applicable state and federal design criteria. The design includes a speed reduction to 40 mph at the M-Canal crossing and would include speed reduction, curve ahead and other appropriate warning signs. The current design also provides a 6' buffered bike lane and 6' sidewalk on both sides of SR 7. The roundabout design at both 60th street and the east Ibis entrance have gone through an extensive review process. Both roundabouts have achieved acceptable traffic operations.

m. *Aesthetics of the noise barrier.*
Response: The proposed noise barrier aesthetics would match the pattern of the existing noise barrier located on SR 7 south of our project limits. The proposed noise barrier would have a pattern of both sides of the wall as preferred by the residents.

n. *Effects on the Ibis Isle Community's existing lakes and waterways.*
Response: As described in the response to Section 4.7.i, the Ibis Isle Community's lake system was permitted under SFWMD Permit No. 50-02120-S to provide both water quality treatment and quantity attenuation for SR 7 stormwater runoff. It is also a requirement in the Ibis Isle Community's Development Order Resolution (ORB6229) to accept SR 7 storm water runoff. The proposed drainage swale adjacent to the roadway would provide water attenuation and treatment prior to entering into the Ibis Isle Community's lake system. Therefore, the Ibis Isle Community's lakes/waterways were designed and permitted to treat runoff from SR 7 and with the addition of the dry roadside swale, the project should not result in negative impacts to the Community's system.

o. *Need for a multi-use path.*
Response: The proposed roadway is designed in accordance with State standards with regards to bicycle and pedestrian accommodations. It includes 6-foot wide sidewalks on both sides of the road and 6-foot wide bicycle lanes in each direction. The need for a multi-use path was not identified during the PD&E study or the design phase. Additionally, as stated previously, the Department has significantly reduced the width of the typical section to minimize environmental impacts and providing a multi-use path is unnecessary and counter to these efforts.

p. *The Environmental Protection Agency (EPA) has expressed concerns with the Clean Water Act (CWA) Section 404(b)(1) Guidelines. Specifically, the EPA believes the*

project will have substantial and unacceptable impacts to hydric pine flatwoods, sawgrass, and larger tracts of the remaining freshwater wetlands in Palm Beach County. The EPA has concerns that avoidance and minimization have not been demonstrated for impacts to Aquatic Resources of National Importance. The EPA has requested alternative and cumulative impact analyses for the proposed project.

Response: The EPA's concerns and RAIs applicants are addressed in Section 4.9 below, as the Corps has coordinated with the EPA to address the EPA's Part IV 3 (a) and 3 (b) objections, in accordance with the 404(q) Memorandum of Agreement between the Corps and EPA.

q. *The National Marine Fisheries Service (NMFS) opposes the expansion of SR 7 any further into the Pond Cypress Natural Area. The NMFS recommendation is that a new SR 7 alignment should continue north from the existing SR 7 (Acreage Reliever Road) and not impact areas under conservation easement or associated with Grassy Waters Preserve*.

Response: The new SR 7 alignment avoids any direct impacts to Grassy Waters Preserve, the Ibis Preserve mitigation area, and all other areas under conservation easement associated with Grassy Waters Preserve. The new SR 7 alignment located directly adjacent to Grassy Waters Preserve (between the M-Canal and Northlake Blvd.) is located completely within existing transportation right-of-way. The proposed project plans show that the limits of construction are within existing transportation right-of-way and do not encroach into Grassy Waters Preserve.

4.8 Corps Purview – The following comments are not discussed further in this document as they are outside the Corps purview: N/A

4.9 Additional information: In response to the public notice, published on 27 August 2015, the EPA initiated the field level procedures outlined in the August 1992 MOA, Part IV, by issuing a paragraph 3(a) letter dated 7 October 2015 and a paragraph 3 (b) letter dated 28 October 2015. To address the indicated issues, the Corps provided additional information to the EPA and held multiple coordination meetings with the EPA and the FDOT from 16 December 2015. After addressing the indicated issues, the Corps issued a paragraph 3(c) letter, dated 19 May 2017 to the EPA that included a draft permit and draft Environmental Assessment and Statement of Findings. The EPA concluded the coordination procedure by issuing a paragraph 3(d) letter, dated 9 June 2017, stating the EPA would not request a higher level review for this project under Part IV, paragraph 3(d)(1). The summary table below consists of the EPA comments and additional information requests (RAIs) with the Corps' responses:

U.S. Environmental Protection Agency (EPA)	Corps' Response
Date Received: 7 October 2015 Comment/Issue: In response to the Public Notice, The EPA indicated that the project, as currently proposed, does not comply with the 404(b)(1) Guidelines. The EPA finds this project may result in substantial and unacceptable adverse impacts to hydric pine flatwoods, sawgrass, and large tracts of the remaining freshwater wetlands. These wetlands are considered an aquatic resource of national importance (ARNI). This letter follows the field level procedures outlined in the August 1992 MOA between the Department of the Army and the EPA, Part IV, paragraph (3a) ("A" letter) regarding Section 404(q) of the Clean Water Act. Date Received: 28 October 2015 Comment/Issue: The EPA indicated that the project, as currently proposed, does not comply with the 404(b)(1) Guidelines. The EPA finds this project would result in substantial and unacceptable adverse impacts to hydric pine flatwoods, sawgrass, and large tracts of the remaining freshwater wetlands. These wetlands are considered an ARNI. This letter follows the field level procedures outlined in the August 1992 MOA between the Department of the Army and the EPA, Part IV, paragraph (3b) ("B" letter) regarding Section 404(q) of the Clean Water Act. The EPA also provided RAIs dated 28 September 2015 and 16 October 2015. Below, this chart summarizes EPA's comments and RAIs in the left column and provides the Corps' responses in the right column.	By letter dated 25 January 2016, the Florida Department of Transportation (FDOT) provided information to assist the USACE in responding to EPA's RAIs and responses to the Public Notice. The Corps has independently analyzed the issues raised by EPA. As appropriate, the Corps has incorporated FDOT's information into its responses below. Since the proposed project's inception, FDOT has coordinated with multiple environmental agencies, including the EPA, in order to seek input and address agency concerns on environmental issues pertaining to the project. FDOT noted that on August 12, 2006, EPA entered the following comments into the Efficient Transportation Decision Making (ETDM) website regarding the State Road 7 Extension Project Development & Environment (PD&E) study: - "Based on data available, there is no significant impact on air quality." - "Based on data available on the screening tool, no contaminated sites were identified on this corridor." An extensive public involvement and agency coordination program was conducted during this study. On 29 March 2006, an agency workshop was held at the South Florida Water Management District (SFWMD) office in West Palm Beach. The purpose of the meeting was to provide an update to the permitting agencies and interested groups on the progress of the SR 7 project and to solicit their feedback and opinion of each proposed corridor, including the No-Build

	Alternative. Approximately 36 individuals representing federal, state, and local agencies, environmental interest groups, and local governments attended the workshop. The EPA was also invited and attended. In addition, on 1 July 2011, the FDOT received a letter from the EPA concerning the Sole Source Aquifer Review which stated the project is not expected to cause a significant impact to the aquifer system. On 6 October 2011, the EPA also attended a wetland field review with FDOT staff. EPA also participated in a multi-agency meeting on 26 October 2011. In summary, all appropriate agencies, including EPA, have been fully involved in the development of this project since the beginning.
The proposed project would impact freshwater wetlands within the Pond Cypress Natural Area and Grassy Waters Preserve, which is part of the drinking water supply system for the City of West Palm Beach and the towns of South Palm Beach and Palm Beach Island.	Response: <u>Grassy Waters</u> Preserve (GWP). The project would not directly impact wetlands within GWP. Secondary impacts within the FDOT's ROW that is adjacent to the GWP have been appropriately quantified and would be addressed through compensatory mitigation, as discussed in Section 8. The proposed project is to be constructed within existing FDOT ROW and Palm Beach County ROW. The property boundaries of Grassy Waters Preserve do not directly abut the existing development, i.e. the Ibis Community and

	the existing roadway. State Road 7 Extension would be constructed in the areas outside of the Grassy Waters Preserve, approximately 170 feet west of the property boundary. <u>Pond Cypress Natural Area (PCNA).</u> The project would directly and indirectly impact PCNA only in the area where the M Canal would be crossed. The Mitigation Plan is compensated the direct and indirect impacts with the deduction of credits at the Pine Glades and Dupuis PROMAs. The property boundaries of PCNA, do not directly abut the M Canal. Excluding the M Canal crossing, State Road 7 Extension would be constructed in areas outside the boundaries of PCNA. South of the M Canal, Palm Beach County owns the ROW reserved for transportation purposes and the conservation area known as PCNA. PCNA encompasses over 1,700 acres. The transportation ROW encompasses an estimated 30.8 acres along the north limit of PCNA. The City of West Palm Beach has an 80-ft wide canal maintenance easement along the south bank of the M-Canal, on the north side of and within the transportation ROW. To avoid encroachment into this easement, the roadway had to be designed further to the south. Therefore, the proposed bridge over the M-Canal would impact 0.67 acres of the northern corner of PCNA. The applicants propose to release this .67 acres from the existing conservation easement. This equates to less than 0.03% of the total land area of PCNA. Due to wetland minimization efforts in the roadway design, there are 3.95 acres

	within the transportation ROW that are not needed for the proposed roadway construction. In order to compensate for release of the conservation easement over the .67 acres of PCNA, the applicants propose to preserve the 3.95 acres. In addition, the wetlands within the 0.67 acres that would be impacted by roadway construction would be mitigated for at Pine Glades Permittee-Responsible Offsite Mitigation Area (PROMA). With these changes, the proposed roadway would be contained completely within transportation right-of-way. Please note that north of the M Canal, there is a parcel between the City owned conservation parcels and the Ibis Community and that is where not only State Road 7 Extension would be built, but the onsite restoration area as well. The onsite restoration area is approximately 170 feet wide and west of that, the roadway is 142 feet wide including drainage and spill containment features.
The Proposed wetland impacts would occur within 25.2 acres of hydric pine flatwoods. The EPA considers hydric pine flatwood systems to be aquatic resources of national importance (ARNI), because they are threatened habitats that provide nesting, resting, and feeding sites for a wide variety of wildlife species. Despite the importance of this habitat type, south Florida hydric pine flatwoods are among the least protected lands in Florida, with only 9 percent in public ownership.	The applicants provided a history on the ARNI (GWP) in order to fully address the issue. Grassy Waters was purchased by Henry Flagler in the early 1890's. Between then and 1955, when the land was purchased by the City of West Palm Beach, minimal change in the land use is visible through a review of historical aerials. A few roads/paths and canals that traversed Grassy Waters east-west were created in the early 1950s and 1960s. Also, two separate areas along the eastern edge, north and south of Northlake Boulevard appear to have been clear cut in the early 1950s. The perimeter of the Preserve was "diked" through the construction of berms in the

	mid-1950s. It is likely that the berm and ditch located in the on-site mitigation area (the area proposed for wetland restoration) are the remnant dike berms. For the most part, the Preserve has remained undisturbed other than the spread of exotic/invasive vegetation which is concentrated adjacent to the roadways and canals. From the 1950s to the 1980s most of the land usage surrounding Grassy Waters was primarily devoted to open range cattle ranching on marginally suitable range lands produced from the years of drainage practices in the area. The exception to this usage was a large dairy farm operation established in the early 1950s on the western edge of the Preserve, on land which today has become the site of the Ibis Community. The dairy farm operation and its later (circa 1970s) conversion to an alligator production farm operation had profound implications and severe altering effects on the immediate wetland system in Grassy Waters along this boundary interface zone due to un-managed agricultural non-point source pollution run-off from these operations. Over a period of nearly thirty years, the cumulative effects of these separate operations and their contributions of agricultural non-point source pollution as a result of seepage and intermittent overflow from stockpiled manure piles, feed lot compounds, and later alligator rearing lagoons, would alter the natural biological context of the immediate area, as well as, more distant areas of Grassy Waters, as a result of over-nutrification of an otherwise oligotrophic marsh system. Department of the Army Permit No. SAJ-2004-1236, issued 7 April 2006, for a

	residential development, authorized the permittee responsible off-site mitigation for the City of West Palm Beach, within the northwest corner of Grassy Waters Preserve, directly adjacent to the proposed on-site mitigation area. This area was characterized as having an eutrophication problem that has resulted in the significant accumulation of organic material (peat) over the last 30 years. The eutrophic area suffers from peat accretion overlaying the native mineral soils, low hydraulic conductivity, plant succession toward non-native plant communities, shortened hydro period, low dissolved oxygen, reduced wildlife utilization, and lowered periphyton and freshwater food sources for wildlife. This area is directly adjacent to the former dairy/alligator farm. The hydric pine flatwoods that would be impacted by the proposed project are located in the northwest corner of the Preserve, adjacent to existing development, where historic disturbance has occurred. The impact to hydric pine flatwood has been minimized through the current roadway design, which reduced the typical roadway section to 142 feet. Impact to native-dominated hydric pine habitat, has been decreased by 65% from the original design plans through the avoidance and minimization efforts undertaken during the PD&E study from the original roadway design (320 ft. typical section). Impacts to the exotic-dominated hydric pine habitat that have been overrun by exotic/nuisance vegetation such as Australian pine, melaleuca, and old word climbing fern, have decreased by 8%. The substantial

	reduction in disturbance to native-dominated hydric pine is due to the selection of the western roadway alignment, and as such the majority of disturbance is to the exotic-dominated hydric pine flatwood habitat which is located on the western extent of the transportation ROW between the M-Canal and Northlake Boulevard. A total of 25.48 acres of hydric pine flatwood habitat is proposed to be impacted by the SR 7 Extension project. Of this 25.48 acres, only 12.31 (48%) acres is in its optimal state and not infested with exotic/nuisance vegetation and 13.17 (52%) is considered FLUCFCS 6250B and sub-optimal in ecological value. In summary, 52% of the impact is to low quality Hydric pine flatwoods. An estimated 859 acres of hydric pine flatwood habitat currently occur in the Eastern Palm Beach County Basin, which includes most of the developed portion of the County east of the SFWMD Water Conservation Area 1. An estimated 95% of the hydric pine flatwood habitat in the Eastern Palm Beach County Basin is currently in public ownership and protected in perpetuity under conservation easement. Therefore, even without considering mitigation that would occur for the impact to hydric pine habitat, the proposed project is impacting less than 3% of the total hydric pine flatwood in the Basin and only about 1% of the native-dominated hydric pine flatwood habitat. The Mitigation Plan (See impact/mitigation table in Section 1.6.4) proposes to compensate for direct and indirect impacts to forested wetlands that

	include hydric pine habitat within Palm Beach County ROW with similar habitat-type hydric pine functional units deducted from the Pine Glades PROMA. Direct and indirect impacts to hydric pine habitat within the FDOT ROW would be mitigated by deducting functional units of similar habitat-type hydric pine acre-credits at the Dupuis PROMA. As required by the USFWS Snail Kite Biological Opinion, FDOT would also place a conservation easement over 216 acres, in favor of Palm Beach County, known as the Rangeline that provides additional hydric pine flatwoods habitat and would be deeded to Palm Beach County Environmental Resource Management (PBERM). The preservation and conservation of over 216 acres of ideal forested upland, marsh, and forested wetland and upland habitats will benefit the wood stork and snail kite foraging and nesting habitat within the watershed. Avoidance and minimization efforts would avoid impacts to 23.44 acres of hydric pine flatwoods, and the project as proposed would only impact approximately 1% of native hydric pine habitat in the Eastern Palm Beach County Basin. This does not include the substantial acreage of hydric pine flatwoods avoided through responsible corridor and alignment selection during the PD&E studies. Additionally, FDOT would be protecting, in perpetuity, the hydric pine flatwoods habitat through two (2) conservation easements of the 54.8 acres on-site mitigation to the SFWMD and 216 acres off-site mitigation sites along the “rangeline” FDOT ROW to the County of Palm Beach.

In addition, the project proposes to impact 17.6 acres of freshwater marsh, which consists of sawgrass soft rush and maidencane.	Impacts to only 11.49 acres of freshwater marsh habitat are proposed for the SR 7 Extension project. The 17.6 acres listed includes the wetland acreage occurring in the vegetated ditch that is located within the transportation ROW between the M-Canal and Northlake Blvd. The wetland vegetation occurring in this ditch consists of a mix of native and invasive species that occur in deeper water habitats (such as spadderdock, giant leather fern, water lettuce and cattail). This habitat should not be considered freshwater marsh. This ditch would be back-filled to match existing wetland grade as part of the on-site mitigation area restoration strategy. Over 15,700 acres of freshwater marsh habitat currently occurs in the Eastern Palm Beach County Basin. An estimated 97% of the freshwater marsh habitat in the Eastern Palm Beach County Basin is currently in public ownership and protected in perpetuity under conservation easement. Therefore, even without considering mitigation that would occur for freshwater marsh impacts, the proposed project is impacting approximately 0.07% of the total freshwater marsh habitat in the Basin. South of the M Canal, the City of West Palm Beach owns an 80-ft wide canal maintenance easement directly adjacent to the south bank of the M-Canal and in order to avoid encroachment into this easement, the roadway had to be designed further to the south, thus causing more freshwater marsh disturbance. The Mitigation Plan (See impact/mitigation table in Section 1.6.4) proposes to compensate for direct and

	indirect impacts to freshwater marsh wetlands with the deduction of credits from the Pine Glades and Dupuis PROMAs. For compensatory mitigation projects on public lands, federal facility management plans or integrated natural resources management plans may be used to provide long-term protection. Here, the public landowner and manager are the proposed permittees. In addition, the Corps has reviewed the current management plan and has determined it will provide long-term protection. Pine Glades PROMA is site protected by a Conservation Easement, dated 3 May 2011 and managed under the Palm Beach County' Management Plan for Pine Glades Natural Area, dated March 2008. The Dupuis PROMA is currently managed under the SFWMD's Dupuis Ten Year Management Plan (2014 – 2024), dated January 2014. These documents are made part of the project's administrative record. Also FDOT is placing a conservation easement on the Rangeline 216 acres that contains additional freshwater marsh habitat and deeding the land to PBERM. FDOT is transferring the property to PBERM in order to meet the USFWS Snail Kite Biological Opinion commitment.
In order to fully review the proposed project, the EPA requests that the applicants provide alternatives for review which would have less adverse impacts on the aquatic environment.	A comprehensive list of alternatives have been evaluated to meet the basic project purpose, which is to extend SR 7 to Northlake Boulevard, and the overall project purpose of providing a connection from Okeechobee Boulevard to Northlake Boulevard to improve regional system linkage. See Section 5 of this EASOF for an analysis of alternatives. Some alternatives would have less impact to the aquatic environment, but would impose a significant impact to local communities, including numerous residential

	relocations, and are not practicable. Section 1.3.1 of this EASOF contains a historical summary of the project's history, including the many studies that have been completed. These studies also evaluated a wide range of additional alternatives. Through the PD&E process Alternative 3 was selected for further development and analysis because it best balanced the interests of the public and the environmental agencies. Following the selection of Alternative 3, three alignment alternatives within that corridor were analyzed; west, center and east. The west alignment alternative had the least wetland impacts and was therefore selected. The west alignment alternative was again modified to minimize impacts by reducing the median width from 42 feet to 22 feet and by re-sizing drainage treatment swales to meet South Florida Water Management District (SFWMD) standards plus capacity for 50 percent additional treatment. The combination of this minimization effort reduced the overall typical section from 320 feet wide to 120 feet wide. Total wetland impacts were reduced by 50 percent to 58.52 acres. On January 25, 2012 the Federal Highway Administration (FHWA) completed an Environmental Assessment (EA) . Since then, USACE and the City of West Palm Beach requested that FDOT consider two additional corridors further to the west. As a result, FDOT conducted a Corridor Report Addendum, which evaluated the extension of SR 7 west along existing 60th Street with one alternative proceeding north along either 130th Avenue North or 130th Trail and a

	second alternative that proceeds northward along 140th Avenue North. Each of the western corridors would result in less impact to the aquatic environment; however, these corridors were considered not practicable for the following reasons: • The alternatives to the west would not provide a direct connection from Okeechobee Boulevard to Northlake Boulevard. A traffic evaluation was conducted and determined that the alternatives to the west would serve more local trips in contrast to the proposed extension of SR 7 that would serve more regional trips. This is important as SR 7 is a critical regional roadway connecting Miami-Dade, Broward, and Palm Beach Counties. The extension of SR 7, as proposed, would provide for the capacity and mobility needs of the region. By shifting the alternatives to the west, the number of anticipated vehicle trips served would drop from 21,600 vehicles per day in 2040 to 15,500. • The potential social impacts would be substantial. Depending on which of the new western corridors was considered the number of residential relocations would range from 24 to as high as 75 along with the direct impact of 107 to 156 parcels. This would add significant cost and social impacts to the project. Furthermore, the alternatives to the west would substantially disrupt the rural character of the community. Many of the roads that connect to the 140th Avenue and 130th Avenue North or 130th Trail would be modified as dead end streets and require the rerouting of traffic.

	• The alternatives to the west would be required to cross numerous Indian Trails Improvement District (ITID) canals which provide flood control for the Acreage Community. Analysis showed that constructing the roadway in these locations had the potential to act as a dam for floodwaters, resulting in the potential for increased flooding to homes. Installation of the numerous culverts that would be required to cross the ITID canals would require disturbance and fill within the canals, which could cause downstream flooding. As described above and in Section 1.3.1 and Section 5, numerous alternatives have been evaluated throughout the years.
The EPA requests that the applicants consider other alternatives for the road alignment west of the Ibis Residential Development (IRD).	The previous response above details the alternatives evaluated west of the Ibis Residential Development (IRD). The study concluded that these alternatives would result in numerous property and residential impacts and that none of the alternatives west of the IRD would be practicable alternatives. The proposed location of the roadway east of the IRD was the result of many years of study and coordination with the environmental agencies and public. The alternative selection process involved considerable discussion from all stakeholders involved (including the Corps, SFWMD, USFWS, EPA, NMFS, FDEP, other federal and state agencies, and two tribal governments). The Corps noted that the applicants' preferred alternative (Alternative 3) would minimize community impacts by avoiding right of way acquisition and relocations, and compared to the other alternatives,

	provides the best alternative for avoiding adverse effects to wetlands and the natural environment by wrapping around existing urban development. It also meets the project's purpose and need by enhancing the regional transportation network given the proximity between the Florida's Turnpike and Seminole Pratt Whitney Road.
It would appear that alternatives west of Ibis Residential Development (IRD) would lessen the possibility for an adverse impact to the drinking water supply for the City of West Palm Beach and the towns of South Palm Beach and Palm Beach Island should a toxic spill occur along the proposed State Road 7 extension.	As stated in the previous responses above, alternatives west of IRD would result in numerous residential relocations, flooding concerns and would not meet the project purpose and need. The concern of a toxic spill occurring and having an adverse impact to the drinking water supply was raised early in the PD&E process by various stake holders and has thus been taken into account in the design of the roadway and drainage system. On 9 May 2017, the SFWMD entered a final order approving issuance of Permit Number 50-05422-P, which provides Water Quality Certification (WQC) and Coastal Zone Management Act (CZMA) consistency concurrence. The SR 7 Extension eastern ROW limit is located 170 feet west of the western property boundary of the GWP. The project would impact PCNA only in the area where the M Canal would be crossed. As noted in the applicant's response in Section 4.7(i) above, the Ibis Development Lake System was permitted by the SFWMD to provide water quality treatment and quantity attenuation for the SR 7 Extension (Segment 2) storm water runoff. No direct storm water discharges associated with the project are proposed or would be allowed into the GWP. All permitted drainage would be directed west into the Ibis Lake system, away from the GWP.

	To address concerns raised regarding adverse impact to the drinking water supply, FDOT incorporated a dry swale along the east side of the roadway in the design as an additional effort to provide better runoff quality and emergency containment in the event of a spill. The swale volumes in each basin are much larger than the capacity of a tanker truck, therefore, any runoff from a spill would be contained within the swale. The dry swale would discharge to the Ibis Lake system through outfall structures raised approximately one foot above the bottom of the dry swale to allow retention time in the swale for contamination clean up. The design of the drainage system would prevent any possibility of direct discharge through the use of berms, pumps and the elevations of the control structures and pipe systems. This is over and above the treatment that Ibis runoff currently receives prior to discharging into the Preserve. In the event of an accident involving a spillage of hazardous materials, or other pollutants, emergency responders would follow standard protocols to notify the appropriate agencies and initiate a clean-up. All spillage would be totally contained, isolated, and removed before any potential contamination could spread. For the bridge crossing over the M-Canal, a 54-inch high concrete barrier wall would be used. Most barrier walls for this type of application are only 32 inches high. In addition, the joints on the bridge would be sealed using a poured joint with backer rod expansion system. This structure would help retain any contaminated

	materials on the bridge deck and away from the M-Canal. A Spill Response Plan details the drainage design and the response procedures that would ensure that truck rollovers would not impact Grassy Waters Preserve.
The EPA requests that the applicant provide information on measures that have been taken to avoid and minimize on-site, freshwater wetland impacts.	The Corps noted that the applicant incorporated many measures in the design of the new Segment 2 roadway to reduce wetland impacts associated with the SR 7 Extension project. As detailed in the responses above, the limits of the project from its inception in the early 90s to the current design have been drastically reduced. This inherently has reduced wetland impacts. The Corps and other federal, state, and tribal agencies and governments (including the SFWMD, USFWS, EPA, NMFS, FDEP, other federal and state agencies, and two tribal governments) have provided comments on the project through the PD&E process, so the current roadway design reflects wetland minimization efforts. The applicants' preferred alternative reflects their efforts at avoidance and minimization. They proposed Alternative 3 because it balanced community impacts and natural resource impacts. In contrast, Alternative 4 would result in increased wetland impacts (112.2 acres) and Alternative 2 would bifurcate Pond Cypress Natural Area. The next minimization measure taken was the selection of the western alignment within Alternative 3. The western alignment reduced wetland impacts by having the footprint of the roadway as far west and close to existing development as possible. In addition, after the alternative and alignment were selected, the applicants considered minimization strategies in proposing the typical section

	and general design. FDOT revised the typical section to minimize the project's footprint as much as possible. Specific avoidance and minimization measures pertaining to wetlands, protected species, and other wildlife are described in Section 1.5. That Section also details the environmental benefits that would be realized from these measures. Secondary impacts to wetlands have also been reduced to the greatest extent practicable. By shifting the alignment to the west, north of the M-Canal, the vast majority of secondary impacts to wetlands now occur within FDOT ROW that would be used for wetland creation and enhancement. Additionally, part of FDOT's mitigation plan is to restore the remaining 150 feet of FDOT Rangeline right of way adjacent to the Grassy Waters Preserve and apply a conservation easement for the unused portion of the right of way. This would prevent any future widening to the outside. In addition, the reduced median width would prevent widening to the inside, restricting the roadway to only four lanes in the future.
For example, the applicants should consider reducing the width of the 22-foot median by constructing a jersey barrier similar to the one used on US1 from Florida City to Key Largo in order to avoid and minimize impacts.	The purpose, location, anticipated use, and environment of US-1 from Florida City to Key Largo; and SR 7 Extension in Palm Beach County differ substantially. US-1 in that location is an 18 mile high speed two lane limited access highway used for long trips to access the Florida Keys, which is surrounded by open water and coastal wetlands. SR 7 Extension is a 4 mile local/regional arterial roadway intended to relieve congestion in the immediate area, which is surrounded by

	existing development and freshwater wetlands. The two roadways are not comparable from a design perspective. The proposed median width has already been reduced from 42 feet to 22 feet to minimize wetland impacts. FDOT indicated that in accordance with FDOT roadway plans guidance, 22 feet is the minimum median width for arterial roadways with design speed less than or equal to 45 mph such as this project. The 22-foot wide median provides important safety, operational, aesthetic and environmental benefits that a narrower median with Jersey barrier would not provide. Some of the benefits of the 22-foot wide median are listed below. • Allows left turns and U-turns by using the turn lanes in the median. With a median barrier wall, turn lanes in the median cannot be accommodated and gaps in the barrier to allow left turns would create the possibility of severe collisions with the blunt ends of the barrier. • Improves operational efficiency by enhancing traffic flow due to the removal of turning traffic from through lanes. • The grassed median provides more “green space” than the median barrier wall and paved shoulders. The median reduces stormwater runoff and enhances air quality. • The 22-foot median also provides an opportunity for landscaping in keeping with the residential nature of the area. • The use of a median barrier and paved shoulders, although narrower than the 22-foot grassed median, would result in an increased amount of impervious area that would need to be compensated for by enlarging the dry retention swale along the east side of the proposed

	roadway by approximately 6', which would increase wetland impacts while decreasing space available for the onsite mitigation. • The reduced traffic "friction" caused by a median barrier is likely to result in an increase in average travel speed along the corridor, reducing safety and possible increasing noise. The Jersey barrier referenced on US 1 was designed primarily for safety because of the significant number of head on collisions on US 1 prior to it being re-constructed. The barrier is an effective way to reduce the head on collisions of vehicles attempting to pass in an unsafe manner. A similar safety concern is not expected to occur on the SR 7 extension. There were also ROW restrictions that precluded the use of a wider median on the US 1 project. As stated above, design elements incorporated into the project have already significantly reduced wetland impacts.
The applicants' proposed mitigation to offset project impacts consists of the creation, restoration and enhancement of 54 acres of onsite wetlands and the purchase of credits from the Pine Glades and Dupuis Reserve Permittee-Responsible Offsite Mitigation Areas. The EPA preference for mitigation is the use of a federally approved mitigation bank or in-lieu fee program, if available, rather than permittee-responsible mitigation. Since avoidance and minimization have not been adequately demonstrated, it is premature for the EPA to consider any type of mitigation.	As discussed above in this chart and in Sections 1.5 and 1.63, avoidance and minimization measures have been optimized. For instance, the applicants are proposing on-site mitigation through wetland creation, restoration, enhancement, and preservation through a conservation easement. The primary purpose of the onsite mitigation area is to minimize secondary impacts and provide additional water quality and habitat benefits to the adjacent Grassy Waters Preserve. In addition, it would increase the visual aesthetics of the wetland, which would be enjoyed by people using the SR 7 extension. It would also minimize the potential for vehicular bird strikes on protected wading birds and

	snail kites through the incorporation of a tall tree buffer that would force birds to fly up and over the roadway corridor. Finally, without the proposed on-site mitigation, a long strip of habitat that includes several exotic and invasive species would remain between the new roadway and Grassy Waters Preserve. In addition, as described in Section 8.3.7, the proposed compensatory mitigation complies with the Compensatory Mitigation Rule, 33 C.F.R. Part 332. The Mitigation Plan now involves purchasing credits from the federally approved Loxahatchee Mitigation Bank (LMB) and deducting functional units from Permittee-Responsible Offsite Mitigation Area sites that are already established and deemed successful. Section 8.3.7.1 explains why mitigation at the Pine Glades and Dupuis Reserve PROMAs is environmentally preferable to the purchase of additional LMB credits. For compensatory mitigation projects on public lands, federal facility management plans or integrated natural resources management plans may be used to provide long-term protection. Here, the public landowner and manager are the proposed permittees. In addition, the Corps has reviewed the current management plan and has determined it will provide long-term protection. Pine Glades PROMA is site protected by a Conservation Easement, dated 3 May 2011 and managed under the Palm Beach County's Management Plan for Pine Glades Natural Area, dated March 2008. The Dupuis PROMA is currently managed under the SFWMD's Dupuis Ten Year Management Plan (2014 – 2024), dated January 2014. These

	documents are made part of the project's administrative record. 33 CFR 332.3 (b)(2) through (b)(6) state the following preference hierarchy in the selection of mitigation sites. • (b)(2) Mitigation bank credits when permitted impacts are located within the service area of an approved mitigation bank, and the bank has the appropriate number and resource type of credits available. • (b)(3) In-lieu fee program credits when permitted impacts are located within the service area of an approved in-lieu fee program, and the sponsor has the appropriate number and resource type of credits available. • (b)(4) Permittee-responsible mitigation under a watershed approach when a watershed plan is available. The ultimate goal of a watershed approach is to maintain and improve the quality and quantity of aquatic resources within watersheds through strategic selection of compensatory mitigation sites. • (b)(5) Permittee-responsible mitigation through on-site and in-kind mitigation. • (b)(6) Permittee-responsible mitigation through off-site and out-of-kind mitigation. The following RAI response was provided by the applicants early in the permit application review process and, as noted above, the proposed mitigation has evolved to include the purchase of credits from LMB. The SR 7 Extension project corridor is within the service area of the LMB, and the LMB currently has a sufficient quantity of forested and herbaceous wetland credits available to offset most but not all forested wetland

	secondary impacts. However, as the applicant stated in the SR 7 Extension Mitigation Plan, concern has been expressed that the habitat complexity and assemblages at LMB do not match that of the impact site. The impact site and the adjacent natural areas consist of a mosaic of herbaceous marshes, cypress domes, hydric pine flatwoods, and upland forested habitats. LMB contains freshwater marsh intermixed with occasional forested tree islands. LMB does not offer hydric pine habitat credits specifically, however the LMB does provide the general palustrine forested credits. Due to the avoidance and minimization measures incorporated into the project design, wetland mitigation needs have been drastically reduced. Both the DuPuis and Pine Glades PROMAs have wetland functional lift 'units' available to meet the needs of this project (The PROMAs have lift that is available as they have not been previously allocated to another project). Therefore, there was no need for FDOT to advertise an 'invitation to bid' for mitigation banks. The next mitigation option in order of preference is in-lieu fee program credits. There are no in-lieu fee programs available that have a service area that includes the SR 7 Extension project corridor. Therefore, this is not a viable option and does not meet the requirements of 33 CFR 332.3(b)(3). The third mitigation option in order of preference is Permittee-Responsible mitigation under a watershed approach. The majority of the proposed mitigation of the wetland 'lift' unit allocation needed) is being proposed at the Pine Glades and

	Dupuis PROMA sites, with the remaining "lift" credits needed coming from the LMB. Both of the PROMA sites have success criteria that each site is fulfilling. These sites are also protected under conservation easement, ensuring the long-term sustainability and functionality of the wetlands within these sites. Pine Glades is located approximately 8 miles northwest of the impact site. Dupuis is located approximately 20 miles to the northwest of impact site.
Since avoidance and minimization have not been adequately demonstrated, it is premature for the EPA to consider any type of mitigation plan.	As detailed in the previous response and in Sections 1.5 and 1.63, avoidance and minimization has been optimized to the maximum extent practicable. The original proposed project extended to SR706/Indiantown Road, was 16 miles long and included over 500 acres of wetland impacts whereas the project proposed now would be 4.1 miles in length and impact 58.52 acres of wetlands which is an 88% reduction. Since the 1990s, the length of the project has been reduced due to land use changes that have occurred. Much of the northern area that would have been served by the original SR 7 extension is now in public ownership and no longer available for future development. Reducing the length of the project further reduced the risk of development pressures. Additionally the Snail Kite commitment that FDOT has entered into with USFWS for Snail Kite Habitat, would put 216 acres of the FDOT range line north of Northlake Blvd into a conservation easement and deeded over to Palm Beach County ERM. This would also remove the risk of development pressures on these wetlands.

In the event that onsite wetland impacts are reduced and avoidance and minimization are demonstrated in the future, the EPA requests that the applicant provide the following information regarding any proposed mitigation.	The applicants have proposed a comprehensive mitigation plan, as discussed above and in Section 8.
The EPA requests that the applicant provide Uniform Mitigation Assessment Method scores for the proposed impact and mitigation sites. Technical rationale for each score should also be included.	All proposed wetland impacts were assessed for compensatory mitigation requirements using Uniform Mitigation Assessment Method (UMAM), with the exception of the 0.66 forested Modified-WRAP (M-WRAP) credit deduction from LMB. On October 13, 2011, USACE, SFWMD, and National Marine Fisheries Service (NMFS) approved all wetland habitat delineation polygons, acreages, and the direct impact UMAM scores (See impact/mitigation table in Section 1.6.4) for all habitats within the ROW and 300-foot secondary impact buffer. USACE reviewed the secondary impact UMAM scores on 13 August 2013 and stated that they seemed reasonable and in accordance with other similar secondary wetland impacts incurred in similar habitats. USACE also stated that these scores would be formally reviewed and approved during the permitting process. Wetland impacts were assessed within the Limits of Construction (LOC; direct impacts) and within a 300-foot buffer zone of the LOC (secondary impacts). In order to properly assess Functional Loss resulting from unavoidable wetland impacts, all wetlands within the project LOC and 300-foot buffer area were categorized into two (2) wetland areas: 1) those occurring south of the M-Canal adjacent to the Pond Cypress Natural Area; and 2) those occurring north of the M-Canal adjacent to Grassy Waters Preserve. Secondary impact assessments were divided into two (2)

	distance increments (as measured from the LOC): 1) a 0-50 feet increment; and 2) a 50-300 feet increment within the buffer. These two increment distances were established with guidance from SFWMD and USACE based on a preliminary assessment of Functional Loss in a 300-foot buffer zone surrounding the existing two-lane roadway. With the exception of a small portion of the FDOT Rangeline, the proposed roadway footprint that is located south of the M-Canal is within County ROW. Therefore, the majority of the secondary wetland impacts associated with this portion of the roadway corridor are within the County-owned ROW. When the proposed roadway footprint is completely within FDOT ROW, the associated secondary wetland impacts are attributed to FDOT. For the majority of the proposed roadway north of the M-Canal, the proposed typical section shows a 150-foot wide LOC, with the westernmost 120 feet of impact within the County ROW and the remaining 30 feet of impact within FDOT ROW. This equates to 80 percent of the typical section width within County ROW, and 20 percent in FDOT ROW. Secondary wetland impacts associated with this portion of the corridor are divided accordingly, so that 80 percent of the impacts within the 300-foot buffer are attributed to County ROW (0-240 feet from the LOC boundary) and 20 percent are attributed to FDOT ROW (240-300 feet from the LOC boundary). The Corps and the SFWMD approved this methodology for assigning responsibility to secondary wetland impacts during a multi-agency meeting held on 6 June 2013.

	The Pine Glades PROMA was permitted using UMAM. The impacts resulting from the proposed SR 7 Extension project were assessed using UMAM. Therefore, wetland mitigation functional unit allocation can be deducted at a 1:1 ratio. Wetland acre-credit allocation at the Dupuis Reserve PROMA site is assessed based on acreage-based mitigation ratios. USACE and SFWMD previously permitted other FDOT projects, such as the Indian Street Bridge in Martin County, using the following impact to mitigation acreage ratios: • Direct Wetland Impacts – 4:1 • Secondary Wetland Impacts in 0-50 foot buffer – 0.5:1 • Secondary Wetland Impacts in buffer beyond 50 feet – 0.25:1 These same ratio classifications were applied to the direct and secondary impacts resulting from the proposed SR 7 Extension project. The ecological 'lift' resulting from the proposed on-site wetland restoration, creation, and enhancement activities was calculated using UMAM. The 'current' scores used to calculate UMAM data for each habitat type in the on-site mitigation area match the agency approved direct impact 'current' scores for the impacted habitat types (where applicable) within the LOC. The 'current' scores for the upland berm habitats (FLUCFCS 7430/8100) were established at zero because these are uplands that provide minimal ecological function. The berms are infested with invasive/exotic species, inhibit surface water flow, and provide a barrier to wildlife access/utilization of

	surrounding wetlands. The target, post-construction UMAM "with" scores were established to match the "with" scores of the native-dominated habitats occurring in Grassy Waters Preserve. The time lag values were established as follows: • Habitats proposed for wetland enhancement (via exotic eradication and control activities) were given a time lag (t-factor) of 1.07, equivalent to three years. It is anticipated that given the density of exotic/nuisance vegetation occurring in these areas, three years would be sufficient for natural colonization of native wetland vegetation to occur to fulfill the permitted native coverage success criteria. • Proposed herbaceous marsh restoration and creation activities resulting from ditch backfill and berm removal, respectively, were given a t-factor of 1.14, equivalent to five years. It is anticipated that five years would be sufficient to achieve the permitted vegetation coverage criteria given the proposed planting activities and anticipated rate of natural vegetation colonization. • Proposed forested wetland restoration and creation activities resulting from ditch backfill and berm removal, respectively, were given a t-factor of 1.46, equivalent to 11-15 years. It is anticipated that a forested system with sufficient canopy coverage to fulfill the permitted native coverage success criteria would be achieved within 15 years given the additional planting of shrub and canopy layers, and natural colonization from surrounding wetlands. It should be noted that the proposed wetland

	transitional areas, designed immediately adjacent to the LOC (which is upland), are also forested wetlands that would be planted with mature canopy trees. The transitional areas would be slightly elevated and therefore have relatively lower functionality and wetland vegetation coverage/diversity compared to the other restored/created forested wetland areas. All proposed wetland restoration and creation areas were assigned a risk factor of 2.0, given that the establishment of accurate and successful wetland target elevations can sometimes be difficult. However, because surface water levels are controlled in Grassy Waters and relatively easy to measure and the proposed restoration/creation areas are not dependent on ground water for hydrology, the risk factor was limited to 2.0. There is reduced risk with the proposed exotic/invasive species eradication and control activities, therefore all proposed enhancement areas received a risk factor of 1.5.
For purposes of compliance with the National Environmental Policy Act (NEPA) with respect to the activities regulated under CWA Section 404, the EPA believes that the EA/FONSI was not comprehensive and did not include any indirect and cumulative impact analysis.	A cumulative impact analysis was conducted and is discussed in detail within Section 9.0 of this EASOF. Secondary (indirect) wetland impact UMAM sheets are included and summarized in the Mitigation Plan.
The EPA believes that it is likely that there would be substantial or potentially significant long-term impacts to the Grassy Waters Preserve from roadway contaminants including heavy metals and other hazardous substances. In addition to the direct impacts related to the placement of fill within	The proposed project does not include placement of fill within Grassy Waters Preserve._Roadway contaminants would not directly enter Grassy Waters Preserve, but could enter the drainage system via a dry swale, which would

the Grassy Waters Preserve, and the Pond Cypress Natural Area, the project as proposed may also have an adverse impact on the drinking water supply for the City of West Palm Beach and the towns of South Palm Beach and Palm Beach Island from roadway runoff or, for example, should a toxic spill occur along the proposed road extension alignment.	provide initial treatment and then enter the Ibis stormwater facilities where further treatment takes place. Additionally, the onsite restoration area/buffer, as described in section 8.3.8. of this document, would occur between the roadway and the Preserve and would provide further protection. The Spill Response Plan details the drainage design and the response procedures that would ensure that truck rollovers would not impact Grassy Waters.
Should the U.S. Army Corps of Engineers choose to adopt the FHWA's NEPA documents for the purposes of compliance with the proposed permitting action, the EPA believes that to meet the requirements of NEPA a supplemental analysis should be conducted which should also include an analysis of what additional development would be spurred by the new roadway in the project study area that could further impact waters of the U.S.	SR 7 extension is being constructed to address the existing needs and the projected growth to occur in the area per the County's Comprehensive Plan and the adopted Palm Beach MPO's Long Range Transportation Plans. Because the roadway is surrounded by conservation lands under public ownership and existing development, no new development would occur adjacent to the roadway. Any further developments which may occur in the watershed would be required to address impacts to waters of the U.S. that may result from those developments and that development, if it were to occur would be independent of SR 7. The proposed conservation easements on the on-site mitigation area and the off-site rangelines would ensure no future development on these parcels.
	The Corps, by letter dated 7 March 2016, provided the EPA with a summary of the applicants' responses to EPA's concerns and an initial determination that the applicants addressed the concerns presented by the EPA and were in compliance with the CWA Section 404(b)(1) Guidelines. The Corps requested that the EPA reconsider their 404(q) MOA objections to the project and to notify the Corps within 15 days from

	the date of the letter, whether the EPA would continue to object or not object to issuance of the Section 404 permit.
By letter dated 31 March 2016, the EPA notified the Corps that based on the Corps 7 March 2016 letter, the EPA was currently reviewing the supplemental information provided by FDOT. The EPA was appreciative of the information provided by the Corps and stated it looks forward to working together towards resolution of the outstanding issues.	
By e-mail dated 26 April 2016, the EPA submitted a RAI to the Corps for the following further information needed to complete EPA review.	By e-mails dated 26 April 2016 and 16 May 2016, the Corps provided the applicant with a RAI requesting additional information based on the EPA review of the applicants' 25 January 2016 responses. The applicants provided responses by letter dated 23 June 2016.
1. Need alternative analysis reviewed using the 120th Avenue North as a corridor. *2. Need alternative analysis reviewed using 130th Avenue North as a one-way, 2 lane road going north and 130th Trail North as a one-way, 2 lane road going south as a corridor.* 3. *All the alternatives reviewed should include a cost for purchase of the road Right-of-Way, construction of roadway, and mitigation to offset wetland impacts.*	The alternatives suggested by EPA have been evaluated. In addition, the requested information about cost and mitigation has been provided. A detailed alternative analysis is included in Section 5 of this document that consolidates all the alternatives the EPA requested to be considered. SR7 Corridor Report (August 2007): During the corridor evaluation phase for the PD&E study, extensive public involvement was conducted to obtain local citizen and agency input on the proposed corridors. This is documented in the SR 7 Corridor Report (August 1, 2007). The combination of public comments received, agency input, and potential environmental impacts led the Florida Department of Transportation (FDOT) to recommend Corridor 3 and the No-Build option for further evaluation. Extending SR 7 through this corridor would not result in residential relocations and reduced the amount of impact to the

	environment when compared with Corridor 4 (Rangeline Alignment) that was analyzed in the previous corridor report. In addition, Corridor 3 would not bifurcate the natural area formed by the Pond Cypress Natural Area and the Grassy Waters Preserve. The potential bifurcation of these natural areas was a major concern for the permitting agencies. The FHWA conceptually agreed with the FDOT's recommendation and concurred with Corridor 3 and the No-Build option being carried forward. Through the Efficient Transportation Decision Making (ETDM) process, the FHWA determined that the level of documentation for the PD&E Study was an Environmental Assessment (EA). FDOT LEDPA response to USACE (December 2012): The applicants Public Hearing for the project was held March 21, 2012. Subsequent to the Public Hearing, the US Army Corps of Engineers (USACE) submitted a letter to FDOT dated 12 April 2012. In this letter, the USACE suggested that additional corridors be evaluated. On 11 September 2012, an interagency meeting was held at SFWMD. From that meeting, USACE asked FDOT to demonstrate that the recommended alternative in the FONSI was the Least Environmentally Damaging Practicable Alternative (LEDPA). On 5 December 5 2012, FDOT submitted their response to USACE which documented the justification and response to the Corps that the FDOT had addressed the alternative analysis used to reach the LEDPA in the FONSI. SR 7 Corridor Report Addendum (April 2014):

	At the request of the City of West Palm Beach and the USACE, the FDOT evaluated additional corridors. These corridors are documented in the SR 7 Corridor Report Addendum. The purpose of the Corridor Report Addendum was to evaluate the extension of SR 7 west along 60th Street with one corridor proceeding north along either 130th Avenue North or 130th Trail and a second corridor that proceeds northward along 140th North. As documented in the Corridor Report Addendum dated April 2014 (provided in Appendix A), two corridors, 130th Avenue North/Trail and 140th Avenue North, were evaluated as part of this analysis. The following five alternatives were reviewed and corresponding findings are listed below: • **Corridor 130th Avenue North** • Potential impacts to 107 parcels and potential relocation of 54 homes • The secondary impacts to properties that remain are over a larger area than those impacted by the Recommended Alternative at the Public Hearing. • Substantially impacts the remainder of the corridor in the community • Attracts 15,500 vehicles compared to 21,600 for the currently Recommended Corridor adjacent to the City Water Catchment Area • Potential to act as a dam for floodwaters east of SR 7 Extension, resulting in potential increased flooding to homes to the east • ROW Cost: $ 29 M • Construction Cost: $ 47 M

	• **Corridor 130th Trail** • Potential impacts to 114 parcels and potential relocation of 72 homes • The secondary impacts to properties that remain are over a larger area than those impacted by the Recommended Alternative at the Public Hearing. • Substantially impacts the remainder of the corridor in the community • Attracts 15,500 vehicles (AADT 2040) compared to 21,600 (AADT 2040) for the currently Recommended Corridor adjacent to the City Water Catchment Area • Potential to act as a dam for floodwaters east of SR 7 Extension, resulting in potential increased flooding to homes to the east • ROW Cost: $ 37 M • Construction Cost: $ 47 M • **Corridor Bridge over B Canal** • Potential impacts to 108 parcels and potential relocation of 24 homes along 60th Street • The secondary impacts to properties that remain are over a larger area than those impacted by the Recommended Alternative at the Public Hearing. • Substantially impacts the remainder of the corridor in the community • For safety reasons, the SR 7 Extension is elevated over the six existing side streets that cross the ITID B Canal. This elevates SR 7 about 22 feet above the side streets and would be a substantial visual impact visually to the

	surrounding properties. • Attracts 15,500 vehicles compared to 21,600 for the currently Recommended Corridor adjacent to the City Water Catchment Area • The total project cost for this corridor located within the ITID B Canal is approximately $279 million – about 3.5 times greater than the other alternatives evaluated and includes the following ROW and construction costs. • ROW Cost: $ 16 M • Construction Cost: $ 123 M • **Corridor 140th Avenue North (East)** • Potential impacts to 153 parcels and potential relocation of 46 homes • The secondary impacts to properties that remain are over a larger area than those impacted by the Recommended Alternative at the Public Hearing. • Substantially impacts the remainder of the corridor in the community • Attracts 15,500 vehicles (AADT 2040) compared to 21,600 (AADT 2040) for the currently Recommended Corridor adjacent to the City Water Catchment Area • Potential to act as a dam for floodwaters east of SR 7 Extension, resulting in potential increased flooding to homes to the west • ROW Cost: $ 29 M • Construction Cost: $ 49 M • **Corridor 140th Avenue North (West)** • Potential impacts to 156 parcels and potential relocation of 75

	homes • The secondary impacts to properties that remain are over a larger area than those impacted by the Recommended Alternative at the Public Hearing. • Substantially impacts the remainder of the corridor in the community • Attracts 15,500 vehicles (AADT 2040) compared to 21,600 (AADT 2040) for the currently Recommended Corridor adjacent to the City Water Catchment Area • Potential to act as a dam for floodwaters east of SR 7 Extension, resulting in potential increased flooding to homes to the west • The FPL substation would require $40 million to relocate • Both the Acreage Pines Natural Area and Acreage Community Park are 4(f) resources and cannot be impacted unless no other reasonable alternative is available. • ROW Cost: $ 81 M • Construction Cost: $ 49 M Collectively, these five western alternative corridors were eliminated from further study for the following reasons: • These alternatives would significantly reduce the ability to meet the project purpose and need: The traffic study shows the corridors to the west would serve local traffic and diminish the benefit to the regional network. Addressing the mobility needs of the region is an important element of the project. These corridors would result in a reduction in the ability to address the capacity issues associated with this

	project. Facilities this far west would accommodate more local trips whereas the existing alignment better serves the purpose and need providing capacity relief on a more regional level. The extension of SR 7 would also facilitate the hurricane evacuation process by providing additional capacity and connectivity in the area. There are no designated evacuation routes or evacuation shelters within the study area. The closest designated evacuation routes include Southern Boulevard (running east to west), the Florida's Turnpike (running south to north), and Beeline Highway (SR 710) (running southeast to northwest). Okeechobee Boulevard (running east to west) is also considered an evacuation route, but for the segment east of the Florida's Turnpike; approximately 3.8 miles east of the study area. The extension of SR 7 would facilitate the evacuation process by improving the linkage between Northlake Boulevard and Southern Boulevard. • Impacts to as many as 153 residential parcels and up to 75 residential relocations: Alternatives to the west would result in significant impacts to the community and are not desirable as noted from public comments. The recommended alignment for the extension of SR 7 would result in no residential impacts. During the corridor evaluation phase, the public overwhelmingly expressed strong opposition to Corridor 1 (located west of the Ibis Golf and Country Club) due to the number of potential residential relocations. A similar response would be expected for corridors further west. • Significant potential for increased flooding to homes to the east of the alternative corridors.

	• Substantially larger area of secondary impacts to surrounding communities than other corridors. • Additional project costs of up to approximately $279 million - about 3.5 times greater than other alternatives (Alt. Corridors within ITID B Canal). • Significant problematic and costly maintenance challenges related to the stormwater management systems (Alt. Corridors within ITID B Canal). • Significant additional project costs of $40M to relocate the Florida Power and Light substation (140th Avenue North (West) Corridor) • Impacts to 4(f) resources (parks and recreational facilities under public ownership): Acreage Pines Natural Area and Acreage Community Park (140th Avenue North (West) Corridor) In summary, the evaluated SR 7 Extension alternatives west of the Ibis Development, would include substantial impacts to residential communities, particularly the number of residential relocations. Furthermore, SR 7 Extension alternatives west of the Ibis Development including using 130th Avenue North as a one-way, 2 lane road going north and 130th Trail North as a one-way, 2 lane road going south as a corridor would not meet the overall project purpose of providing regional network connectivity and capacity improvement.
Other alternatives need to be reviewed and thoroughly analyzed that do not impact Aquatic Resources of National Importance (ARNI) as proposed by the preferred corridor of FDOT.	The proposed SR 7 Extension project would directly impact a total of 12.31 acres of hydric pine flatwood habitat (considered an ARNI by EPA), that is currently in its optimal state and not infested with exotic/nuisance vegetation. An estimated 859 acres of hydric pine

	flatwood habitat currently occur in the Eastern Palm Beach County Basin, which includes most of the developed portion of the County east of the SFWMD Water Conservation Area 1. An estimated 95% of the hydric pine flatwood habitat in the Eastern Palm Beach County Basin is currently in public ownership and protected in perpetuity under conservation easement. Therefore, even without considering compensatory mitigation that would occur for the proposed impacts to hydric pine habitat, the proposed project is impacting less than 3% of the total hydric pine flatwood in the Basin and only about 1% of the native-dominated hydric pine flatwood habitat.
An additional measure the applicants may consider is to reduce or remove the 22-foot median proposed. Some of the benefits proposed for this 22-foot wide median include, a) it allows for left turns and b) landscaping in keeping with residential nature of the area. The roadway is in a remote location which makes left turn lanes unnecessary other than the 1 turnaround required to enter Ibis from the east. The roadway is also in a remote location which would not benefit the residences in the area.	The applicants have implemented avoidance and minimization measures. As stated previously, in order to minimize wetland impacts, the proposed median width was reduced from 42 feet to 22 feet, the minimum width that complies with the design criteria applicable to this type of roadway. The 22-foot width allows left turns and U-turns due to the turn lanes in the median resulting in reduced rear-end crashes. With a narrower median, turn lanes in the median cannot be well-accommodated and safety is compromised. The number of median openings with turn lanes has been minimized and they are generally proposed only at locations that coincide with driveways with one exception. Due to the large distance between Driveway #5 and the Ibis Entrance, an additional median opening with turn lanes is proposed mid-distance between these two driveways to provide the opportunity for U-turns. This eliminates impact to 40 acres of wetlands and represents an

	approximate 36% decrease in direct wetland impacts. Further, this project is not considered to be in a remote location since it is within one mile of an urban area and is bordered by mostly residential development on the west side for approximately 6.7 miles of the 8.4 miles of the project (approx. 80%)*. The residential neighborhoods and developments include Porto Sol, La Mancha, the Acreage, Ibis Golf & Country Club and Amli at Ibis Apartments. The commercial developments include the Target Shopping Plaza at the south end of the project and the Publix Shopping Plaza at the north end. Finally, the use of a narrower median, such as with a median barrier and paved shoulders, would result in an increase in impervious area necessitating an increase in the size of the dry retention swale along the east side of the proposed roadway. This would increase wetland impacts and decrease the space available for the proposed onsite mitigation. *FPID 229664-4(Okeechobee Blvd. to 60th St. N.): 4.4 miles of 4.4 miles (100%) FPID 229664-3 (60th St. N. to Northlake Blvd.): 2.4 miles of 4.0 miles (60%)
Request applicants consider removing the sidewalks from the project to reduce wetland impacts. Proposed roadway is in a remote location which may make sideways unnecessary.	The applicants have proposed avoidance and minimization measures for this project, including the removal of the originally proposed multi-use path. The applicant provided in response the RAI that Section 335.065 of the Florida Statutes states, in part, that: “bicycle and pedestrian ways shall be established in

	conjunction with the construction, reconstruction, or other change of any state transportation facility, and special emphasis shall be given to projects in or within 1 mile of an urban area." The statutory exceptions to this general rule are not applicable here. As described above, this project is located within one mile of an urban area and is bordered by mostly residential development on the west side for approximately 6.7 miles of the 8.4 miles of the project (80%). In addition to the important traffic congestion relief function this proposed project would serve for this area of Palm Beach County, the project is also expected to be used by vehicles, cyclists and pedestrians from the nearby residential neighborhoods that are directly adjacent to the project including Porto Sol, La Mancha, the Acreage, Ibis Golf & Country Club, Amli at Ibis Apartments and others.
Please describe in detail if any Right-of-Way after construction would be available for future road widening projects or its attended use.	No right-of-way would be available for future roadway widening. The roadway typical section from 60th St. N. to Northlake Blvd. has been designed to use only that portion of the right-of-way needed for the roadway footprint and the required stormwater management system. As noted in the response to a previous comment, the design median width is at the minimum width allowed for this type of roadway, precluding expansion of the roadway in the median. Expansion of the roadway would also require additional room for stormwater management facilities, room that is not available due to FDOT's release of its interest in the remaining right-of-way. From 60th St. N. to the M-Canal crossing, the excess right-of-way on the south side

	of the project has been given to Palm Beach County Environmental Resources Management (ERM) to become part of the Pond Cypress Natural Area. From the M-Canal crossing to Northlake Blvd., the excess right-of-way on the east side of the project and adjacent to Grassy Waters Preserve, is proposed as an on-site mitigation area that would be constructed as part of this project and placed under conservation. The conservation easement shall preserve this area as a wetland in perpetuity, and ensure that no roadway widening would occur. In addition the Rangeline right-of-way to the north of the project corridor would also be preserved in perpetuity, as mitigation for snail kite foraging, nesting, and perching/roosting habitat impacts. Preserving this area would ensure that the roadway would not extend north of its proposed terminus at Northlake Blvd.
Currently there is only one state and federally approved mitigation bank in the proposed project basin to offset wetland impacts. Attachment 7 (Cumulative Impact Assessment) goes on further to state, "Credits purchase from this bank is not proposed to offset unavoidable wetland impacts because there is a concern by the regulatory agencies that it does not provide habitat complexity or similar assemblages of wetland habitats as those being impacted by the proposed project." The EPA does not concur with the statement that the regulatory agencies have concerns for the use of the Loxahatchee Mitigation Bank (LMB) to offset freshwater ditches, marsh, and shrub habitats. The EPA is of the position that the Federal Mitigation Rule sets a preference for use of the LMB for the above reference habitats over all of the mitigation options proposed by the applicants'. In addition, the offsite mitigation proposed by the applicants' are not within the project basin boundaries which	The Mitigation Plan now involves purchasing credits from LMB and deducting functional units from Pine Glades and Dupuis Reserve PROMAs. As explained in responses above and in Section 8.3.7.1 mitigation at the PROMAs is environmentally preferable to the purchase of additional LMB credits. The Corps has determined that the proposed compensatory mitigation complies with the Compensatory Mitigation Rule, 33 C.F.R. Part 332.

makes LMB more suited to offset project wetland impacts.	
33 CFR 332.3(a)(l). When evaluating compensatory mitigation options, the district engineer would consider what would be environmentally preferable. In making this determination, the district engineer must assess the likelihood for ecological success and sustainability, the location of the compensation site relative to the impact site and their significance within the watershed, and the costs of the compensatory mitigation project. In many cases, the environmentally preferable compensatory mitigation may be provided through mitigation banks or in-lieu fee programs because they usually involve consolidating compensatory mitigation projects where ecologically appropriate, consolidating resources, providing financial planning and scientific expertise (which often is not practical for permittee-responsible compensatory mitigation projects), reducing temporal losses of functions, and reducing uncertainty over project success.	Reference Section 1.6 and Section 8 of this EASOF.
33 CFR 332.3(a)(2). Compensatory mitigation may be performed using the methods of restoration, enhancement, establishment, and in certain circumstances preservation. Restoration should generally be the first option considered because the likelihood of success is greater and the impacts to potentially ecologically important uplands are reduced compared to establishment, and the potential gains in terms of aquatic resource functions are greater, compared to enhancement and preservation.	Reference Section 1.6 and Section 8 of this EASOF.
33 CFR 332.3(b). Type and location of compensatory mitigation. (1) When considering options for successfully providing the required compensatory mitigation, the district engineer shall consider the type and location options in the order presented in paragraphs (b)(2) through (b)(6) of this section.	Reference Section 1.6 and Section 8 of this EASOF.
Please provide the following information in regards to Dupuis and Pine Glades permittee responsible offsite mitigation areas (PROMA) for	The USACE Permit No. SAJ-2011-02278 authorizing the restoration activities at the Pine Glades West PROMA site contains

EPA review. This should include a) Mitigation Banking Instruments, b) Background information on the purchase of both PROMAs by the state of Florida for appropriateness for mitigation purposes, c) Background information on how Dupuis mitigation credits became available for use to offset wetland impacts, d) Credit ledger for both PROMAs, e) Corps mitigation position on use LMB versus out of basin PROMAs, e) Monitoring reports on the PROMAs, f) WRAP or UMAM data sheets of the PROMAs to determine mitigation credits, g) Performance standards for PROMAs, h) Time lag and risk scores used for determining mitigation credits, i) Credit release schedules, and j) Mitigation service area maps of PROMAs.	background information on the site, UMAM scores, mitigation banking instruments, and performance standards. A recent Pine Glades annual monitoring report documents that the site is currently fulfilling permit success criteria or trending toward success (depending on how recent the restoration activities were completed). The Corps can confirm that the mitigation is complete at these PROMAs and are being maintained by SFWMD (Dupuis) and Palm Beach County (Pine Glades). The Corps also confirms through credit ledgers provided for both sites that Functional Gain Units are available for compensatory mitigation in accordance with Section 1.6 and Section 8 of this EASOF. DuPuis Ten-Year Management Plan (2014 to 2024) summarizes the history of hydrologic and habitat restoration activities completed on-site, exotic control activities, vegetation and wildlife management activities, and monitoring protocols that are implemented. In 1997, the SFWMD and FDOT entered into a Joint Participation Agreement (JPA), whereby the FDOT agreed to fund the restoration and long-term maintenance and management of 850 acres within the DuPuis Reserve as advance mitigation site and agreed to contribute approximately $2.3 million for this effort. The service area for the DuPuis Reserve site was established to provide mitigation for freshwater impacts as a result of FDOT linear projects in Palm Beach, Martin, St. Lucie, and Okeechobee counties. These service area counties all lie within the SFWMD and historic Everglades watershed. The DuPuis Reserve has provided mitigation for impacts to freshwater and forested

	wetlands since 1997 and has served as an advance mitigation area. Please reference section 8.3.7.1 for a more detailed history of the DuPuis Reserve.
Should the PROMAs be necessary to offset wetland impacts other than what is being provided by LMB, the EPA requests a compliance inspection be conducted by the federal regulatory agencies.	Justification for the proposed credit deduction from the Pine Glades and Dupuis Reserve PROMAs is provided in Section 8 of this EASOF. The Pine Glades Annual Monitoring Report concludes that the site is currently fulfilling its permitted success criteria. FDOT's consultants conducted recent visits to the DuPuis PROMA site. They reported that the site contains an assemblage of forested and marsh habitats that is similar to the habitats currently occurring in Grassy Waters Preserve. These habitats are described in further detail in the DuPuis Management Plan. In general, the habitats are of better quality and functionality than those being directly impacted by the proposed SR 7 Extension project. Coverage by exotic/nuisance vegetation was minimal (less than 1%) and in compliance with Section 5.2.1 of the DuPuis Management Plan. Hydrology was appropriate with no vegetation or wetland habitats exhibiting signs of water stress. A snail kite was observed north of the L-8 Canal levee, in marsh habitat along the southern extent of DuPuis. The observance of the snail kite shows the appropriateness of this habitat for compensatory mitigation.
The applicants also propose the creation, restoration, and enhancement of 54 acres of onsite wetlands to offset project impacts. In the event that onsite wetland impacts are reduced and avoidance and minimization are demonstrated in the future, the EPA requests that the applicant provide the following information regarding any	In addition to the required compensatory mitigation, in order to preserve and protect adjacent sensitive habitats, such as hydric pine, the applicants have proposed an on-site mitigation, restoration and enhancement area. The onsite wetland restoration, creation, and

proposed mitigation. This information is necessary in order to ensure the proposed mitigation for impacts associated with the project are in compliance with the Federal Compensatory Mitigation Rule, dated April 2008.	enhancement activities consisting of 54.8 acres augments the ecological value of the contiguous conservation lands, including the Grassy Waters Preserve. Any Corps authorization would special condition the applicants complete the mitigation objectives in accordance with the mitigation plan which would be an attachment to the authorization, for all mitigation proposed above and beyond the compensatory mitigation proposed. Reference Section 1.6 and Section 8 of this EASOF.
Detailed mitigation and maintenance plan	Reference the Mitigation Plan for a detailed description of the proposed on-site mitigation plan. In addition to the required compensatory mitigation, in order to preserve and protect adjacent sensitive habitats, such as hydric pine, the FDOT has committed to construction of the on-site mitigation, restoration and enhancement area. The onsite wetland restoration, creation, and enhancement activities consisting of 54.8 acres augments the ecological value of the contiguous conservation lands including the Grassy Waters Preserve. The maintenance plan is detailed in Section 3.7 on page 49 of the Mitigation Plan and additional details provided in section 8.3.8. of this document.
The responsible party for the long-term management of the mitigation area	As stated in Sections 3.10 and 3.12 (pages 53 and 54, respectively) of the Mitigation Plan, the applicants would be responsible for the long-term management and maintenance costs of the on-site mitigation area.
Assurance for the long-term protection of the mitigation area (such as a perpetual conservation easement)	Reference Section 8 of this EASOF. As stated in Section 3.3 (page 41) of the Mitigation Plan, the on-site mitigation area would be placed under conservation easement ensuring its high wetland quality and functionality in perpetuity.

Detailed performance standards to achieve mitigation success	Detailed performance standards are listed in Section 3.8 (page 50) of the Mitigation Plan.
Detailed monitoring requirements	Detailed monitoring requirements are listed in Section 3.9 (page 51) of the Mitigation Plan.
Detailed long-term management plan	As stated in Section 3.10 (page 53) of the Mitigation Plan, the applicants would be responsible for the long-term management of the on-site mitigation area. The area would be placed under conservation easement ensuring its high wetland quality and functionality in perpetuity.
Detailed adaptive management plan	A detailed adaptive management plan is listed in Section 3.11 (page 53 of the Mitigation Plan). FDOT has stated that it will be proactive in mitigating any deficiencies in planting success or native vegetative coverage that are documented during the monitoring events to ensure that the site fulfills all permitted success criteria within five (5) years. Any Corps authorization would special condition the applicants complete the mitigation objectives in accordance with the mitigation plan which would be an attachment to the authorization, for all mitigation proposed above and beyond the compensatory mitigation proposed. Reference Section 1.6 and Section 8 of this EASOF. In the event that any of the success criteria listed in Section 3.8 (page 49 of the Mitigation Plan) are not achieved after the end of the five (5) year monitoring period, the FDOT will consult with SFWMD, USACE, and USFWS to determine the best remediation actions. Such actions could include, but are not limited to, additional plantings, increased frequency of maintenance events, or

	additional earthwork if the as-built wetland restoration and/or creation elevations need to be lowered or raised to achieve better vegetation coverage. In the event that the permitted success criteria are not met in the long-term, the FDOT will conduct the necessary remediation actions to ensure that the site remains in compliance. FDOT will inform SFWMD, USACE, and USFWS of any remediation efforts taken and the results of these efforts.
Detailed long-term management plan	As stated in Section 3.10 (page 53 of the Mitigation Plan), the applicants will be responsible for the long-term management of the on-site mitigation area. The area will be placed under conservation easement ensuring its high wetland quality and functionality in perpetuity and FDOT will be responsible in perpetuity. Any Corps authorization would special condition the applicants complete the mitigation objectives in accordance with the mitigation plan which would be an attachment to the authorization, for all mitigation proposed above and beyond the compensatory mitigation proposed. Reference Section 1.6 and Section 8 of this EASOF.
Objectives	The objective of proposing the on-site mitigation area for compensatory wetland mitigation is listed in Section 3.1 (page 31) of the Mitigation Plan.
Site selection criteria	Site selection criteria are provided in Section 3.2 (pages 38-39) of the Mitigation Plan.
Baseline information	Site selection criteria are provided in Section 3.2 (pages 38-39) of the Mitigation Plan.
Please provide Uniform Mitigation Assessment Method (UMAM) scores for the proposed impact and mitigation sites. Technical rationale for each score should also be included. The EPA needs	The Corps concurs with the reference UMAM scores; time lag; and risk as described below. Section 3.5 (page 44) of the Mitigation Plan provides a

complete data sheets for review which justifies the UMAM scores provided in the mitigation plan. Since UMAM was competed in 2011, it may be necessary to revisit the sites and reevaluate the site conditions.	summary of how the UMAM credits were determined. Complete impact UMAM data sheets are provided in Appendix D of the Mitigation Plan (PDF pages 90-171). Complete UMAM data sheets detailing the ecological 'lift' that would result from the proposed on-site wetland restoration, creation, and enhancement activities are provided in Appendix G of the Mitigation Plan (PDF pages 191-208). Impact UMAM scores were reanalyzed in March 2015. On-site mitigation area 'Lift' UMAM scores were calculated in November 2015.
Please provide onsite mitigation construction drawings which include: Target elevations, excavation and fill quantities, and construction methodology for review.	Grading plans showing the existing and proposed target elevations are provided in Appendix H. Construction sequencing plans are provided in Appendix I. A detailed work plan is provided in Section 3.6 (pages 47-49) of the Mitigation Plan included in Appendix G. An estimated 75,000 cubic yards of substrate would be excavated for the on-site mitigation area. This volume is primarily for the forested wetland restoration and creation activities. An estimated 95,500 cubic yards of fill would be needed for embankment in the forested restoration and creation areas.
The time lag factor calculations in the mitigation plan to determine the amount of credits generated by the onsite mitigation used the State of Florida data and not Federal. This needs to be updated using the federal table and the EPA requests further discussions with the Corps on the proper time lag to be applied to each type of mitigation proposed. Further discussion also needs to address the risk factor applied to the each mitigation type.	Detail for the rationale behind the proposed time lag and risk scores is provided in Section 3.5 (pages 44-46) of the Mitigation Plan included in Appendix G. The proposed risk scores (2.0 for the proposed wetland restoration and creation activities; 1.5 for the proposed wetland enhancement activities) are conservative estimates based on the environmental conditions of the site. Similar wetland restoration activities authorized under Permit No. SAJ-2004-1236 in the northwest corner of Grassy Waters Preserve, directly adjacent to the proposed on-site mitigation area, were

	approved with a risk score of 1.25. A copy of Permit No. SAJ-2004-1236 and the mitigation plan are contained in the Corps administrative record for this project. Assuming the UMAM delta and risk values remain constant, by incorporating the federal t-factor values, the total Relative Functional Gain (or "lift") resulting from the proposed on-site mitigation activities is 5.15 units. This total "lift" is greater than the 4.71 units of lift that are currently proposed. The time lag scores authorized under SAJ-2004-1236 were 1.03 for target marsh habitat and 1.14 for target hydric pine and mixed forested wetland habitat. The time lag scores proposed by the applicants are more conservative than these scores.
Please provide the EPA with a vegetative planting plan for the onsite mitigation area.	Planting plans are provided in Appendix J. Plant quantities are shown on the Planting Schedule on Sheet 33 of Appendix J.
The maintenance plan as proposed allows up to 5 percent coverage of exotic vegetation for long-term compliance with the mitigation permit conditions. Further discussion needs to be conducted with the Corps to insure what level of exotic/nuisance species we would allow per assessment area and that the appropriate UMAM score is applied.	A copy of Permit No. SAJ-2004-1236 and the mitigation plan are contained in the Corps administrative record for this project. The five percent exotic vegetation coverage criterion is standard for mitigation areas in south Florida. A relevant example includes Permit No. SAJ- 2004-1236, which approved the wetland mitigation activities in the northwest corner of Grassy Waters Preserve, directly adjacent to the proposed on-site mitigation area. Special condition #7 of Permit No. SAJ-2004-1236 required that "at no time would the coverage of invasive exotic species, as defined by the Florida Exotic Pest Plant Council, exceed 10% coverage". By comparison, the applicants' proposed maximum 5% exotic coverage criterion is more stringent.

The success criteria needs to address federal regulations and not the State of Florida Codes. Baseline data for each assessment area needs to be conducted and provided to the EPA before any success criteria for the project can be approved. The success criteria as proposed is lacking detail which the EPA looks forward to updating after discussions the Corps and FDOT.	Baseline information for each habitat type is provided in Sections 3.2 and 3.4 (pages 38-39 and 42, respectively) of the Mitigation Plan included in Appendix G. The proposed success criteria include: • Maximum 5% coverage by invasive exotic species, as defined by the Florida Exotic Pest Plant Council, in perpetuity • Minimum 80% coverage by appropriate native wetland species after five years • Minimum 30% canopy coverage by native wetland tree species
Please provide a drawing illustrating the locations of transects that would be used for monitoring. Further updating of the monitoring requirements may be necessary after updated success criteria is competed. The EPA requests that additional monitoring be required in perpetuity other than the five years as proposed. We are not requesting the in-depth monitoring as conducted during the first five years but periodic reports to keep regulatory agencies informed that the mitigation is in compliance with permit conditions.	The locations of all proposed monitoring transects are depicted in the Planting Plans provided in Appendix J (Sheets 7-32). A total of 29 transects, spaced every 500 feet, that span the width of the mitigation area are proposed. A permanent photo station would be established at the west end of each linear transect. Any Corps authorization would special condition the applicants complete the mitigation objectives in accordance with the mitigation plan which would be an attachment to the authorization, for all mitigation proposed above and beyond the compensatory mitigation proposed. Reference Section 1.6 and Section 8 of this EASOF. Per the mitigation plan the applicants under conservation easements would be responsible for long term maintenance in perpetuity.
The proposed adaptive management allows a five year period before implementation is required should the project not be trending toward success. The EPA believes that adaptive management should be implemented at any time when necessary to correct mitigation deficiencies.	Any Corps authorization would special condition the applicants complete the mitigation objectives in accordance with the mitigation plan which would be an attachment to the authorization, for all mitigation proposed above and beyond the compensatory mitigation proposed.

	Reference Section 1.6 and Section 8 of this EASOF. Per the mitigation plan the applicants under conservation easements would be required to consult with the Corps and USFWS to determine the best remediation actions. Such actions could include, but are not limited to, additional plantings, increased frequency of maintenance events, or additional earthwork if the as-built wetland restoration and/or creation elevations need to be lowered or raised to achieve better vegetation coverage. In the event that the permitted success criteria are not met in the long-term, the FDOT would conduct the necessary remediation actions to ensure that the site remains in compliance. FDOT would inform the Corps, SFWMD, and USFWS of any remediation efforts taken and the results of these efforts.
Burn plan if proposed	No burning is proposed.
Fencing or signage plan	Fencing is proposed along the SR 7 Extension and along Northlake Blvd that would prevent access into the on-site mitigation area from the roadways. The fencing would be 10-ft tall chain-link that includes slats installed at the fence bottom to prevent small wildlife from passing through and would reduce vehicular lighting impacts. The fencing would match the fence design that is currently in place between the existing SR 7 and the Pond Cypress Natural Area. Permanent 10-inch by 14-inch signage would be affixed to the fencing every 1,000 feet along the corridor for the 229664-3 project (the new roadway extension segment between 60th Street and Northlake Blvd.). There is no signage along the existing SR 7 corridor between Okeechobee Blvd. and 60th Street that identifies protected lands within Pond Cypress Natural Area. No

	existing signage is posted along the transportation right-of-way identifying the Grassy Waters Preserve boundary. Grassy Waters Preserve is currently protected by exclusionary fencing and sheriffs routinely patrol the area. As a result, there is currently little evidence of unauthorized disturbances from off-road vehicular traffic and other human use. This is not anticipated to change. No fencing is proposed along the east limit of the on-site mitigation area because the intention is for this area to transition into (be an extension of) Grassy Waters Preserve. Any fencing along the mitigation area's east limit would inhibit wildlife movement between the mitigation area and Grassy Waters Preserve.
Cumulative Impact Analysis: Please provide the EPA with a cumulative impact analysis for review. To date, this has not been received. The applicants instead provided the EPA with a cumulative impact assessment to support use of the PROMAs.	A Cumulative Impact Analysis was provided by the applicant in Appendix B of the FDOT RAI Response letter, dated 23 June 2016. See also Section 9 of this EASOF.
	The Corps provided the EPA with the applicants' RAI responses on 27 June 2016. The Corps has determined that the applicants' responses comprehensively address the EPA project specific comments and requests for additional information.
By e-mail dated 11 July 2016, the EPA provided the Corps with additional comments on the FDOT's 23 June 2016 RAI responses.	
On 2 November 2016, the Corps and EPA discussed the 11 July 2016 EPA comments via teleconference.	
	By e-mail dated 16 November 2016, the Corps provided the remaining EPA issues identified during the 2 November 2016 teleconference to District 4 FDOT. The

	Corps incorporated the FDOT's input in providing the following responses.
Alternative Analysis: *Further Evaluation of 120th and 130th Avenues alternative corridors.*	During the PD&E study, an extensive analysis was conducted on various corridors to determine a preferred route for extending SR 7 to Northlake Boulevard. Corridors west of the Ibis Golf and Country Club (110th Avenue, 130th Avenue North, 130th Avenue Trail, Corridor Bridge over B Canal, and 140th Avenue North) were eliminated because of high economic impacts and costs. These corridors were located within the Acreage community and would require a significant amount of property acquisition and the relocation of numerous homes. Likewise, a corridor along 120th Avenue would result in similar impacts and costs to the community. A corridor along 120th Avenue would involve the need to acquire 81 parcels resulting in the relocation of 67 homes. The conclusion of this analysis is that a corridor along 120th Avenue or 130th Avenue is not economically viable due to the high cost associated with potential family relocations, and it adversely affects the public and property. Corridors west of the Ibis Golf and Country club, such as 120th Avenue and 130th Avenue, would be cost prohibitive and immensely disruptive to the lives, homes, and quality of life for many of the residents. Therefore, a corridor along 120th Avenue or 130th Avenue is not practicable. This is in comparison with Corridor 3 that does not involve the relocation of any homes. Furthermore, corridors along 120th Avenue or 130th Avenue should be eliminated from further consideration due to the following: • These corridors would significantly reduce the ability to meet the

	purpose and need as the traffic study shows that the corridors to the west would serve local traffic and diminish the benefit to the regional network. The use of the facility would drop by about 28 percent for corridors west of the Ibis Golf and Country Club. • Potential for roadway to act as a dam for floodwaters east of SR 7 extension resulting in potential increased flooding to homes to the east. • Substantial impacts for the remainder of the community along the alternative corridors. Reference Section 5 of this EASOF. The Corps determined that Alternatives 3 and 4 were the only practicable alternatives to be carried forward.
Alternative Analysis: *Traffic Study results for alternative corridors to the west of the Ibis corridor.*	A traffic evaluation was conducted for corridors to the west of the Ibis Golf and Country Club and is documented in the SR 7 Extension Alternative Corridor Evaluation Traffic Assessment dated 28 March 2014 (available in the administrative project file). The evaluation utilized the 2035 Southeast Regional Planning Model (SERPM 6.5) to estimate the daily traffic demand for each of the alternative corridors. The travel demand model takes into account the anticipated growth in population and employment, cost feasible roadway improvements, available roadway capacity and other factors, to estimate vehicle assignments on the roadway network. By the year 2040, it is estimated that 21,600 vehicles per day would utilize the extension of SR 7 if it was located along Corridor 3. If the extension was relocated to corridors west of the Ibis Golf and Country Club, approximately 15,500 vehicles would be expected to utilize the

	facility. The lower traffic volume for these corridors indicates that those wishing to travel north-south between Okeechobee Blvd and Northlake Blvd would be diverted to other north-south roadways. The corridors to the west would serve local traffic and diminishes the benefit to the regional network. This would significantly reduce the ability of the project to meet the purpose and need. Reference Section 5 of this EASOF. The Corps determined that Alternatives 3 and 4 were the only practicable alternatives to be carried forward.
Wetland Impacts along the proposed corridors: *Proposed project corridor wetland quality* *Corps/EPA inconsistency*	The Corps has completed field reviews of the project corridor, which included walking the corridor along the GWP, while the EPA review was more limited. Some of the wetland communities were given FLUCFCS codes based upon their historic condition. This is normal for the permitting process. The current quality of the wetland whether poor or excellent condition, is then addressed through the UMAM scoring. This is most true for the hydric pine communities found within the project ROW (FLUCFCS 6250). In some cases, these communities are barely recognizable as historic hydric pine due to anthropogenic changes and influx of exotic and nuisance species. For this reason, we developed two classes, 6250A and 6250B, and completed UMAM scoring for them separately. The 'B' code is the poorer quality version of the habitat type. Even so, UMAM scores for the 'B' systems are relatively high, and the systems continue to degrade with further influx of nuisance species. Accordingly, prior to the submittal of the joint ERP/Section 404 application, a field review with representatives of the

	SFWMD and USACE was conducted for the following purposes: • To review the habitat classifications in the proposed impact areas; • To review the UMAM scoring in areas of disturbance; and • To introduce Randy Turner, USACE reviewer, to the project on the ground. The Corps concurred with the FDOT consulting ecologists conclusions that some of the habitats within the project site were continuing to degrade at an alarming rate. The Corps accepted the current UMAM scores, even as several years have elapsed, the ecological condition of the areas proposed for impact continues to degrade. Exotic vegetation has further deteriorated the habitat and these changes in existing condition are not reflected in the UMAM scores.
Wetland Impacts along the proposed corridors: *Clarification of location of impacts (within Grassy Waters preserve or adjacent to the Grassy Waters Preserve in FDOT owned Right-of-Way)*	There would be no direct wetland impacts within Grassy Waters Preserve. With respect to the north-south project segment that lies west of Grassy Waters Preserve, all direct wetland impacts occur within the County and FDOT ROW. Furthermore, the project and its direct impacts are situated in the western portion of the ROW; the eastern portion of the ROW that abuts Grassy Waters Preserve would be Conservation Area. Additional detailed discussion of impacts can be found at these locations: • Within FDOT response to USACE RAI #1 dated January 25, 2016, Appendix J, Response to the EPA Letter Dated January 25, 2016, Page 2, Item 1

	• Within FDOT response to USACE RAI #2 dated June 23, 2016, Appendix G, Mitigation Plan).
Mitigation: *Discuss/evaluate incorporating hydric Pine credits from the Bluefield Ranch MB*	The proposed project is not within the service area of the federally approved Bluefield Ranch Mitigation Bank (MB). • The use of Pine Glades PROMA is more appropriate because of its proximity to the area of impacts. Like a bank, it has been previously funded and the compensatory mitigation is in place and meeting success criteria prior to the impacts occurring. Its permitted service area is Palm Beach County. The use of DuPuis Reserve PROMA is more appropriate because it is 20 miles from the area of impacts The service area for the DuPuis Reserve site was established to provide mitigation for freshwater impacts as a result of FDOT linear projects in Palm Beach, Martin, St. Lucie, and Okeechobee counties. With the exception of the on-site mitigation area which should provide an improved wetland and wildlife habitat buffer between the roadway and the GWP, the other two PROMAs sites are established and ecologically successful. In addition, they provide mitigation that is within the wetland habitats of Palm Beach County, provide similar ecological functions, and also increase regional benefits with hydrologic connectivity. The Bluefield Ranch MB service area does not overlap the project impacts, and mitigation at Bluefield Ranch would not provide any ecological benefits within the project region as it lies within a completely different and far removed landscape.

Mitigation: *Discuss/evaluate potential use of the on-site wetland mitigation to reduce direct/indirect ARNI impacts outside of compensatory mitigation for the project (accompanied by an increase in PROMA and/or MB credits)*	The U.S. EPA has determined that the hydric pine habitats within the project footprint are Aquatic Resources of National Importance (ARNI), and Comment 7 inquires as to why hydric pine habitat impacts are not addressed through the creation of hydric pine in the compensatory mitigation project. The potential for creation of additional hydric pine within the on-site wetland mitigation was evaluated prior to development of the conceptual plan for this area, however it was rejected for several reasons as outlined below: • The target wetland elevation is very specific, and the hydrologic range very narrow; • It would be difficult to hit the target exactly in a long narrow mitigation area; • The target elevation for the hydric pine habitat would also support several exotic and nuisance species; • There is no nearby hydric pine in the adjacent Grassy Waters Preserve that could be 'matched' for elevation; • The hydric pine vegetative structure would be difficult to create in a long linear mitigation area; • No high quality hydric pine is being directly impacted; and • This habitat is best maintained by fire. Hydric pine is a transitional wetland habitat that occurs within the extremely flat areas that lie between freshwater marsh and pine flatwood. Because of its position in the landscape, in dry times it can seem dry and developable, and in wet seasons and wetter years, its wetland function is evident. As development encroached on wetlands over the past several decades, this habitat was easy to develop because it required little fill.

	Even if it was not developed, it became the wetland habitat that was situated between the development of the pine flatwood, and the undeveloped marsh, and it was likely disturbed as the adjacent upland was impacted. As a result, quality hydric pine habitats are very rare in the project area, and the vast majority of this habitat is now located within preserves, conservation areas, and other publicly-owned lands. For this particular habitat type, it is the structure of the canopy, shrub and groundcover layers that define the community. Typical hydric pine communities support very few pine and therefore have a very open canopy. The shrub layer is minimal, however the groundcover is well developed and should support species typical of the habitat. Creation of this vegetative structure condition would not be possible in a long linear mitigation design. Because the creation of the specific elevations that would support hydric pine habitat would be extremely difficult within the shape of the mitigation area, hydric pine was rejected as a habitat type appropriate for creation. If the shape of the mitigation area was square, creation of this habitat could be attempted, and there could be some success, although perhaps not within the exact polygon specified on the plans. However, with an extremely long linear work area, it would be difficult to create any substantial amount of this habitat. If the elevation combined with water level fluctuations was perfect, you may succeed in creating a very narrow strip of this habitat. If these two factors were not perfect (the water levels in GWP and adjacent canals are

	controlled for potable water withdrawal purposes), which is the likely scenario, the habitat would become either marsh, or upland. To address the quality of hydric pine that would be impacted, and its designation by U.S. EPA as ARNI, the FDOT undertook a study to assess the function of the highest quality hydric pine in the project region and compare it to the hydric pine habitats proposed for impact. A brief description of the study is included in the paragraphs below. Detailed information regarding the methodology and results can be found in the SR 7 Extension Hydric Pine Wetland Evaluation Preliminary Draft, dated December 2016 (available in the administrative project file). Because these areas of historic hydric pine have been highly impacted by adjacent development activities, other anthropogenic affects, and the invasion of exotic/nuisance species, their quality has been severely degraded over time. For this reason, the FDOT has undertaken a study to determine the level of wetland functions these hydric pine impact areas provide. This investigation compares the hydric pine wetlands that would be impacted by the proposed project to the highest quality hydric pine available in the region. To make this comparison, project biologists employed the Hydrogeomorphic Approach (HGM Approach) presented in the U.S. Army Corps of Engineers' (USACE's) Regional Guidebook for Applying the Hydrogeomorphic Approach to Assessing Wetland Functions of Wet Pine Flats on Mineral Soils in the Atlantic and Gulf Coast Plains (Rheinhardt,

	Rheinhardt, and Brinson). Supporting collateral information in the form of Uniform Mitigation Assessment Method (UMAM) analysis, as described in 62-345 of the Florida Administrative Code (FAC), USACE Wetland Determination Data Forms (for Atlantic and Gulf Coastal Plains), and a botanical inventory was compiled. After field review of several potential sites, Sweetbay Natural Area was selected as the reference wetland. One Wetland Assessment Area (WAA) was established within the reference wetland (WAA 1), one in a SR 7 impact wetland coded as 6250B (WAA 2), and one in each of two SR 7 impact wetlands classified as 6250A (WAAs 3 and 4). Each WAA was evaluated for its ability to maintain appropriate hydrology, ability to maintain the characteristic attributes of hydric pine plant communities, ability to provide resources to maintain the suite of fauna characteristic of hydric pine ecosystems, and ability to maintain biogeochemical processes that are characteristic of hydric pine flatwoods. These functions were quantified using the HGM model. The score of the reference wetland was standardized as 100% (highest quality) and the function of each WAA was compared in percentage form to the reference WAA. One overall score (the average of each function's percentage score) was obtained for each WAA. WAA 1, as the reference scored a 100%, WAA 2 scored a 29%, WAA 3 scored a 57%, and WAA 4 scored a 59%. The results show that the exotic-dominated hydric pine (WAA 2) functions the least like the reference wetland, and that the two hydric pine areas with less exotics

	function about roughly 60% of the reference wetland function. The supporting collateral data that was collected corroborates the results of the HGM Approach. The UMAM scores were 0.87 for WAA 1, 0.20 for WAA 2, 0.73 for WAA 3, and 0.67 for WAA 4. Notably, WAA 2 has experienced such extensive anthropogenic effects that it does not currently meet the requirement for USACE consideration as wetland; this area lacks hydrologic indicators, does not have a predominance of hydrophytic vegetation, and has disturbed soils due to excavation probably associated with the adjacent area's development. All information collected indicates that WAA 2 is not functioning as hydric pine, nor does it constitute a wetland. WAAs 3 and 4 maintain some hydric pine functionality and wetland characteristics. These WAAs represent the greater SR 7 hydric pine impacts. They do not approach the HGM-level of quality present at the hydric pine of the Sweetbay Natural Area. Therefore, the analysis presented in this document shows that these areas have moderate to low functionality as true hydric pine flatwood systems.
Cummulative Impact Analysis: *Inclusion residential developments in the western portion of Palm Beach County within the cumulative impacts analysis for the proposed roadway extension of SR 7*	The Corps response is that the proposed project would support existing or planned residential developments in the western developed portions of Palm Beach County. As per the following input from FDOT provided to the Corps, the project would support existing development thus incorporated minimization of the typical section of the roadway. The PD&E study for the Extension of SR 7 began in 2005. At that time, several large-scale, planned developments were identified west of the Ibis Golf and Country Club. These

	developments included Vavrus Ranch, Palm Beach County Biotechnology Research Park (Mecca Farms), Indian Trail Groves, and Callery-Judge Groves. During that time, a traffic analysis was conducted that considered these developments and identified the need for a six-lane facility for SR 7. During the Recession between 2005 and 2011, these proposed developments were stopped and dropped from consideration. At the same time, the public requested that the Department re-evaluate the traffic demand for the proposed extension of SR 7. The Department agreed and another traffic analysis was conducted. The conclusion of the revised traffic analysis showed that only four-lanes along SR 7 were needed which the current typical section is proposed. In addition, significant minimization was applied to the typical section that would not allow any future expansion beyond the proposed four-lane divided facility. When considering cumulative impacts, the proposed extension of SR 7 would not induce any other developments as the extension of SR 7 was designed only to accommodate existing development. Should future development be permitted west of Ibis, traffic concerns would need to be addressed at that time with other roadway network improvements, as the addition of lanes to this section of SR 7 would not be possible.
	On 22 December 2016 the Corps and FDOT discussed via teleconference the EPA and Corps concerns regarding the proposed onsite mitigation and its conformance with the 2008 mitigation rule hierarchy.

	By letter dated 3 March 2017, the FDOT responded to the Corps request to provide an alternative mitigation proposal to mitigate portions of the on-site forested wetland impacts. Certain forested secondary wetland impacts associated with the SR 7 extension were proposed to be offset through the construction of an on-site mitigation project in the eastern remaining ROW. The impacts that were proposed to be mitigated onsite at this location include those listed below: FDOT-Attributed Buffer (0-50 feet) Secondary Impacts of 3.98 ac, or 1.99 UMAM FL FDOT-Attributed Buffer (50-300 feet) Secondary Impacts of 24.52 ac, or 4.48 UMAM FL and 0.66 M-WRAP FL As a result, the applicants now propose to mitigate the majority of this secondary impact through the additional deduction of credits from Dupuis, FDOT's previously permitted PROMA for impacts within Palm Beach County. Dupuis has been shown to have appropriate habitat located in the eastern portion of this site to offset impacts to forested systems including hydric pine. The remainder of the impacts (6.60 acre) would be mitigated at Loxahatchee Mitigation Bank (0.66 Modified Wetland Rapid Assessment Procedure (M-WRAP) forested credits). In addition to the required compensatory mitigation, in order to preserve and protect adjacent sensitive habitats, such as hydric pine, the FDOT is committed to construction of the on-site mitigation, restoration and enhancement area. Ecologically, the best position in the landscape to mitigate for secondary impacts is where the impacts are *anticipated to occur*. Even though the

	project's secondary impacts would be mitigated off-site, the FDOT is committed to constructing the on-site wetland habitat creation, restoration and enhancement project to provide the most ecologically sound transportation project possible. The wetland habitat restoration area is positioned just to the right (east) of the roadway, within the FDOT right-of- way. Because secondary impacts are those impacts adjacent to the project footprint that are *anticipated to occur*, by constructing the wetland habitat restoration at the same location, the potential for these impacts to occur in the first place is substantially reduced. The wetland restoration area would provide a revitalized, ecologically sound, buffer area to Grassy Waters Preserve. By leaving existing trees in place, and planting additional trees, this ecological buffer would eventually provide a visual buffer; all buffer benefits are important to wildlife and the protected species that are known to utilize local habitats. Finally, this constructed wetland restoration buffer would then be in place for the entire length of the project along Grassy Waters Preserve, and would benefit the preserve in perpetuity. In addition to the required compensatory mitigation, in order to preserve and protect adjacent sensitive habitats, such as hydric pine, the FDOT is committed to construction of the on-site mitigation, restoration and enhancement area. The onsite wetland restoration, creation, and enhancement activities consisting of 54.8 acres augments the ecological value of the contiguous conservation lands including the Grassy Waters Preserve. If the wetland restoration is not constructed, the existing wetland areas

	adjacent to the roadway would remain infested with exotics, and would continue to be an unwanted nuisance seed source to Grassy Waters Preserve. The upland portions of this area would remain as uplands, and would be sodded and fenced at the FDOT eastern ROW. In summary, the applicants now propose to mitigate all of the forested secondary impacts within its Dupuis PROMA and Loxahatchee Mitigation Bank. In addition, they propose to construct the on-site wetland creation, restoration and enhancement area. For this particular project, construction of the on-site habitat restoration provides many tangible benefits, and is the ecologically sound approach for addressing the ROW remainder located to the east of the project footprint, and directly west of and contiguous to Grassy Waters Preserve. The on-site wetland restoration accomplishes many objectives, including: • Buffers and protects remaining sensitive habitats, particularly hydric pine wetlands; • Reduces the potential for secondary impacts by restoring and enhancing the habitat that is in the secondary impact zone; • Creates an ecological sound, viable wetland/upland buffer for the full length of Grassy Waters Preserve north of the M-Canal, approximately 14,000 linear feet; • Eliminates all nuisance/exotic species within the project ROW that could

	create future degradation of Grassy Waters Preserve; and • Benefits wildlife and protected species known to use habitats local habitats. • The applicants would use a Districtwide Wetland Mitigation contract. This type of contract allows the use of civil engineering firms who specialize in the design and permitting of wetland restoration projects, contractors who specialize in building wetland restoration projects and environmental professionals who specialize in the monitoring and maintenance of wetland restoration sites.
	By letter dated 19 May 2017, the Corps issued a paragraph 3(c) letter that responded to the stated EPA concerns and references this EASOF. Specifically, the letter references Sections 4.9 (Detailed EPA comments and Corps responses), 5.0 (Alternatives Analysis), 6.0 (Evaluation of 404(b)(1) Guidelines), and 8.0 (Mitigation). The 3(c) letter requested a response from EPA within 15 days, in accordance with paragraph 3(d) of the 404(q) MOA, that specifies that the Regional Administrator would not request higher level review, or, that the Regional Administrator had forwarded the issue to the Assistant Administrator, Office of Water, with a recommendation to request review by the Assistant Secretary of the Army (Civil Works).
On 9 June 2017, the EPA issued to the Corps a paragraph 3(d) letter that concluded the coordination procedure by stating the EPA would not request a higher level review for this project under Part IV, paragraph 3(d)(1). The letter included a request to provide the EPA with a copy of the final permit once the Corps issues the	

permit.	

4.10 Public Hearing Request – *(33 CFR 327) Requests for a public hearing shall be granted unless the district engineer determines that the issues raised within the request(s) for a public hearing are insubstantial or there is otherwise no valid interest to be served by the hearing. The district engineer will make such a determination in writing, and communicate his reasons therefor to all requesting parties.*

Public Hearing: A public hearing was requested, but denied.
Discussion/Explanation *(if necessary)*: Mr. Gary R. Alexander of Alexander & Cleaver Attorneys at Law, is the attorney for and member of the Board of Directors of the Ibis Isle Homeowners Association (HOA). His comment letter summarized a list of potential negative impacts associated with the proposed project and requested a public hearing. The Corps responded by letter dated 26 October 2015, advising Mr. Alexander that his comments would be considered in the evaluation of this project. The Corps notified Mr. Alexander by letters dated 2 November 2016 and 19 June 2017 that all submitted comments and information received in response to the Public Notice is evaluated prior to reaching a permit decision and that the Corps reviewed the information provided and concluded there is no valid interest to be served by a public hearing.

5.0 Alternatives Analysis – *(40 CFR 230.10, HQ Regulatory SOP July 2009, RGL 93-2, RGL 84-09) If the project is sited in a special aquatic site (such as a wetland), and if the project does not need to be in or near the special aquatic site to fulfill its basic purpose (i.e., the project is not "water-dependent"), it is presumed that there are practicable alternatives that do not involve special aquatic sites. To overcome this presumption, the applicant must clearly demonstrate to the Corps that practicable alternatives are not available. If the presumption is not overcome, the Corps must deny the permit application. If the project is not sited in a special aquatic site and/or is water-dependent, the applicant is not required to overcome the presumption that upland alternatives are available. However, the Corps must still address whether there are any upland alternatives (or alternatives with less impact), and if any are identified, the applicant must clearly demonstrate that they are not feasible. If such a demonstration cannot be made, the Corps must deny the permit application. The Corps performed an evaluation of alternatives, as described below:* The proposed project does not need to be in or near the special aquatic site to fulfill its basic purpose (not water dependent) but in this geographical location of Florida and given the alternatives outlined below, the “no action” alternative is the only alternative that would not impact any special aquatic sites. All the alternatives that were considered were derived from previous FHWA/FDOT PD&E studies that culminated in the EA FONSI dated 19 Feb 2015.

5.1 Overall Project Purpose (as independently defined by Corps): The overall project purpose is the same as the Corps determined overall project purpose (reference Section 1.7.5).

5.2 Screening Criteria:

Factor	Measure and/or constraint
Availability	Degree of difficulty to obtain needed Right of Way (ROW) (none, minor, moderate, or substantial)
Cost	Degree of resource expenditure to acquire ROW and to construct the project (none, minor, moderate, or substantial)
Logistics	Degree of effect to infrastructure, existing traffic flows and M Canal crossing feasibility (none, minor, moderate, or substantial)
Property Relocations	Degree of effect based on number of residential parcels/family relocations required (none, minor, moderate, or substantial)
Wetlands	Degree of effect based on wetland impact acreage and quality (none, minor, moderate, or substantial)
Endangered Species Act (ESA) Species	Degree of effect based on impacts to species and habitat (none, minor, moderate, or substantial)
Drinking Water Resources	Degree of effect based on impacts to drinking water resources (none, minor, moderate, or substantial)
Cultural Resources	Degree of effect based on impacts to cultural and historic resources (none, minor, moderate, or substantial)
Other Environmental Concerns	Degree of effect based on impacts from noise, air quality, construction and demolition debris disposal, and flooding (none, minor, moderate, or substantial)

5.3 No Action Alternative *(No action is defined as permit denial or alternative without impacts to waters of the United States)*:

The “No Action” alternative would mean no change to the current road system that would require a Corps permit. The traffic congestion and travel times would continue to increase with the “no action” alternative. Hurricane evacuation would not facilitate increased evacuation abilities with the “no action” alternative. The applicant has indicated that improving the regional system linkage and accommodating future travel demands by establishing a north-south travel network between Okeechobee Boulevard and Northlake Boulevard is the driving need for the project. The north-south travel network between Okeechobee Boulevard and Northlake Boulevard is currently limited. The Florida’s Turnpike is located four miles to the east of SR 7 and Seminole Pratt Whitney Road is located six miles to the west. The need for the project is summarized as follows: (1) There is a need to improve system linkage between Okeechobee Boulevard and Northlake Boulevard; (2) Travel demands west of the proposed project corridor in Palm Beach County will continue to grow; and (3) The Palm Beach

Metropolitan Planning Organization (MPO) has identified this project as a critical priority. The no action alternative would not meet any of the existing needs associated with the proposed project and would not accomplish the overall project purpose. Nonetheless, the No Action Alternative was evaluated by the Corps to provide a benchmark for comparison of the environmental effects of the proposed action and other alternatives.

No Action Alternative	
Description	Comparison to criteria
No Action	**Availability – None:** No ROW to acquire. **Cost - None:** No relocation cost, and no construction cost. The degree of effect for this factor would be None. **Logistics - None:** No existing infrastructure required to be relocated/removed; local traffic flows remain the same; and, no crossing of M-Canal that would require modification of State Law. Logistics degree of effect would be None. **Property Relocations - None:** No property relocations would be required. The degree of effect would be None. **Wetlands - None:** No impacts to jurisdictional waters of the U.S. (wetlands and surface waters) required. The degree of effect would be None. **ESA Species – None:** This alternative would not further effect ESA species, however, the no action would also not procure and preserve 216 acres of Rangeline ESA species habitat or create, enhance, restore, and preserve 54.8 of on-site habitat. The degree of effect would be None. **Drinking Water Resources – None:** The no action alternative would not have any effects to the current drinking water resources. The degree of effect would be None. **Cultural Resources - None:** The no action alternative would not negatively impact historic or cultural resources. The degree of effect would be none. **Other Environmental Considerations - None:** This alternative would not result in high noise levels or impede normal traffic flows during or after construction. Air quality would not be adversely affected and construction and demolition debris requiring disposal would not be generated. This alternative would not increase potential for flooding.

	The traffic congestion and travel times would continue to increase with the "no action" alternative. Hurricane evacuation would not facilitate increased evacuation abilities with the "no action" alternative. The degree of effect would be negatively moderate.

5.4 Off-site locations and configurations: All the alternatives that were considered were derived from previous FHWA/FDOT PD&E studies that culminated in the EA FONSI dated 19 Feb 2015.

As part of the PD&E Study, FDOT conducted an evaluation of multiple alternatives to identify a suitable location for the proposed action. The Corps determined these alternatives are appropriate for evaluation within this Alternatives Analysis. Each of the off-site alternatives, which would entail the typical section of roadway and stormwater facilities required by a four-lane roadway (reference Figures 1 and 2, Section 4.7.i. above), considered are described below.

- Alternative 1 follows the County's existing two lane roadway from Okeechobee Boulevard to Persimmon Boulevard and continues north, parallel to 110th Avenue. The proposed alignment then crosses over the M-Canal and continues north, just west of the Ibis Golf and Country Club, before terminating at Northlake Boulevard.

- Alternative 2 proceeds north within the FDOT's existing right of way. Within one mile of the M-Canal, the alignment turns northwest, continues through the Pond Cypress Natural Area, and then turns north parallel to 110th Avenue. After crossing the M-Canal, Corridor 2 continues along the west side of the Ibis Golf and Country Club before terminating at Northlake Boulevard.

- Alternative 4 proceeds north within the FDOT's existing right of way and crosses the M-Canal before terminating at Northlake Boulevard. This alignment is commonly referred to as the "Rangeline" alignment since the corridor runs adjacent to the line separating Range 41 and Range 42.

- Alternative 5 (120th Avenue) proceeds north follows the County's existing two lane roadway from Okeechobee Boulevard to Persimmon Boulevard and continues north, parallel to 110th Avenue. At 60th Street, the proposed alignment turns west and follows 60th Street along the south side of the M Canal. At 120th Avenue, the proposed alignment turns north and follows and continues along 120th Avenue before termination at Northlake Boulevard.

- Alternative 6 (130th Avenue North) follows the County's existing two lane

roadway from Okeechobee Boulevard to Persimmon Boulevard and continues north, parallel to 110th Avenue. At 60th Street, the proposed alignment turns west and follows 60th Street along the south side of the M Canal. At 130th Avenue North, the alignment turns north and continues along 130th Avenue North before terminating at Northlake Boulevard.

- Alternative 7 (130th Trail) follows the County's existing two lane roadway from Okeechobee Boulevard to Persimmon Boulevard and continues north, parallel to 110th Avenue. At 60th Street, the proposed alignment turns west and follows 60th Street along the south side of the M Canal. At 130th Trail, the alignment turns north and continues along 130th Trail before terminating at Northlake Boulevard.

- Alternative 8 (Bridge over ITID B Canal) follows the County's existing two lane roadway from Okeechobee Boulevard to Persimmon Boulevard and continues north, parallel to 110th Avenue. At 60th Street, the proposed alignment turns west and follows 60th Street along the south side of the M Canal. At the B Canal, the alignment turns north and continues over the B Canal (between 130th Trail and 130th Avenue North) before terminating at Northlake Boulevard.

- Alternative 9 (140th Avenue North (East)) follows the County's existing two lane roadway from Okeechobee Boulevard to Persimmon Boulevard and continues north, parallel to 110th Avenue. At 60th Street, the proposed alignment turns west and follows 60th Street along the south side of the M Canal. At 140th Avenue North, the alignment turns north and continues along the east side of 140th Avenue North before terminating at Northlake Boulevard.

- Alternative 10 (140th Avenue North (West)) follows the County's existing two lane roadway from Okeechobee Boulevard to Persimmon Boulevard and continues north, parallel to 110th Avenue. At 60th Street, the proposed alignment turns west and follows 60th Street along the south side of the M Canal. At 140th Avenue North, the alignment turns north and continues along the west side of 140th Avenue North before terminating at Northlake Boulevard.

Off-site locations and configurations	
Description	Comparison to criteria
Alternative 1	**Availability – Substantial:** Eminent domain could be used to acquire 100 residential parcels. The section of the M-Canal where this alternative would cross is owned by the City of West Palm Beach and is protected under a Special Act by the Florida Legislature (Chapter 67-2169). Crossing of the M-Canal would require an eminent domain proceeding. The degree of effect would be substantial.

	Cost - Moderate: Would require acquisition of 100 residential properties to support a ROW for a new four lane roadway and associated stormwater facilities and infrastructure. This alternative would require the acquisition cost of $24.6 million and the construction cost of $41.3 million. The degree of effect for this factor would be moderate. **Logistics - Substantial:** Would require over 3.3 miles of existing infrastructure to be relocated/removed; expected disruption of local traffic flows during construction. Logistics degree of effect would be substantial. **Property Relocations - Substantial:** 35 family relocations would be required. The degree of effect would be substantial. **Wetlands - Moderate:** Would impact 56.4 acres of low quality WOUS (wetlands and other waters). Expected mitigation would include deduction of credits from existing PROMAS and/or the purchase of credits from a federally approved mitigation bank. The degree of effect would be moderate. **ESA Species - Minor:** The existing low quality wetlands and surface waters are linear and surrounded by development with low quality ESA habitat. The degree of effect would be minor. **Drinking Water Resources – Minor:** This alternative proceeds north along the west side of the Ibis community. An appropriately designed stormwater treatment system would be expected to minimize impacts to drinking water resources. The degree of effect would be minor. **Cultural Resources - None:** This is pursuant to CFR 36 Part 325, Appendix C (3) (b), and the instance that the permit area has been so extensively modified by previous impacts that a significant loss of archeological integrity to historic properties is presumed. The degree of effect would be none. **Other Environmental Considerations - Substantial:** This alternative would result in high noise levels during construction and traffic flow noise following construction abutting remaining residential development; possibility of the need for noise barriers on both sides of a new 4 lane roadway; the disruption of local traffic flow causing more vehicular stops and

	idling having a negative effect on air quality; and would require the disposal of removed existing infrastructure debris. This alternative would not be expected to increase flooding. The degree of effect would be substantial.
Alternative 2	**Availability – Substantial:** Eminent domain could be used to acquire 100 residential parcels. The section of the M-Canal where this alternative would cross is owned by the City of West Palm Beach and is protected under a Special Act by the Florida Legislature (Chapter 67-2169). Crossing of the M-Canal would require an eminent domain proceeding. The degree of effect would be substantial. **Cost - Moderate:** Would require acquisition of 100 residential properties to support a ROW for a new four lane roadway and associated stormwater facilities and infrastructure. This alternative would require the acquisition cost of $24.6 million and the construction cost of $41.3 million. The degree of effect for this factor would be moderate. **Logistics - Substantial:** Would require over 3.3 miles of existing infrastructure to be relocated/removed and would significantly disrupt local traffic flows during construction. Logistics degree of effect would be substantial. **Property Relocations – Substantial:** 35 family relocations would be required. The degree of effect would be substantial. **Wetlands – Substantial:** Would impact 75.9 acres of low to high quality WOUS (wetlands and other waters). Would directly impact wetlands within PCNA. Expected mitigation would include deduction of credits from existing PROMAS and/or the purchase of credits from a federally approved mitigation bank. The degree of effect would be significant. **ESA Species - Minor:** The existing low quality wetlands and surface waters are linear and surrounded by development. The degree of effect would be minor. **Drinking Water Resources – Moderate:** This alternative would directly impact wetlands within PCNA. An appropriately designed stormwater treatment system would be expected to minimize

	impacts to drinking water resources. The degree of effect would be moderate. **Cultural Resources - None:** Pursuant to CFR 36 Part 325, Appendix C(3)(b), and the instance that the permit area has been so extensively modified by previous impacts that a significant loss of archeological integrity to historic properties is presumed. The degree of effect would be none. **Other Environmental Considerations - Moderate:** This alternative would result in high noise levels during construction and traffic flow noise following construction abutting remaining residential development; possibility of the need for noise barriers on both sides of a new 4 lane roadway; the disruption of local traffic flow causing more vehicular stops and idling having a negative effect on air quality; and would require the disposal of removed existing infrastructure debris. This alternative would not be expected to increase flooding. The degree of effect would be moderate.
Alternative 4	**Availability – Moderate:** The applicants own the majority of the ROW for this alternative. The degree of effect for this factor would be moderate. **Cost - Substantial:** This alternative would require the acquisition cost of $1.0 million non-residential parcel and the construction cost ranging from $114.5 million to $271.9 million. The construction cost is with or without a bridged roadway along portions of this alternative since this alternative bifurcates the PCNA and GWP. The degree of effect for this factor would be substantial. **Logistics – Minor:** No existing infrastructure exists along this alternative. Logistics degree of effect would be minor. **Property Relocations - None:** 0 family relocations would be required. The degree of effect would be none. **Wetlands - Substantial:** Would impact 112.2 acres of low to high quality WOUS (wetlands and other waters) and this alternative bifurcates the PCNA and GWP. Expected mitigation would include deduction of credits from existing PROMAS and/or the purchase of credits from a federally approved mitigation bank. The degree of effect would be substantial.

	ESA Species - Substantial: The majority of this alternative is within the PCNA and GWP and adjacent to the GWP which contains significant amount of ESA critical habitat. The degree of effect would be substantial. **Drinking Water Resources – Substantial:** This alternative would directly impact wetlands within PCNA and GWP. This alternative runs along the east side of the Ibis Community and could utilize the Ibis stormwater management system as permitted by the State for the northern segment of this alternative. An appropriately designed stormwater treatment system would be expected to minimize impacts to drinking water resources. The degree of effect would be substantial. **Cultural Resources - None:** Pursuant to CFR 36 Part 325, Appendix C (3) (b), and the instance that the permit area has been so extensively modified by previous impacts that a significant loss of archeological integrity to historic properties is presumed. The degree of effect would be none. **Other Environmental Considerations - Minor:** This alternative would not abut existing residential developments. Limited noise barriers may be required on portions of the west side of a new 4 lane roadway; there would be no disruption of local traffic flow that would cause increased vehicular stops and idling resulting in a negative effect on air quality; and there is no existing infrastructure debris that would require disposal. This alternative would not be expected to increase flooding. The degree of effect would be minor.
Alternative 5 (120th Avenue)	**Availability – Substantial:** Eminent domain could be used to acquire 81 residential parcels. The section of the M-Canal where this alternative would cross is owned by the City of West Palm Beach and is protected under a Special Act by the Florida Legislature (Chapter 67-2169). Crossing of the M-Canal would require an eminent domain proceeding. The degree of effect would be substantial. **Cost - Moderate:** Would require acquisition of 100 residential properties to support a ROW for a new four lane roadway and associated stormwater facilities and infrastructure. This alternative would require the

	acquisition cost of $24.6 million and the construction cost of $41.3 million. The degree of effect for this factor would be moderate. **Logistics - Substantial:** This alternative would require relocation/removal of over 4.2 miles of existing infrastructure and local traffic flows would be disrupted during construction. Logistics degree of effect would be substantial. **Property Relocations - Substantial:** 67 family relocations would be required. The degree of effect would be substantial. **Wetlands - Minor:** Alternative would impact 6.4 acres of low quality WOUS (wetlands and other waters). Expected mitigation would include deduction of credits from existing PROMAS and/or the purchase of credits from a federally approved mitigation bank. The degree of effect would be minor. **ESA Species - Minor:** The existing low quality wetlands and surface waters are linear and surrounded by development with minimal ESA habitat. The degree of effect would be minor. **Drinking Water Resources – Minor:** This alternative would require a stormwater treatment facility to be constructed within existing residential development to treat water before release into the M-Canal and return to the GWP. The degree of effect would be minor. **Cultural Resources - None:** Pursuant to CFR 36 Part 325, Appendix C (3) (b), and the instance that the permit area has been so extensively modified by previous impacts that a significant loss of archeological integrity to historic properties is presumed. The degree of effect would be none. **Other Environmental Considerations - Substantial:** This alternative would result in high noise levels during construction and traffic flow noise following construction abutting remaining residential development; likely need for noise barriers on both sides of a new 4 lane roadway; the disruption of local traffic flow causing more vehicular stops and idling having a negative effect on air quality; and the disposal of the removed existing infrastructure debris. This alternative crosses east and west oriented drainage canals and a new roadway has the potential

	to act as a dam for floodwaters east of SR 7 Extension, resulting in potential flooding of homes east of a new roadway. The degree of effect would be substantial.
Alternative 6 (130th Avenue North)	**Availability – Substantial:** Eminent domain could be used to acquire 107 residential parcels. The section of the M-Canal where this alternative would cross is owned by the City of West Palm Beach and is protected under a Special Act by the Florida Legislature (Chapter 67-2169). Crossing of the M-Canal would require an eminent domain proceeding. The degree of effect would be substantial. **Cost - Moderate:** Would require acquisition of 107 residential properties to support a ROW for a new four lane roadway and associated stormwater facilities and infrastructure. This alternative would require the acquisition cost of $29 million and the construction cost of $47 million. The degree of effect for this factor would be moderate**.** **Logistics - Substantial:** This alternative would require relocation/removal of over 5.2 miles of existing infrastructure and would include disruption of local traffic flows during construction. Logistics degree of effect would be substantial. **Property Relocations - Substantial:** 54 family relocations would be required. The degree of effect would be substantial. **Wetlands - Moderate:** Would impact 6.4 acres of low quality WOUS (wetlands and other waters) and drainage canal surface waters. Expected mitigation would include deduction of credits from existing PROMAS and/or the purchase of credits from a federally approved mitigation bank. The degree of effect would be moderate. **ESA Species - Minor:** The existing low quality wetlands and surface waters are linear and surrounded by development with minor ESA habitat. The degree of effect would be minor. **Drinking Water Resources – Minor:** This alternative would require a stormwater treatment facility to be constructed within existing residential development to treat water before release into the M-Canal and return to the GWP. The degree of effect would be minor.

	Cultural Resources - None: Pursuant to CFR 36 Part 325, Appendix C (3) (b), and the instance that the permit area has been so extensively modified by previous impacts that a significant loss of archeological integrity to historic properties is presumed. The degree of effect would be none. **Other Environmental Considerations - Substantial:** This alternative would result in high noise levels during construction and traffic flow noise following construction abutting remaining residential development; expected need for noise barriers on both sides of a new 4 lane roadway; the disruption of local traffic flow causing more vehicular stops and idling having a negative effect on air quality; and the disposal of the removed existing infrastructure debris. This alternative crosses east and west oriented drainage canals and a new roadway has the potential to act as a dam for floodwaters east of SR 7 Extension, resulting in potential flooding of homes east of a new roadway. The degree of effect would be substantial.
Alternative 7 (130th Trail)	**Availability – Substantial:** Eminent domain could be used to acquire 114 residential parcels. The section of the M-Canal where this alternative would cross is owned by the City of West Palm Beach and is protected under a Special Act by the Florida Legislature (Chapter 67-2169). Crossing of the M-Canal would require an eminent domain proceeding. The degree of effect would be substantial. **Cost - Moderate:** Would require acquisition of 114 residential properties to support a ROW for a new four lane roadway and associated stormwater facilities and infrastructure. This alternative would require the acquisition cost of $37 million and the construction cost of $47 million. The degree of effect for this factor would be moderate. **Logistics - Substantial:** Would require relocation/removal of over 5.2 miles of existing infrastructure and would result in disruption of local traffic flows. Logistics degree of effect would be substantial. **Property Relocations - Substantial:** 72 family relocations would be required. The degree of effect would be substantial.

	Wetlands - Minor: Would impact 6.4 acres of low quality WOUS (wetlands and other waters) and drainage canal surface waters. Expected mitigation would include deduction of credits from existing PROMAS and/or the purchase of credits from a federally approved mitigation bank. The degree of effect would be minor. **ESA Species - Minor:** The existing low quality wetlands and surface waters are linear and surrounded by development with minimal ESA habitat value. The degree of effect would be minor. **Drinking Water Resources – Minor:** This alternative would require a stormwater treatment facility to be constructed within existing residential development to treat water before release into the M-Canal and return to the GWP. The degree of effect would be minor. **Cultural Resources - None:** Pursuant to CFR 36 Part 325, Appendix C (3) (b), and the instance that the permit area has been so extensively modified by previous impacts that a significant loss of archeological integrity to historic properties is presumed. The degree of effect would be none. **Other Environmental Considerations - Substantial:** This alternative would result in high noise levels during construction and traffic flow noise following construction abutting remaining residential development; expected need for noise barriers on both sides of a new 4 lane roadway; the disruption of local traffic flow causing more vehicular stops and idling having a negative effect on air quality; and the disposal of the removed existing infrastructure debris. This alternative crosses east and west oriented drainage canals and a new roadway has the potential to act as a dam for floodwaters east of SR 7 Extension, resulting in potential flooding of homes east of a new roadway. The degree of effect would be substantial.
Alternative 8 (Bridge Over B-Canal)	**Availability – Substantial:** Eminent domain could be used to acquire 108 residential parcels. The section of the M-Canal where this alternative would cross is owned by the City of West Palm Beach and is protected under a Special Act by the Florida Legislature (Chapter 67-2169). Crossing of the M-

	Canal would require an eminent domain proceeding. The degree of effect would be substantial. **Cost - Substantial:** Would require acquisition of 114 residential properties to support a ROW for a new four lane roadway and associated stormwater facilities and infrastructure. This alternative would require the acquisition cost of $16 million and the construction cost of $263 million. The degree of effect for this factor would be substantial**.** **Logistics - Substantial:** Would require relocation/removal of over 6.4 miles of existing infrastructure and would disrupt local traffic flows. Logistics degree of effect would be substantial. **Property Relocations - Substantial:** 72 family relocations would be required. The degree of effect would be substantial. **Wetlands - Moderate:** Impacts 33.7 acres of low quality WOUS (wetlands and other waters) and drainage canal surface waters. Expected mitigation would include deduction of credits from existing PROMAS and/or the purchase of credits from a federally approved mitigation bank. The degree of effect would be moderate. **ESA Species - Minor:** The existing low quality wetlands and surface waters are linear and surrounded by development with minor ESA habitat value. The degree of effect would be minor. **Drinking Water Resources – Minor:** This alternative would require a stormwater treatment facility to be constructed within existing residential development to treat water before release into the M-Canal and return to the GWP. The degree of effect would be minor. **Cultural Resources - None:** Pursuant to CFR 36 Part 325, Appendix C (3) (b), and the instance that the permit area has been so extensively modified by previous impacts that a significant loss of archeological integrity to historic properties is presumed. The degree of effect would be none. **Other Environmental Considerations - Substantial:** This alternative would result in high noise levels during construction and traffic flow noise following construction abutting remaining residential development; expected need for noise barriers on

	both sides of a new 4 lane roadway; the disruption of local traffic flow causing more vehicular stops and idling having a negative effect on air quality; and the disposal of the removed existing infrastructure debris. This alternative crosses east and west oriented drainage canals and a new roadway has the potential to act as a dam for floodwaters east of SR 7 Extension, resulting in potential flooding of homes east of a new roadway. The degree of effect would be substantial.
Alternative 9 (140th Avenue North (east))	**Availability – Substantial:** Eminent domain could be used to acquire 153 residential parcels. The section of the M-Canal where this alternative would cross is owned by the City of West Palm Beach and is protected under a Special Act by the Florida Legislature (Chapter 67-2169). Crossing of the M-Canal would require an eminent domain proceeding. The degree of effect would be substantial. **Cost - Moderate:** Would require acquisition of 153 residential properties to support a ROW for a new four lane roadway and associated stormwater facilities and infrastructure. This alternative would require the acquisition cost of $29 million and the construction cost of $49 million. The degree of effect for this factor would be moderate**.** **Logistics - Substantial:** Would require relocation/removal of over 6.3 miles of existing infrastructure and would disrupt local traffic flows. Logistics degree of effect would be substantial. **Property Relocations - Substantial:** 46 family relocations would be required. The degree of effect would be substantial. **Wetlands - Minor:** Would impact 3.2 acres of low quality WOUS (wetlands and other waters). Expected mitigation would include deduction of credits from existing PROMAS and/or the purchase of credits from a federally approved mitigation bank. The degree of effect would be minor. **ESA Species - Minor:** The existing low quality wetlands and surface waters are linear and surrounded by development with minor ESA habitat value. The degree of effect would be minor. **Drinking Water Resources – Minor:** This alternative would require a stormwater treatment

	facility to be constructed within existing residential development to treat water before release into the M-Canal and return to the GWP. The degree of effect would be minor. **Cultural Resources - None:** Pursuant to CFR 36 Part 325, Appendix C (3) (b), and the instance that the permit area has been so extensively modified by previous impacts that a significant loss of archeological integrity to historic properties is presumed. The degree of effect would be none. **Other Environmental Considerations - Substantial:** This alternative would result in high noise levels during construction and traffic flow noise following construction abutting remaining residential development; expected need for noise barriers on both sides of a new 4 lane roadway; the disruption of local traffic flow causing more vehicular stops and idling having a negative effect on air quality; and the disposal of the removed existing infrastructure debris. This alternative crosses east and west oriented drainage canals and a new roadway has the potential to act as a dam for floodwaters east of SR 7 Extension, resulting in potential flooding of homes east of a new roadway. The degree of effect would be substantial.
Alternative 10 (140th Avenue North (west))	**Availability – Substantial:** Eminent domain could be used to acquire 156 residential parcels. The section of the M-Canal where this alternative would cross is owned by the City of West Palm Beach and is protected under a Special Act by the Florida Legislature (Chapter 67-2169). Crossing of the M-Canal would require an eminent domain proceeding. The degree of effect would be substantial. **Cost - Substantial:** Would require acquisition of 153 residential properties to support a ROW for a new four lane roadway and associated stormwater facilities and infrastructure. This alternative would require the acquisition cost of $81 million and the construction cost of $49 million. The degree of effect for this factor would be substantial. **Logistics - Substantial:** Would require relocation/removal of over 6.3 miles of existing infrastructure and would disrupt local traffic flows; Logistics degree of effect would be substantial.

	Property Relocations - Substantial: 75 family relocations would be required. The degree of effect would be substantial. **Wetlands - Minor:** Would impact 5.4 acres of low quality WOUS (wetlands and other waters). Expected mitigation would include deduction of credits from existing PROMAS and/or the purchase of credits from a federally approved mitigation bank. The degree of effect would be minor. **ESA Species - Minor:** The existing low quality wetlands and surface waters are linear and surrounded by development with minor ESA habitat value. The degree of effect would be minor. **Drinking Water Resources – Minor:** This alternative would require a stormwater treatment facility to be constructed within existing residential development to treat water before release into the M-Canal and return to the GWP. The degree of effect would be minor. **Cultural Resources - None:** Pursuant to CFR 36 Part 325, Appendix C (3) (b), and the instance that the permit area has been so extensively modified by previous impacts that a significant loss of archeological integrity to historic properties is presumed. The degree of effect would be none. **Other Environmental Considerations - Substantial:** This alternative would result in high noise levels during construction and traffic flow noise following construction abutting remaining residential development; expected need for noise barriers on both sides of a new 4 lane roadway; the disruption of local traffic flow causing more vehicular stops and idling having a negative effect on air quality; and the disposal of the removed existing infrastructure debris. This alternative crosses east and west oriented drainage canals and a new roadway has the potential to act as a dam for floodwaters east of SR 7 Extension, resulting in potential flooding of homes east of a new roadway. The degree of effect would be substantial.

5.4.1 Off-site locations selected for further analysis and why: Alternative 4 is the only off-site location carried forward for further analysis. The other off-site alternatives were not

selected for further analysis because they were not considered practicable or reasonable due to the associated substantial property relocations and substantial logistics issues. The other alternatives would require eminent domain of between 72 to 156 residential properties and require the re-location of between 46 to 114 families.

5.5 On-site configurations: Alternative 3 follows the County's existing two lane roadway from Okeechobee Boulevard to Persimmon Boulevard and continues north, parallel to 110th Avenue. At 60th Street, the alignment turns east, parallel to the M-Canal, and then turns north while crossing the M-Canal to tie into the FDOT's existing right of way. The alignment continues north within FDOT-owned ROW between the east side of the Ibis Golf and Country Club and western boundary of the Grassy Waters Preserve before terminating at Northlake Boulevard. Reference the FHWA FONSI, dated 19 Feb 2015, made part of the administrative record that analyzed 3 alignments within Alternative 3. Reference Section 1.5 for minimization efforts that were applied to the applicant's preferred alternative. Alternative 3 is the applicants' preferred alternative.

Description	Comparison to criteria
Alternative 3	**Availability - Minor:** This alternative would require acquisition of a 1.3 acre portion of a communications tower parcel that is available. The applicants already own the remainder of the proposed ROW. The degree of effect for this factor would be minor. **Cost – Moderate:** This alternative would require the acquisition cost of $1.0 million for the 1.3 acre portion of the communication tower parcel and the construction cost of $54.6 million. The degree of effect for this factor would be moderate. **Logistics - Minor:** No existing infrastructure exists along this alternative. Logistics degree of effect would be minor. **Property Relocations - None:** No family relocations would be required for construction of this alternative. The degree of effect would be none. **Wetlands - Moderate:** This alternative would impact 58.52 acres of low to moderate quality WOUS (wetlands and other waters). Proposed mitigation consists of the deduction of credits from existing PROMAs and the purchase of credits from a federally approved mitigation bank. The applicants are also proposing 54.8 acres of extra on-site creation, enhancement, restoration and preservation mitigation

	to provide a buffer between the roadway and GWP. The overall degree of effect would be moderate. **ESA Species - Minor:** The proposed impacts to 51.1 acres of snail kite habitat would be mitigated through preservation of over 216 acres of ideal snail kite and woodstork foraging and nesting habitat. Additionally, the applicants would provide 54.8 acres of wetland creation, enhancement, restoration, and preservation of onsite wetlands that would provide a significant amount of ESA critical habitat adjacent to the GWP. The degree of effect on ESA species would be minor. **Drinking Water Resources – Minor:** Concerns regarding potential adverse effects to area drinking water resources were raised early in the PD&E process by various project stake holders. These concerns are comprehensively addressed in the design of the roadway and stormwater system. No stormwater from the project would discharge directly to drinking water resources. The roadway would be designed with unique features to contain any potential emergency spills thereby eliminating the potential for adverse impacts to drinking water resources. A buffer adjacent to GWP would be enhanced and preserved. The degree of effect would be minor. **Cultural Resources - None:** Pursuant to CFR 36 Part 325, Appendix C (3) (b), and the instance that the permit area has been so extensively modified by previous impacts that a significant loss of archeological integrity to historic properties is presumed. The degree of effect would be none. **Other Environmental Considerations - Minor:** This alternative would not abut existing residential developments. There may be a need for limited noise barriers on portions of the west side of a new 4 lane roadway; there would be no disruption of local traffic flow that would cause increased vehicular stops and idling resulting in a negative effect on air quality; and there is no existing infrastructure that would need to be removed necessitating construction debris removal. The degree of effect would be minor.

5.6 Practicable Alternatives carried forward: Through the analysis above, the Corps determined that Alternatives 3 and 4 were practicable alternatives to be carried forward.

Nevertheless, Alternative 3 would result in substantially less wetland impacts than Alternative 4 and does not bifurcate or directly impact the PCNA or the GWP resources. Alternative 4 would impact 112.2 acres of wetland impacts and bifurcate the PCNA and GWP compared to Alternative 3, which would have 58.52 acres of wetland impacts and doesn't bifurcate the water catchment areas. Furthermore, corridors west of the Ibis Golf and Country Club (including Alternative 4) would not meet the overall project purpose as indicated in the FDOT traffic study, which determined that western corridor alternatives would primarily serve local traffic rather than provide regional network linkage. Therefore, Alternative 3 is considered the Least Environmentally Damaging Practical Alternative (LEDPA) for the remainder of this document.

6.0 Evaluation of the 404(b)(1) Guidelines:

(40 CFR 230) For each of the below listed evaluation criterion, this section describes the potential impact, any minimization measures that would be used to reduce the level of impact, and the resultant impact level. For the purpose of this evaluation, the fill associated with this project is clean fill from an appropriate upland source.

6.1 Potential effects on physical and chemical characteristics of the aquatic ecosystem (Subpart C):

6.1.1 Substrate: Negligible Effect – The work proposed would permanently alter the existing onsite wetlands aquatic substrate due to the placement of additional fill material over the existing substrate. Discharge of fill at the project site also would eliminate bottom-dwelling organisms within the affected wetlands, either through the smothering of immobile organisms or displacement of mobile organisms. The Functional Loss (FL) of 58.52 acres totals 127.64 UMAM and 0.66 M-WRAP mitigation units, which would be replaced, in-kind (palustrine herbaceous and forested wetlands), at Dupuis and Pine Glades PROMAs and Loxahatchee Mitigation Bank. Therefore, the Corps has determined that the effect upon the overall area substrate would result in a negligible effect for the entire proposed project.

6.1.2 Suspended Particulates / Turbidity: – Minor Effect (short term) – The project would incorporate erosion prevention measures to avoid the discharge of particulate material into adjacent wetlands and downstream waters during construction. However, some unexpected suspended particulates may escape downstream. Any unexpected suspended particulates could temporarily reduce light penetration and lower the rate of photosynthesis of downstream organisms, however, it is anticipated that use of erosion prevention measures would minimize any negative effect to these organisms.

6.1.3 Water: Negligible Effect – The Ibis Development Lake System was permitted under **SFWMD permit #50-02120-S** to provide water quality treatment and quantity attenuation for 46.8 acres of the SR 7 Extension (new construction) storm water runoff. To address concerns raised regarding adverse impact to the drinking water supply,

FDOT incorporated a dry swale along the east side of the roadway in the design as an additional effort to provide better runoff quality and emergency containment in the event of a spill. The dry swale would discharge to the Ibis Lake system through outfall structures raised approximately one foot above the bottom of the dry swale to allow retention time in the swale for contamination clean up. No direct discharge is proposed or allowed into Grassy Waters Preserve for SR 7 storm water runoff. The design of the drainage system would prevent any possibility of direct or indirect discharge through the use of berms, pumps and the elevations of the controls structures and pipe system. The project would not directly impact wetlands within Grassy Waters Preserve. Secondary impacts have been appropriately quantified and would be addressed through mitigation. The proposed project is to be constructed within existing FDOT ROW and Palm Beach County ROW. The property boundaries of Grassy Waters Preserve do not directly abut the existing development, i.e. the Ibis Community and the existing roadway. State Road 7 Extension would be constructed in the areas outside of the Grassy Waters Preserve, approximately 170 feet west of the property boundary.

Given the fact that the swale volumes in each basin are much larger than the capacity of a tanker truck, any runoff from a spill would be contained within the swale. Additionally, each of the outfall structures within the swale would be designed with skimmers which would prevent pollutants from discharging to the outfall in the Ibis lake system. Additional roadway design features including a curb and gutter system and a guardrail along the eastern edge of the roadway would help contain vehicles within the roadway in the event of an accident.

For the bridge crossing over the M-Canal, a 54-inch high concrete barrier wall would be used. Most barrier walls for this type of application are only 32 inches high. In addition, the joints on the bridge would be sealed using a poured joint with backer rod expansion system. This structure would help retain any contaminated materials on the bridge deck and away from the M-Canal. A Spill Response Plan details the drainage design and the response procedures that would ensure that truck rollovers would not impact Grassy Waters Preserve.

In the event of an accident involving a spillage of hazardous materials, or other pollutants, emergency responders would follow standard protocols to notify the appropriate agencies and initiate a clean-up. All spillage would be totally contained, isolated, and removed before any potential contamination could spread.

A water quality certification will be required for this project. In addition, project designs and the incorporation of erosion control measures would negate any potential long-term adverse impact by reducing erosion and sediments into downstream waters. Therefore, the Corps has determined that that water quality and quantity into downstream waters would be negated.

6.1.4

Current Patterns & Water Circulation: No Effect – The project should not affect the flow of currents or the circulation of water within downstream waterways. As outlined in Section 6.1.3 above, the Ibis Development Lake System was permitted by the State to provide water quality treatment and quantity attenuation for 46.8 acres of the SR 7 Extension (new construction) storm water runoff.

6.1.5 Normal Water Fluctuations: Minor Effect (long term) – The project should have a minor effect on water fluctuations of downstream waterways since additional water would be added from the roadway to the existing stormwater treatment, The Ibis Development Lake System was permitted under by the State to provide water quality treatment and quantity attenuation for 46.8 acres of the SR 7 Extension (new construction) storm water runoff.

6.1.6 Salinity Gradients: No Effect – The project corridor is not near an estuarine system thus any surface flows would not have any effect on downstream salinity waters.

6.2 Potential effects on biological characteristics of the aquatic ecosystem (Subpart D):

6.2.1 Threatened or Endangered Species (also see section 10.1): –

a. Everglade snail kite (*Rostrhamus sociabilis plumbeus*): The USFWS issued a Biological Opinion for the project on November 13, 2014; the USFWS finds that the construction and operation of the proposed action is *not likely to jeopardize* the continued existence of the Everglade snail kite (*Rostrhamus sociabilis plumbeus*). The proposed project is located outside of critical habitat designated for the snail kite, but is within the consultation area for the snail kite. Many protection measures would be taken by the applicant to address federally and state protected species during the course of construction as well as in perpetuity as part of the Mitigation Plan. Specifically for the snail kite, implementation of a project-specific snail kite management plan would occur prior to and during construction. This plan includes monitoring for nesting activity during construction and for five years post-construction, guidance for construction scheduling, and contractor education. In addition, compensatory mitigation for snail kite foraging, nesting, and roosting/perching habitat impacts is being proposed above and beyond what is statutorily required for compensatory wetland mitigation. The proposed impacts to an estimated 58.52 acres of snail kite foraging, nesting, and perching/roosting habitat would be mitigated through a multi-faceted approach that includes compensation for direct and indirect habitat impacts, wetland preservation and conservation, an endowment to ensure management of preserved lands in perpetuity, and nest/bird protection during construction. The plan includes preservation of 216 acres of native wetland and upland habitats within three sections of the Rangeline: 1) Okeechobee Boulevard to the M-Canal; 2) Northlake Boulevard to SR 710; and 3) SR 710 to Jupiter Farms. Preserving this acreage discourages future development in the area.

b. The project occurs within the consultation area of the Audubon's crested caracara (*Polyborus plancus audubonii*), Florida scrub jay (*Aphelocoma coerulescens*), and red-cockaded woodpecker. (*Picoides borealis*). No critical habitat or foraging or nesting/denning habitat occurs in the project area for these three species, therefore the Corps determination is that the project would have "no effect" on these species.

c. Wood stork (*Mycteria americana*): The USFWS issued a Biological Opinion for the project on November 13, 2014; within that letter the USFWS provided the FHWA a concurrence that, based on the minor impacts to the wood stork foraging habitat, the USFWS found the project "may affect, but is not likely to adversely affect" the wood stork.

d. Eastern indigo snake (*Drymarchon corais couperi*): The USFWS, by letter dated 29 February 2012, provided the FDOT a concurrence that based on the adherence to the indigo snake protection measures, the USFWS concurs that the project "may affect, but is not likely to adversely affect" the eastern indigo snake. The Corps would condition any authorization with the USFWS approved Standard Protection Measures for the Eastern Indigo Snake.

6.2.2 Fish, Crustaceans, Mollusks, and Other Aquatic Organisms: Minor Effect (short term) – Paragraph 1.3 conveys a description of the existing site conditions.
Through hydrological connections, some sediments, excess nutrients, and contaminants could reach downstream aquatic food webs. However, the use of standard Best Management Practices (BMPs), including the use of silt fencing, hay bales, and other applicable measures would prevent or reduce erosion or turbid discharges from entering the downstream estuaries. As a result, the project is not expected to negatively impact the water quality of any offsite wetlands or water bodies once construction activities are complete.

6.2.3 Other Wildlife: Minor Effect (short term) – The Corps has determined that the project would have a minor effect on other wildlife within the overall watershed due to increased and protected wildlife habitat with the implementation of the proposed mitigation plan.

6.3 Potential Effects on Special Aquatic Sites (Subpart E):

6.3.1 Sanctuaries and Refuges: No Effect – The project does not affect aquatic sanctuaries or refuges.

6.3.2 Wetlands: Minor Effect (long term) – The FL for 58.52 acres of direct wetland and surface water impacts to waters of the U.S., totals 127.64 UMAM and 0.66 M-WRAP and would be replaced with Functional Gain (FG) units sourced from the following:

a. purchase of 0.66 M-WRAP credits from the Loxahatchee Mitigation Bank;

b. allocation of credits at Palm Beach County's Pine Glades Permittee-Responsible Off-Site Mitigation Area (PROMA); and

c. credit allocation at SFWMD's Dupuis Reserve PROMA.

In addition to the required compensatory mitigation described above, forested wetland restoration and creation, herbaceous wetland restoration and creation, freshwater marsh enhancement, shrub wetland enhancement, hydric pine enhancement, upland preservation, and wetland transitional area restoration within 54.8 acres of on-site right-of-way that abuts the GWP would occur to provide an enhanced natural buffer between the project impacts and GWP.

6.3.3 Mud Flats: Not Applicable – There are no mud flats within or near the project area.

6.3.4 Vegetated Shallows: Not Applicable – There are no vegetated shallows or similar habitat within or near the project area.

6.3.5 Coral Reefs: Not Applicable – There are no coral reefs within or near the project area.

6.3.6 Riffle and Pool Complexes: Not Applicable – There are no riffle and pool complexes within or near the project area.

6.4 Potential effects on human use characteristics (Subpart F):

6.4.1 Municipal and Private Water Supplies: Negligible Effect – The SR 7 Extension eastern ROW limit is located 170 feet west of the western property boundary of the GWP. The project would impact PCNA only in the area where the M Canal would be crossed. The Ibis Development Lake System was permitted by the SFWMD to provide water quality treatment and quantity attenuation for the SR 7 Extension (Segment 2) storm water runoff. No direct storm water discharges associated with the project are proposed or would be allowed into the GWP. All permitted drainage would be directed west into the Ibis Lake system, away from the GWP.

To address concerns raised regarding adverse impact to the drinking water supply, FDOT incorporated a dry swale along the east side of the roadway in the design as an additional effort to provide better runoff quality and emergency containment in the event of a spill. The swale volumes in each basin are much larger than the capacity of a tanker truck, therefore, any runoff from a spill would be contained within the swale. The dry swale would discharge to the Ibis Lake system through outfall structures raised approximately one foot above the bottom of the dry swale to allow retention time in the swale for contamination clean up.

The design of the drainage system would prevent any possibility of direct discharge through the use of berms, pumps and the elevations of the control structures and pipe systems. This is over and above the treatment that Ibis runoff currently receives prior to discharging into the Preserve.

In the event of an accident involving a spillage of hazardous materials, or other pollutants, emergency responders would follow standard protocols to notify the appropriate agencies and initiate a clean-up. All spillage would be totally contained, isolated, and removed before any potential contamination could spread.

The SFWMD reviews regional and local water quality and consumption/use issues during their analysis of the proposal. On 9 May 2017, the SFWMD entered a final order approving issuance of Permit Number 50-05422-P for this proposed project and associated stormwater management system. As part of its review, the State determined that the project would not affect water supplies. After reviewing the SFWMD's permit conditions and all available information, and because any Corps permit would require compliance with the State's Water Quality Certification, the Corps determined the proposal would have a negligible effect on water supplies.

6.4.2 Recreational and Commercial Fisheries: No Effect – The project corridor is distant from any navigable water or any commercial fisheries, therefore the Corps determined the proposed project would have no effect on these resources.

6.4.3 Water-related Recreation: No Effect – The project corridor is distant from any waterways that would support water-related recreation. Therefore, the project would not have any effect on downstream water-related recreation.

6.4.4 Aesthetics: Minor Effect (long term) – The project would change the aesthetic landscape in the direct footprint of the road from undeveloped land to a public roadway. The project would include addition of sidewalks and environmental enhancement within a buffer area adjacent to GWP. These features are expected to provide public access to view this attractive natural area. Furthermore, construction of proposed noise barriers with decorative patterns on both sides matching those located on SR 7 south of the project would minimize the aesthetic impact of the project.

6.5 Evaluation and testing (Subpart G):

6.5.1 General Evaluation of Dredged or Fill Material: The fill material would be free from items such as trash, debris, automotive parts, asphalt, construction materials, and concrete block with exposed reinforcement bars, and soils contaminated with any toxic substance, in toxic amounts in accordance with Section 307 of the Clean Water Act. Any permit issued for the project would incorporate a special condition stipulating the use of clean fill. Therefore, this evaluation indicates that the proposed discharge material meets the testing exclusion criteria.

6.5.2 Chemical, Biological, and Physical Evaluation and Testing: The Corps has determined that specific testing of the fill material is not warranted.

6.6 Actions to minimize adverse effects (Subpart H): *Actions to be undertaken in response to 40 CFR Section 203.10(d) to minimize the adverse effects of discharges of dredged or fill material are incorporated into the discussion in sections 5.1 through 5.5 above. If applicable, additional actions to minimize adverse effects are discussed below, including actions concerning the location of the discharge, actions concerning the material to be discharged, actions controlling the material after discharge, actions affecting the method of dispersion, actions related to technology, actions affecting plant and animal populations, actions affecting human use, and other actions.*

Any DA permit issued by the Corps would include special conditions requiring the installation of erosion control features, the use of clean fill, and the stabilization of all fill areas.

6.7 Factual Determinations – (Subpart B, section 230.11) *The determinations below are based on the determination of effects described in detail in sections 6.1 – 6.6 above*:

6.7.1 Physical substrate: Minor Effect (long term) – Reference paragraph 6.1.1. for a description and determination of potential impacts associated with the work proposed at the site.

6.7.2 Water circulation, fluctuation and salinity: No Effect – Reference paragraph 6.1.4, and 6.1.6 for a description and determination of potential impacts associated with the work proposed at the site.

6.7.3 Suspended particulates/turbidity: Minor Effect (short term) – Reference paragraph 6.1.2 for a description and determination of potential impacts associated with proposed work.

6.7.4 Contaminants: Negligible Effect – The applicant would utilize clean fill in conjunction with the work proposed. The fill material would be free from items such as trash, debris, automotive parts, asphalt, construction materials, concrete block with exposed reinforcement bars, and soils contaminated with any toxic substance, in toxic amounts in accordance with Section 307 of the Clean Water Act. Any permit issued for the project would incorporate a special condition stipulating the use of clean fill. Reference also Sections 6.1.3. and 6.4.1.

6.7.5 Aquatic ecosystem and organisms: Minor Effect (short term) – Reference paragraphs 6.1.2, and 6.2.2. for a description and determination of potential impacts associated with the work proposed at the site.

6.7.6

Proposed disposal site**:** No Effect – There are no disposal sites proposed for this project.

6.7.7 Cumulative effects on the aquatic ecosystem: Negligible Effect – Cumulative effects are discussed in section 9 of this document.

6.7.8 Secondary effects on the aquatic ecosystem: Minor Effect (long term) – Secondary effects are discussed in section 9 of this document.

6.8 Restrictions on Discharges (Subpart B, section 230.10) *(an answer marked with an asterisk indicates noncompliance with the Guidelines)*:

No	Based on the discussion in section 5, are there available, practicable alternatives having less adverse impact on the aquatic ecosystem and without other significant adverse environmental consequences that do not involve discharges into "waters of the US" or at other locations within these waters?
Yes	Based on the discussion in section 5, if the project is in a special aquatic site and is not water-dependent, has the applicant clearly demonstrated that there are no practicable alternative sites?
	Will the discharge:
No	Violate state water quality standards?
No	Violate toxic effluent standards (under Section 307 of the Act)?
No	Jeopardize endangered or threatened species or their critical habitat?
No	Violate standards set by the Department of Commerce to protect marine sanctuaries?
	Will the discharge contribute to significant degradation of "waters of the US" through adverse impacts to:
No	Human health or welfare, through pollution of municipal water supplies, fish, shellfish, wildlife and special aquatic sites?
No	Life stages of aquatic life and other wildlife?
No	Diversity, productivity, and stability of the aquatic ecosystem, such as the loss of fish or wildlife habitat, or loss of the capacity of wetland to assimilate nutrients, purify water or reduce wave energy?

No **Yes**	Recreational, aesthetic, and economic values? Will all appropriate and practicable steps (40 CFR 23.70-77) be taken to minimize the potential adverse impacts of the discharge on the aquatic ecosystem?

6.9 Compliance with the 404(b)(1) Guidelines *(Reference section 12 of this document)*:

7.0 General Public Interest Review – *(33 CFR 320.4 and RGL 84-09) All public interest factors have been reviewed and summarized below. Both cumulative and secondary impacts on the public interest have been considered.*

Public Interest Factors Considered:

a. Conservation: Neutral as a result of mitigative action –The project would eliminate 0.67 acre of non-tidal wetlands that is part of a 544 acre conservation easement and PCNA required by the Corps under permit number SAJ-2002-08273 (IP-JBH). The project would impact PCNA only in the area where the M Canal would be crossed. The transportation ROW encompasses an estimated 30.8 acres along the north limit of PCNA. The City of West Palm Beach has an 80-ft wide canal maintenance easement along the south bank of the M-Canal, on the north side of and within the transportation ROW. To avoid encroachment into this easement, the roadway had to be designed further to the south. Therefore, the proposed bridge over the M-Canal would require 0.67 acres of encroachment into the northern corner of PCNA.

3.95 acres have been transferred to the PCNA and placed in a conservation easement in exchange for the 0.67 acres needed for the bridge approach. In addition, the proposed wetland impacts within the 0.67 acres that would be impacted by roadway construction would be mitigated for at Pine Glades PROMA.

b. Economics: Beneficial (minor) - The applicant avoided and minimized wetland impacts to the maximum extent practicable while generating an economically feasible project. The work proposed would generate a reasonable return for the applicant's entities involved in the development of the project (e.g., agents and engineers), provide additional future employment opportunities (e.g., contractors), and stimulate the local construction market. The improvements should result in a stronger economy through enhanced mobility for people and freight. The project would positively benefit this public interest factor.

c. Aesthetics: Negligible – The project would change the aesthetic landscape in the direct footprint of the road from undeveloped land to a public roadway. The project would include addition of sidewalks and environmental enhancement within a buffer area adjacent to GWP. These features are expected to provide public access to view

this attractive natural area. Furthermore, construction of proposed noise barriers with decorative patterns on both sides matching those located on SR 7 south of the project would minimize the aesthetic impact of the project.

d. General Environmental Concerns: Neutral as a result of mitigative action – The applicant submitted documents and drawings supporting the contention that the project avoided and minimized wetland impacts to the maximum extent practicable. Additionally, the applicant submitted documents and drawings supporting the position that the project is adequately mitigated. After reviewing the information the Corps believes that impacts to the general environment are avoided and minimized to the maximum extent practicable and that unavoidable impacts are fully mitigated.

e. Wetlands: Neutral as a result of mitigative action – The FL for 58.52 acres of direct wetland and surface water impacts to waters of the U.S., totals 127.64 UMAM and 0.66 M-WRAP and would be replaced with Functional Gain (FG) units sourced from the following: Purchase of 0.66 M-WRAP credits from the Loxahatchee Mitigation Bank; allocation of credits at Palm Beach County's Pine Glades Permittee-Responsible Off-Site Mitigation Area (PROMA); and credit allocation at SFWMD's Dupuis Reserve PROMA.

In addition to the required compensatory mitigation described above, forested wetland restoration and creation, herbaceous wetland restoration and creation, freshwater marsh enhancement, shrub wetland enhancement, hydric pine enhancement, upland preservation, and wetland transitional area restoration within 54.8 acres of on-site right-of-way that abuts the GWP would occur to provide an enhanced natural buffer between the project impacts and GWP.

f. Historic Properties: No Effect – In correspondence dated 4 September 2015, the SHPO expressed the opinion that the project would have no effect on historic properties listed, or eligible for listing in, the *National Register of Historic Places*.

g. Fish and Wildlife Values: Neutral as a result of mitigative action – The project requires dredge and fill of 58.52 acres of waters of the United States (wetlands). However, the project with the proposed compensatory mitigation is expected to have a minimal effect on downstream aquatic fauna. These wetlands around the perimeter of the GWP have been subjected to agricultural practices for decades and were historically "diked" through the construction of berms in the mid-1950s which has diminished their ecological value. The berm and ditch located within the on-site buffer restoration area are likely remnant dike berms. Wildlife values would be improved with the restoration, creation, and enhancement of the on-site wetlands that should increase habitat for endangered and other species.

h. Flood Hazards: Negligible – The Ibis Development Lake System was permitted under by the State to provide water quality treatment and quantity attenuation for 46.8

acres of the SR 7 Extension (new construction) storm water runoff. This should negate the possibility of any flooding on adjacent properties.

i. Floodplain Values: Negligible – Floodplain compensation would be designed, permitted and constructed in accordance with the requirements of the SFWMD.

j. Land use: Beneficial (minor) – The project would be developed on lands that are already in public ownership and designated for transportation use. As one of four major arterial facilities connecting Miami-Dade, Broward and Palm Beach Counties, SR 7 is a critical inter-regional component of south Florida's transportation network. Other north-south facilities, listed in order from west to east, include the Florida's Turnpike, I-95 and US 1. Travel demands within the project area will continue to grow and connecting SR 7 with Northlake Boulevard is vital to satisfying capacity and mobility needs. The proposed improvement would be usable and beneficial to the surrounding network and could function independently without the need for additional network improvement. The connection up to Northlake Boulevard is expected to operate acceptably meeting the requirements for independent utility.

k. Navigation: N/A

l. Shore Erosion and Accretion: N/A

m. Recreation: Beneficial (minor) – The sidewalk component of the proposed project would provide pedestrians and bicyclists with a new scenic route to transit.

n. Water Supply and Conservation: Beneficial (minor) – The proposed mitigation would provide additional water storage capacity, water quality, and habitat benefits to the adjacent Grassy Waters Preserve.

o. Water Quality: Negligible – The project has been permitted under **SFWMD permit #50-02120-S** to provide water quality treatment and quantity attenuation for 46.8 acres of the SR 7 Extension (new construction) storm water runoff. In an effort to address concerns raised regarding adverse impact to the drinking water supply, FDOT incorporated a dry swale along the east side of the roadway in the design as an additional effort to provide better runoff quality and spillage containment in the event of a spill. The dry swale would discharge to the Ibis Lake system through outfall structures raised approximately one foot above the bottom of the dry swale to allow retention time in the swale for contamination clean up. No direct discharge is proposed or allowed into GWP for SR 7 storm water runoff. The design of the drainage system would prevent any possibility of direct discharge through the use of berms, pumps and the elevations of the controls structures and pipe system. This is over and above the treatment that Ibis runoff receives prior to it being discharged into GWP. On 9 May 2017, the SFWMD entered a final order approving issuance of Permit Number 50-05422-P for the

construction of this proposed project and associated stormwater management system. Any Corps permit would require compliance with the State's Water Quality Certification.

p. Energy Needs: Negligible – Activities authorized by this permit might require various sources of energy including electricity, petroleum fuels, natural gas, etc. These energy sources are expected to be readily available.

q. Safety: Beneficial (minor) – Activities authorized by this permit are expected to result in reductions in travel time. Improvements would allow for a safer and more secure transportation system for residents, businesses and visitors.

r. Food and Fiber Production: Negligible – Food production may be increased by activities authorized by this permit, by providing better routes to transport raw materials to food and fiber processing facilities.

s. Mineral Needs: Negligible – The capacity improvement authorized by this permit could require considerable amounts of construction material such as sand, limerock, concrete, asphalt, etc. These mineral resources are expected to be readily available.

t. Consideration of Property Ownership: Negligible – The proposed project area is within the applicants' existing right-of-way with the exception of 0.6 acres that is part of a previous Corps permitted mitigation area and approximately 1.3 acre portion of a communications tower parcel. The project would not require residential or commercial relocations.

u. Needs and Welfare of the People: Beneficial (minor) – Activities authorized by this permit are expected to result in reductions in travel time for local residents and would provide a connection from Okeechobee Boulevard to Northlake Boulevard that improves regional system linkage. Currently, the north-south travel network between Okeechobee Blvd. and Northlake Blvd. is limited. Florida's Turnpike is located four miles to the east of SR 7 and Seminole Pratt Whitney Road is located six miles to the west. The proposed onsite buffer restoration area would provide additional water storage capacity in the GWP for the City of West Palm Beach, and the Towns of Palm Beach and South Palm Beach. The proposed onsite buffer restoration area also creates additional wildlife habitat and new opportunities for wildlife viewing and aesthetic views for pedestrians and bicyclist using the new walkway.

7.1 The relative extent of the public and private need for the proposed structure or work: SR 7 is a critical regional facility connecting Miami-Dade, Broward, and Palm Beach Counties. The extension of SR 7, as proposed, would provide the capacity and mobility needs of the region. The proposed work would satisfy public and private needs for transporting people, services, and goods. Public needs would also include potential employment opportunities, a probable increase in the local tax base and traffic relief

from improved roadway capacity. Travel demands within the project area will continue to grow and connecting SR 7 with Northlake Boulevard is vital to satisfying capacity and mobility needs. The proposed improvement would be usable and beneficial to the surrounding network and could function independently without the need for additional network improvement. The connection up to Northlake Boulevard is expected to operate acceptably meeting the requirements for independent utility.

7.2 Are there unresolved conflicts as to resource use? No
If so, are there reasonable and practicable alternative locations and/or methods to accomplish the objectives of the proposed action? N/A

7.3 The extent and permanence of the beneficial and/or detrimental effects, which the proposed work is likely to have on the public and private use to which the area is suited: No detrimental impacts are expected since the project is consistent with land use plans and long-term transportation corridor designs approved by the State of Florida. On-site wetland losses would be permanent but would be mitigated at a federally approved mitigation bank and at Permittee Responsible Off-site Mitigation Areas (PROMAs) to ensure no net loss of wetland functions. In addition to required compensatory mitigation, on-site creation, restoration, enhancement, and preservation, would provide a valuable buffer to the GWP. The beneficial effects associated with the capacity improvement would be permanent. The proposed improvement would be usable and beneficial to the surrounding network and could function independently without the need for additional network improvement.

8.0 Mitigation – *33 CFR 320.4 (r); 33 CFR 332; 40 CFR 230.70-77; 40 CFR 230.90-99 and 40 CFR 1504.12(f)*:

8.1 Avoidance – In evaluating a project area containing waters of the United States, consideration must be given to avoiding impacts on these sites. Avoidance measures for this project are: Avoidance measures indicated by the applicant in Section 1.5 of this document.

8.2 Minimization – If waters of the United States cannot be avoided, impacts must be minimized. Minimization measures for this project are: Minimization measures indicated by the applicant in Section 1.5 of this document.

8.3 Compensatory Mitigation:

8.3.1 Is Compensatory Mitigation required?

☐ No

(If No, provide explanation here. Do not complete [delete] rest of Section 8, Mitigation. If Yes, indicate N/A here): N/A

☑ Yes

(If yes, complete the remainder of Section 8, Mitigation).

8.3.2 Are the impacts to the jurisdictional aquatic resources in the service area of an approved mitigation bank? Yes

8.3.3 Does the mitigation bank have the appropriate number and resource type or credits available? Yes

8.3.4 Are the impacts to the jurisdictional aquatic resources in the service area of an approved in-lieu fee program? No

8.3.5 Does the in-lieu fee program have the appropriate number and resource type or credits available? N/A

8.3.6 Identify the selected compensatory mitigation options(s):

☑ mitigation bank credits

☐ in-lieu fee program credits

☑ permittee-responsible mitigation under a watershed approach

☐ permittee-responsible mitigation, on-site

☐ permittee-responsible mitigation, off-site

8.3.7 As the selected compensatory mitigation includes both the purchase of mitigation bank credits and permittee-responsible mitigation, this section explains why the selected compensatory mitigation option is environmentally preferable. The criteria provided in §332.3(a)(1) and §332.4(c)(2)-(14) are addressed as follows:

a. Baseline information: Reference paragraph 1.3.

b. Determination of credits: The applicants propose to mitigate the Functional Loss (FL) of 58.52 acres of direct impacts and 161.87 acres of secondary impacts which totals 127.64 UMAM and 0.66 M-WRAP functional units. This functional loss would be mitigated through the purchase of 0.66 forested Modified-WRAP (M-WRAP) credits from the Loxahatchee Mitigation Bank (LMB); deduction of 34.71 herbaceous and 50.45 forested UMAM credits for a total of 85.16 UMAM credits from the Dupuis Permittee Responsible Off-site Mitigation Area (PROMA); and deduction of 15.70 herbaceous and 26.78 forested UMAM credits for a total of 42.48 UMAM credits from the Pine Glades PROMA. The Corps reviewed and concurred with the applicants' UMAM and M-WRAP assessment results.

8.3.7.1

Description of the compensatory mitigation: The Mitigation Plan involves purchasing credits from the federally approved Loxahatchee Mitigation Bank (LMB) and deducting functional units from Permittee-Responsible Offsite Mitigation Area (PROMA) sites that are already established and deemed successful. The LMB is the only federally approved bank that has a service area that includes the project corridor. Justification for the proposed credit deduction from the Pine Glades and Dupuis Reserve PROMAs is provided in the following paragraphs.

DuPuis Reserve Mitigation Area History:

The DuPuis Reserve Management Area is located in northwest Palm Beach and southwest Martin Counties, Florida, and is comprised of improved pasture, pine flatwoods, cypress forest, and emergent freshwater marsh. DuPuis Reserve was purchased by SFWMD in 1986 through the "Save Our Rivers" program specifically for conservation, to improve Florida's rivers, and to provide compensatory mitigation for FDOT. The DuPuis Reserve is bordered to the north by the St. Lucie Canal, excavated in the 1920s, and to the west by the L-8 canal completed in 1953. These two canals caused substantial hydrological alterations to the DuPuis Reserve, as well as the land management activities that converted the area, once part of the overall Everglades, to cattle production lands. The L-8 marsh restoration project was initiated in November 1994 with the re-construction of the DuPuis/L-8 levee and became operational beginning in December 1995. The overall plan for DuPuis Reserve included restoration of approximately 2,200 acres of the historic northern Everglades located in the L-8 marsh. In 1997, the SFWMD and FDOT entered into a Joint Participation Agreement (JPA), whereby the FDOT agreed to fund the restoration and long-term maintenance and management of 850 acres within the DuPuis Reserve as advance mitigation site and agreed to contribute approximately $2.3 million for this effort. The $2.3 million paid by the FDOT, were internal FDOT funds for environmental mitigation and was not the same funds that were used to purchase the DuPuis Reserve under the "Save Our River" program. The service area for the DuPuis Reserve site was established to provide mitigation for freshwater impacts as a result of FDOT linear projects in Palm Beach, Martin, St. Lucie, and Okeechobee counties. These service area counties all lie within the SFWMD and historic Everglades watershed. The DuPuis Reserve has been used by both the USACE and the SFWMD for mitigation for impacts to freshwater and forested wetlands since 1997 and has served as an advance mitigation area with the binding agreement between the SFWMD and the FDOT and acts similar to an In-lieu fee program.

The DuPuis Reserve is hydrologically connected to the project area via contiguous wetlands located within the J.W. Corbett Wildlife Management Area. Since the DuPuis Reserve area was established prior to the 2008 Mitigation Rule, the Corps has worked with the FDOT, USFWS, and SFWMD to develop a mitigation instrument and programmatic approval from the USFWS of the site as acceptable mitigation for wood stork CFA. Although the FDOT and SFWMD had an agreement in place, there was no

formal agreement between FDOT and the Corps. To remedy this, the Corps requested that FDOT prepare a permittee-responsible mitigation plan for the 850 restored wetland acres at the DuPuis mitigation area which includes information and guidelines associated with the responsibilities and standards for the establishment, use, operation, monitoring, and maintenance of the 850 acres within the DuPuis Management Area being used by FDOT for mitigation purposes. As a note, in accordance with the JPA, the 850 credits had been historically based on a ratio formula. The FDOT prepared a draft plan in 2010 entitled: "DuPuis Reserve Permittee Responsible Mitigation Plan". The plan was prepared in accordance with the 12 components of permittee-responsible mitigation per the 2008 Mitigation Rule. Additionally, the Corps participated in a meeting on 15 June 2011 with FDOT, USFWS, and SFWMD, as well as the FDOT's consultant, C3TS, to discuss the items included in the mitigation instrument. Included were discussions of the continued use of ratios, wetlands hydroperiod classifications, wood stork biomass analysis, and updating of the DuPuis Reserve ledger, among other topics. Per meeting minutes, dated 27 July 2011, the Corps agreed to use the proposed ratios which assigned a specific ratio to a certain range of UMAM or WRAP functional values. A review of the meeting minutes, indicates this statement to be accurate. A record of these minutes are made part of the project's administrative record.

Subsequent to the 15 June 2011 interagency coordination meeting, the FDOT provided a letter, dated 3 October 2011, to the Corps, with a copy to the USFWS, with the subject title of "Development of a Mitigation Instrument, FDOT'S L-8 Marsh Restoration Area within the DuPuis Reserve". The letter was in response to the comments provided during the 15 June 2011 meeting and included information associated with the DuPuis Reserve's background and current ledger deduction method, the proposed ledger deduction method, and the wood stork biomass analysis. The Corps evaluated the information provided, and coordinated with the USFWS regarding the determination of wood stork foraging analysis and proposed service area. Per electronic mail correspondence from the USFWS, dated 7 March 2012, the Service stated that they reviewed the wood stork foraging analysis included in the L-8 Marsh Restoration Area within DuPuis Reserve document and did not object to the proposed ratios provided in the 3 October 2011 letter. Based on the mentioned documents, and prior coordination between the Corps, SFWMD, FDOT, and USFWS, the Corps had determined the DuPuis Reserve site to be an acceptable site for the continued use as compensatory mitigation and has accepted FDOT's purchases of credits from the DuPuis Reserve mitigation site for aquatic resource impacts for DA permits, following the mentioned coordination (2012).

The DuPuis Reserve Management Area is operated by the SFWMD, and the SFWMD consists of a staff of land managers who regularly maintain the site and ensure that the site is successfully performing the required functions and services palustrine forested and emergent wetlands, as was the original intention of the site. Additionally, land management plans are prepared by the SFWMD which includes information of the

current site conditions and general guidelines for continued management of the area. The recent management plan is entitled: DuPuis Management Area Ten-Year General Management Plan 2014 to 2024. The information indicates that the site is successfully performing the functions and services of a restored wetlands, and exotics are being controlled. Additionally, the permittees would be required to ensure that the site is maintained to the ecological functional level as intended of compensatory mitigation sites, which includes hydrology and control of exotic vegetative species, in perpetuity. In order to ensure this, the DA permit would include a special condition that states that the permittee shall ensure that hydrology is maintained, and exotic species are controlled, to ensure the site is successfully offsetting the loss of functions and services, as was the intention of the mitigation site.

Pine Glades Mitigation Area History: The Corps Permit Numbers SAJ-2004-10276, SAJ-2005-7887, SAJ-2005-2880, SAJ-2005-1807, SAJ-2003-1939, SAJ-2005-2878, SAJ-2007-4122, SAJ-2009-3006, SAJ-2009-1340, SAJ-2002-08273, and SAJ-2009-1720 require Palm Beach County's (County) Department of Environmental Resources Management (ERM) to oversee the referenced mitigation construction projects, complete the required monitoring and maintenance activities, and maintain the offsite mitigation areas (Figure 4) in perpetuity. The Pine Glades South, North, and West Mitigation Areas and the Acreage Reliever Road Offsite Mitigation Area (collectively, the Pine Glades Mitigation Areas) are located south of Indiantown Road, east of Pratt Whitney Road, and west of Jupiter Farms (Figure 4). This monitoring report details the management, restoration and biological monitoring activities, including photo monitoring and vegetation surveys, wildlife surveys, aquatic macrofaunal sampling and hydrologic monitoring, completed July 1, 2013 through June 30, 2014 for the Pine Glades Mitigation Areas.

The Corps issued a Standard Permit (SAJ-2011-02278 (IP-EGR) on 15 December 2011 that authorized Palm Beach County to:

(1) fill 0.01 acre of a ditch in order to construct a weir for the purposes of wetland hydrologic enhancement of the proposed Pine Glades West Mitigation Area (PGWMA); and

(2) fill and re-grade 2.57 acres of ditches to appropriate wetland elevations in the proposed PGWMA. The project includes the ongoing removal of exotic vegetation in order to enhance approximately 1,206.26 acres of freshwater herbaceous and forested wetlands in the PGWMA. The number of freshwater wetland mitigation credits available has been determined by the Corps through the use of the Uniform Mitigation Assessment Method (UMAM). The enhancement activities result in 28.64 freshwater herbaceous wetland UMAM credits and 41.17 freshwater forested wetland UMAM credits.

The functional lift generated by the wetland enhancement activities may be utilized by Palm Beach County to offset future unavoidable wetland impacts caused by projects where Palm Beach County is the applicant. The Corps shall determine the appropriateness of utilizing available mitigation credits at PGWMA for authorized impacts on a case by case basis, in accordance with 33 CFR 332.

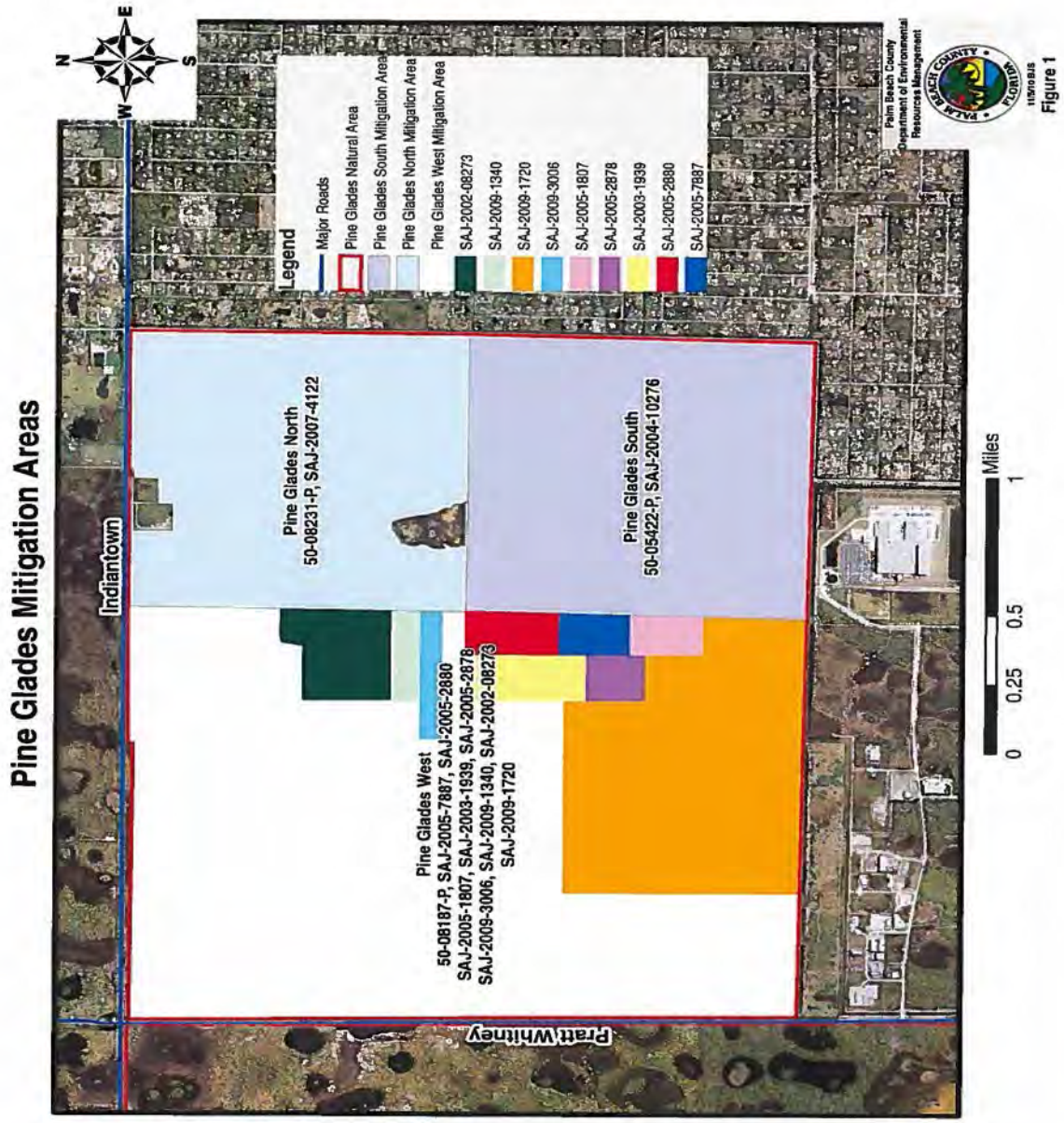

Figure 4

8.3.7.2 Selection of the mitigation type and location, §332.3(b)(2)-(6), considered the following:

a. Uncertainty and Risk [*Uncertainty – the element associated with whether the compensatory mitigation will successfully offset project impacts. Risk – the element associated with the potential for the proposed compensatory mitigation plan to fail*]:

Permittee-responsible:

Off-Site PROMAs: Over 95% of the wetland "lift" unit allocation needed is proposed at the Pine Glades and Dupuis PROMA sites. Both of these sites have historic permitting and/or coordination efforts with resource agencies and the Corps. Both sites have approved mitigation plans and are meeting success criteria. These sites are also protected and preserved under conservation easement (Pine Glades) and Florida Statute (Dupuis), ensuring the long-term sustainability and functionality of the wetlands within these sites.

DuPuis PROMA: The DuPuis Reserve was established under the "Save Our Rivers" program specifically for conservation, to improve Florida's rivers, and to provide compensatory mitigation. The FDOT entered into a Joint Participation Agreement (JPA), whereby the FDOT agreed to fund the restoration and long-term maintenance and management of 850 acres within the DuPuis Reserve as advance mitigation site. The $2.3 million paid by the FDOT, were internal FDOT funds for environmental mitigation and was not the same funds that were used to purchase the DuPuis Reserve under the "Save Our River" program. The DuPuis Reserve Management Area is operated by the SFWMD with a staff of land managers who regularly maintain the site and ensure that the site is successfully performing the required functions and services palustrine forested and emergent wetlands, as was the original intention of the site. The DuPuis Management Plan 2014 to 2024 includes information that the site is successfully performing the functions and services of a restored wetlands, and exotics are being controlled.

Pine Glades PROMA: The Corps issued a Standard Permit (SAJ-2011-02278 (IP-EGR) on 15 December 2011 that authorized Palm Beach County to perform hydrologic enhancement activities and also included the ongoing removal of exotic vegetation in order to enhance approximately 1,206.26 acres of freshwater herbaceous and forested wetlands in the PGWMA. The Palm Beach County provided a recent annual monitoring report for 1 July 2013 through 30 June 2014 that documents that the site is currently fulfilling permit success criteria or trending toward success (depending on how recent the restoration activities were completed).

Mitigation Bank: Credits represent the attainment of aquatic functions at the mitigation site. Released credits of the appropriate number and type eliminate the uncertainty that the mitigation will successfully offset project impacts. Released credits eliminate or significantly reduce the risk that mitigation will fail. Released credits

represent a mitigation project that has been fully implemented, has undergone a specific program of data collection documenting the physical, chemical, and biological characteristics of the mitigation site (monitoring), and has fully met established ecological performance standards or displays a continuous and appropriate positive trend toward ecological success.

b. Size and ecological value of parcel; watershed approach [*how the site is ecologically suitable for providing desired functions – consider the physical characteristics, watershed scale features, size, and location; compatibility with adjacent land uses; and, likely effects on important resources*]:

Permittee-responsible:

Off-Site PROMAs:

The DuPuis Reserve contains approximately 22,000 acres within the Loxahatchee watershed. The site is located approximately 20 miles northwest of the project corridor. Its service area includes all of Palm Beach County. The DuPuis Reserve is hydrologically connected to the project area via contiguous wetlands located within the J.W. Corbett Wildlife Management Area. The SFWMD has completed activities necessary for the hydraulic and hydrologic restoration of flows, to the ecological benefit of various freshwater wetland habitat types including hydric pine flatwood, wet prairie, herbaceous marsh, shrub-scrub and cypress domes. The restored habitat assemblages match those proposed for impact.

The Pine Glades Natural Area contains approximately 6,500 acres within the Loxahatchee watershed. The Pine Glades PROMA sites are located eight (8) miles northwest of the SR 7 Extension project corridor in northern Palm Beach County. Pine Glades also offers in-kind habitat assemblages similar to the proposed project impacts.

Mitigation Bank: The bank site consists of a larger, consolidated mitigation parcel providing more ecological value to the watershed. The bank evaluation reflected a watershed approach that uses a landscape perspective that places primary emphasis on site selection through consideration of landscape attributes that will help provide the desired aquatic resource types and ensure they are self-sustaining. The watershed approach also considers how other landscape elements (e.g., other natural resources and developments) interact with compensatory mitigation project sites and affect the functions they are intended to provide.

c. Temporal loss [*the time between the initiation of the mitigation plan and the maturation of anticipated ecological functions at a compensatory mitigation site*]:

Permittee-responsible:

Off-Site PROMAs: The DuPuis Reserve and Pine Glades PROMA are existing restored and maintained sites. There is no temporal loss as the sites are monitored and maintained as functioning wetland complexes per established mitigation plans. The SFWMD staff evaluates the conditions of the DuPuis Reserve and Palm Beach County Environmental Resources Management (ERM) staff evaluates the conditions of the Pine Glades Natural Area. The SFWMD and ERM controls exotic species, and maintains the sites as functioning wetland systems.

Mitigation Bank: Availability of credits indicates that the mitigation project has already achieved an established level of maturity so there is no time loss between impact and compensatory mitigation.

d. Scientific/technical analysis, planning, and implementation [*as commensurate with the amount and type of impact, the level of scientific/technical evaluation required to appropriately and adequately assess the likelihood for ecological success and sustainability; the location of the compensation site and the significance in the watershed; and, other factors presented in a complete mitigation plan*]:

Permittee-responsible:

Off-Site PROMAs: The SFWMD and ERM staffs includes professional engineers, biologists, foresters, and other associated fields of expertise who regularly maintain the sites and ensure that the sites are successfully performing the required functions and services. The project design required scientific and technical analysis, planning, and extensive modeling. As such, the Corps determined that the mitigation plans for these PROMAs, reviewed by Corps biologists, has had a sufficient level of scientific/technical evaluation.

Mitigation Bank: Development of the bank involved extensive review by the Interagency Review Team (IRT), an assemblage of agency representatives with varying and specific scientific/technical expertise. The IRT adopts a consensus based approach in evaluating all aspects of the mitigation plan and the mitigation banking instrument, ensuring the plan takes into consideration the needs of the watershed and an understanding of the ecological processes that drive the functions in that watershed. The IRT ensures the site is appropriately located within the landscape, is sustainable, and has a high likelihood of ecological success. They ensure mitigation performance standards are based on objective and verifiable attributes that measure functional capacity; they ensure there is a management strategy that anticipates likely challenges and provides for the implementation of adaptive management measures to address those challenges and they evaluate any proposed modifications to the components of the mitigation plan and the banking instrument.

e. Long-term viability of mitigation/mitigation site [*how the compensatory mitigation project will be managed after performance standards have been achieved to ensure long-term sustainability of the resource*]:

Permittee-responsible:

Off-Site PROMAs: The Permittees would be responsible for maintenance of the off-site PROMAs in perpetuity with SFWMD and Palm Beach County ERM staff providing continued support.

Mitigation Bank: Long-term management plans, along with the real estate protection instrument and financial assurances, ensure the long-term viability of the mitigation site. The long-term management plan establishes a plan of action and associated timetable to implement actions to establish and maintain desired habitat conditions/functional gain within the bank. Representative management actions include but are not limited to, water level manipulation, herbicide use, and mechanical plant removal, and prescribed burning. The party responsible for the long-term management of the site was identified and evaluated to ensure capability of successfully managing the property.

f. Site Protection [*aquatic habitats, riparian areas, buffers, and uplands that comprise the overall compensatory mitigation must be provided long-term protection through real estate instruments or other available mechanisms, as appropriate*]:

Permittee-responsible:

Off-Site PROMAs: The two proposed PROMA sites, Pine Glades and Dupuis Reserve, are protected from development by existing conservation easements and are subject to ongoing/perpetual maintenance (including removal of exotic/invasive vegetation) as required by existing USACE (Pine Glades PROMA only) and SFWMD permits.

Mitigation Bank: Site protection has been ensured through an approved real estate mechanism that is held by an appropriate third party; and, has undergone Office of Counsel review and approval. Existing restrictions, easements, rights of ways, or other encumbrances associated with the property have been extinguished or evaluated to ensure consistency/compatibility with the mitigation activities and long-term management of the property.

g. Financial Assurances [*description of financial assurances that will be provided and how they are sufficient to ensure a high level of confidence that the compensatory mitigation project will be successfully completed, as well as annual cost estimates for the long-term management needs of the site and the funding mechanism that will meet those needs*]:

Permittee-responsible:

Off-Site PROMAs: The financial responsibility for the perpetual monitoring and maintenance of the off-site PROMAs would be the responsibility of the Permittees. Funds have been dedicated to the continued monitoring and maintenance of the PROMAs. In 1997, the SFWMD and FDOT entered into a Joint Participation Agreement (JPA), whereby the FDOT agreed to fund the restoration and long-term maintenance and management of 850 acres within the DuPuis Reserve as advance mitigation site and agreed to contribute approximately $2.3 million for this effort. The $2.3 million paid by the FDOT, were internal FDOT funds for environmental mitigation and was not the same funds that were used to purchase the DuPuis Reserve under the "Save Our River" program. For compensatory mitigation projects on public lands, federal facility management plans or integrated natural resources management plans may be used to provide long-term protection. Here, the public landowner and manager are the proposed permittees. In addition, the Corps has reviewed the current management plan and has determined it will provide long-term protection. Pine Glades PROMA is site protected by a Conservation Easement, dated 3 May 2011 and managed under the Palm Beach County' Management Plan for Pine Glades Natural Area, dated March 2008. The Dupuis PROMA is currently managed under the SFWMD's Dupuis Ten Year Management Plan (2014 – 2024), dated January 2014. These documents are made part of the project's administrative record.

Mitigation Bank: Financial assurances for bank implementation and long term management of the mitigation site have been established to ensure that a sufficient amount of money would be available for use to complete or replace the mitigation provider's obligations to implement the mitigation project and meet specified ecological performance standards in the event that the provider proves unable or unwilling to meet those obligations. The financial assurances considered the size and complexity of the mitigation project. The assurances are held by an approved entity; and, have undergone Office of Counsel review. Any modification, disbursement, or release of the assurances requires COE notification.

h. Other relevant factors [*additional information contributing to the appropriateness, feasibility, or practicability of the mitigation project (ESA, wildlife corridor, unique habitat, etc.)*]:

Permittee-responsible:

Off-Site PROMAs:

The DuPuis Reserve contains approximately 22,000 acres within the Loxahatchee watershed. The site is located approximately 20 miles northwest of the project corridor. Its service area includes all of Palm Beach County. Allocation of herbaceous wetland

credits that are available as a result of previous wetland restoration activities. Wetland restoration activities increase potential for snail kite utilization.

Pine Glades PROMA: The proposed mitigation strategy includes the deduction of 156.7 kilograms of long hydroperiod (Class 6) wood stork foraging habitat biomass credits to compensate for unavoidable impacts to core foraging habitat. 540.4 kilograms are currently available. The availability of herbaceous and forested wetland functional units are a result of previous wetland restoration activities. The wetland restoration activities in the PROMA have increased foraging, perching/roosting, and nesting habitat, thereby increasing potential for snail kite utilization.

For compensatory mitigation projects on public lands, federal facility management plans or integrated natural resources management plans may be used to provide long-term protection. Here, the public landowner and manager are the proposed permittees. In addition, the Corps has reviewed the current management plan and has determined it will provide long-term protection. Pine Glades PROMA is site protected by a Conservation Easement, dated 3 May 2011 and managed under the Palm Beach County' Management Plan for Pine Glades Natural Area, dated March 2008. The Dupuis PROMA is currently managed under the SFWMD's Dupuis Ten Year Management Plan (2014 – 2024), dated January 2014. These documents are made part of the project's administrative record.

Mitigation Bank: Contributions by IRT members with specific technical expertise provide input to ensure site selection and development are focused on maximizing benefits to water quality, wildlife, and specific species requirements. Watershed approach and size of mitigation site provide opportunity for wider array of ecological and direct species benefits.

8.3.7.3 Selection relied upon the following aspects of the Mitigation Plan, §332.4(c)(2)-(14): Information regarding each of the components is conveyed below.

a. Objectives: The SR 7 Extension project would result in unavoidable impacts to waters of the U.S. (wetlands) and wood stork core foraging and snail kite foraging, nesting, and roosting/perching habitats. The compensatory mitigation proposed to offset the 58.52 acres of direct wetland and surface water impacts and the associated secondary impacts would be provided through the following:

(1) Purchase of credits from a federally approved Loxahatchee Mitigation Bank.

(2) Allocation of wetland functional units at Palm Beach County's Pine Glades Permittee- Responsible Off-Site Mitigation Area (PROMA).

(3) Allocation of acre-credits at SFWMD's Dupuis Reserve PROMA.

b. Site selection:

Off-Site PROMAs:

Palm Beach County has instituted a regionally significant mitigation plan for wetland restoration within the Pine Glades West and Pine Glades North Mitigation Areas. Both sites were permitted by the State (West: ERP No. 50-08187-P; North: ERP No. 50-08231-P) and the USACE as Permittee Responsible Off-Site Mitigation Areas (PROMAs) (West Permit No.:SAJ-2011-02278; North: Permit No. SAJ-2007-04122). Both sites include extensive marsh wetlands, short and long hydroperiod wetlands, forested wetlands (hydric pine and cypress stands) and upland forests that provide foraging, roosting, nesting, feeding, and breeding habitat necessary for wetland-dependent wildlife and listed species such as the wood stork and snail kite. The restored habitat assemblages match those proposed for impact. Both sites have approved wood stork foraging habitat mitigation credits. As permitted, County projects resulting in wetland impacts can mitigate for unavoidable impacts through the allocation of wetland functional units at either Pine Glades site. The sites are only available for mitigation for County projects. Therefore all direct wetland impacts on County ROW within the SR 7 project corridor can be mitigated at Pine Glades, as well as all secondary impacts associated with the portion of the project located within County ROW. To the extent possible, allocated Pine Glades PROMA wetland functional units would also be used to mitigate wood stork impacts. Should additional wood stork mitigation be required to fully offset impacts, additional biomass credits would be set aside at Pine Glades.

The Pine Glades PROMA sites are located eight (8) miles northwest of the SR 7 Extension project corridor in northern Palm Beach County. The PROMA is well positioned to provide wood stork CFA mitigation, as it lies within the 18.6-mile radius of an active nesting colony affected by the proposed project. It is located within the Loxahatchee River watershed and the C-18 drainage sub-basin, both of which have their southern boundaries located along Northlake Blvd. and the Rangeline between Northlake Blvd. and SR 710 directly adjacent to the northern terminus of the project corridor. A bridge project along Northlake Blvd. was recently completed that re-established a hydrologic connection to wetland natural areas to the north and south. The stormwater associated with the proposed project would flow into Grassy Waters after it is sufficiently treated in the stormwater system. Therefore, because the project's stormwater outfalls into Grassy Waters and portions of Grassy Waters flow into the Loxahatchee River watershed and C-18 drainage sub-basin through the re-established connection under Northlake Blvd., Pine Glades is a viable mitigation option. In addition, its close proximity to the project corridor makes it an appropriate mitigation option.

The Dupuis Reserve PROMA site was established through a Joint Project Agreement (JPA) between FDOT and SFWMD in which FDOT contributed funds to SFWMD for ecological restoration. SFWMD is responsible for the ownership and perpetual

management of the Dupuis Reserve. The site is located approximately 20 miles northwest of the project corridor in southwest Martin County. Its service area includes all of Palm Beach County. It is located within the Loxahatchee River watershed. The SFWMD has completed activities necessary for the hydraulic and hydrologic restoration of flows, to the ecological benefit of various freshwater wetland habitat types including hydric pine flatwood, wet prairie, herbaceous marsh, shrub-scrub and cypress domes. The restored habitat assemblages match those proposed for impact. The USACE has permitted recent FDOT projects to deduct acreage credits from the Dupuis Reserve bank ledger based on acreage-based mitigation ratios. Originally 850 restoration acre-credits were established. The FDOT currently has approximately 567 acre-credits available (66 for forested wetlands and 501 for herbaceous marsh).

c. Site protection instrument:

Off-Site PROMAs: The two proposed PROMA sites, Pine Glades and Dupuis Reserve, are protected from development and are subject to ongoing/perpetual maintenance (including removal of exotic/invasive vegetation) as required by existing USACE (Pine Glades PROMA only) and SFWMD permits. For compensatory mitigation projects on public lands, federal facility management plans or integrated natural resources management plans may be used to provide long-term protection. Here, the public landowner and manager are the proposed permittees. In addition, the Corps has reviewed the current management plan and has determined it will provide long-term protection. Pine Glades PROMA is site protected by a Conservation Easement, dated 3 May 2011 and managed under the Palm Beach County' Management Plan for Pine Glades Natural Area, dated March 2008. The Dupuis PROMA is currently managed under the SFWMD's Dupuis Ten Year Management Plan (2014 – 2024), dated January 2014. These documents are made part of the project's administrative record.

d. Baseline information:

(1) Off-Site PROMAs: See Sections 8.3.7.1 and 8.3.7.2 for brief descriptions of the habitats restored in the Pine Glades and Dupuis Reserve PROMAs.

e. Determination of credits (including assessment of Indirect and Secondary Effects and Impacts in wetlands): See Section 8.3.7.b for a detailed breakdown.

These same ratio classifications were applied to the direct and secondary impacts resulting from the proposed SR 7 Extension project.

Off-Site PROMAs: The Pine Glades PROMA was permitted using UMAM. The impacts resulting from the proposed SR 7 Extension project were assessed using UMAM. Therefore, wetland mitigation functional unit allocation can be deducted at a 1:1 ratio. The proposed impacts to wood stork foraging biomass were assessed using the

USFWS compensatory biomass calculator tool. This tool was also used to assess foraging biomass availability at Pine Glades; allowing wood stork foraging biomass credits to be allocated at a 1:1 ratio. Wetland acre-credit allocation at the Dupuis Reserve PROMA site is assessed based on acreage-based mitigation ratios. USACE and SFWMD previously permitted other FDOT projects, such as the Indian Street Bridge in Martin County (FPID No. 230978-1-52-01), using the following impact to mitigation acreage ratios:

- Direct Wetland Impacts – 4:1
- Secondary Wetland Impacts in 0-50 foot buffer – 0.5:1
- Secondary Wetland Impacts in buffer beyond 50 feet – 0.25:1

f. Mitigation work plan:

Off-Site PROMAs: For compensatory mitigation projects on public lands, federal facility management plans or integrated natural resources management plans may be used to provide long-term protection. Here, the public landowner and manager are the proposed permittees. In addition, the Corps has reviewed the current management plan and has determined it will provide long-term protection. Pine Glades PROMA is site protected by a Conservation Easement, dated 3 May 2011 and managed under the Palm Beach County' Management Plan for Pine Glades Natural Area, dated March 2008. The Dupuis PROMA is currently managed under the SFWMD's Dupuis Ten Year Management Plan (2014 – 2024), dated January 2014. These documents are made part of the project's administrative record.

g. Maintenance plan:

Off-Site PROMAs: Any monitoring and maintenance of the off-site PROMAs are the responsibility of the owning/operating entities.

h. Performance standards: For compensatory mitigation projects on public lands, federal facility management plans or integrated natural resources management plans may be used to provide long-term protection. Here, the public landowner and manager are the proposed permittees. In addition, the Corps has reviewed the current management plan and has determined it will provide long-term protection. Pine Glades PROMA is site protected by a Conservation Easement, dated 3 May 2011 and managed under the Palm Beach County' Management Plan for Pine Glades Natural Area, dated March 2008. The Dupuis PROMA is currently managed under the SFWMD's Dupuis Ten Year Management Plan (2014 – 2024), dated January 2014. These documents are made part of the project's administrative record.

i. Monitoring requirements:

Off-Site PROMAs: For compensatory mitigation projects on public lands, federal facility management plans or integrated natural resources management plans may be used to provide long-term protection. Here, the public landowner and manager are the proposed permittees. In addition, the Corps has reviewed the current management plan and has determined it will provide long-term protection. Pine Glades PROMA is site protected by a Conservation Easement, dated 3 May 2011 and managed under the Palm Beach County' Management Plan for Pine Glades Natural Area, dated March 2008. The Dupuis PROMA is currently managed under the SFWMD's Dupuis Ten Year Management Plan (2014 – 2024), dated January 2014. These documents are made part of the project's administrative record.

j. Long-term management plan: FDOT shall be responsible for the management of the on-site mitigation area in perpetuity.

Off-Site PROMAs: For compensatory mitigation projects on public lands, federal facility management plans or integrated natural resources management plans may be used to provide long-term protection. Here, the public landowner and manager are the proposed permittees. In addition, the Corps has reviewed the current management plan and has determined it will provide long-term protection. Pine Glades PROMA is site protected by a Conservation Easement, dated 3 May 2011 and managed under the Palm Beach County' Management Plan for Pine Glades Natural Area, dated March 2008. The Dupuis PROMA is currently managed under the SFWMD's Dupuis Ten Year Management Plan (2014 – 2024), dated January 2014. These documents are made part of the project's administrative record.

k. Adaptive management plan:

Off-Site PROMAs: For compensatory mitigation projects on public lands, federal facility management plans or integrated natural resources management plans may be used to provide long-term protection. Here, the public landowner and manager are the proposed permittees. In addition, the Corps has reviewed the current management plan and has determined it will provide long-term protection. Pine Glades PROMA is site protected by a Conservation Easement, dated 3 May 2011 and managed under the Palm Beach County' Management Plan for Pine Glades Natural Area, dated March 2008. The Dupuis PROMA is currently managed under the SFWMD's Dupuis Ten Year Management Plan (2014 – 2024), dated January 2014. These documents are made part of the project's administrative record.

l. Financial assurances:

Off-Site PROMAs: For compensatory mitigation projects on public lands, federal facility management plans or integrated natural resources management plans may be used to provide long-term protection. Here, the public landowner and manager are the

proposed permittees. In addition, the Corps has reviewed the current management plan and has determined it will provide long-term protection. Pine Glades PROMA is site protected by a Conservation Easement, dated 3 May 2011 and managed under the Palm Beach County' Management Plan for Pine Glades Natural Area, dated March 2008. The Dupuis PROMA is currently managed under the SFWMD's Dupuis Ten Year Management Plan (2014 – 2024), dated January 2014. These documents are made part of the project's administrative record.
m. Other information: N/A

8.3.8 Other mitigative actions: In addition to required compensatory mitigation, FDOT is proposing an on-site wetland restoration area within the swath of unused ROW, which totals an estimated 54.8 acres in the easternmost 170 feet (typical) of the corridor ROW between the M-Canal and Northlake Blvd. This area would be placed under a conservation easement following completion of all restoration and enhancement activities. The conservation easement would serve two functions: 1) it ensures that the wetlands are preserved in a 'pristine' (high quality, minimal coverage by exotic/nuisance vegetation) state in perpetuity; and 2) provides assurance to the regulatory agencies that no future expansion or widening of this SR 7 corridor would occur. Third party rights would also be granted to the USFWS through a conservation easement. FDOT would monitor/maintain the on-site mitigation area in perpetuity. FDOT would be responsible for all management and maintenance costs associated with the on-site wetland mitigation area in perpetuity.

In addition, it would improve the visual aesthetics of the wetland, which would be enjoyed by people using the SR 7 extension. It would also minimize the potential for vehicular bird strikes on protected wading birds and snail kites through the incorporation of a tall tree buffer that would force birds to fly up and over the roadway corridor. Finally, this portion of the mitigation strategy represents an ecologically responsible approach to the overall project; if this on-site mitigation proposal is not undertaken, a long strip of habitat that includes several exotic and invasive species would remain between the new roadway and Grassy Waters Preserve.

8.3.9 Final compensatory mitigation required by the Corps: The compensatory mitigation required by the Corps is the same as described in Section 1.6 of this document (Compensatory Mitigation proposed by the applicant). Also refer to Section 8.3.7.b for a detailed breakdown of functional loss and the proposed compensatory mitigation.

9.0 Cumulative and Secondary Impacts – *(40 CFR 230.11(g) and 40 CFR 1508.7, RGL 84-9) Cumulative impacts result from the incremental environmental impact of an action when added to all other past, present, and reasonably foreseeable future actions. They can result from individually minor but collectively significant actions taking place over a period of time. A cumulative effects assessment should consider both direct and indirect, or secondary, impacts. Indirect impacts result from actions that occur later in*

time or are farther removed in distance from the original action, but still reasonably foreseeable.

9.1 Geographic scope: The geographic area includes three HUC 10 watersheds, as follows: Earman River-Boynton Inlet Frontal (HUC 0309020608), Lower West Palm Beach Canal (HUC 0309020609), and Corbett Wildlife Management Area (HUC 0309020101). Both Earman River-Boynton Inlet Frontal and Lower West Palm Beach Canal watersheds are within the HUC 8 Florida Southeast Coast watershed (03090206), and Corbett Wildlife Management Area watershed is within the HUC 8 Lake Okeechobee watershed (03090201). These three HUC 10 watersheds are part of the HUC 6 South Atlantic-Gulf Region watershed (030902).

9.2 Temporal scope: 34 years.

Explain the selected timeframe: The timeframe for the temporal scope is 34 years (25 April 2006 through 2040). The years 25 April 2006 through 25 April 2016 is to represent the recent, past 10 years of impacts to waters of the U.S. (wetlands and surface waters). The future years is based on the Palm Beach County, Long Range Transportation Plan that projects future transportation growth in Palm Beach County.

9.3 Historical conditions of the area subject to this analysis: The current baseline condition in the watersheds includes past and ongoing wetland, wildlife, and water quality impacts resulting from residential, commercial, and agricultural development. Based on reports using the ORM-2 database, within the HUC 8 Florida Southeast Coast watershed, the Corps issued 973 Letters of Permission, 2,822 Nationwide Permits, 20 Programmatic General Permits, 2,344 Regional General Permits, and 642 Individual Permits during the 10-year temporal scope. The total authorized fill between 25 April 2006 through 25 April 2016, for this watershed was 15,821.43 acres, there were 2,726.42 acres of permanent loss, and 6,807.93 acres of mitigation was provided. Additionally, within the HUC 8 Lake Okeechobee watershed, the Corps issued 3 Letters of Permission, 30 Nationwide Permits, 5 Regional General Permits, and 11 Individual Permits. The total authorized fill for this watershed was 190.68 acres, there were 163.38 acres of permanent loss, and 411.38 acres of mitigation provided. Given this information, the majority of development has occurred within the Florida Southeast Coast watershed.

9.4 Major changes to the area and description of current condition: Roadway construction similar to the proposal has occurred since the early 1900s. Future conditions are expected to include additional development resulting in natural resource changes and stresses, which include land development and man-induced drainage patterns. These resources are also being affected by encroachment through secondary and indirect impacts through losses of high functioning uplands and wetlands, habitat loss and fragmentation. Resulting natural resource changes and stresses include water quality degradation, wetland impacts, and ground water recharge losses. These resources are also being affected by invasion of exotic vegetation. Authorizing this project would not

set precedent for occurrences of additional filling activities in waters of the United States. The project would not provide new access to land for development.

9.5 Anticipated cumulative and secondary/indirect impacts (environmental consequences) of the proposed action: Future conditions are expected to be similar or less since the overall wetland area within the watershed has been reduced. Resulting natural resource changes and stresses include hydrological impacts, loss of high quality natural uplands, and increases in stormwater runoff and water quality degradation. These resources are also being affected by exotic and nuisance species such as Brazilian pepper. These species would dominate natural wetland and upland areas. Runoff from within the watersheds contains substances from urban and agricultural landscapes, including pesticides, suspended solids, and nutrients. Resulting natural resource changes and stresses include reductions in natural wetland storm water attenuation and treatment, exotic and nuisance vegetation infestations, and loss of ecological diversity. A key issue of concern in this watershed is the degradation of water quality resulting from wetland loss, nutrient pollutants, and water level manipulation and over draining.

The Upper Loxahatchee Slough watershed consists of land within Palm Beach County, and is approximately 63,482 acres, of which approximately 45.95 percent (29,172 acres) are wetlands. The majority of wetlands within this watershed are protected (approximately 79.63 percent, 23,229 acres), while the remaining (approximately 20.37 percent, 5,943 acres) are considered ‘at-risk’ for development. The Lower Loxahatchee River watershed consists of land within Palm Beach and Martin Counties, and is approximately 108,655 acres, of which approximately 27.33 percent (29,692 acres) are wetlands. The majority of wetlands within this watershed are protected (approximately 68.33 percent, 20,289 acres), and the remaining (approximately 31.67 percent, 9,403 acres) considered ‘at-risk’ for development.

The majority of high functional quality wetlands surrounding the project corridor and within the Upper Loxahatchee Slough and Lower Loxahatchee River are protected from development through public conservation ownership. Therefore, the anticipated cumulative effects are not unacceptable as the project would not open new areas for future development in the watershed.

9.6 Reasonably foreseeable future actions: In summary, the project’s impacts on the environment resulting from the incremental impact of the project when added to the past, present, and reasonably foreseeable future actions are minor and discountable given the current requirements of federal laws including the Clean Water Act, the Corps regulatory program regulations, and the conditions of the DA permit, if a permit were issued. The existing transportation system within the Palm Beach County urban area is an integrated network of highways, transit, freight, and non-motorized facilities such as bike and pedestrian pathways. Palm Beach County had a population of 1.32 million people as of the 2010 Census. Approximately 45% of the population resides in unincorporated areas. Palm Beach County is the second largest county in Florida (by

land area) with tourism as its number one industry, followed by agriculture. The population is projected to grow by approximately 27 percent to nearly 1.68 million by the year 2040. Given the geographical location of Palm Beach County set is a warm south Florida climate, it is reasonably foreseeable that future actions would include new roadways and/or expansion of existing roadways to support the population growth. Sufficient and appropriate compensatory mitigation would fully offset the reasonably anticipated direct, secondary and cumulative wetland impacts of the project. Cumulative impacts should be minor and effectively compensated through the cumulative benefits of the proposed project and related compensatory mitigation.

This area has experienced substantial residential and commercial development over the last decades and, given that South Florida is a popular tourist destination and retirement locale due to the warmer, year round climate, the area would continue to show this development trend, regardless if this proposed project is completed or not. The Corps, however, would specifically analyze any projects proposed within those areas that affect aquatic systems; and, insure that any work authorized meets the national goal of no net loss of wetland functions and services.

9.7 Effect of the proposed mitigation, including avoidance and minimization, on reducing the project's contribution to cumulative effects in the region: This project's cumulative aquatic habitat impacts would be discountable since the applicant would be required to completely offset the functions and values of the impacted wetland habitats with appropriate in-kind compensatory mitigation. Cumulative water quality impacts would be discountable given the required erosion control measures, the State permitting requirements with respect to water quality certification, and the wetland compensatory mitigation requirements. Cumulative wildlife and fisheries impacts would also be discountable since mitigation measures, such as offsetting the loss of foraging habitat for wading birds and implementing the Indigo Snake Construction Conditions, would be implemented to avoid direct, indirect and cumulative adverse effects on wildlife.

9.8 Conclusions: The Corps determined all direct, indirect and cumulative impacts have been identified and assessed, and is not aware of any other adverse effects or impacts attributable to the project that are likely to result in a measurable amount of functional loss within the watershed that would not be offset with appropriate mitigation measures. The Corps determined the proposed compensatory mitigation is anticipated to fully offset the authorized impacts associated with filling wetlands and waters of the United States, and other mitigation measures are reasonably anticipated to offset the anticipated direct and indirect effects on wetlands, endangered species, and water quality.

10.0 Other Laws, Policies, and Effects:

10.1 Endangered Species Act (ESA):

10.1.1 Name of Species considered: Eastern indigo snake (*Drymarchon couperii corais*); woodstork (*Mycteria americana*); Everglade snail kite (*Rostrhamus sociabilis plumbeus*); Audubon's crested caracara (*Polyborus plancus audubonii*); Florida scrub jay (*Aphelocoma coerulescens*); red-cockaded woodpecker (*Picoides borealis*)

10.1.2 Effects Determination:

☑ No Effect

For these species: Audubon's crested caracara (*Polyborus plancus audubonii*); Florida scrub jay (*Aphelocoma coerulescens*); red-cockaded woodpecker (*Picoides borealis*)

☑ May affect, not likely to adversely affect

For these species: Eastern indigo snake (*Drymarchon couperii corais*); woodstork (*Mycteria americana*);

☑ May adversely affect

Everglade snail kite (*Rostrhamus sociabilis plumbeus*)

10.1.3 Basis for determinations:

a. The project occurs within the consultation area of the Audubon's crested caracara (*Polyborus plancus audubonii*), Florida scrub jay (*Aphelocoma coerulescens*), and red-cockaded woodpecker (*Picoides borealis*). No critical habitat or foraging or nesting/denning habitat occurs in the project area for these three species, therefore the Corps determination is that the project would have "*no effect*" on these species.

b. Eastern indigo snake (Drymarchon corais couperi): The USFWS, by letter dated 29 February 2012, provided the FDOT a concurrence that based on the adherence to the indigo snake protection measures, the USFWS concurs that the project "may affect, but is not likely to adversely affect" the eastern indigo snake. The Corps would condition any authorization with the USFWS approved Standard Protection Measures for the Eastern Indigo Snake.

c. Wood stork (Mycteria americana): The USFWS issued a Biological Opinion for the project on November 13, 2014; within that letter the USFWS provided the FHWA a concurrence that, based on the minor impacts to the wood stork foraging habitat, the USFWS found the project "may affect, but is not likely to adversely affect" the wood stork.

d. Everglade snail kite (*Rostrhamus sociabilis plumbeus*): The USFWS issued a Biological Opinion for the project on November 13, 2014; the USFWS finds that the construction and operation of the proposed action "*is not likely to jeopardize the continued existence"* of the Everglade snail kite (*Rostrhamus sociabilis plumbeus*). The proposed project is located outside of critical habitat designated for the snail kite. Many protection measures would be taken by the applicant to address federally and

state protected species during the course of construction as well as in perpetuity as part of the Mitigation Plan. Specifically for the snail kite, implementation of a project-specific snail kite management plan would occur prior to and during construction. This plan includes monitoring for nesting activity during construction and for five years post-construction, guidance for construction scheduling, and contractor education.

In addition, mitigation for snail kite foraging, nesting, and roosting/perching habitat impacts is being proposed above and beyond what is statutorily required for compensatory wetland mitigation. The proposed impacts to an estimated 58.52 acres of snail kite foraging, nesting, and perching/roosting habitat would be mitigated through a multi-faceted approach that includes compensation for direct and indirect habitat impacts, wetland preservation and conservation, an endowment to ensure management of preserved lands in perpetuity, and nest/bird protection during construction. The plan includes preservation of 216 acres of native wetland and upland habitats within three sections of the Rangeline: 1) Okeechobee Boulevard to the M-Canal; 2) Northlake Boulevard to SR 710; and 3) SR 710 to Jupiter Farms. Preserving this acreage discourages future development in the area. See Section 10.1.6 below for more detail on the off-site Rangeland preservation.

10.1.4 Consultation: Informal and Formal

10.1.5 Consultation responses:

a. By letter dated 29 February 2012, the USFWS concurred with the FDOT's determination that the SR 7 extension project "*may affect, but is not likely to adversely affect*" the Eastern Indigo snake.

b. By letter dated 13 November 2014, the USFWS recommended that the FHWA adopt a determination of "*may affect, not likely to adversely affect*", based on the minor impacts to wood stork foraging habitat and to use this letter as USFWS concurrence of that finding.

c. By letter dated 13 November 2014, the USFWS issued a Biological Opinion for the project; the USFWS finds that the construction and operation of the proposed action is *not likely to jeopardize* the continued existence of the Everglade snail kite (*Rostrhamus sociabilis plumbeus*).

10.1.6 Off-Site Rangeline Preservation: The proposed impacts to 58.52 acres of snail kite foraging, nesting, and perching/roosting habitat would be mitigated through preservation and conservation of over 216 acres of ideal forested upland, marsh, and forested wetland and upland habitats within three sections of SR 7 Rangeline located outside of the project corridor: 1) Okeechobee Blvd. to M-Canal; 2) Northlake Blvd. to SR 710; and 3) SR 710 to Jupiter Farms. Currently, there are no state or federal statutes defining protocols to mitigate for impacts specifically to snail kite foraging,

nesting, and roosting/perching habitat. Many protection measures would be taken by the applicant to address federally and state protected species during the course of construction as well as in perpetuity as part of the Mitigation Plan. Specifically for the snail kite, implementation of a project-specific snail kite management plan would occur prior to and during construction. This plan includes monitoring for nesting activity during construction and for five years post-construction, guidance for construction scheduling, and contractor education. The FDOT has committed that construction of the project would not commence until the USFWS is granted third party rights over the three Rangeline properties identified for conservation and mitigation from north of Okeechobee Blvd. to the M-Canal and from Northlake Blvd. to Jupiter Farms. Further, the FDOT commits to transferring ownership of the three Rangelines to the County and establishing a management endowment fund of $1,579,720.00 to Palm Beach County ERM to cover the costs associated with the perpetual management of these Rangeline mitigation properties. The funds would be placed in an escrow account during construction. Conservation easements would be placed over the Rangelines after the ownership transfer is completed. This would preserve the habitat in perpetuity and ensure that no future roadways are built in these Rangeline segments. All this is included in the Joint Participation Agreement between FDOT and the County that is currently being developed.

10.1.7 Additional information *(optional)*: By e-mail dated 3 September 2015, the USFWS informed the Corps that the Services listed species consultation with the FHWA (the lead federal agency for the project) has been completed and no further action by the Corps is necessary.

10.1.8 Compliance with ESA: Yes

10.2 Magnuson-Stevens Act – Essential Fish Habitat (EFH): The project would not affect estuarine or marine habitat. The Corps does not expect adverse effects to EFH or federally managed fisheries in, or associated with, downstream systems because of the work proposed. The Corps performed a GIS-based Resources at Risk analysis which indicated “no results” for all of the EFH species analyzed. Therefore, the Corps determined the project would have no effect on EFH.

10.2.1 Compliance with Magnuson-Stevens Act: Yes

10.3 National Historic Preservation Act – Section 106:

10.3.1 Known sites present: No

10.3.2 Survey required/conducted: No

10.3.3 Effects determination:

☑ No potential to cause effect

For these historic properties eligible or listed in the National Register of Historic Places: All sites considered.

☐ No effect

For these historic properties eligible or listed in the National Register of Historic Places:

☐ No adverse effect

For these historic properties eligible or listed in the National Register of Historic Places:

☐ Adverse effect

For these historic properties eligible or listed in the National Register of Historic Places:

10.3.4 Rationale for effects determination: State Historic Preservation Officer (SHPO)
Date Received: 4 September 2015
Comment/Issue: The Florida SHPO reviewed the proposed project for possible effects on historic properties listed, or eligible for listing, on the National Register of Historic Places. Based on previous reviews of the project, the opinion of the SHPO was that the proposed project would have no effect on historic properties listed, or eligible for listing, on the National Register of Historic Places.

a. The applicant's consultant evaluated the project site for the potential presence of significant historical or archeological resources. That investigation included preliminary background research that focused on the history of the project area, as well as a review of cultural resources potentially near the site.

b. In correspondence dated 4 September 2015, the SHPO reviewed the proposed project for possible effects on historic properties listed, or eligible for listing, on the National Register of Historic Places. Based on previous reviews of the project, the opinion of the SHPO was that the proposed project would have no effect on historic properties listed, or eligible for listing, on the *National Register of Historic Places*.

c. The potential impacts to cultural resources were evaluated using the *RD SOP for Section 106 of the National Historic Preservation Act Compliance for the State of Florida, dated 21 November 2016*. The Corps determined the final "effect" determination is *"no potential to cause effect".* This is pursuant to CFR 36 Part 325, Appendix C (3) (b), and the instance that the permit area has been so extensively modified by previous impacts that a significant loss of archeological integrity to historic properties is presumed. *"No potential to cause effect"* to historic properties determination will not require SHPO/Tribal Preservation Office (THPO) concurrence. The Section 106 process is considered complete.
Further, any remaining NHPA concerns would be addressed by the general conditions of any standard permit issued, which advises permittees of the procedures that must be implemented should unexpected cultural resources be encountered.

10.3.5 Memorandum of Agreement required: No

10.3.6 Date consultation complete *(if necessary)*: N/A

10.3.7 Additional information *(optional)*: N/A

10.3.7 Compliance with National Historic Preservation Act: Yes

10.4 Corps Wetland Policy: Based on the public interest review (Section 7 of this document), the beneficial effects of the project outweigh the detrimental impacts of the project.

10.5 Water Quality Certification under Section 401 of the Clean Water Act:

10.5.1 An individual water quality certification was issued on 9 May 2017.

10.6 Coastal Zone Management Consistency under Section 307c of the Coastal Zone Management Act (CZMA):

10.6.1 A CZMA consistency determination was issued on 9 May 2017.

10.6.2 Additional information *(optional)*: On 15 February 2016, the SFWMD issued a Notice of Intended Agency Action to approve Permit (WQC/CZMA) Number 50-05422-P for the construction of this proposed project and associated stormwater management system. The proposed permit was administratively challenged and subsequently upheld via Final Order on 9 May 2017.

10.7 Effects on Federal Projects *(33 CFR 320.4(g)(4))*: This project is not located in the vicinity of an authorized federal project.

10.8 Effects on the limits of the territorial seas *(33 CFR 320.4(f))*: This proposed project does not include any structure or work affecting coastal waters.

10.9 Safety of impoundment structures *(33 CFR 320.4(k))*: This proposed project does not include any impoundment structures.

10.10 Activities in Marine Sanctuaries *(33 CFR 320.4(i))*: This proposed project is not located in a marine sanctuary as established by the Secretary of Commerce under authority of Section 302 of the Marine Protection, Research and Sanctuaries Act of 1972.

10.11 Other Authorizations: N/A

10.12 Significant issues of Overriding National Importance *(33 CFR 320.4(j)(2))*: N/A

10.13 Discussion *(if necessary)*: N/A

11.0 Final Project Description and Special Conditions:

11.1 Final Project Description: The applicant seeks authorization to discharge fill material over 58.52 acres of non-tidal wetlands along the existing 4.4-mile and proposed 4.1-mile roadway corridor. The secondary impacts of the project will impact 161.87 acres of additional wetlands. The project seeks to widen the existing two lanes to a four-lane divided roadway from Okeechobee Boulevard to 60th Street North (Segment 1). In addition, the project involves constructing a new section of roadway from 60th Street North to Northlake Boulevard, north of the current roadway alignment (Segment 2). The proposed project design includes the creation of stormwater management facilities within the existing right-of-way for water quality treatment and flow attenuation.

11.2 Special Conditions:

a. To insure the implementation of the Mitigation Plan, any permit issued for the project would contain a special condition requiring the implementation of the Mitigation Plan, which would be attached by reference.

b. Any permit issued for the project would contain special conditions associated with the submittal of a notice of the initiation of work, the installation of erosion control features and the stabilization of all fill areas, restrictions regarding the type of fill material, and the submittal of as-built drawings. These conditions would facilitate compliance inspections and reduce potential secondary (unintended) impacts associated with the implementation of the project. Furthermore, the permit would include special conditions addressing endangered species protection and mitigation and unexpected historic and cultural resource protection.

12.0 Findings and Determinations:

12.1 Section 176(c) of the Clean Air Act General Conformity Rule Review: The proposed permit action has been analyzed for conformity applicability pursuant to regulations implementing Section 176(c) of the Clean Air Act. It has been determined that the activities proposed under this permit would not exceed de minimis levels of direct or indirect emissions of a criteria pollutant or its precursors and are exempted by 40 CFR Part 93.153. Any later indirect emissions are generally not within the Corps' continuing program responsibility and generally cannot be practicably controlled by the Corps. For these reasons, a conformity determination is not required for this permit action.

12.2 Relevant Presidential Executive Orders:

12.2.1 EO 13175, Consultation with Indian Tribes, Alaska Natives, and Native Hawaiians:

This action has no substantial effect on one or more Indian tribes, Alaska or Hawaiian natives.

12.2.2 EO 11988, Floodplain Management: Alternatives to location within the floodplain, minimization and compensatory mitigation of the effects were considered above.

12.2.3 EO 12898, Environmental Justice: The Corps has determined that this proposed project would not use methods or practices that discriminate on the basis of race, color or national origin nor would it have a disproportionate effect on minority or low-income communities.

12.2.4 EO 13112, Invasive Species: The evaluation provided above included invasive species concerns in the analysis of impacts at the project site and associated compensatory mitigation projects.

12.2.5 EO 13212 and EO 13302, Energy Supply and Availability: The project was not one that will increase the production, transmission, or conservation of energy, or strengthen pipeline safety.

12.2.6 EO 13547, Stewardship of the Ocean, Our Coasts, and the Great Lakes: The project would not adversely affect the protection, maintenance, and/or restoration of the health of ocean, coastal, and/or Great Lakes ecosystems and resources; the sustainability of ocean and coastal economies; the preservation of our maritime heritage; sustainable uses and access; adaptive management to enhance our understanding of, and capacity to respond to, climate change and ocean acidification; or, our national security and foreign policy interests.

12.3 Finding regarding the need for an Environmental Impact Statement: Having reviewed the information provided by the applicant and all interested parties and an assessment of the environmental impacts, we find that this permit action would not have a significant impact on the quality of the human environment. Therefore, an Environmental Impact Statement will not be required.

12.4 Compliance with the Section 404(b)(1) guidelines: Having completed the evaluation in Section 6, the undersigned have determined that the proposed discharge complies with the Guidelines, with the inclusion of the appropriate and practicable conditions listed in Appendix A to minimize pollution or adverse effects to the affected ecosystem. The proposed discharge complies with the Guidelines, with the inclusion of the appropriate and practicable conditions listed in Appendix A to minimize pollution or adverse effects to the affected ecosystem.

12.4.1 The proposed action is the Least Environmentally Damaging Practicable Alternative (LEDPA).

12.5 Public Interest Determination: We find that issuance of a Department of the Army Permit is not contrary to the public interest.

Prepared By:

TURNER.RANDY.LYNN.1107775648

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RANDY L. TURNER
Project Manager

Date: 19 June 2017

Reviewed By:

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ANDREW A. KIZLAUSKAS
Chief, Panama City Permits Section

Date: 19 June 2017

Reviewed By:

DONALD W. KINARD
Chief, Regulatory Division

Date: 19 June 2017

Approved By:

JASON A. KIRK, P.E.
Colonel, EN
Commanding

Date: 19 June 2017