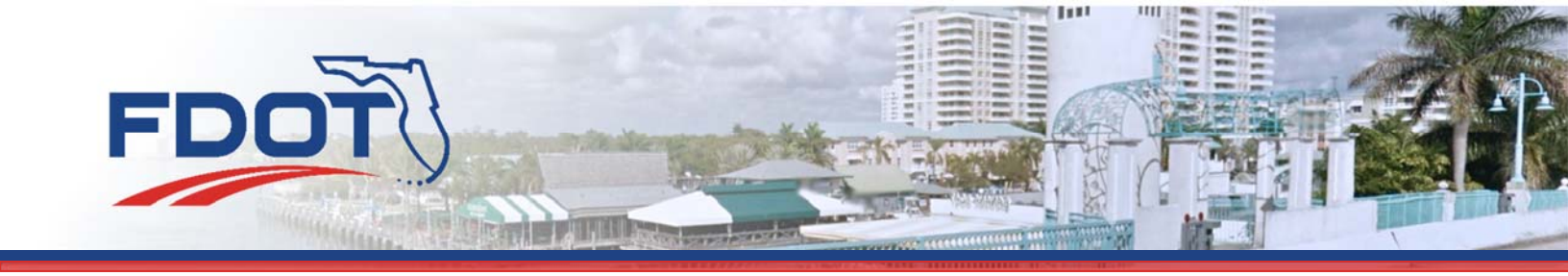

ENDANGERED SPECIES BIOLOGICAL ASSESSMENT

PD&E STUDY
SR-9/I-95 at SR-804/Boynton Beach Boulevard Interchange (MP 57)
and
SR-9/I-95 at Gateway Boulevard Interchange (MP 58)
Palm Beach County, Florida

Prepared for
Florida Department of Transportation – District 4
3400 West Commercial Boulevard
Ft. Lauderdale, Florida 33309 3421

Financial Management Number: 435804-1-22-01
Financial Management Number: 231932-1-22-01
Efficient Transportation Decision Making (ETDM) Numbers: 14180 and 14181

April 2017

ENDANGERED SPECIES BIOLOGICAL ASSESSMENT

PD&E Study
SR 9/I-95 at SR-804/Boynton Beach Boulevard Interchange (MP 57)
and
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3400 West Commercial Boulevard
Ft. Lauderdale, Florida 33309 3421

Prepared by:

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

April 2017

Executive Summary

The Florida Department of Transportation (FDOT) District 4 is conducting a Project Development and Environment (PD&E) Study for SR-9/I-95 and Gateway Boulevard Interchange (milepost 58) and SR-9/I-95 at SR-804/Boynton Beach Boulevard Interchange (milepost 57) in Palm Beach County, Florida.The purpose of this *Endangered Species Biological Assessment* (ESBA) is to document potential involvement with protected species and their habitats for the proposed improvements at the SR-9/I-95 and Gateway Boulevard Interchange and SR-9/I-95 at SR-804/Boynton Beach Boulevard Interchange. This report was prepared in compliance with Section 7(c) of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531 et seq.), 50 CFR Part 202, and in accordance with Part 2, Chapter 27 of the PD&E Manual (dated August 26, 2016).

The project are was reviewed to identify, map, and assess the presence of critical habitat; the presence of protected species habitat; the level of impact, if any, to critical habitat and/or protected species by the project; and whether any protected species present would be adversely impacted by the proposed project. The study methodology included reviews of the Environmental Technical Advisory Team (ETAT) comments, literature reviews, agency database searches, Geographic Information System (GIS) analyses, and field reviews.

There are no U.S. Fish and Wildlife Service designated critical habitats or National Marine Fisheries (NMFS) Essential Fish Habitat (EFH) within the project areas or potential pond sites. Within the two study areas, several undeveloped parcels and storm water ponds could be utilized by listed species. However, the undeveloped parcels represent low quality upland habitats are within highly developed areas. No natural wetlands exist within, or in the vicinity of the project areas or the potential pond sites.

No other indirect impacts to listed species are anticipated as part of his project. No cumulative impacts to the project areas or potential pond sites are anticipated due to the highly developed nature of the project area along I-95 in Palm Beach County.

During review of the document, Florid Fish and Wildlife Conservation Commission (FFWCC) updated their *Florida's Endangered and Threatened Species* List in January 2017. This document has been updated with the most current listed species as of April 10, 2017. Ten animal and three plant species protected by state and/or federal regulations and/or designations were determined to potentially occur within, or within the vicinity of, the project areas based on USFWS, Florida Department of Agriculture and Consumer Services (FDACS), and FFWCC sources. However, little suitable habitat remains available for use by listed species in this developed project area. Based on the limited available habitat and the proposed improvements, it was determined that only eleven species have the potential to occur. It was determined that the project will to have "no effect" on the following federally listed species: the Florida Scrub-jay (*Aphelocoma coerulenscens)*, West Indian Manatee (*Trichechus manatus*), Four-petal Pawpaw (*Asmina tertamera*), Florida Perforate Cladonia (*Cladonia perdorata*), and the Tiny Polygala (*Polyagala smalli*). It was found that the project "may effect, but is not likely to adversely affect" the following federally listed species: the Wood Stork and the Eastern Indigo Snake (*Drymarchon corais*).

Based on the findings of the preliminary data collection, general wildlife surveys, and coordination with USFWS and FFWCC through the Efficient Transportation Decision Making (ETDM) process, the FDOT commits to:

- Performing protected species reviews of any proposed offsite pond locations during final design; and
- Adhering to the USFWS Standard Protection Measures for the Eastern Indigo Snake (2013) during the construction phase.

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Tables

Figures

Appendices

LIST OF ACRONYMS

AASHTO	American Association of State Highway and Transportation Officials
AN	Advanced Notification
APE	Area of Potential Effect
BMP	Best Management Practice
CAAA	Clean Air Act Amendments
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CSER	Contamination Screening Evaluation Report
CRA	Comminity Redevelopment Area
dBA	A-Weighted Decibel
DOA	Determination of Applicability
DOS	Department of State
DRA	Drainage Retention Area
DRI	Development of Regional Impact
EA	Environmental Assessment
EFH	Essential Fish Habitat
ERM	Environmental Resource Management
ERP	Environmental Resource Permit
ESF	Emergency Support Functions
EST	Environmental Screening Tools
ETDM	Efficient Transportation Decision Making
FDEP	Florida Department of Environmental Protection
FDHR	Florida Division of Historical Resources
FDOT	Florida Department of Transportation
FEMA	Federal Emergency Management Agency
FPPA	Farmland Protection Policy Act
FFWCC	Florida Fish and Wildlife Conservation Commission
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Map
FLUCFCS	Florida Land Use Cover Forms Classification System
FMSF	Florida Master Site File

FS	Florida Statute
FY	Fiscal Year
GIS	Geographic Information System
LDCA	Location and Design Concept Acceptance
LEP	Limited English Proficiency
LOS	Level of Service
LRTP	Long Range Transportation Plan
MLOU	Methodology Letter of Understanding
MOT	Maintenance of Traffic
MPO	Palm Beach Metropolitan Planning Organization
NAAQS	National Ambient Air Quality Standards
NAC	Noise Abatement Criteria
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NSA	Noise Study Area
NWI	National Wetland Inventory
PD&E	Project Development and Environment
ROW	Right-of-Way
SERPM	Southeast Regional Planning Model
SFWMD	South Florida Water Management District
SHPO	State Historic Preservation Officer
SIMR	System Interchange Modification Report
SR	State Road
STIP	State Transportation Improvement Plan
TDM	Transportation Demand Model
TIP	Transportation Improvement Plan
TSM	Transportation System Management
USACE	U.S. Army Corps of Engineers
USC	United States Code

USDA	U.S. Department of Agriculture
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
WER	Wetlands Evaluation Report

1. Introduction

The Florida Department of Transportation (FDOT) is conducting a Project Development and Environment (PD&E) Study for interchange improvements located at SR-9/I-95 and Gateway Boulevard Interchange (milepost 58) and SR-9/I-95 at SR-804/Boynton Beach Boulevard Interchange (milepost 57) in Palm Beach County, Florida. The alternatives developed in this PD&E Study and the associated social, economic, and environmental analyses were evaluated according to the requirements of the National Environmental Policy Act (NEPA) and FDOT's PD&E Manual, Part 1, Chapter 5 in order to receive Location and Design Concept Acceptance (LDCA). The environmental review, consultation, and other actions required by applicable federal environmental laws for this project are being, or have been, carried out by FDOT pursuant to 23 U.S.C. §327 and a Memorandum of Understanding dated December 14, 2016 and executed by the Federal Highway Administration (FHWA) and FDOT.

The Federal Fixing America's Surface Transportation Act (FAST Act, 2015) serves as the current regulatory and funding framework for transportation planning. The Palm Beach Metropolitan Planning Organization (MPO) is the government organization that provides both long-range and short-term transportation planning for Palm Beach County. The Palm Beach MPO 2040 Long Range Transportation Plan (LRTP, October 2014) represents long-term transportation planning for Palm Beach County. The MPO's Transportation Improvement Program (TIP) represents short-term planning. The purpose of the LRTP is to identify the transportation needs of the community and establish priorities for funding those improvements in the TIP. The MPO priority projects are listed in the TIP Priority Projects FY 2016-2020 (April 2015).

FDOT lists planned projects with federal participation, including all MPO TIPs, in the State Transportation Improvement Program (STIP), which is submitted to, and approved by the FHWA. The PD&E Study for SR-9/I-95 at SR-804 Boynton Beach Boulevard Interchange and at Gateway Boulevard Interchange is programmed for PD&E Study under the Fiscal Year 2015-2018 STIP.

While the improvements at both interchanges are not included in the cost feasible component of the 2040 LRTP, one highway project in the vicinity of the interchanges is provided in the LRTP needs component. This project is for the Strategic Intermodal System (SIS) implementation of managed lanes on I-95 from the Palm Beach County/Broward County Line to Indiantown Road. Projects that are in the vicinity of both interchanges are identified in the STIP and include:

- Preliminary engineering for future capacity of SR-9/I-95 from Linton Boulevard to Indiantown Road (FM# 433109);
- Planned interchange improvements at SR-9/I-95 at Hypoluxo Road (FM# 413257); and
- Planned interchange improvements at SR-9/I-95 at Woolbright Boulevard (FM #231932).

The purpose of this Endangered Species Biological Assessment (ESBA) Report is to document potential project involvement with protected species and their habitats in compliance with Section 7(c) of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531 et seq.) and in accordance with Part 2, Chapter 27 of the PD&E Manual (dated August 26, 2016). The following information is provided to determine the anticipated effects that the proposed improvements will have on federal and state endangered or threatened species and to confirm that the proposed

roadway project is not likely to jeopardize the continued existence of endangered or threatened species or result in the destruction or adverse modification of the critical habitat of these species.

1.1 Project Description

The project study area (study area) is located in eastern Palm Beach County within the City of Boynton Beach between SR-9/I-95 Woolbright Road to the south and SR-9/I-95 at Hypoluxo Road to the north. The SR-9/I-95 at SR-804/Boynton Beach Boulevard Interchange is located on I-95 at milepost 57 between the Gateway Boulevard Interchange (1.5 miles to the north) and the Woolbright Road interchange (1.0 mile to the south). The SR-9/I-95 at Gateway Boulevard Interchange is located on SR-9/I-95 at milepost 58 between the Hypoluxo Road interchange (1.5 miles to the north) and the Boynton Beach Boulevard Interchange (1.5 miles to the south). At Gateway Boulevard, the project area extends from west of High Ridge Road to east of Seacrest Boulevard. At Boynton Beach Boulevard Interchange, the project area extends from west of Industrial Avenue to east of Seacrest Boulevard. A project location map is provided in **Figure 1**.

2. Purpose and Need for Action

The primary purpose of the proposed action is to enhance overall traffic operations at the existing interchanges of SR-9/I-95 at SR-804/Boynton Beach Boulevard and at Gateway Boulevard by providing improvements to achieve acceptable Levels of Service (LOS) in the future condition (2045 Design Year). The proposed action will support redevelopment efforts in the vicinity of the interchange, meeting the overall vision of the City of Boynton Beach. In addition, goals of the project include improving safety conditions and enhancing emergency evacuation and response times. The proposed action is anticipated to improve traffic operations at the study interchanges through implementation of operational and capacity improvements that will maintain and improve mobility, improve safety, and support existing and future development at the study interchanges.

2.1 Transportation Capacity

The study area was initially evaluated in the *I-95 (SR-9) Interchange at Boynton Beach Boulevard (SR-804) in Palm Beach County, Interchange Concept Development Report* (June 2014) and the *I-95 (SR-9) Interchange at Gateway Boulevard in Palm Beach County, Interchange Concept Development Report* (June 2014) [CD Reports].

Based upon the traffic operations analysis conducted for the study area interchanges and adjacent signalized intersections and documented in the CD Reports, the existing operational capacity and overall traffic operations (LOS) are deficient. These deficiencies are based on existing and future AM and PM peak hour traffic conditions for intersection delay and safety performance. LOS is a quality measure describing operational conditions of these facilities. LOS classifications are designated from LOS A to LOS F, with LOS A representing the best operating conditions and LOS F representing the worst. Operational conditions considered in an LOS classification include speed and travel time, freedom to maneuver, traffic interruptions, and comfort and convenience. Existing and future AM and PM peak hour conditions for Boynton Beach Boulevard Interchange and Gateway Boulevard Interchange are shown in **Tables 1** and **2**.

Although the intersections operate at LOS E or better under existing conditions scenarios at Boynton Beach Boulevard Interchange many of the individual through and turning movements at the intersections (which include approaches to SR-9/I-95) operate at LOS F during future AM and PM peak periods. Under the existing conditions scenarios at Gateway Boulevard Interchange, all intersections operate at LOS E or better except at the Gateway Boulevard - High Ridge Road and SR-9/I-95 southbound ramp intersections. Without improvements, the intersections will continue to experience excessive delays and queue lengths, and will continue to operate below acceptable LOS standards and the interchange will have insufficient capacity to accommodate the projected travel demand.

Table 1 Boynton Beach Boulevard Interchange Existing and Future AM and PM Peak Hour Conditions

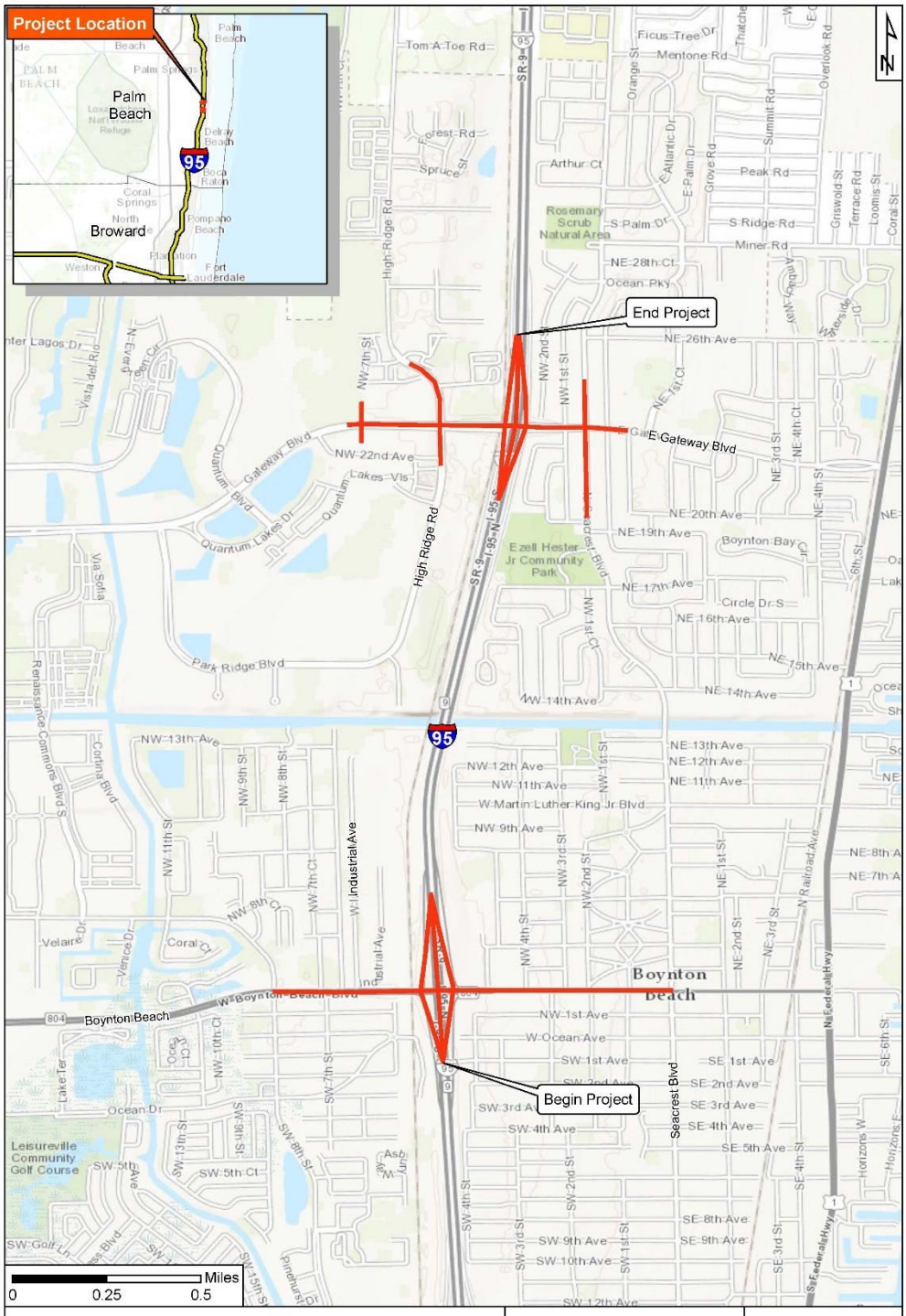
Boynton Beach Boulevard Interchange	Existing AM Conditions		Existing PM Conditions		Future AM Conditions		Future PM Conditions	
	Level of Service (LOS)	Delay (sec)[1]	Level of Service (LOS)	Delay (sec)[1]	Level of Service (LOS)	Delay (sec)[1]	Level of Service (LOS)	Delay (sec)[1]
Industrial Avenue	B	12.5	C	24.9	C	26.7	E	58.4
SR-9/I-95 Southbound Ramps	E	68.4	B	19.5	F	138.2	D	43.1
SR-9/I-95 Northbound Ramps	C	31.9	D	44.4	F	130.0	F	144.5
Seacrest Boulevard	D	45.0	D	35.6	F	158.7	F	178.6

1. sec: Delay in seconds per vehicle
Source: *I-95 (SR-9) Interchange at Boynton Beach Boulevard in Palm Beach County, Interchange Concept Development Report* (June 2014).

Table 2 Gateway Boulevard Interchange Existing and Future AM and PM Peak Hour Conditions

Gateway Boulevard Interchange	Existing AM Conditions		Existing PM Conditions		Future AM Conditions		Future PM Conditions	
	Level of Service (LOS)	Delay (sec)[1]	Level of Service (LOS)	Delay (sec)[1]	Level of Service (LOS)	Delay (sec)[1]	Level of Service (LOS)	Delay (sec)[1]
High Ridge Road	F	111.4	D	40.9	F	275.2	F	84.7
SR-9/I-95 Southbound Ramps	F	255.7	F	158.0	F	146.8	F	251.1
SR-9/I-95 Northbound Ramps	D	37.5	E	60.4	F	102.2	F	166.9
Seacrest Boulevard	D	43.6	D	38.4	F	195.2	F	204.9

1. sec: Delay in seconds per vehicle
Source: *I-95 (SR-9) Interchange at Gateway Boulevard in Palm Beach County, Interchange Concept Development Report* (June 2014).



PD&E Study
SR-9/I-95 at SR-804/Boynton Beach Blvd Interchange
SR-9/I-95 at Gateway Blvd Interchange
FM Nos. 435804-1-22-01; 231932-1-22-01
ETDM Nos. 14180 and 14181

PROJECT LOCATION MAP

FIGURE 1

2.2 Economic Development

The area surrounding the SR-9/I-95 at SR-804/Boynton Beach Boulevard Interchange is urbanized, containing a mixture of commercial, industrial, and residential land uses. According to the City of Boynton Beach Future Land Use Map (**Appendix E**), the SR- 9/I-95 at SR-804/Boynton Beach Boulevard Interchange falls within the designated Community Redevelopment Area (CRA). The residential neighborhoods and business districts of this area are intended to be redeveloped by implementing compact, more intensive urban growth patterns that provide opportunities for more efficient use and development of infrastructure, land, and other resources and services. The area surrounding the SR-9/I-95 at Gateway Boulevard Interchange is urbanized, containing a mixture of residential and recreational land uses to the east and commercial, office, industrial, and residential activities to the west as part of the Quantum Park Development of Regional Impact (DRI). According to the City of Boynton Beach Future Land Use Map, the area will continue to support the noted land uses.

Population within the vicinity of the Boynton Beach Boulevard Interchange is anticipated to grow by approximately 10% from 2005 to 2035 primarily in the areas northeast and southwest of the interchange. Population is anticipated to grow by 46% within the vicinity of the Gateway Boulevard Interchange, primarily east of Seacrest Boulevard and within the Quantum Park DRI. Employment in the vicinity of Boynton Beach Boulevard Interchange is projected to increase approximately 147% from 2005 to 2035, primarily in the areas northeast, east, and southwest of the interchange. In the vicinity of Gateway Boulevard, employment is expected to increase by approximately 173% primarily in the areas west and southeast of the interchange. These projections are based on data derived from the enhanced Southeast Regional Planning Model (SERPM) version 6.5 Managed Lanes Model (upgraded to include specific subarea improvements for the I-95 Interchange Master Plan). Improving the transportation infrastructure at the study area interchanges and adjacent intersections will support the redevelopment efforts in the vicinity of these interchanges and the overall vision of the City of Boynton Beach growth and economic development, as identified in the *Heart of Boynton Community Redevelopment Plan Update* (April 2014).

2.3 Secondary Criteria

2.3.1 Safety

The 2040 LRTP continues the requirement that the MPO carry out a planning process that increases the safety and security of the transportation system for motorized and non-motorized users. MAP-21 also establishes national performance goals for federal highway programs including:

- Safety - to achieve a significant reduction in traffic fatalities and serious injuries on all public roads; and
- System Reliability – to improve the efficiency of the surface transportation system.

The FAST Act continued the Highway Safety Improvement Program (HSIP) as a core federal program. To receive funding under this Program, states were required to develop Strategic Highway Safety Plans (SHSP). The SHSP is a data-driven, four to five year comprehensive plan that establishes statewide goals and objectives to reduce fatalities and serious injuries. In 2006, Florida completed development of a comprehensive SHSP. The overall goal of the SHSP is to reduce the number of fatalities in Florida to zero. Use of a systems approach in engineering is one of the objectives

to be used in accomplishing this overall goal; to strike a balance between single unique locations and addressing the safety of the road network.

The CD Reports included a safety analysis of the study area. For the Boynton Beach Boulevard Interchange, crash data analyzed from 2010 – 2012 indicated 214 crashes occurred with 69% being rear-end type crashes. Predominant crash locations were along Boynton Beach Boulevard Interchange at the SR-9/I-95 northbound on and off-ramps and the southbound off ramp. For the Gateway Boulevard Interchange, crash data indicated 117 crashes occurred with 48% being rear-end type crashes. The segment of SR-9/I-95 in the vicinity of Gateway Boulevard Interchange is identified as a high crash segment having a higher crash rate compared with similar state roadways for the time period analyzed.

2.3.2 Emergency Evacuation and Response Times

SR-9/I-95 and SR-804/Boynton Beach Boulevard serve as part of the emergency evacuation route network designated by the Florida Division of Emergency Management and Palm Beach County. As designated evacuation facilities, these roadways are critical in facilitating traffic flows during emergency evacuation periods. SR-804/Boynton Beach Boulevard is a major east-west corridor in eastern Palm Beach County providing a linkage between SR-9/I-95 and Florida's Turnpike. Both Boynton Beach Boulevard and Gateway Boulevard connect to other major arterials and highways of the state evacuation route network.

3. Project Alternatives

NEPA project development must consider a range of alternatives that meet the purpose and need of the project while balancing engineering requirements, impacts, and benefits. Project alternatives include the No-Build, Transportation Systems Management & Operations, and Build Alternatives.

FDOT is committed to the practicable avoidance and minimization of potential impacts to the social and natural environment when considering approval of proposed transportation projects. The study of alternatives and associated environmental consequences were evaluated according to NEPA and FDOT's PD&E process. This study process allows for coordination during the alternatives development process and thorough consideration of alternatives developed.

3.1 No Build Alternative

NEPA requires no change to existing conditions be considered as an alternative during the environmental review process. This alternative is designated as the No-Build Alternative, signifying that no new improvements or construction would take place. Although this alternative does not meet the purpose and need for the project, it will be considered serving as a baseline for comparison against other alternatives. The No-Build Alternative retains the existing roadway and interchange improvements, and would not have any direct impacts to the physical, natural, and social environments, right-of-way (ROW), structures, or utilities.

3.2 Transportation System Management and Operations (TSM&O) Alternative

The TSM&O Alternative includes implementation of non-capacity improvements to the existing transportation network that improve traffic flow, manage congestion, and maximize highway operations. Intelligent transportation systems (ITS), multimodal applications, adjusting signal phasing and timing, auxiliary lane additions, and higher land-use density strategies are TSM&O instruments used to maximize transportation infrastructure utilization. Such improvements are often less costly and require little to no ROW compared to physical expansion of the transportation network.

TSM&O improvements alone would not adequately accommodate the future year traffic volumes within the project's area of influence. The TSM&O Alternative alone is not considered a viable alternative. However, the build alternatives developed will incorporate viable TSM&O improvements.

3.3 Alternative Travel Modes

Multimodal facilities such as transit routes currently exist within the proposed project limits. The existing modes are incorporated into the build alternatives with current design standards. The Build Alternative for this project will include bicycle lanes and sidewalks that will connect to existing facilities to the east and west of the project limits. The transit routes within the study area will not be affected by the Build Alternative. Alternative travel modes are not anticipated to reduce the future demand near this interchange.

3.4 Build Alternatives Development

As part of the PD&E Study, several roadway improvement alternatives were considered for improving traffic operations and safety near the SR 804/Boynton Beach Boulevard Interchange and Gateway Boulevard Interchange. The interchanges were initially evaluated in concept development reports completed by the FDOT through the I-95 Master Plan Project. The *SR 9/I-95 Interchange at SR 804/Boynton Beach Boulevard, Palm Beach County, Interchange Concept Development Report* (2014) and *SR 9/I-95 Interchange at Gateway Boulevard, Palm Beach County, Interchange Concept Development Report* (2014) developed and evaluated conceptual design alternatives for geometric criteria, impacts on structures, drainage, signing, and utilities, adjoining side street connections, signalized intersections, and constructability.

The recommended improvements resulted in development of a Conceptual Design Alternative (CDA). The CDA has been retained and will be evaluated as a build alternative in this PD&E Study. A *Tier 1 Alternatives Evaluation Technical Memorandum* (March 2016) was prepared that identified preliminary alternatives that improved traffic operations and safety. In addition to the CDA, eight (8) conceptual alternatives were developed for SR 804/Boynton Beach Boulevard Interchange and three (3) for Gateway Boulevard Interchange. A preliminary screening of each alternative was completed with respect to the purpose and need for the project, traffic operations, traffic safety, constructability, cost, right of way, environmental, and socio-economic impacts.

All Build Alternatives will incorporate TSM&O improvements and will be developed further as the project progresses. Of the preliminary alternatives developed, the following build alternatives were retained for full evaluation for each interchange. An alternatives evaluation matrix is included in **Appendix A**.

- Alternative 1 - Conceptual Design Alternative (CDA);
- Alternative 2 - Streamlined CDA; and
- Alternative 3 - Single-point Urban Interchange (SPUI).

3.5 Build Alternatives

3.5.1 SR 9/I-95 at SR 804/Boynton Beach Boulevard Interchange

Alternative 1 – CDA. This build alternative was retained from the concept development reports previously prepared and discussed in Section 3.4. The development of this alternative considered practical design and evaluated traditional turn lane improvements for the existing Tight Urban Diamond Interchange configuration to optimize the benefit to cost ratio without imperiling traffic operations and safety. This alternative, and specific improvements (1-9), are depicted in **Appendix A, Figure 6**.

For this alternative, proposed improvements include:

1. A new westbound right turn lane to Industrial Avenue;
2. Dual left and triple right turn lanes in the southbound direction at the I-95 southbound ramp terminal intersection;
3. Continuously flowing channelized eastbound right turn lane and dual westbound left turn lanes that create three SR 9/I-95 southbound on-ramp lanes; the third lane on the SR 9/I-95 southbound on-ramp is merged south of the ramp terminal intersection from the right side to tie into the existing dual lane on-ramp;
4. Dual left turn lanes in the eastbound and westbound along SR 804/Boynton Beach Boulevard;
5. Triple left turn lanes and single channelized right turn lane in the northbound direction at the northbound I-95 ramp terminal intersection;
6. Dual left turn lanes with extended queue lengths, single channelized right turn lane and additional through lane in the westbound direction along SR 804/Boynton Beach Boulevard east of the SR 9/I-95 bridge;
7. Continuously flowing channelized westbound right turn lane and dual eastbound left turn lanes that create three SR 9/I-95 northbound on-ramp lanes; two of the three lanes on this SR 9/I-95 northbound on-ramp are merged north of the ramp terminal intersection from the right to tie into the existing axillary lane between SR 804/Boynton Beach Boulevard and Gateway Boulevard;
8. Increased right turn storage lane along eastbound SR 804/Boynton Beach Boulevard at the northbound SR 9/I-95 ramp terminal intersection; and
9. New right turn storage lane in the eastbound direction at the SR 804/Boynton Beach Boulevard and Seacrest Boulevard intersection.

Alternative 1 also adds an additional westbound through lane between the SR 9/I-95 southbound ramp terminal and Old Boynton Road/SW 8th Street. This additional westbound through lane is dropped near the intersection of SR 804/Boynton Beach Boulevard and Old Boynton Road/SR 8th Street as a westbound right turn lane.

Alternative 2 – Streamlined CDA. This build alternative enhances Alternative 1 and avoids reconstruction of the SR 804/Boynton Beach Boulevard bridges over the CSX/SFRC railroad (Bridge Number 930289) and SR 9/I-95 (Bridge Number 930285). This alternative retains Alternative 1 proposed improvements, as depicted in **Appendix A, Figure 7**, but proposes the additional improvements (1-4) as described below:

For this alternative, proposed improvements include:

1. A closed median between 7th Street and Old Boynton Road;
2. Dual right turn lanes, a single left turn lane, and a shared left/right lane in the southbound direction at the SR 9/I-95 southbound ramp terminal intersection;
3. Continuously flowing channelized eastbound right turn lane and dual westbound left turn lanes that create three SR 9/I-95 southbound on-ramp lanes; the third lane on the SR 9/I-95 southbound on-ramp is merged south of the ramp terminal intersection from the left side to tie into the existing dual lane on-ramp; and
4. Triple left and dual channelized right turn lanes in the northbound direction at the I-95 northbound ramp terminal intersection.

Alternative 2 eliminates the additional westbound through-lane between SR 9/I-95 southbound ramp terminal and Old Boynton Road/SW 8th Street added by the Alternative 1.

Alternative 3 – Single-point Urban Interchange (SPUI). This build alternative proposes the construction of a new SPUI at the SR 9/I-95 and SR 804/Boynton Beach Boulevard Interchange. A SPUI configuration combines turning movements at the SR 9/I-95 northbound and southbound exit ramps to operate under a single traffic control device, resulting in a high capacity interchange. This alternative is depicted in **Figure 8 in Appendix A** and includes the following proposed improvements:

1. Convert existing dual ramp terminal signalized intersections into a single signalized intersection to serve both southbound and northbound ramp terminals. This Alternative will replicate all improvements considered along SR 804/Boynton Beach Boulevard and the SR 9/I-95 northbound and southbound ramps considered under Alternative 2 as described above.

3.5.2 SR 9/I-95 at Gateway Boulevard Interchange

Alternative 1 – CDA. This Build Alternative was retained from the concept development reports previously prepared and discussed in Section 3.4. The development of this alternative considered practical design and evaluated traditional turn lane improvements for the existing Tight Urban Diamond Interchange configuration to optimize the benefit to cost ratio without imperiling traffic operations and safety.

This alternative, and the proposed improvements (1-8), are depicted in **Figure 9 in Appendix A:**

1. Dual left turn lanes and a single right turn lane in the eastbound direction at the Gateway Boulevard and High Ridge Road intersection;
2. Dual left turn lanes and a single right turn lane in the northbound direction at the Gateway Boulevard and High Ridge Road intersection;
3. Triple left turn lanes from southbound High Ridge Road to eastbound Gateway Boulevard;
4. Dual left and right turn lanes in the southbound direction at the SR 9/I-95 southbound ramp terminal intersection;
5. Dual right turn lanes from eastbound Gateway Boulevard to southbound SR 9/I-95;
6. Triple left and single right turn lanes in the northbound direction at the SR 9/I-95 northbound ramp terminal intersection;
7. Dual left turn lanes from northbound Seacrest Boulevard to westbound Gateway Boulevard; and
8. Single right turn lane from southbound Seacrest Boulevard to westbound Gateway Boulevard.

Alternative 1 adds an additional through lane in the eastbound and westbound direction to create an eight lane typical section along Gateway Boulevard within the project limits between Quantum Boulevard and NE 1st Way.

Alternative 2 – Streamlined CDA. This build alternative enhances Alternative 1 along with retaining most of Alternative 1 proposed improvements including the additional through lane in the eastbound and westbound direction along Gateway Boulevard between Quantum Boulevard and NE 1st Way. Most of the SR 9/I-95 northbound and southbound ramp termini turn lane improvements are retained from Alternative 1 with adjustments to the intersection turn lane improvements at High Ridge Road.

For this alternative, proposed modifications (1-3) are described below and shown in **Figure 10 in Appendix A:**

1. Dual left turn lanes from southbound High Ridge Road to eastbound Gateway Boulevard as opposed to triple left turn lanes in Alternative 1;
2. A single right turn lane and shared thru/right turn lane from eastbound Gateway Boulevard to southbound SR 9/I-95; and
3. Triple left and dual right turn lanes in the northbound direction at the SR 9/I-95 northbound ramp terminal intersection.

Alternative 3 – Single-point Urban Interchange (SPUI). This build alternative proposes the construction of a new SPUI at the SR 9/I-95 at Gateway Boulevard Interchange. A SPUI configuration combines turning movements at the SR 9/I-95 northbound and southbound exit ramps to operate under a single traffic control device, resulting in a high capacity interchange. The following improvements are proposed for this alternative and are shown in **Figure 11 in Appendix A**.

1. Convert existing dual ramp terminal signalized intersections into a single signalized intersection to serve both southbound and northbound ramp terminals. This Alternative will replicate all improvements considered along Gateway Boulevard and the SR 9/I-95 northbound and southbound ramps considered under Alternative 2 as described above.

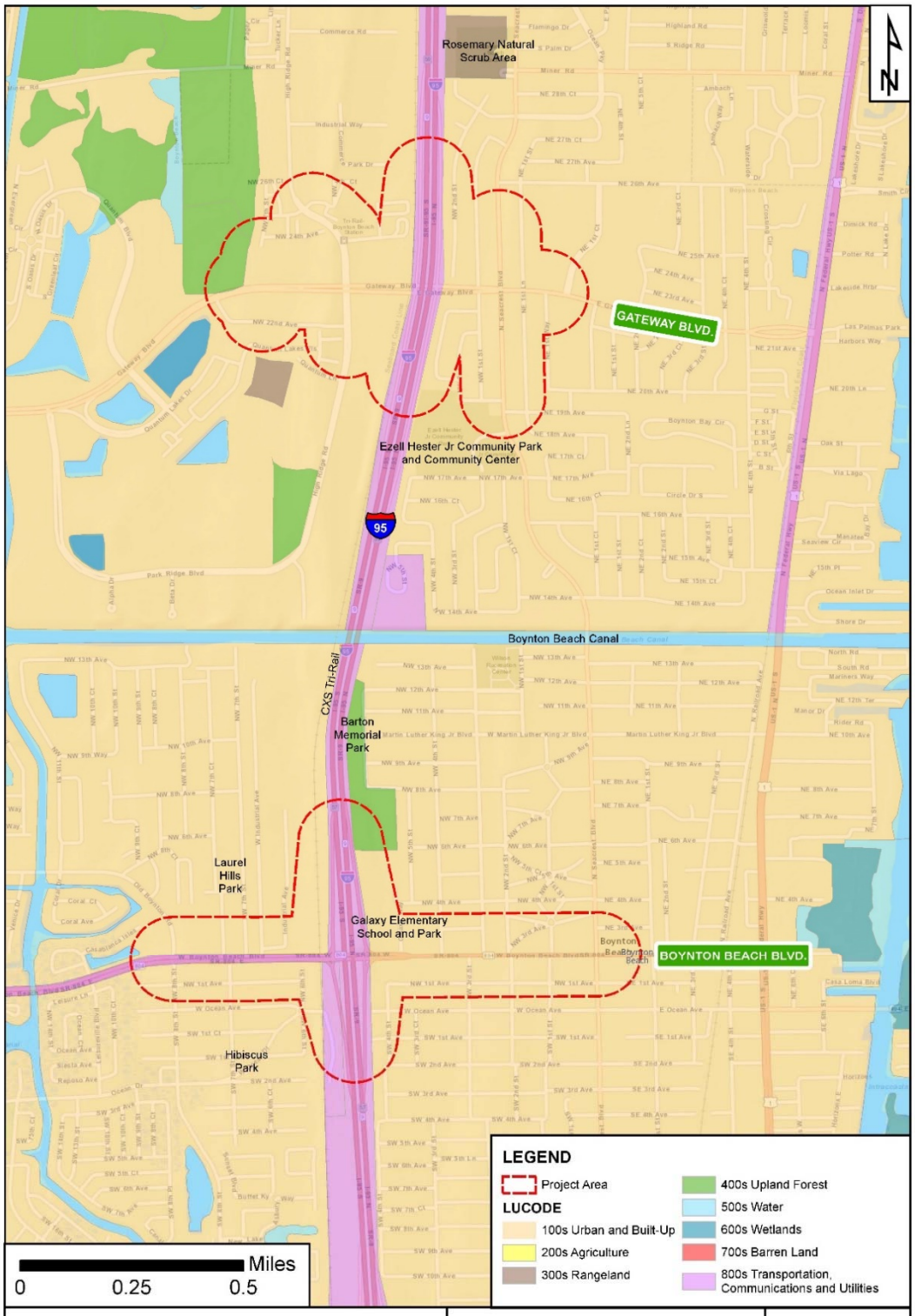
4. Existing Environmental Conditions

The following sections include descriptions of the land uses and natural features within the SR-9/I-95 and SR-804/Boynton Beach Boulevard Interchange and Gateway Boulevard Interchange project areas that would potentially be affected by the proposed interchange improvements. To characterize the project areas, the existing land uses and cover types were identified using South Florida Water Management District's (SFWMD) 2011 land use Geographical Information Systems (GIS) data and Florida Land Use Cover Forms Classification System (FLUCFCS) codes. The study area encompasses a 500-foot buffer surrounding the proposed interchange improvements (**See Figure 2**).

4.1 Land Use

Both interchanges are located in urbanized areas. Land use surrounding the SR-9/I-95 at SR-804/Boynton Beach Boulevard Interchange consists of single and multi-family residential, commercial, office, light industrial, and public school. Land use surrounding the SR-9/I-95 at Gateway Boulevard Interchange consists primarily of transportation. Specifically, 97.4% of the project areas are classified as Urban and Built-Up (FLUCFCS 1210, 1330, 1340, 1390, 1400, 1411, 1550, 1710, and 1850) or Transportation (FLUCFCS 8120 and 8140), with a majority of the existing land use being Residential (FLUCFCS 1210, 1330, and 1340) and Commercial and Services (FLUCFCS 1390, 1400, and 1411) land uses. Existing land use, by acreage and percentage, within the project areas are shown in **Table 3.** The project areas also include Educational Facilities and Parks (FLUCFCS 1710 and 1850). The Ezell Hester Jr. Community Park and Community Center is located at the southernmost end of the Gateway Boulevard Interchange project area, east of I-95 and just north of NW 17th Avenue. Galaxy Elementary School and its associated recreational area, Galaxy Park, are located at the northeastern intersection of I-95 and Boynton Beach Boulevard. The CSX Tri-Rail track runs parallel and west of I-95. The Boynton Beach Train Station, part of the CSX Tri-Rail system, is also west of I-95 and north of NW Commerce Park Drive near the Boynton Beach Interchange.

Several recreational areas are located outside of the project areas. None of these locations are anticipated to be impacted by the projects. The Rosemary Scrub Natural Area is approximately 700 feet north of the Gateway Boulevard Interchange project area, immediately east of I-95. This natural area has walking paths through scrub habitat that could potentially contain state and/or federally listed species, such as the gopher tortoise. Barton Memorial Park is approximately 150 feet north of the Boynton Beach Interchange project area, immediately east of I-95. This park contains walking paths, benches, and a small cemetery at the northern end of the park. Laurel Hills Park is a residential park found at the intersection of NW 4th Avenue and NW 7th Street, approximately 325 feet north and 610 feet west of the Boynton Beach Boulevard Interchange project area. Hibiscus Park is a residential at the intersection of SW 1st Avenue and W Ocean Drive. It is approximately 650 feet south and west of the Boynton Beach Boulevard Interchange project area.


Rosemary Natural Scrub Area
GATEWAY BLVD.
Ezell Hester Jr Community Park and Community Center
95
Boynton Beach Canal
CXS Tri-Rail
Barton Memorial Park
Laurel Hills Park
Galaxy Elementary School and Park
BOYNTON BEACH BLVD.
Hibiscus Park
LEGEND
Project Area
LUCODE
100s Urban and Built-Up
200s Agriculture
300s Rangeland
400s Upland Forest
500s Water
600s Wetlands
700s Barren Land
800s Transportation, Communications and Utilities
Miles
0
0.25
0.5
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EXISTING LAND USE MAP
Source: SFWMD, 2011
FIGURE 2

Table 3 Land Use and Cover Types within 500 Feet of Boynton Beach Boulevard and Gateway Boulevard Interchange

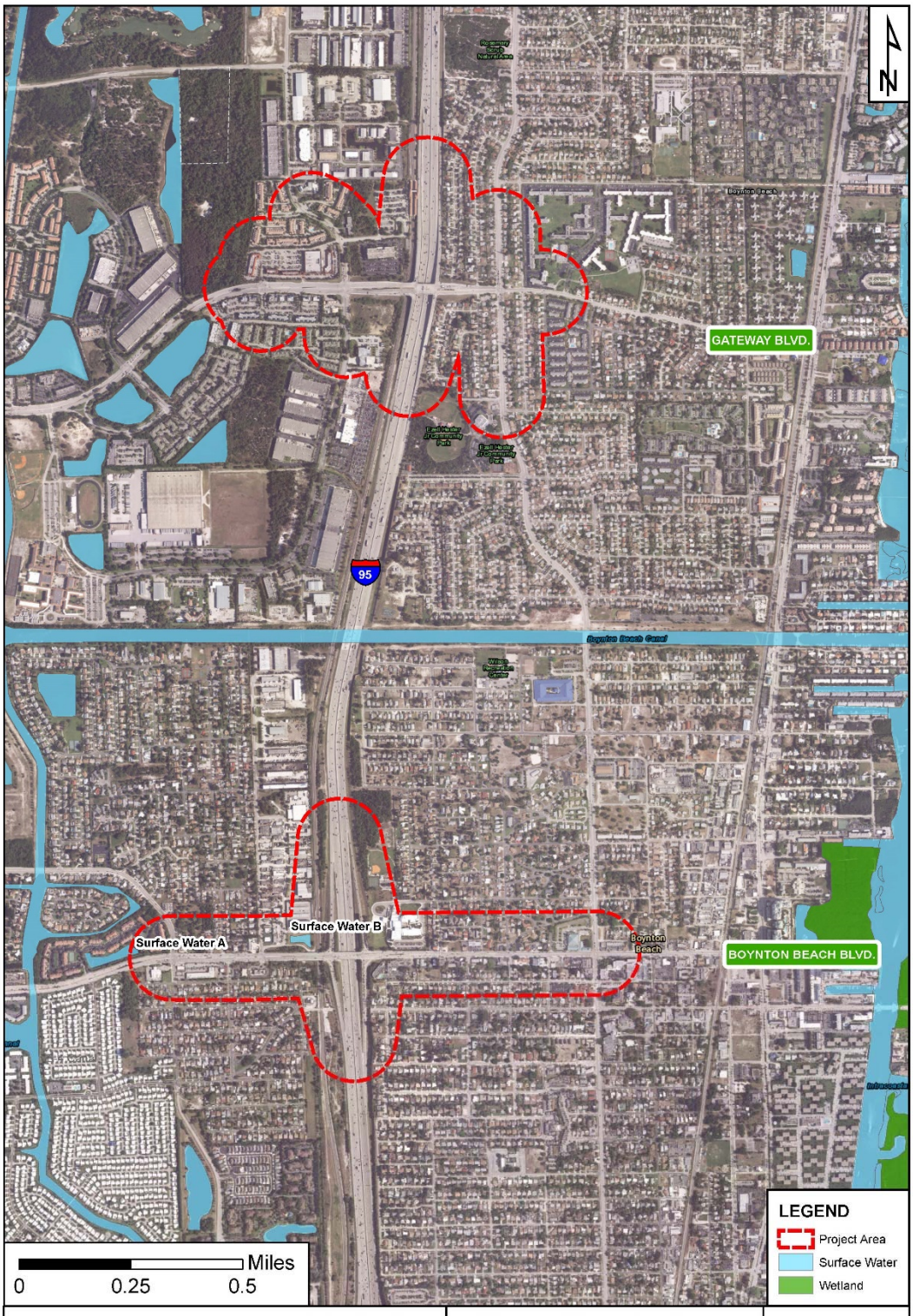
FLUCFCS	Description	Acres in project area buffer (500 feet)	Percent Acres in project area buffer (500 feet)
1210	Fixed Single Family Units	138.45	33.77%
1330	Multiple Dwelling Units, Low Rise <Two stories or less>	36.71	8.95%
1340	Multiple Dwelling Units, Low Rise <Three stories or more>	9.59	2.34%
1390	High Density Under Construction	17.35	4.23%
1400	Commercial and Services	97.42	23.76%
1411	Shopping Centers (Plazas, Malls)	8.02	1.96%
1550	Other Light Industrial	3.49	0.85%
1710	Educational Facilities	15.12	3.69%
1850	Parks and Zoos	6.29	1.53%
4110	Pine Flatwoods	0.64	0.16%
4240	Melaleuca	5.95	1.45%
4340	Hardwood - Conifer Mixed	3.90	0.95%
5300	Reservoirs	0.19	0.05%
8120	Railroads	6.78	1.65%
8140	Roads and Highways	60.08	14.65%
Total Acreage		**409.97**	**100%**

Source: SFWMD, 2011

4.2 Natural and Biological Features

Upland habitat, disturbed and undisturbed, makes up 2.6 percent of the project areas. Uplands account for 1.61% of land use at Gateway Boulevard Interchange and 0.95% of land use at Boynton Beach Boulevard Interchange project areas. The habitat quality of these upland areas is low given the high level of human use, habitat fragmentation, and the landscaped nature of the vegetation. The only natural upland habitat within the Boynton Beach Boulevard Interchange project area is a strip of remnant xeric scrub located northwest of Galaxy Elementary, bordering the I-95 northbound ROW. Within the Gateway Boulevard Interchange project area, there is a remnant strip of sand pine scrub that grades down to a Melaleuca stand on the west side of Quantum Village commercial plaza. There is also one acre of hardwood/pine forested "native preservation area" located between the Children's Services Council facility and High Ridge Road, northwest of the Gateway Boulevard Interchange. An undeveloped parcel of upland habitat also exists southwest of the Gateway Boulevard Interchange.

No natural wetland habitat exists within 500 feet of the Gateway Boulevard Interchange or Boynton Beach Boulevard Interchange project areas. The Efficient Transportation Decision Making (ETDM) tool, the 2014 National Wetland Inventory (NWI), and three field reviews, conducted in August 2015, April 2016, and January 2017, confirmed these findings. There are, however, existing storm water features throughout the project areas. During the field reviews and a desktop review of aerial imagery, two surface waters (Surface Waters A and B), which are part of existing storm water facilities, were identified within the Boynton Beach Boulevard Interchange project area. **Figure 3** depicts wetlands and other surface waters within, and adjacent to, the Boynton Beach Boulevard Interchange and Gateway Boulevard Interchange.



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WETLANDS AND OTHER SURFACE WATERS LOCATION MAP
Source: NWI, 2014

FIGURE 3

4.3 Soils

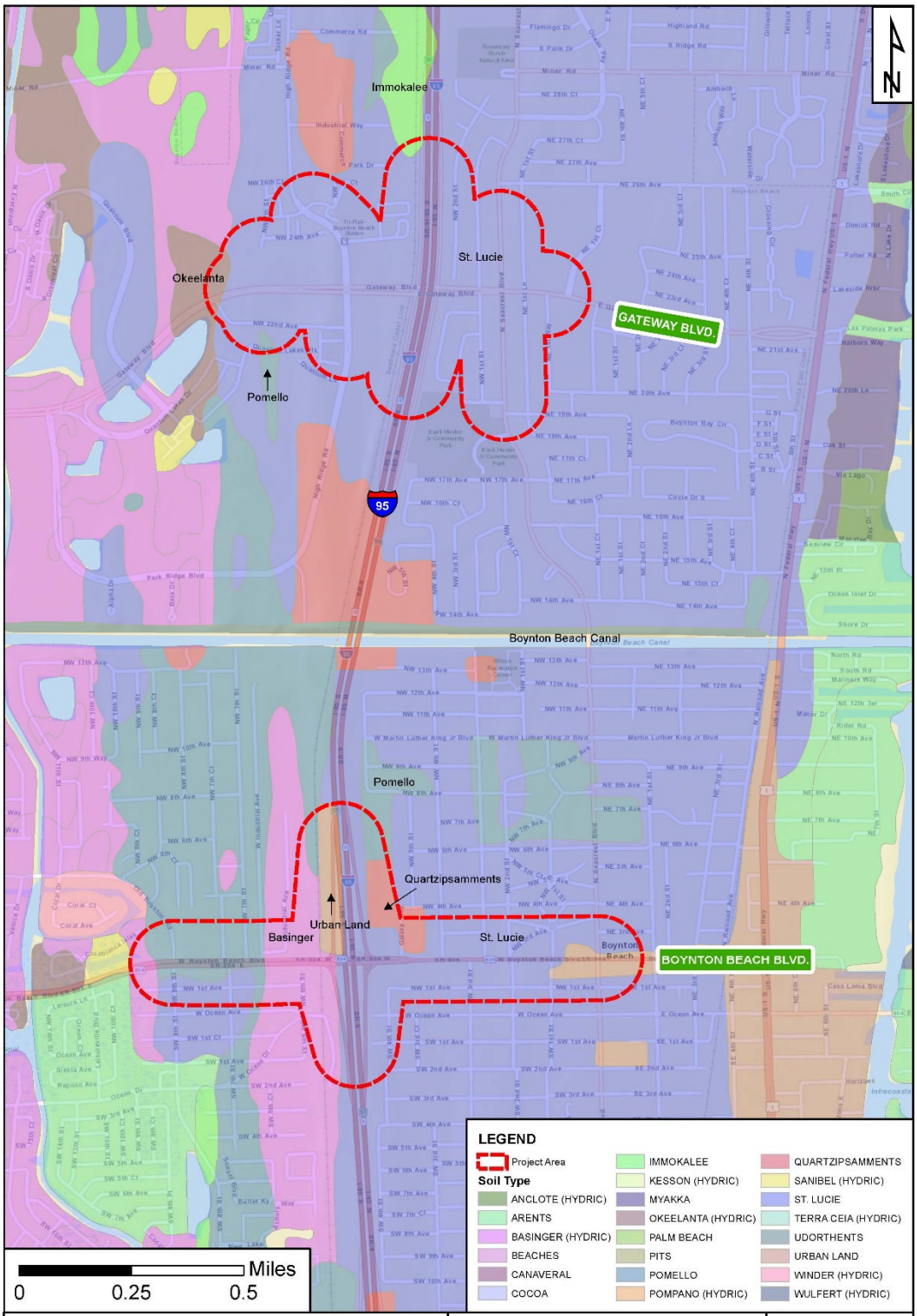
The primary soil type within the Gateway Boulevard Interchange project area is St. Lucie-Paola-Urban Land Complex, 0-8 percent slopes (Excessively Drained), some small areas of Okeelanta Muck (very poorly drained), and Immokalee Fine Sand (Poorly Drained). The primary soil type within the Boynton Beach Boulevard Interchange project area is St. Lucie-Paola-Urban Land Complex, 0-8 percent slopes (Excessively Drained) and Basinger Fine Sand (Poorly Drained), as well as small portions of Pomello Fine Sand, 0 to 5 percent slopes (Moderately Well Drained), Quartzipsamments, shaped, 0 to 5 percent slope (Well Drained), and Urban Land. Soil types within the project areas are listed in **Table 4** below. The existing Natural Resources Conservation Service (NRCS) soils map for the project area is shown in **Figure 4**.

According to the ETDM Screening tool, hydric soils exist within the project areas. There are two soils with a hydric component based on the Hydric Soils Handbook of Florida, 1995. The first is Okeelanta Muck, which meets the saturation and ponding criteria and is present along the western portions of the Gateway Boulevard Interchange project area. Basinger Fine Sand, which meets the saturation criteria, is located within the western portion of the Boynton Beach Boulevard Interchange project area.

Table 4 Soil Types within the Boynton Beach Boulevard Interchange and Gateway Boulevard Interchange Project Areas

Soil Type	Slope	Drainage Class	Acreage
Basinger Fine Sand (Hydric)	---	Poorly Drained	33.77
Immokalee Fine Sand	---	Poorly Drained	0.78
Okeelanta Muck (Hydric)	---	Very Poorly Drained	3.11
Pomello Fine Sand	0 - 5 Percent Slopes	Moderately Well Drained	26.87
Quartzipsamments, Shaped	0 - 5 Percent Slopes	Well Drained	8.80
St. Lucie-Paola-Urban Land Complex	0 - 8 Percent Slopes	Excessively Drained	318.84
Urban Land	---	---	17.76

Source: NRCS. 2012


Immokalee
St. Lucie
Okeelanta
GATEWAY BLVD.
Pomello
95
Boynton Beach Canal
Pomello
Quartzipsamments
Urban Land
Basinger
St. Lucie
BOYNTON BEACH BLVD.
LEGEND
Project Area
Soil Type
ANCLOTE (HYDRIC)
ARENTS
BASINGER (HYDRIC)
BEACHES
CANAVERAL
COCOA
IMMOKALEE
KESSON (HYDRIC)
MYAKKA
OKEELANTA (HYDRIC)
PALM BEACH
PITS
POMELLO
POMPANO (HYDRIC)
QUARTZIPSAMMENTS
SANIBEL (HYDRIC)
ST. LUCIE
TERRA CEIA (HYDRIC)
UDORTHENTS
URBAN LAND
WINDER (HYDRIC)
WULFERT (HYDRIC)
Miles
0
0.25
0.5
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SOILS MAP
Source: NRCS, 2012
FIGURE 4

5.0 Methodology and Potential Occurrence of Listed Species

An assessment of federal and state listed wildlife and plant species involvement was conducted in accordance with 50 CFR Part 202, the Endangered Species Act of 1973, as amended, and the PD&E Manual, Part 2 – Chapter 27 (FDOT, 2016). The objectives of this assessment were to evaluate the following: the presence of critical habitat; the presence of protected species habitat; the level of impact, if any, to critical habitat and/or protected species by the project; and whether any protected species present would be adversely impacted by the proposed project. The study methodology included reviews of the Environmental Technical Advisory Team (ETAT) comments, literature reviews, agency database searches, agency coordination, GIS analyses, and field reviews.

5.1 Literature and Field Reviews

Literature and field reviews were used to determine whether suitable habitat for listed species exists within the project areas. Field reviews, conducted in August 2015, April 2016, and January 2017, consisted of surveying potential wildlife habitat within and adjacent to the project areas for listed species utilization. Areas surveyed include several six undeveloped parcels, two storm water ponds, and six potential pond sites. Pond sites are further discussed in **Section 6.1**. Due to the highly developed nature of the corridor and disturbances from traffic noise, very few wildlife species were observed in the project areas during the field reviews. Common species such as the Blue Jay (*Cyanocitta cristata*), Black Racer (*Coluber constrictor*), Green Iguana (*Iguana iguana*), Cattle Egret (*Bubulcus ibis*), and Pigeons (*Columba liva*) were observed. Information sources and databases utilized during the desktop review include the following:

- ETDM Environmental Screening Tool;
- U.S. Fish and Wildlife Service (USFWS) Environmental Conservation Online System;
- Florida Natural Areas Inventory (FNAI);
- FNAI listed species element occurrence database;
- Florida Fish and Wildlife Conservation Commission (FFWCC) databases;
- Florida Department of Agriculture and Consumer Services (FDACS);
- NWI maps;
- FWC Bald Eagle Nesting database;
- FWC Waterbird Colony Locator;
- FWC's Strategic Habitat Conservation Areas (SHCA);
- USFWS Wood Stork Rookeries (18.6 mile radius) (2012); and
- USFWS South Florida Multi-Species Recovery Plan.

5.2 Environmental Technical Advisory Team Comments

Project information was distributed to the USFWS, FFWCC, National Marine Fisheries Service (NMFS), US Army Corps of Engineers (USACE), US Environmental Protection Agency (USEPA), Florida Department of Environmental Protection (FDEP), SFWMD, and other governmental agencies, as part of the ETDM process. The USFWS, FFWCC, and NMFS responded to the request for comments. Full agency responses are included in **Appendix B** (SR-9/I-95 at Gateway Boulevard Interchange) and **Appendix C** (SR-9/I-95 at Boynton Beach Boulevard Interchange). Concurrence from the USFWS will be required for federally listed species. The following is a summary of the ETAT comments and descriptions of the possible effects of the build alternatives on the listed species that could potentially inhabit the project areas.

US Fish and Wildlife Service

The USFWS ETDM response was received on July 11, 2014 for the Boynton Beach Boulevard Interchange project and on July 28, 2014 for the Gateway Boulevard Interchange project. A "minimal" degree of impact was assigned to both project areas by the agency. The agency commented that the following listed species have the potential to occur in or near the project site: Eastern Indigo Snake (*Drymarchon corais*), West Indian Manatee (*Trichechus manatus)*, and Wood Stork (*Mycteria Americana)*. The agency commented that the project corridor is in the Core Foraging Area (CFA) of four active nesting colonies of the Wood Stork. The agency recommended that any lost foraging habitat resulting from the project should be replaced within the CFA of the active nesting colony to minimize affects to the Wood Stork. The USFWS requires a functional assessment to be completed using their "Wood Stork Foraging Analysis Methodology" if five or more acres of suitable foraging habitat are impacted.

Florida Fish and Wildlife Conservation Commission

The FFWCC ETDM response was received on August 5, 2014 for the Boynton Beach Boulevard Interchange project and on August 14, 2014 for the Gateway Boulevard Interchange project. A "minimal" degree of impact was assigned to both project areas by the agency. FFWCC suggested that, although a significant amount of the project areas are urbanized, construction in the remaining natural scrub habitat adjacent to I-95, north of Galaxy Elementary School, should be avoided. Additional comments noted that wading birds might use drainage ditches and storm water ponds within and around the project areas. It was also noted that the project areas are within 15 miles of three Wood Stork colonies, as well as within USFWS Service Consultation Areas for the Florida Scrub-Jay (*Aphelocoma coerulenscens)*, West Indian Manatee, and Atlantic Coast Plants. For both interchanges, the agency commented that direct and indirect effects would be minimal if roadway construction avoids the remaining xeric scrub area, drainage retention areas (DRAs) are not constructed within areas of natural habitat, and degradation of downstream water quality is avoided by use of Best Management Practices (BMPs).

National Marine Fisheries Service

The NMFS EDTM response was received on November 20, 2014 for the Boynton Beach Boulevard Interchange project and on August 12, 2014 for the Gateway Boulevard Interchange project. No degree of impact was assigned to either project areas. The agency commented that the proposed work is not anticipated to directly impact areas that support Essential Fish Habitat (EFH) and that an EFH Assessment would not be required.

5.3 Potentially Occurring Listed Wildlife Species

According to the USFWS's, *Species by County Report*, 19 listed species have the potential to occur within Palm Beach County. Of the 19 listed by the USFWS, 10 species are not expected to be present within the project areas due to lack of suitable habitat. Three species are associated with coastal habitat: Southeastern beach mouse (*Peromyscus polionotus niveiventris*); Piping plover (*Charadrius* melodus); and Red knot (*Calidris canutu).* An additional seven species are not expected to be present within the project areas due to of a lack of supporting habitat and/or suitable foraging areas: Whooping Crane (*Grus americana*); Everglades snail kite (*Rostrhamus sociabilis*); Kirtland's warbler (*Setophagia kirtlandii*); Red-cockaded woodpecker (*Leuconotopicus borealis*); Audubon's crested caracara (*Caracara cheriway*); Florida Panther (*Puma concolor*); American crocodile (*Crocodylus acutus*). The remaining species have a likelihood of occurrence ranging from low to moderate and are discussed in subsequent sections: Florida Scrub Jay; Wood Stork; West Indian Manatee; Eastern Indigo snake; and the Gopher Tortoise (*Gopherus polyphemus*).

The FFWCC listed 13 species with the potential to occur within the vicinity of the project areas based on species range and preferred habitat type. The Least tern (*Sternula antillarum*) is associated with a coastal habitat, and therefore, is not expected to be present within the project areas. The remaining twelve species have a low to moderate potential of occurrence within the project areas and are discussed in subsequent sections: Wood Stork; Burrowing owl (*Athene cunicularia*); Little blue heron (*Egretta caerulea*); Tricolored heron (*Egretta tricolor*); Eastern Indigo Snake; Gopher tortoise; and Florida pine snake (*Pituophis melanoleucus mugitus)*.

Table 5 summarizes listed wildlife species with the potential to occur within the vicinity of the project areas, based on the project locations and availability of suitable habitat.

5.4 Potentially Occurring Listed Plant Species

The project areas are within the USFWS Service Consultation Areas for Atlantic Coast Plants. **Table 6** summarizes the state and federally listed plant species with the potential to occur within, or within the vicinity of, the project areas, based on suitable habitat type. This list of plants was obtained from the 2017 FDACS "Florida's Federally Listed Plant Species" list. The four-petal pawpaw (*Asmina tertamera*) requires sand pine scrub vegetation on old coastal dune (Austin and Tatje, 1979). The Florida perforate cladonia (*Cladonia perdorata*) requires sand pine scrub habitat characterized by xeric white sands (USFWS, 1999). The tiny polygala (*Polyagala smalli*) requires pine rockland, scrub, sandhill high pine, or open coastal spoil habitat (Gann and Bradley, 1995).

Table 5 Listed Wildlife Species with the Potential to Occur within the Vicinity of the Project Areas

Scientific Name	Common Name	Status	Likelihood of Occurrence
Birds			
Aphelocoma coerulescens	Florida Scrub-Jay	FT	Low
Mycteria Americana	Wood Stork	FT	Moderate
Athene cunicularia	Burrowing Owl	SSC	Low
Egretta caerulea	Little Blue Heron	SSC	Moderate
Egretta tricolor	Tricolored Heron	SSC	Moderate
Haliaeetus leucocephalus	Bald Eagle	---	Low
Mammals			
Trichechus manatus	West Indian Manatee	FT	No Involvement
Reptile			
Drymarchon corais couperi	Eastern Indigo Snake	FT	Low
Gopherus polyphemus	Gopher Tortoise	ST	Moderate
Pituophis melanoleucus mugitus	Florida Pine Snake	SSC	Low
Note: SSC = Species of Special Concern; ST = State-designated Threatened; FT = Federally-designated Threatened; T = Threatened; FE = Federally-designated Endangered; E = Endangered			

Note: SSC = Species of Special Concern; ST = State-designated Threatened; FT = Federally-designated Threatened; T = Threatened; FE = Federally-designated Endangered; E = Endangered
Source: Florida Fish and Wildlife Conservation Commission. Florida's Endangered and Threatened Species. Official Lists, January 2016; U.S. Fish and Wildlife Service, County Listed Species.

Table 6 Listed Plant Species with the Potential to Occur Within the Vicinity of the Project Areas

Scientific Name	Common Name	Preferred Habitat	Federal Status	State Status	Likelihood of Occurrence
Asmina tertamera	Four-petal Pawpaw	Sand pine scrub	E	E	Low
Polyagala smalli	Tiny Polygala	Scrub and Sandhill	E	E	Low
Cladonia perdorata	Florida Perforate Cladonia	Xeric White Sands in Sand Pine Scrub	E	E	Low

Notes: E = Endangered
Sources: Florida Department of Agriculture and Consumer Services, 2017

6.0 Analysis of Potential Impacts and Recommendations

Potential impacts to listed species that are likely to occur within, and in the vicinity of the project areas and the potential pond sites (See **Table 7 and 8)**, as well as potential impacts to their critical habitats, were assessed. There are no designated critical habitats or EFH within the project areas or potential pond sites. The project areas have

minimal habitat available for use by listed species. Undisturbed habitats make up just 2.6 percent of the Gateway Boulevard Interchange and Boynton Beach Boulevard Interchange project areas. Within the two study areas, several undeveloped parcels and storm water ponds could be utilized by listed species. However, the undeveloped parcels represent low quality upland habitats and the storm water ponds are within highly developed areas. No natural wetlands exist within, or in the vicinity of the project areas or the potential pond sites.

Proposed improvements associated with the build alternatives for the Gateway Boulevard Interchange and Boynton Beach Boulevard Interchange project areas would require a minimal amount of additional ROW) (i.e., 0.82 to 2.35 acres) (See **Table 7**). The areas where proposed ROW acquisitions occur are shown in the Concept Plans in **Appendix A**. The majority of ROW being acquired for the build alternatives consists of Urban and Built-Up land uses at both project locations. The parcels that would require ROW acquisition do not provide suitable wildlife habitat. Impacts to undeveloped parcels and surface waters within the project areas are discussed below in regards to proposed ROW acquisitions and listed species that could potentially inhabit these areas.

The recommended preferred alternative for the project areas was chosen by FDOT on January 26, 2017. The Streamlines Concept Development Alternative was chosen for the Boynton Beach Boulevard Interchange and the Single Point Urban Interchange Alternative was chosen for the Gateway Boulevard Interchange. These two options require the least amount of ROW acquisitions in comparison to other alternative proposed, with the exception of the No-Build Alternative.

Table 7 Right-of-Way Impacts Per Alternative

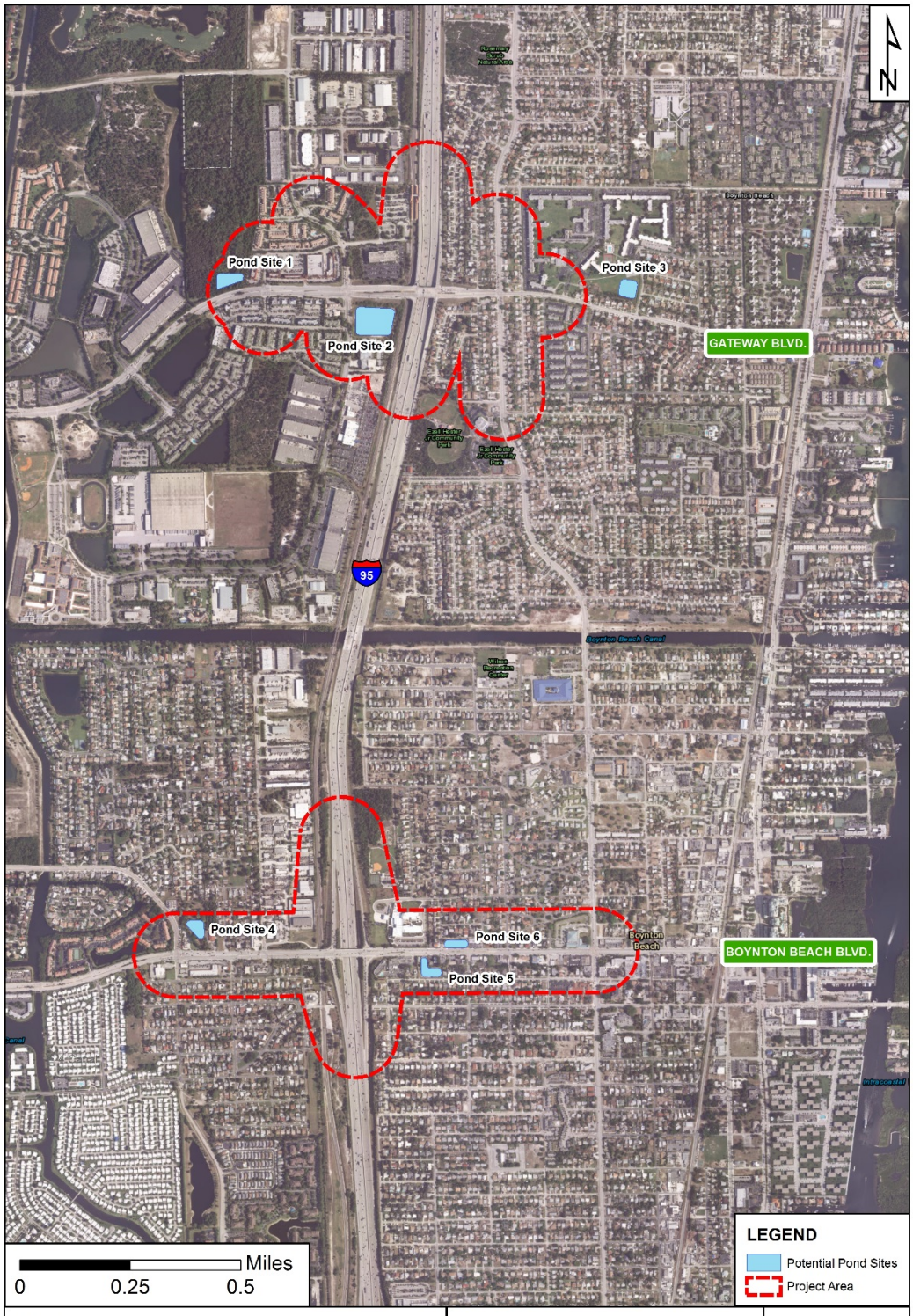
Evaluation Factors	No Build Alternative	Concept Development Alternative	Streamlined Concept Development Alternative	Single Point Urban Interchange (SPUI) Alternative
I-95 at Boynton Beach Boulevard Interchange				
Required Right of Way (Acres)	0	1.39	0.82	0.82
I-95 at Gateway Boulevard Interchange				
Required Right of Way (Acres)	0	2.35	2.28	2.07

Within the Boynton Beach Interchange project area, there are three undeveloped areas that could provide habitat to listed species. One is an undeveloped upland parcel and the two other are parcels with storm water features (Surface Water A and B). The upland parcel site is a strip of remnant xeric scrub located northwest of Galaxy Elementary, bordering the existing I-95 ROW has the potential to support listed species like the Gopher Tortoise, Eastern Indigo Snake, Burrowing Owl, and Florida Pine Snake. Surface Water A and Surface Water B (See **Figure 3**) are part of existing storm water facilities. These surface waters are of poor quality, but could potentially support the foraging needs of several listed avian species, to include the Wood Stork, Little Blue Heron, and Tricolored Heron. Neither surface water will be affected by ROW acquisitions; therefore, no direct impacts are anticipated to occur at these locations. Although unlikely, species that inhabit the upland parcel or use the existing surface waters could also utilize the existing ROW. However, this area provides marginal habitat.

Within the Gateway Boulevard Interchange project area, there are three undeveloped upland parcels that could provide habitat for listed species. One is a remnant strip of sand pine scrub that grades down to a Melaleuca stand (also Pond Site 1) on the west side of Quantum Village commercial plaza, north of Gateway Boulevard. Minor ROW acquisitions are proposed to occur in all build alternatives at this location. The second is a one acre of hardwood/pine forested area, identified by FFWCC as a "native preservation area", located between the Children's Services Council facility and High Ridge Road, northwest of the Gateway Boulevard Interchange. Minor ROW acquisitions are proposed to occur in all build alternatives at this location. The third parcel is a cleared upland area (also Pond Site 2) southwest of the Gateway Boulevard Interchange along I-95, and no ROW acquisitions are proposed to occur in any build alternative at this location. Although all three upland parcels are disturbed areas there is the potential for listed species like the Gopher Tortoise, Eastern Indigo Snake, Burrowing Owl, and Florida Pine Snake to inhabit these areas.

6.1 Potential Pond Sites

Six potential pond sites are being evaluated within and adjacent to the project areas. The following discusses the six potential pond sites and their potential impacts to wetlands. **Figure 5** depicts the proposed pond sites. For additional information regarding the potential pond sites, see the Pond Siting Report.



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POTENTIAL POND SITES LOCATION MAP

FIGURE 5

Pond Site 1

Pond Site 1 (**Photo 6**) is located immediately north of Gateway Boulevard and west of the Quantum Village Shopping Plaza. This pond site is 0.95 acres and is located entirely within Melaleuca, FLUCCS 4240 (SFWMD, 2011). Vegetation is overgrown and consists of Brazilian pepper (*Schinus terebinthifoluis*), saw palmetto (*Serenoa repens*), carrotwood (*Cupainiopsis anacardioides*), longleaf pine (Pinus palustris), and multiple vine species. This potential pond site is adjacent to Melaleuca (FLUCCS 4240) to the west, Pine Flatwoods (FLUCCS 4110) to the north, and Commercial and Services (FLUCCS 1400) to the east. A blue jay was observed during the January 2017 field visit. The potential pond site is not likely to impact listed species because it is disturbed and overgrown with dense vegetation.

Photo 6. Pond Site 1, north of Gateway Blvd, on the south side of the potential pond site facing north

Pond Site 2

Pond Site 2 (**Photo 7**) is located immediately south of Gateway Boulevard and west of I-95. This pond site is 3.27 acres and is within a vacant area that is classified as Commercial and Services, FLUCCS 1400 (SFWMD, 2011). The main vegetation includes Brazilian pepper, sabal palm (*Sabal palmetto*), beach sunflower (*Helianthus debilis*), broomsedge bluestem (*Andropogon virginicus*), prickly pear (*Opuntia*), and other weedy groundcover. This potential pond site is surrounded entirely by Commercial and Services (FLUCCS 1400) and Transportation (FLUCCS 810) land uses. Burrows were observed on this site during the three field visits. They appear to belong to Green Iguanas, not Gopher Tortoises. No tortoises, scat, or tracks have been observed. The burrow locations and characteristics varied during each field visit, which also indicates that they potentially belong to a Green Iguana. Though this upland parcel is disturbed and fragmented, there is the potential for listed species like the Gopher Tortoise, Eastern Indigo Snake, Burrowing Owl, and Florida Pine Snake to inhabit this area. These burrows will need to be revisited during the design phase if this pond site is selected.

Photo 7. Potential Pond Site 2, south of Gateway Boulevard, in the center of the potential pond site facing north

Pond Site 3

Pond Site 3 (**Photo 8**) is located east of I-95 and north of Gateway Boulevard, west of NE 2nd CT. This pond site is 0.94 acres and is within an area classifies as Multiple Dwelling Units, High Rise <Three stories or more>, FLUCCS 1340. This are is to the south of and associated with Village Royale on the Green East Club House Business Office. The area is entirely maintained St. Augustine grass (Stenotaphrum secundatum). This potential pond site is surrounded entirely by Multi-Family (FLUCCS 1340) and Single Family (FLUCCS 1210) residential land use. White Ibis (*Eudocimus albus)* were observed foraging within this areas during the January 2017 field visit. This potential pond site does not currently provide suitable nesting habitat for wading birds like the Little Blue Heron or Tricolored Heron because it is upland.

Photo 8. Potential Pond Site 3, north of Gateway Boulevard, on the north side of the potential pond site facing southwest

Pond Site 4

Pond Site 4 (**Photo 9**) is located north of Boynton Beach Boulevard and east of Old Boynton Road. This pond site is 0.75 acres and is within a vacant area that is classified as Fixed Single Family Units, FLUCCS 1210 and Commercial and Services, FLUCCS 1400 (SFWMD, 2011). The main vegetation type is maintained Bahia grass (*Paspalum notatum*), sea grape (*Coccoloba uvifera*), and an unidentified Ficus. This potential pond site is adjacent to Single Family (FLUCCS 1210) and Multi-Family (FLUCCS 1330). White Ibis were observed foraging within and adjacent to this area during the January 2017 field visit. This potential pond site does not currently provide suitable nesting habitat for wading birds like the Little Blue Heron and Tricolored Heron because it is upland.

Photo 9. Potential Pond Site 4, north of Boynton Beach Boulevard, of the west side of the potential pond site facing northeast

Pond Site 5

Pond Site 5 (**Photo 10**) is located south of Boynton Beach Boulevard and north of NW 1st Avenue, west of SW 2nd Street. This pond site is 0.74 acres and is within a vacant parcel classified as Fixed Single Family Units, FLUCCS 1210 (SFWMD, 2011). The main vegetation type is Bahia grass and one longleaf pine. This potential pond site is surrounded by Single Family (FLUCCS 1210) and Commercial and Services (FLUCCS 1400). This area is highly disturbed and fragmented and is not anticipated to impact listed species.

Photo 10. Potential Pond Site 5, south of Boynton Beach Boulevard, on the south side of the potential pond site facing northeast

Pond Site 6

Pond Site 6 (**Photo 11**) is located north of Boynton Beach Boulevard and east of NW 4th Street. This pond site is 0.56 acres and is within a vacant parcel classified as Fixed Single Family Units FLUCCS 1210 (SFWMD, 2011). The main vegetation type is Bahia grass and other weedy grass species. This potential pond site is surrounded by Single Family (FLUCCS 1210) land use. This area is highly disturbed and fragmented and is not anticipated to impact listed species.

Photo 11. Potential Pond Site 6, north of Boynton Beach Boulevard, on the west side of the potential pond site facing east

Proposed right-of-way acquisitions for the Boynton Beach Boulevard Interchange potential pond sites vary from 0.56 acre to 3.27 acres (**See Table 6**). Right-of-way that would have to be acquired consists primarily of developed land uses such as Fixed Single Family Units (FLUCCS 1210), Multiple Dwelling Units, High Rise <Three stories or more> (FLUCCS 1340), Commercial and Services (FLUCCS 1400). Pond Site 1 is within Melaleuca (FLUCCS 4240). The Melaleuca is highly disturbed and overgrown and is not anticipated to impact listed species. The six potential pond sites avoid wetlands impacts. None of the potential pond sites are within or adjacent to wetlands and, therefore, no impacts to wetlands are anticipated.

Table 8 Pond Site Right-of-Way Requirement

Evaluation Factors	Pond Site 1	Pond Site 2	Pond Site 3	Pond Site 4	Pond Site 5	Pond Site 6
Required Right of Way (Acres)	0.95	3.27	0.94	0.75	0.74	0.56

6.2 Indirect and Cumulative Impacts

"Indirect (secondary) effects" are those impacts that are linked and causally related to the proposed action. They include temporary and permanent indirect effects. For transportation projects, indirect impacts typically include any disturbance to the areas adjacent to the project area. These impacts include short-term impacts associated with road construction activities, as well as, long-term impacts. Further fragmentation of available habitat within the project areas is an indirect impact as part of the project. Though, the pond sites will create viable foraging habitat for some listed wading bird species. No other indirect impacts to listed species are anticipated as part of his project.

A "cumulative impact", as defined by the Council of Environmental Quality Regulation (40 CFR 1508.7), is "the impact on the environment which results from the incremental impacts of the action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency (federal or non-federal) or person undertakes such other actions**."** No cumulative impacts to the project areas or potential pond sites are anticipated due to the highly developed nature of the area along I-95 in Palm Beach County, specifically adjacent to the Boynton Beach Interchange and Gateway Boulevard Interchange.

6.3 Federally Listed Wildlife Species with the Potential to Occur within the Vicinity of the Project Areas

The following sections describe federally listed wildlife species that have the potential to occur within, or within the vicinity of, the project areas and potential pond sited, based on available suitable habitat, and are listed in the order corresponding to **Table 5**. These species include the Florida Scrub jay, Wood Stork, West Indian Manatee, and the Eastern Indigo snake. Both the Boynton Beach Boulevard Interchange and Gateway Boulevard Interchange project areas are found within the South Florida Ecosystem Management Area and USFWS Service Consultation Areas for the Florida scrub-jay, West Indian Manatee, and Atlantic Coast Plants. None of these federally listed species were observed during the field reviews. According to NMFS coordination, the proposed work is not anticipated directly impact areas that support EFH.

6.3.1 Florida Scrub-Jay

Florida Scrub-jay has a blue head, wings, and long tail with gray on their back and belly. The Florida Scrub-jay is endemic to Florida and has very specific habitat requirements, which include scattered patches of sand pine scrub, xeric oak scrub, and scrubby flatwoods. Florida Scrub-jay habitat requires maintenance through periodic fires that occur on excessively well drained soils, and have a maintained vegetation height of between four and six feet. Their main diet consists of insects, scrub oak acorns, and small vertebrates. The Florida Scrub-jay is similar in size to a blue jay (*Cyanocitta cristata*), but has distinctly different coloration. The USFWS classifies the Florida Scrub-jay as Federally Threatened due to habitat destruction, fire suppression, and habitat fragmentation.

Although the project areas are within a USFWS Florida Scrub-Jay Consultation Area, no suitable habitat exists within the project areas or potential pond sites. No Florida Scrub-jays were observed during the field reviews. The remaining areas of upland habitat within the project areas are highly disturbed, fragmented, and fire suppressed. The Rosemary Scrub Natural Area is a potential site where Florida Scrub-jays could be found, however, this area is outside the 500 foot buffer at both project locations. The projects will have no impact on any habitat that could be utilized by this avian species; therefore, the project is anticipated to have "no effect" on the Florida Scrub-jay.

6.3.2 Wood Stork

Wood Storks are large, colonial-nesting, wading birds. Primary nesting sites are cypress or mangrove swamps with foraging habitat consisting of marshes, ditches, and flooded pasture. Small fish are the main dietary item. USFWS guidelines state that impacts to appropriate wetland systems within a 15-mile radius of a colony may directly affect colony productivity. The radius area for Wood Storks, or CFA, is defined as the distance storks may fly from the colony to capture prey for their young. According to the ETDM Screening Tool, the Boynton Beach Boulevard Interchange and Gateway Boulevard Interchange project areas are within five CFA's: LOXOHATCHEE 619315; LOX NC-4; LOXAOHATCHEE 619314; LOXAHATCHEE 1; and WAKODAHATCEE. The USFWS classifies the Wood Storks as Federally Threatened due to loss of habitat and modification of wetland hydrology.

Although the project areas are located within five Wood Stork CFA's, no foraging habitat is expected to be lost due to the project; therefore, no Wood Stork foraging function assessment will be required. Suitable nesting habitat does not exist within the project areas or potential pond sites. No Wood Storks were observed during the field reviews. Since construction activities will occur adjacent to potential foraging areas associated with existing storm water ponds, the project "may affect, but is not likely to adversely affect" the Wood Stork.

6.3.3 West Indian Manatee

The West Indian Manatee is a large (up to 400 lbs.), gray, nearly hairless, walrus-like, aquatic mammal. Its tail is broad, rounded, and flattened, with flipper like front limbs, and three nails. Hind limbs are absent. The manatee has a broad head that is undifferentiated from its body. Its upper lip is deeply cleft and bears stiff bristles. Its eyes are small and it has no external ears. The manatee inhabits coastal waters, bays, rivers, and occasionally lakes. It requires warm-water refugia, such as springs or cooling effluent, during cold weather. Sheltered coves are important for feeding, resting, and calving. The manatee can cover a wide spatial range during warm months (coastal waters from Texas to North Carolina), but is restricted to springs and other warm-water areas, in Florida, during the winter. It may be found in any coastal or estuarine waters, but it is most common in peninsular Florida. The USFWS classifies the West Indian Manatee as Federally Threatened. Threats to this mammalian species include boat collisions, loss of habitat, and harmful algal blooms.

Although the project area is within a Manatee Consultation Area designated by the USFWS, no suitable habitat exists within the project areas or potential pond sites. The species is likely to occur in the Boynton Beach Canal, which is located between the two interchanges, but the canal will not be impacted by the project. No West Indian Manatees were observed during the field review. Exclusionary grates were observed on pipes in the canal, indicating that manatees may be known to occur in the canal. The project does not impact any habitats that would be populated by the West Indian Manatee; therefore, the project will have "no effect" on the West Indian Manatee.

6.3.4 Eastern Indigo Snake

The Eastern Indigo Snake is a large, black snake with cream to red coloration on the underside of the head. This species is non-venomous and can be up to eight feet long. The Eastern Indigo Snake is found throughout Georgia and Florida and can inhabit scrub, sandhill, wetland prairies, mangrove swamps, agricultural fields, and other human-altered habitats. They require protection from cold and desiccating conditions, and often use Gopher Tortoise

burrows as shelter. This species requires a large swath of land with a variety of habitat types in which to live. They are active year-round, but nest in May and June. The Eastern Indigo Snake is commensal to the Gopher Tortoise, using tortoise-dug burrows for shelter and nesting. The USFWS classifies the Eastern Indigo Snake as Federally Threatened due to habitat loss, degradation, and fragmentation.

According to comments in the ETDM, FWC biologists have documented a population of Gopher Tortoises in the remaining upland habitat north of Galaxy Elementary School, west of the Boynton Beach Boulevard Interchange project area. There are also unidentified burrows in the Pond Site 2 location that could provide habitat for the Eastern Indigo Snake. Therefore, Eastern Indigo Snakes may exist within the project areas or Pond Site 2, despite available habitat being low quality and highly fragmented. No Eastern Indigo Snakes were observed during the field reviews. Due to the potential for Eastern Indigo Snakes to occur in the upland areas, where construction activities will occur during the course of the projects, it is recommended that the USFWS's Standard Protection Measures (Updates August 12, 2013 – See **Appendix D**) be implemented. Implementation of these protection measures should minimize potential impacts to the Eastern Indigo Snake; therefore, this project "may effect, but is not likely to adversely affect" the Eastern Indigo Snake.

6.4 State Listed and Other Wildlife Species with the Potential to Occur within the Vicinity of the Project Areas

The following sections describe state listed species that have the potential to occur within, or within the vicinity of, the project areas, based on available suitable habitat, and are listed in order corresponding to **Table 5**. These species include: the Burrowing Owl; Little Blue Heron; Tricolored Heron; Bald Eagle; Gopher Tortoise; and the Florida Pine Snake. None of these state listed species were observed during the field reviews, but one gopher tortoise burrow was identified during the April 2016 field review. The burrow was located north of Galaxy Elementary, in the northeast quadrant of the I-95 and West Boynton Beach Boulevard Interchange project area.

6.4.1 Burrowing Owl

Burrowing Owls are small ground-dwelling owls that stand up to 10 inches tall, have a brown body, and long legs. The burrowing owl utilizes native prairies and cleared areas with short groundcover. This species utilizes burrows year-round for nesting and roosting in winter. The burrows are either self-dug or dug by another species, such as Gopher Tortoises. Their diet ranges from insects to lizards and from snakes to small mammals. The burrowing owl is protected under the Migratory Bird Treaty Act of 1918, and the FFWCC classifies the Burrowing Owl as a Species of Special Concern due to habitat destruction, degradation, and fragmentation.

According to comments in the ETDM, FFWCC biologists have documented a population of Gopher Tortoises in the remaining upland habitat north of Galaxy Elementary School, west of the Boynton Beach Boulevard Interchange project area. The remaining upland habitat where the Gopher Tortoise population occurs has the potential to be used by the Burrowing Owl. The potential pond sites that are currently vacant lots (Pond Site 2, Pond Site 3, Pond Site 4, Pond Site 5, and Pond Site 6), could be utilized by the Burrowing Owl. No Burrowing Owls were observed in the project area or potential pond sites. The project is not likely to adversely affect the Burrowing Owl.

6.4.2 Little Blue Heron and Tricolored Heron

The preferred habitat of these wading birds includes freshwater and brackish water wetlands; however, saltwater marshes are also utilized. Nesting is primarily accomplished in trees or shrubs in, or adjacent to, wetlands. Small fish and crustaceans are the primary food source of these species. FFWCC classifies these avian species as Species of Special Concern. Historic hunting by the millinery industry, bioaccumulation of contaminants, and habitat destruction are all factors that have contributed to the listed status of these species.

It is likely that these avian species will utilize roadside ditches and storm water ponds within the project areas for foraging, although nesting is highly unlikely due to limited available suitable habitat. The project does not impact wetlands and no direct impacts to surface waters that could be utilized as habitat by the Little Blue Heron and Tricolored Heron will occur. The project is not likely to adversely affect these state listed avian species.

6.4.3 Bald Eagle

The mature Bald Eagle has a white head, white tail, and a large, bright yellow bill; all other plumage is dark. Juveniles are dark with variable amounts of light splotching on their body, wings, and tail, and its head and bill are dark. The Bald Eagle is most commonly found close to coastal areas, bays, rivers, lakes, or other bodies of water that provide abundant food sources including fish, waterfowl, and wading birds. The Bald Eagle usually nests in tall trees (mostly live pines) which provide clear views of the surrounding area. Although the Bald eagle is not protected under state or federally threatened or endangered species regulations, they are protected the Bald and Golden Eagle Protection Act (16-U.S.C. 668-668c) and the Migratory Bird Treaty Act (16-U.S.C. 703-712). Protection zones are maintained around active nests by FFWCC.

It is unlikely that the Bald Eagle would utilize any habitat within the project areas or potential pond sites, as the locations are highly unsuitable for this species. No trees suitable for nesting are present within the project areas or potential pond sites. No Bald Eagle nests are known to occur within the project areas or potential pond sites and no individuals were observed during the field reviews. The nearest known nest (PB018) is 5.8 miles to the west, along Florida's Turnpike.

6.4.4 Gopher Tortoise

The Gopher Tortoise is a medium sized (9 – 11 inches) terrestrial turtle. Their main habitats are well-drained, sandy uplands, such as sandhills, scrub, pine flatwoods, coastal dunes, and disturbed lands, including road shoulders and old fields, as these habitats are important for burrowing. Additionally, many commensal species (Eastern Indigo Snake, Gopher Frog, etc.) use these burrows. Low growing plants such as wiregrass, legumes, and prickly pear are the main food source to Gopher Tortoises. The FFWCC classifies the Gopher Tortoise as Threatened due to habitat destruction, fragmentation, road kill, disease, and predation.

According to comments in the ETDM, FFWCC biologists have documented a population of Gopher Tortoises in the remaining upland habitat north of Galaxy Elementary School, west of the Boynton Beach Boulevard Interchange project area. This area was surveyed on April 12, 2016 and one Gopher Tortoise burrow was observed (**Photo 12**).

Photo 12. Gopher Tortoise Burrow; facing northeast

Additional areas where Gopher Tortoises might potentially occur were also surveyed, including Rosemary Scrub Natural Area (outside of the project areas) and a vacant parcel at the southwest quadrant of the I-95 and Gateway Boulevard Interchange (no right-of-way acquisitions), also identified as Potential Pond Site 2. Shallow burrows were observed at Potential Pond Site 2. They appeared to be characteristic of Green Iguana burrows, but this area should be inspected again during the permitting phase. No Gopher Tortoises, scat, or tracks were observed during the field visits. Gopher tortoise burrows were observed at the Rosemary Scrub Natural Area but is outside of the project area. Habitat that could be utilized by the gopher tortoise does not occur within either project area, but it does exist within Pond Site 2.

6.4.5 Florida Pine Snake

The Florida Pine Snake is large and has a gray to rusty brown body with reddish to dark tan blotches. This species is non-venomous and can be up to seven feet long. These snakes can be found throughout Florida, with the exception of the Everglades. The Florida Pine Snakes preferred habitats feature well-drained sandy soils with a moderate to open canopy (Franz 1992, Ernst and Ernst 2003). This species spends a significant time underground in the burrows of other species, or self-dug burrows. The FFWCC classifies the Florida Pine Snake as a Species of Special Concern due to habitat loss, degradation, and fragmentation.

No Florida Pine Snakes were observed during the field reviews. The project does not directly impact any habitat that could potentially support the Florida Pine Snake.

6.5 State and Federally Listed Plant Species

The project areas are within the USFWS Service Consultation Areas for Atlantic Coast Plants. Refer to **Table 6** for a summary of the state and federally listed plant species with the potential to occur within the vicinity of the project areas. The four-petal pawpaw is listed by the FDACS as Endangered. This species can be found in sand pine scrub vegetation on old coastal dune (Austin and Tatje, 1979). The Florida perforate cladonia is listed by the FDACS as Endangered. This species can be found growing in sand pine scrub habitat characterized by xeric white sands (USFWS, 1999). The tiny polygala is listed by the FDACS as Endangered. This species can be found in pine rockland, scrub, sandhill high pine, or open coastal spoil habitat (Gann and Bradley, 1995). None of these habitats are located within the project areas or potential pond sites and these species were not observed during the August 2015, April 2016, or January 2017 field reviews.

The project does not impact any habitat that might support the four-petal pawpaw or the Florida perforate cladonia. The tiny polygala could occur in the remaining upland habitat north of Galaxy Elementary School, however, this is unlikely due to the disturbed nature of the habitat.

7 Summary and Conclusions

The Boynton Beach Boulevard and Gateway Boulevard Interchange project areas were analyzed for the potential presence of threatened and endangered species (flora and fauna) in accordance with the FDOT PD&E Manual, *Part 2, Chapter 27 – Protected Species and Habitat*. Determinations were made regarding potential direct impacts to those listed species. The study methodology included reviews of the ETAT comments, literature reviews, agency database searches, agency coordination, GIS analyses, and field reviews (August 2015, April 2016, and January 2017). All ETAT comments have been reviewed and addressed. During review of the document, FFWCC updated their *Florida's Endangered and Threatened Species* List in January 2017. This document has been updated with the most current listed species as of April 10, 2017.

The project areas at both locations are highly urbanized. Natural habitat makes up just 2.6 percent of the total project areas; however, these upland areas are highly disturbed and of low quality given the high level of human use and habitat fragmentation. Five undeveloped parcels, two surface water swales, and six potential pond sites were evaluated for their ability to support listed species that could potentially occur within the project areas. No critical habitats or EFH exist within the project areas. Proposed improvements associated with the Gateway Boulevard Interchange project build alternatives would require between 2.07 and 2.35 acres of right-of-way acquisition. Proposed improvements associated with the Boynton Beach Boulevard Interchange project build alternatives would require between 0.82 and 1.39 acres of right-of-way acquisition.

Ten animal and three plant species protected by state and/or federal regulations and/or designations were determined to potentially occur within, or within the vicinity of, the project areas based on USFWS, FDACS, and FFWCC sources. The project areas have minimal suitable habitat available for use by listed species. The following species were evaluated based on the build alternative's potential and likelihood to directly or indirectly impact each species. It was determined that the project will to have "no effect" on the following federally listed species: the Florida Scrub-jay, West Indian Manatee, Four-petal Pawpaw, Florida Perforate Cladonia, and the Tiny Polygala. It was

found that the project "may effect, but is not likely to adversely affect" the following federally listed species: the Wood Stork and the Eastern Indigo Snake.

7.1 Commitments

Based on the findings of the preliminary data collection, general wildlife surveys, and coordination with USFWS and FFWCC through the ETDM process, the FDOT commits to:

- Performing protected species reviews of any proposed offsite pond locations during final design; and
- Adhering to the USFWS Standard Protection Measures for the Eastern Indigo Snake (2013) during the construction phase.

8 References

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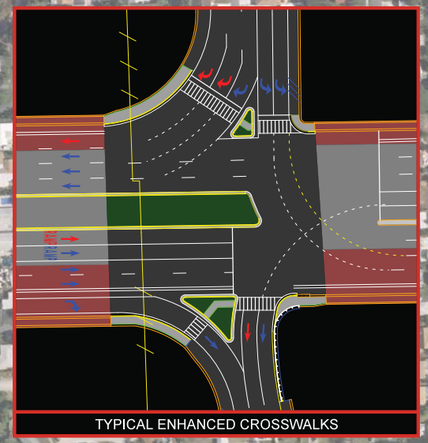
Appendix A

Concept Plans & Alternatives Evaluation Matrix



SEE INSET FOR NB I-95 ON RAMP

LEGEND
- PROPERTY LINE
- EXISTING R/W
- PROPROSED R/W
- EXISTING LIMITED ACCESS R/W
- PROPOSED LIMITED ACCESS R/W
- EXISTING ROADWAY
- PROPOSED ROADWAY
- EXISTING BRIDGE
- PROPOSED BRIDGE
- EXISTING LANES
- PROPOSED LANES

OLD BOYNTON ROAD
BEGIN PROJECT
BOYNTON BEACH BOULEVARD
WENDYS
BP
7-ELEVEN
GATEWAY CENTRE
MEDICAL OFFICES
NW 1ST AVENUE
W OCEAN AVENUE
SW 1ST COURT
NW 8TH STREET
NW 7TH COURT
NW 7TH STREET
W INDUSTRIAL AVENUE
INDUSTRIAL AVENUE
South Florida Rail Corridor/CSX Railroad
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9
NW 4TH AVENUE
GALAXY ELEMENTARY SCHOOL
NW 4TH STREET
NW 3RD STREET
NW 2ND STREET
NW 3RD COURT
NW 1ST STREET
LLOYD'S PLAZA
THE INN AT BOYNTON BEACH
MARATHON GAS
FIRST BAPTIST CHURCH OF BOYNTON BEACH
US POST OFFICE
SEACREST BOULEVARD
END PROJECT

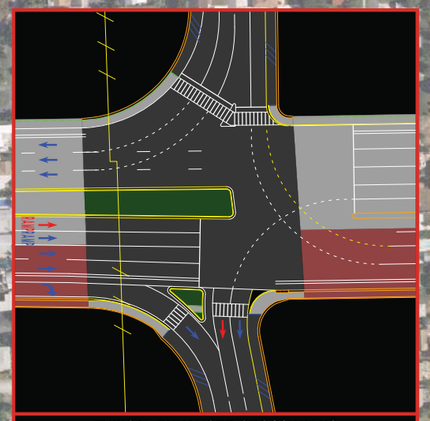
North
NOT TO SCALE

PD&E Study
SR 9/I-95 at SR-804/Boynton Beach Boulevard Interchange
SR 9/I-95 at Gateway Boulevard Interchange
FPID Nos.: 435804-1-22-01; 231932-1-22-01
ETDM Nos.: 14180 and 14181

FDOT

SR 9/I-95 at SR 804/Boynton Beach Boulevard Interchange
Alternative 1 - Conceptual Development Alternative (CDA)

Figure 6



TYPICAL ENHANCED CROSSWALKS

SEE INSET FOR NB I-95 ON RAMP

NB I-95 ON RAMP

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- PROPOSED R/W
- EXISTING LIMITED ACCESS R/W
- PROPOSED LIMITED ACCESS R/W
- EXISTING ROADWAY
- PROPOSED ROADWAY
- EXISTING BRIDGE
- PROPOSED BRIDGE
- EXISTING LANES
- PROPOSED LANES

OLD BOYNTON ROAD
BEGIN PROJECT
BOYNTON BEACH BOULEVARD
804
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GATEWAY CENTRE
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MEDICAL OFFICES
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W OCEAN AVENUE
SW 1ST COURT
South Florida Rail Corridor/CSX Railroad
INTERSTATE 95
NW 4TH AVENUE
GALAXY ELEMENTARY SCHOOL
NW 4TH STREET
NW 3RD STREET
LLOYD'S PLAZA
NW 2ND STREET
NW 3RD COURT
NW 1ST STREET
FIRST BAPTIST CHURCH OF BOYNTON BEACH
SEACREST BOULEVARD
MARATHON GAS
US POST OFFICE
THE INN AT BOYNTON BEACH
END PROJECT
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North
NOT TO SCALE

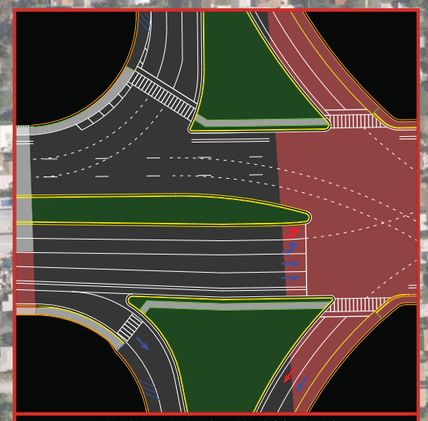
PD&E Study
SR 9/I-95 at SR-804/Boynton Beach Boulevard Interchange
SR 9/I-95 at Gateway Boulevard Interchange
FPID Nos.: 435804-1-22-01; 231932-1-22-01
ETDM Nos.: 14180 and 14181

FDOT

SR 9/I-95 at SR 804/Boynton Beach Boulevard Interchange

Alternative 2 - Streamlined CDA

Figure 7



SEE INSET FOR NB I-95 ON RAMP

LEGEND
- PROPERTY LINE
- EXISTING R/W
- PROPROSED R/W
- EXISTING LIMITED ACCESS R/W
- PROPOSED LIMITED ACCESS R/W
- EXISTING ROADWAY
- PROPOSED ROADWAY
- EXISTING BRIDGE
- PROPOSED BRIDGE
- EXISTING LANES
- PROPOSED LANES

OLD BOYNTON ROAD
BEGIN PROJECT
BOYNTON BEACH BOULEVARD
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MEDICAL OFFICES
NW 8TH STREET
NW 7TH COURT
NW 7TH STREET
NW 1ST AVENUE
W OCEAN AVENUE
SW 1ST COURT
W INDUSTRIAL AVENUE
INDUSTRIAL AVENUE
South Florida Rail Corridor/CSX Railroad
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GALAXY ELEMENTARY SCHOOL
NW 4TH STREET
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NW 2ND STREET
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LLOYD'S PLAZA
FIRST BAPTIST CHURCH OF BOYNTON BEACH
MARATHON GAS
US POST OFFICE
THE INN AT BOYNTON BEACH
SEACREST BOULEVARD
END PROJECT

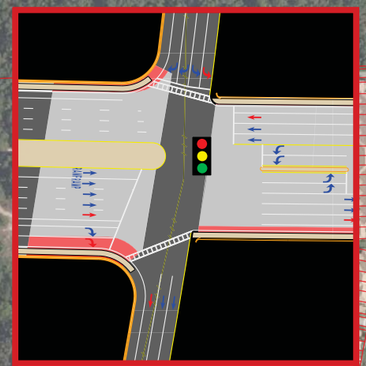
North
NOT TO SCALE

PD&E Study
SR 9/I-95 at SR-804/Boynton Beach Boulevard Interchange
SR 9/I-95 at Gateway Boulevard Interchange
FPID Nos.: 435804-1-22-01; 231932-1-22-01
ETDM Nos.: 14180 and 14181

FDOT

SR 9/I-95 at
SR 804/Boynton Beach Boulevard Interchange
Alternative 3 - Single Point Urban Interchange (SPUI)

Figure 8



LEGEND

- PROPERTY LINE
- EXISTING R/W
- PROPOSED R/W
- EXISTING LIMITED ACCESS R/W
- PROPOSED LIMITED ACCESS R/W
- PAVEMENT
- EXISTING BRIDGE
- PROPOSED BRIDGE
- EXISTING LANES
- PROPOSED LANES

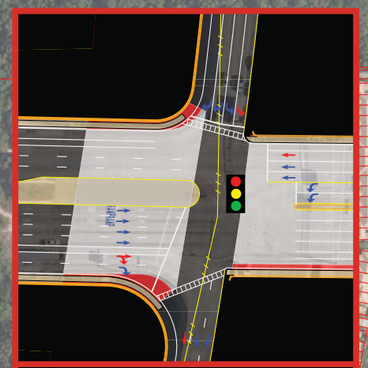
PD&E Study
SR 9/I-95 at SR-804/Boynton Beach Boulevard Interchange
SR 9/I-95 at Gateway Boulevard Interchange
FPID Nos.: 435804-1-22-01; 231932-1-22-01
ETDM Nos.: 14180 and 14181

FDOT

SR 9/I-95 at Gateway Boulevard Interchange Alternative 1 - Conceptual Development Alternative (CDA)

North
NOT TO SCALE

Figure 9



TYPICAL ENHANCED CROSSWALKS

1

2

3

LEGEND

- PROPERTY LINE
- EXISTING R/W
- PROPOSED R/W
- EXISTING LIMITED ACCESS R/W
- PROPOSED LIMITED ACCESS R/W
- PAVEMENT
- EXISTING BRIDGE
- PROPOSED BRIDGE
- EXISTING LANES
- PROPOSED LANES

PD&E Study
SR 9/I-95 at SR-804/Boynton Beach Boulevard Interchange
SR 9/I-95 at Gateway Boulevard Interchange
FPID Nos.: 435804-1-22-01; 231932-1-22-01
ETDM Nos.: 14180 and 14181

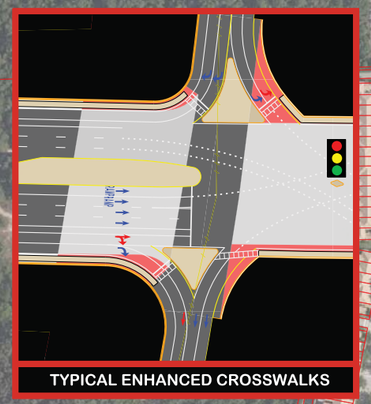
FDOT

SR 9/I-95 at Gateway Boulevard Interchange

Alternative 2 - Streamlined CDA

North
NOT TO SCALE

Figure 10



1

Commerce Park Dr
High Ridge Road
SOUTH FLORIDA RAIL CORRIDOR
CSX RR
SB EXIT RAMP
NB ENTRANCE RAMP
I-95
NE 1st Way
NW 1st Street
N Seacrest Blvd
QUANTUM VILLAGE
Quantum Village
QUANTUM TOWN CENTER
Gateway Blvd.
SB ENTRANCE RAMP
NW 21st St
NW 2nd St
NW 2nd Ct
NW 1st St
NE 1st Lane
NE 1st Way

LEGEND

- PROPERTY LINE
- EXISTING R/W
- PROPOSED R/W
- EXISTING LIMITED ACCESS R/W
- PROPOSED LIMITED ACCESS R/W
- PAVEMENT
- EXISTING BRIDGE
- PROPOSED BRIDGE
- EXISTING LANES
- PROPOSED LANES

North
NOT TO SCALE

PD&E Study
SR 9/I-95 at SR-804/Boynton Beach Boulevard Interchange
SR 9/I-95 at Gateway Boulevard Interchange
FPID Nos.: 435804-1-22-01; 231932-1-22-01
ETDM Nos.: 14180 and 14181

FDOT

SR 9/I-95 at Gateway Boulevard Interchange Alternative 1 - Single Point Urban Interchange (SPUI)

Figure 11

ALTERNATIVES EVALUATION MATRIX
I-95 at Boynton Beach Boulevard

Evaluation Factors	No Build Alternative	TSM&O[1]	Concept Development Alternative	Streamlined Concept Development Alternative	Single Point Urban Interchange (SPUI) Alternative
Engineering					
Meets Geometric Design Criteria	No	No	Yes	Some	Yes
Provides Current FDOT Standards for Bicycle Facilities	No	No	Yes	Yes	Yes
Provides Pedestrian Facilities	Yes	Yes	Yes	Yes	Yes
Improves Mobility	No	Some	Yes	Yes	Yes
Improves Traffic Operations	No	Some	Yes	Yes	Yes
Improves Safety	No	Some	Yes	Yes	Yes
Meets Purpose & Need	No	No	Yes	Yes	Yes
Physical Resource Impacts					
Residential Properties Impacted – Single Family	0	0	0	0	0
Residential Properties Impacted – Multifamily	0	0	1	1	1
Schools Impacted	0	0	1	1	1
Business Properties Impacted	0	0	21	14	14
Total Properties Impacted	**0**	**0**	**23**	**16**	**16**
Potential Relocations - Residential	0	0	1	1	1
Potential Relocations - Commercial	0	0	1	0	0
Contamination Sites Impacted	0	0	1	0	0
Required Right of Way (Acres)	0	0	1.207	0.644	0.644
Cultural and Natural Resource Impacts					
Improves Air Quality	No	Some	Yes	Yes	Yes
Noise Receptors[2]	None	None	TBD	TBD	TBD
Wetlands (acres)	0	0	0	0	0
Wildlife and Habitat	0	0	0	0	0
Archaeological Sites	0	0	0	0	0
Current and Previously Recorded Historic Structures To Avoid	0	2	2	2	2
Parks / Recreation (Section 4f)	0	0	0	0	0

ALTERNATIVES EVALUATION MATRIX
I-95 at Boynton Beach Boulevard

Evaluation Factors	No Build Alternative	TSM&O[1]	Concept Development Alternative	Streamlined Concept Development Alternative	Single Point Urban Interchange (SPUI) Alternative
Operational Improvement (Design Year 2040)					
Total Intersection Delay AM Peak Hour (minutes/vehicle)	10.75	8.45	4.75	4.77	4.33
Reduction in Delay from No-Build AM Peak Hour (percent)	-	**21.4%**	**55.8%**	**55.6%**	**59.7%**
Total Intersection Delay PM Peak Hour (minutes/vehicle)	8.68	7.27	5.47	4.82	4.45
Reduction in Delay from No-Build PM Peak Hour (percent)	-	**16.2%**	**37.0%**	**44.5%**	**48.7%**
Costs ($-millions)					
Roadway Construction (LRE Cost)	N/A	N/A	$32,914,899	$20,377,866	$47,478,774
Engineering/Design (10% of Construction)	N/A	N/A	$3,291,490	$2,037,787	$4,747,877
CEI (15% of Construction)	N/A	N/A	$4,937,235	$3,056,680	$7,121,816
Right-of-Way Acquisition	N/A	N/A	$18,600,000	$13,600,000	$13,600,000
TOTAL COST	**N/A**	N/A	**$59,743,624**	**$39,072,333**	**$72,948,467**

sec/veh – seconds per vehicle

1 Transportation Systems Management and Operations

2 Noise Impacts will be evaluated following selection of the Recommended Alternative

All public comments received will be considered during the PD&E Study

PRELIMINARY

ALTERNATIVES EVALUTATION MATRIX
I-95 at Gateway Boulevard

Evaluation Factors	No Build Alternative	TSM&O[1]	Concept Development Alternative	Streamlined Concept Development Alternative	Single Point Urban Interchange (SPUI) Alternative
Engineering					
Meets Geometric Design Criteria	No	No	Yes	Some	Some
Provides Current FDOT Standards for Bicycle Facilities	No	No	Yes	Yes	Yes
Provides Pedestrian Facilities	Yes	Yes	Yes	Yes	Yes
Improves Mobility	No	Some	Yes	Yes	Yes
Improves Traffic Operations	No	Some	Yes	Yes	Yes
Improves Safety	No	Some	Yes	Yes	Yes
Meets Purpose & Need	No	No	Yes	Yes	Yes
Physical Resource Impacts					
Residential Properties Impacted – Single Family	0	0	41	25	25
Residential Properties Impacted – Multifamily	0	0	1	1	1
Schools Impacted	0	0	0	0	0
Business Properties Impacted	0	0	11	7	7
Total Properties Impacted	**0**	**0**	**53**	**33**	**33**
Displacements - Residential	0	0	5	5	6
Displacements - Commercial	0	0	1	1	1
Contamination Sites Impacted	0	0	5	3	3
Required Right of Way (Acres)	0	0	2.37	2.28	2.07
Cultural and Natural Resource Impacts					
Improves Air Quality	No	Some	Yes	Yes	Yes
Noise Receptors[2]	No	No	TBD	TBD	TBD
Wetlands (acres)	0	0	0	0	0
Wildlife and Habitat	0	0	0	0	0
Archaeological Sites	0	0	0	0	0
Current and Previously Recorded Historic Structures To Avoid	0	0	1	1	1
Parks / Recreation (Section 4f)	0	0	0	0	0

ALTERNATIVES EVALUTATION MATRIX
I-95 at Gateway Boulevard

Evaluation Factors	No Build Alternative	TSM&O[1]	Concept Development Alternative	Streamlined Concept Development Alternative	Single Point Urban Interchange (SPUI) Alternative
Operational Improvement (Design Year 2040)					
Total Intersection Delay AM Peak Hour (minutes/vehicle)	11.00	8.24	3.49	3.99	3.28
Reduction in Delay from No-Build AM Peak Hour (percent)	-	**25.1%**	**68.3%**	**63.7%**	**70.2%**
Total Intersection Delay PM Peak Hour (minutes/vehicle)	8.02	6.79	3.02	3.38	2.85
Reduction in Delay from No-Build PM Peak Hour (percent)	-	**15.3%**	**62.3%**	**57.9%**	**64.5%**
Costs ($-millions)					
Roadway Construction	N/A	N/A	$19,946,597	$18,109,969	$20,545,855
Engineering/Design (10% of Construction)	N/A	N/A	$1,994,660	$1,810,997	$2,054,586
CEI (15% of Construction)	N/A	N/A	$2,991,990	$2,716,495	$3,081,878
Right-of-Way Acquisition	N/A	N/A	$13,000,000	$10,700,000	$10,100,000
TOTAL COST	**N/A**	**Low**	**$37,933,247**	**$33,337,461**	**$35,782,319**

sec/veh – seconds per vehicle

1 Transportation Systems Management and Operations

2 Noise Impacts will be evaluated following selection of the Preferred Alternative

All public comments received will be considered during the PD&E Study

PRELIMINARY

Appendix B

ETDM Agency Comments Project #14181 – SR-9/I-95 at Gateway Boulevard Interchange

Agency Environmental Comments

#14181 - SR-9/I-95 at Gateway Boulevard Interchange Submit Comment | Request Response | Watch Project

District: District 4 **Phase:** Programming Screen **Contact Information:** Gaspar Jorge Padron (850) 777-4320 gaspar.padron@dot.state.fl.us

Alternative #1

Project Effects Overview for Alternative #1

Issue	Degree of Effect	Organization	Date Reviewed
Social and Economic			
Land Use Changes	1 Enhanced	FL Department of Economic Opportunity	08/14/2014
Land Use Changes	3 Moderate	FDOT District 4	09/03/2014
Social	2 Minimal	US Environmental Protection Agency	09/06/2014
Social	2 Minimal	FDOT District 4	09/03/2014
Relocation Potential	4 Substantial	FDOT District 4	09/03/2014
Farmlands	0 None	Natural Resources Conservation Service	07/31/2014
Aesthetic Effects	2 Minimal	FDOT District 4	09/03/2014
Economic	2 Minimal	FDOT District 4	09/03/2014
Economic	0 None	FL Department of Economic Opportunity	08/14/2014
Mobility	1 Enhanced	FDOT District 4	09/03/2014
Cultural			
Historic and Archaeological Sites	3 Moderate	FL Department of State	08/14/2014
Recreation Areas	0 None	FL Department of Environmental Protection	09/04/2014
Recreation Areas	0 None	South Florida Water Management District	08/18/2014
Recreation Areas	0 None	US Environmental Protection Agency	09/06/2014
Recreation Areas	N/A N/A / No Involvement	National Park Service	08/01/2014
Natural			
Wetlands	0 None	US Army Corps of Engineers	08/18/2014
Wetlands	0 None	South Florida Water Management District	08/18/2014
Wetlands	0 None	FL Department of Environmental Protection	09/04/2014
Wetlands	2 Minimal	US Fish and Wildlife Service	07/28/2014
Wetlands	0 None	US Environmental Protection Agency	09/06/2014

Wetlands	0 None	National Marine Fisheries Service	08/12/2014
Water Quality and Quantity	2 Minimal	South Florida Water Management District	08/18/2014
Water Quality and Quantity	0 None	US Environmental Protection Agency	09/06/2014
Water Quality and Quantity	0 None	FL Department of Environmental Protection	09/04/2014
Floodplains	0 None	US Environmental Protection Agency	09/06/2014
Floodplains	0 None	South Florida Water Management District	08/18/2014
Wildlife and Habitat	2 Minimal	FL Fish and Wildlife Conservation Commission	08/14/2014
Wildlife and Habitat	2 Minimal	US Fish and Wildlife Service	07/28/2014
Coastal and Marine	0 None	National Marine Fisheries Service	08/12/2014
Coastal and Marine	0 None	South Florida Water Management District	08/18/2014
Physical			
Air Quality	2 Minimal	US Environmental Protection Agency	09/06/2014
Contamination	2 Minimal	FL Department of Environmental Protection	09/04/2014
Contamination	2 Minimal	US Environmental Protection Agency	09/06/2014
Contamination	0 None	South Florida Water Management District	08/18/2014
Navigation	N/A N/A / No Involvement	US Army Corps of Engineers	08/18/2014
Navigation	N/A N/A / No Involvement	US Coast Guard	07/24/2014
Special Designations			
Special Designations	0 None	South Florida Water Management District	08/18/2014
Special Designations	0 None	US Environmental Protection Agency	09/06/2014

ETAT Reviews: Social and Economic

Land Use Changes

Project Effect Comments

Coordinator Summary Degree of Effect: 3 *Moderate*
Response By: FDOT District 4 (11/20/2014)
Comments:

FDEO reported that the project is compatible with the development goals of the City of Boynton Beach. FDEO noted that the project is not located in an Area of Critical State Concern or within the Coastal High Hazard Area and does not encroach on a military base; however, since the project is located near public recreational features, impacts to Section 4(f) resources should be analyzed. The project is included in the FY 2014 - 2019 FDOT Work Program, the Strategic Intermodal System Cost Feasible Plan 2024 - 2040, the Palm Beach Metropolitan Planning Organization (MPO) FY 2015 - 2019 Transportation Improvement Program (TIP), and the Palm Beach County Comprehensive Plan (reflected on Map TE 14.1). It is not identified in the Palm Beach MPO Cost Feasible 2035 Long Range Transportation Plan (LRTP) or the State Transportation Improvement Program

(STIP). While the project is expected to accommodate expanding residential and industrial activities within the area, potential impacts to residential uses are anticipated as a result of additional right-of-way required for the improvements. Therefore, a Summary DOE of Moderate has been assigned to the Land Use Changes issue.

During the Project Development phase, public outreach will be conducted by FDOT District Four in coordination with the Palm Beach MPO and the City of Boynton Beach to obtain feedback from residents and businesses that may be impacted by the interchange improvement. FDOT District Four will also coordinate with the City of Boynton Beach and the Palm Beach MPO to ensure that 1) the project is included on the Future Transportation Map of the adopted City of Boynton Beach Comprehensive Plan and is consistent with the adopted Palm Beach MPO LRTP and 2) funding is identified for all future project phases in the TIP, LRTP, STIP, and FDOT SIS Cost Feasible Plan.

⊞ 1 **FL Department of Economic Opportunity (08/14/2014)**

⊞ 3 **FDOT District 4 (09/03/2014)**

The following organization(s) were expected to but did not submit comments for this alternative about potential direct effects in the Land Use Changes category: Not Available. Contact the ETDM Help Desk for assistance.

Back to Alternative #1

Social

Project Effect Comments

Coordinator Summary Degree of Effect: 2 *Minimal*
Response By: FDOT District 4 (11/20/2014)
Comments:

While access to residences and businesses could temporarily be affected and/or modified as a result of the interchange improvement, overall impacts on the social environment and community cohesion are anticipated to be limited as the project will accommodate the expanding residential and industrial uses within the vicinity of the interchange (supporting goals of both Palm Beach County and the City of Boynton Beach). However, given the fact that the project is in an area with minority and low-income households and a population deficient in English proficiency, a Summary DOE of Minimal has been assigned to the Social issue.

During the Project Development phase, public outreach will be conducted by FDOT District Four in coordination with the Palm Beach Metropolitan Planning Organization and the City of Boynton Beach to solicit input from the general public to ensure that both the social and transportation needs of the community are addressed through the project. To avoid and/or minimize potential impacts to the greatest extent practicable, FDOT District Four will also prepare an Air Quality Technical Memorandum (see Air Quality issue), Noise Study Report (see Noise issue), and Sociocultural Effects Evaluation (in accordance with Part 2, Chapter 9 of the FDOT PD&E Manual) with particular focus on civil rights and environmental justice considerations. It should additionally be noted that Limited English Proficiency (LEP) accommodations will be required during public outreach.

⊞ 2 **US Environmental Protection Agency (09/06/2014)**

⊞ 2 **FDOT District 4 (09/03/2014)**

The following organization(s) were expected to but did not submit comments for this alternative about potential direct effects in the Social category: Not Available. Contact the ETDM Help Desk for assistance.

Back to Alternative #1

Relocation Potential

Project Effect Comments

Coordinator Summary Degree of Effect: 4 *Substantial*
Response By: FDOT District 4 (11/20/2014)
Comments:

The proposed project is anticipated to require additional right-of-way along the northern and southern portions of Gateway Boulevard, both east and west of the interchange. The acquisition of new right-of-way has the potential to impact approximately eleven commercial businesses located within 1,000 feet to the west of the interchange (no relocations are anticipated) and twenty-seven residential units located within 1,000 feet to the east of the interchange (this may result in the relocation of up to twenty-four units). Further, access to businesses and residences could temporarily be affected and/or modified during project construction. For these reasons, a Summary DOE of Substantial has been assigned to the Relocation Potential issue.

A Conceptual Stage Relocation Plan will be prepared during the Project Development stage if relocations are determined to be necessary. Potential relocation effects should be assessed further during Project Development as more detailed and finalized project information regarding right-of-way needs becomes available. The proposed interchange improvements will be adjusted so as to avoid or minimize impacts to identified features.

⊞ 4 **FDOT District 4 (09/03/2014)**
The following organization(s) were expected to but did not submit comments for this alternative about potential direct effects in the Relocation Potential category: Not Available. Contact the ETDM Help Desk for assistance.

Back to Alternative #1

Farmlands

Project Effect Comments

Coordinator Summary Degree of Effect: 0 *None*
Response By: FDOT District 4 (11/20/2014)
Comments:

NRCS determined that there are no Prime, Unique or Locally Important Farmland soils within any of the project buffers. In addition, the project is located within the Miami Urbanized Area. According to Part 2, Chapter 28, Section 28-2.1 of the FDOT PD&E Manual, transportation projects situated within urbanized areas with no adjacent present or future agricultural lands are excluded from Farmland Assessments. Since the project is located within a designated urban area anticipated to continue to support residential and industrial uses, a Summary DOE of None has been assigned to the Farmlands issue.

⊞ 0 **Natural Resources Conservation Service (07/31/2014)**
The following organization(s) were expected to but did not submit comments for this alternative about potential direct effects in the Farmlands category: Not Available. Contact the ETDM Help Desk for assistance.

Back to Alternative #1

Aesthetic Effects

Project Effect Comments

Coordinator Summary Degree of Effect: 2 *Minimal*
Response By: FDOT District 4 (11/20/2014)
Comments:

The project is consistent with the area's future land use vision as it is expected to enhance access to the Quantum Park at Boynton Beach Development of Regional Impact and support growing residential and industrial activities. Given the urban nature of the surrounding project area, impacts to aesthetics/the existing visual environment should be limited. Therefore, a Summary DOE of Minimal has been assigned to the Aesthetic Effects issue.

During the Project Development phase, public outreach will be conducted by FDOT District Four in coordination with the Palm Beach Metropolitan Planning Organization and the City of Boynton Beach to solicit opinions and preferences from residents and businesses on potential project effects and general design concepts related to aesthetics.

⊞ 2 **FDOT District 4 (09/03/2014)**
The following organization(s) were expected to but did not submit comments for this alternative about potential direct effects in the Aesthetic Effects category: Not Available. Contact the ETDM Help Desk for assistance.

Back to Alternative #1

Economic

Project Effect Comments

Coordinator Summary Degree of Effect: 2 *Minimal*
Response By: FDOT District 4 (11/20/2014)
Comments:

By improving operational capacity and overall traffic operations, the project is intended to accommodate future travel demand as a result of expanding industrial and residential uses within the vicinity of the interchange. In addition, the improvements will enhance access to SR-9/I-95 (from the east and west) and other major transportation facilities and employment centers (including freight facilities) of Southeast Florida. While no business relocations are anticipated, access to residences and businesses could temporarily be affected and/or modified during construction. Therefore, a Summary DOE of Minimal has been assigned to the Economic issue.

During the Project Development phase, public outreach will be conducted by FDOT District Four in coordination with the Palm Beach Metropolitan Planning Organization and the City of Boynton Beach to solicit input from residents and businesses (located within the vicinity of the interchange) regarding potential economic enhancements/impacts (particularly access to businesses) as a result of the project.

⊞ 2 **FDOT District 4 (09/03/2014)**

⊞ 0 **FL Department of Economic Opportunity (08/14/2014)**
The following organization(s) were expected to but did not submit comments for this alternative about potential direct effects in the Economic category: Not Available. Contact the ETDM Help Desk for assistance.

Back to Alternative #1

Mobility

Project Effect Comments

Coordinator Summary Degree of Effect: 1 *Enhanced*
Response By: FDOT District 4 (11/20/2014)
Comments:

Through improved operational capacity and overall traffic operations, the proposed interchange improvement is anticipated to 1) accommodate future travel demand (thus achieving acceptable Levels of Service at the interchange), 2) allow SR-9/I-95 to continue to facilitate the north-south movement of local and regional traffic, 3) enhance access to SR-9/I-95 and other major transportation facilities and employment centers in Southeast Florida, 4) improve freight mobility, 5) enhance emergency evacuation and response times, and 6) reduce conflict points and the potential occurrence of collisions. Therefore, a Summary DOE of Enhanced has been assigned to the Mobility issue.

During the Project Development phase, public outreach will be conducted by FDOT District Four in coordination with the Palm Beach Metropolitan Planning Organization and the City of Boynton Beach to solicit community opinions and preferences, targeting input from the transportation disadvantaged population, regarding the project.

⊞ 1 **FDOT District 4 (09/03/2014)**
The following organization(s) were expected to but did not submit comments for this alternative about potential direct effects in the Mobility category: Not Available. Contact the ETDM Help Desk for assistance.

Back to Alternative #1

ETAT Reviews: Cultural

Section 4(f) Potential

Project Effect Comments

Coordinator Summary Degree of Effect: 2 *Minimal*
Response By: FDOT District 4 (11/20/2014)
Comments:

Potentially protected Section 4(f) resources within proximity to the interchange include a native preservation area associated with the Palm Beach County Children's Services Council building [although not considered a public park, a Section 4(f) Determination of Applicability (DOA) should be prepared and coordinated with FHWA] and the Ezell Hester, Jr. Community Center and Park. Access to these features could be temporarily affected during project construction. In addition, unrecorded cultural resources (eligible or potentially eligible for listing in the National Register of Historic Places) may exist since a comprehensive survey has not been conducted for the project area. For these reasons, a Summary DOE of Minimal has been assigned to the Section 4(f) Potential issue.

During Project Development, a Section 4(f) Determination of Applicability (DOA) will be conducted in coordination with FHWA (in accordance with Part 2, Chapter 13 of the FDOT PD&E Manual) to determine the extent of Section 4(f) involvement and focus any required documents on the avoidance and/or minimization of impacts.

No ETAT Reviews were submitted for the Section 4(f) Potential Issue.
The following organization(s) were expected to but did not submit comments for this alternative about potential direct effects in the Section 4(f) Potential category: Not Available. Contact the ETDM Help Desk for assistance.

Back to Alternative #1

Historic and Archaeological Sites

Project Effect Comments

Coordinator Summary Degree of Effect: 3 *Moderate*
Response By: FDOT District 4 (11/20/2014)
Comments:

FDOS commented that there is one known significant resource in the project area (the Seaboard Air Line Railway); it has not been evaluated by the SHPO. FDOS also noted that since the project area has not been comprehensively surveyed, other resources of potential significance may be present. Due to the possible presence of cultural resources eligible or potentially eligible for listing in the National Register of Historic Places (NRHP) within the project area, a Summary DOE of Moderate has been assigned to the Historic and Archaeological Sites issue.

During Project Development, a Cultural Resource Assessment Survey will be conducted (in accordance with Part 2, Chapter 12 of the FDOT PD&E Manual) to determine the presence of historic, cultural and archeological resources in the area and evaluate their eligibility for listing in the NRHP. Any potential impacts to such resources will be avoided and/or minimized during the process.

⊞ 3 **FL Department of State (08/14/2014)**
The following organization(s) were expected to but did not submit comments for this alternative about potential direct effects in the Historic and Archaeological Sites category: Not Available. Contact the ETDM Help Desk for assistance.

Back to Alternative #1

Recreation Areas

Project Effect Comments

Coordinator Summary Degree of Effect: 0 *None*
Response By: FDOT District 4 (11/20/2014)
Comments:

While a native preservation area associated with the Palm Beach County Children's Services Council building (although not considered a public park, but has the potential to be a Section 4(f) resource) and the Ezell Hester, Jr. Community Center and Park are located within proximity to the interchange, no recreation areas/features are present within the 200-foot project buffer. No direct impacts to these resources are anticipated. For this reason, a Summary DOE of None has been assigned to the Recreation Areas issue.

An assessment of potential impacts to recreational features/areas will be conducted during Project Development. Future environmental documentation will include an evaluation of the direct, indirect, and cumulative impacts of the proposed project and construction on any public lands and proposed acquisition sites. Impacts will be avoided and/or minimized during the process. FDOT District Four will coordinate with the appropriate agencies concerning the necessary studies, documentation and commitments needed to adequately address any identified resources in accordance with federal, state, and local laws and regulations.

⊞ 0 **FL Department of Environmental Protection (09/04/2014)**

⊞ 0 **South Florida Water Management District (08/18/2014)**

⊞ 0 **US Environmental Protection Agency (09/06/2014)**

⊞ N/A **National Park Service (08/01/2014)**
The following organization(s) were expected to but did not submit comments for this alternative about potential direct effects in the Recreation Areas category: Not Available. Contact the ETDM Help Desk for assistance.

Back to Alternative #1

ETAT Reviews: Natural

Wetlands

Project Effect Comments

Coordinator Summary Degree of Effect: 2 *Minimal*
Response By: FDOT District 4 (11/20/2014)
Comments:

USACE stated that if work is to be performed within waters of the United States (includes existing ditches, canals, etc.) to improve the stormwater management system, a nationwide permit would likely be required. SFWMD also noted that multiple existing Environmental Resource Permits cover portions of the project area; these permits will likely need to be modified. Due to the limited amount of wetlands within the vicinity of the project and the fact that no impacts this resource or surface waters are anticipated, a Summary DOE of Minimal has been assigned to the Wetlands issue.

During Project Development, potential wetland impacts will be evaluated through a Wetlands Evaluation Technical Memorandum to be prepared in accordance with Part 2, Chapter 18 of the FDOT PD&E Manual. All necessary measures will be taken to avoid and/or minimize impacts to wetlands to the greatest extent practicable during project design. Should avoidance and/or minimization not be practicable, a Mitigation Plan will be prepared. In addition, existing compensatory mitigation sites within the area of influence will be identified and reviewed. Further, best management practices will be utilized during project construction and all applicable permits (including an Environmental Resource Permit) will be obtained in accordance with federal, state, and local laws and regulations.

⊞ 0 **US Army Corps of Engineers (08/18/2014)**

⊞ 0 **South Florida Water Management District (08/18/2014)**

⊞ 0 **FL Department of Environmental Protection (09/04/2014)**

⊞ 2 **US Fish and Wildlife Service (07/28/2014)**

⊞ 0 **US Environmental Protection Agency (09/06/2014)**

⊞ 0 **National Marine Fisheries Service (08/12/2014)**

The following organization(s) were expected to but did not submit comments for this alternative about potential direct effects in the Wetlands category: Not Available. Contact the ETDM Help Desk for assistance.

Back to Alternative #1

Water Quality and Quantity

Project Effect Comments

Coordinator Summary Degree of Effect: 2 *Minimal*
Response By: FDOT District 4 (11/20/2014)
Comments:

No impaired waters are located within the project vicinity; however, the project may result in construction related disturbances as well as additional stormwater treatment and right-of-way for retention/detention ponds or swales to meet regulatory water quality criteria. SFWMD identified multiple existing Environmental Resource Permits within the project area that will likely need to be modified; the project permit must meet the criteria of Applicant's Handbook Volume II. Based on the foregoing, a Summary DOE of Minimal has been assigned to the Water Quality and Quantity issue.

During Project Development, FDOT District Four will conduct a Water Quality Impact Evaluation (in accordance with Part 2, Chapter 20 of the FDOT PD&E Manual) and coordinate with all relevant agencies for the design of the proposed stormwater system and the requirements for stormwater treatment, evaluating existing stormwater treatment adequacy and details on the future stormwater treatment facilities. All necessary permits will be obtained in accordance with federal, state, and local laws and regulations.

⊞ 2 **South Florida Water Management District (08/18/2014)**

⊞ 0 **US Environmental Protection Agency (09/06/2014)**

⊞ 0 **FL Department of Environmental Protection (09/04/2014)**

The following organization(s) were expected to but did not submit comments for this alternative about potential direct effects in the Water Quality and Quantity category: Not Available. Contact the ETDM Help Desk for assistance.

Back to Alternative #1

Floodplains

Project Effect Comments

Coordinator Summary Degree of Effect: 0 *None*
Response By: FDOT District 4 (11/20/2014)
Comments:

The proposed interchange improvements will not encroach into any special flood zone hazard areas (100-year floodplain). Therefore, a Summary DOE of None has been assigned to the Floodplains issue.

⊞ 0 **US Environmental Protection Agency (09/06/2014)**

⊞ 0 **South Florida Water Management District (08/18/2014)**

The following organization(s) were expected to but did not submit comments for this alternative about potential direct effects in the Floodplains category: Not Available. Contact the ETDM Help Desk for assistance.

Back to Alternative #1

Wildlife and Habitat

Project Effect Comments

Coordinator Summary Degree of Effect: 2 *Minimal*
Response By: FDOT District 4 (11/20/2014)
Comments:

The interchange is within the South Florida Ecosystem Management Area; FWS Consultation Areas for the Florida scrub-jay, West Indian Manatee, and Atlantic Coast Plants; and Core Foraging Areas of four active nesting Wood Stork colonies. FWC indicated that the only remaining natural habitat along the alignment is north of Gateway Boulevard at the west end of the project area, where a strip of remnant sand pine scrub on the west side of the Quantum Village commercial area grades into a shrub swamp; there is also a hardwood/pine forested "native preservation area" of approximately one acre located between the Children's Services Council facility and High Ridge Road. FWC stated that impacts could be minimized if construction takes place in previously disturbed sites and avoids the remaining xeric scrub area or other natural areas. For these reasons and given the urban nature of the area, a Summary DOE of Minimal has been assigned to the Wildlife and Habitat issue.

The final design of the project will avoid and/or minimize impacts to wetlands/wildlife and habitat to the greatest extent practicable (including confining new DRAs to previously disturbed sites), and best management practices will be utilized during project design and construction; appropriate mitigation will also be provided for unavoidable impacts. During Project Development, an Endangered Species Biological Assessment will be prepared in compliance with Section 7 of the Endangered Species Act (ESA) of 1973, as amended (16 USC 1531 et seq) and in accordance with Part 2, Chapter 27 of the FDOT PD&E Manual. FWC stated that 1) plant community mapping/wildlife surveys are to be performed along the right-of-way and within sites proposed for Drainage Retention Areas, 2) permits are to be obtained if gopher tortoises or nests of other listed species are present within any permanent or temporary construction areas, and 3) a compensatory mitigation plan is to be prepared including the replacement of any wetland, upland, or aquatic habitat lost as a result of the project. USFWS indicated that a functional assessment using the USFWS's Wood Stork Foraging Analysis Methodology is required on the foraging habitat to be impacted and the foraging habitat provided as mitigation for projects that impact 5 or more acres of wood stork foraging habitat.

⊞ 2 **FL Fish and Wildlife Conservation Commission (08/14/2014)**

⊞ 2 **US Fish and Wildlife Service (07/28/2014)**

The following organization(s) were expected to but did not submit comments for this alternative about potential direct effects in the Wildlife and Habitat category: Not Available. Contact the ETDM Help Desk for assistance.

Back to Alternative #1

Coastal and Marine

Project Effect Comments

Coordinator Summary Degree of Effect: 0 *None*
Response By: FDOT District 4 (11/20/2014)
Comments:

As the project is located approximately two miles west of the Atlantic Ocean and Intracoastal Waterway, it is not within an area considered to have coastal or marine resources. The NMFS indicated that the proposed work would not directly impact areas that support essential fish habitat (EFH), NOAA trust fishery resources, or wetland areas that support NOAA trust fishery resources. As such, this project will not require an Essential Fish Habitat Assessment, nor is further consultation with the NMFS necessary unless future modifications to the project could result in adverse impacts to EFH. For these reasons, a Summary DOE of None has been assigned to the Coastal and Marine issue.

⊞ 0 **National Marine Fisheries Service (08/12/2014)**

⊞ 0 **South Florida Water Management District (08/18/2014)**

The following organization(s) were expected to but did not submit comments for this alternative about potential direct effects in the Coastal and Marine category: Not Available. Contact the ETDM Help Desk for assistance.

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ETAT Reviews: Physical

Noise

Project Effect Comments

Coordinator Summary Degree of Effect: 2 *Minimal*
Response By: FDOT District 4 (11/20/2014)
Comments:

Single family homes are located at the northeast and southeast corners of the interchange. Currently, there are sound barriers adjacent to these houses. For this reason, a Summary DOE of Minimal has been assigned to the Noise issue.

During Project Development, a Noise Study Report will be prepared in accordance with Part 2, Chapter 17 of the FDOT PD&E Manual.

No ETAT Reviews were submitted for the Noise Issue.
The following organization(s) were expected to but did not submit comments for this alternative about potential direct effects in the Noise category: Not Available. Contact the ETDM Help Desk for assistance.

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Air Quality

Project Effect Comments

Coordinator Summary Degree of Effect: 2 *Minimal*
Response By: FDOT District 4 (11/20/2014)
Comments:

The project is not located within a USEPA-designated Air Quality Maintenance or Non-Attainment Area for any of the four pollutants (nitrogen oxides, ozone, carbon monoxide, and small particulate matter) specified by the USEPA in National Ambient Air Quality Standards. Therefore, the Clean Air Act conformity requirements do not apply to this project at this time. While temporary impacts to air quality could occur during project construction as a result of fugitive dust and exhaust emissions, no permanent effects to air quality are anticipated. Overall, minor air quality improvement could result due to reduced emissions from idling traffic with the expansion of operational capacity. Based on the foregoing, a Summary DOE of Minimal has been assigned to the Air Quality issue.

During Project Development, an Air Quality Technical Memorandum will be prepared in accordance with Part 2, Chapter 16 of the FDOT PD&E Manual.

⊞ 2 **US Environmental Protection Agency (09/06/2014)**
The following organization(s) were expected to but did not submit comments for this alternative about potential direct effects in the Air Quality category: Not Available. Contact the ETDM Help Desk for assistance.

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Contamination

Project Effect Comments

Coordinator Summary Degree of Effect: 2 *Minimal*
Response By: FDOT District 4 (11/20/2014)
Comments:

FDEP and USEPA reported the following potential contamination sites within the 500-foot project buffer: one hazardous waste facility, three petroleum contamination monitoring sites, seven storage tank contamination monitoring sites, one Super Act risk source, and two USEPA RCRA-regulated facilities. Due to the presence and proximity of these facilities (including potential previous contamination from these sites) and potential presence of hazardous substances associated with the existing bridge over the South Florida Rail Corridor/CSX Railroad line, a Summary DOE of Minimal has been assigned to the Contamination issue.

Contamination (including any required permits) will be evaluated during Project Development in accordance with federal, state and local laws and regulations. A Contamination Screening Evaluation Report (similar to Phase I and Phase II Audits) will be prepared in accordance with Part 2, Chapter 22 of the FDOT PD&E Manual, including site specific surveys to assess existing known subsurface contamination and proximity to construction activities, as well as historical contamination release. Contingency Plans/"Special Provisions for Unidentified Areas of Contamination" shall be included in the project's construction contract documents. These provisions will specify procedures to follow in the event any hazardous material or suspected contamination is encountered during construction or should there be any construction-related spills.

⊞ 2 **FL Department of Environmental Protection (09/04/2014)**

⊞ 2 **US Environmental Protection Agency (09/06/2014)**

⊞ 0 **South Florida Water Management District (08/18/2014)**

The following organization(s) were expected to but did not submit comments for this alternative about potential direct effects in the Contamination category: Not Available. Contact the ETDM Help Desk for assistance.

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Infrastructure

Project Effect Comments

Coordinator Summary Degree of Effect: 2 *Minimal*
Response By: FDOT District 4 (11/20/2014)
Comments:

Infrastructure-related features identified within the 500-foot project buffer include three compliance and enforcement tracking facilities, one onsite sewage facility, one wireless antenna structure location, one USEPA water quality data monitoring station, and the South Florida Rail Corridor/CSX Railroad (located immediately west of the existing interchange). Although the bridge over the existing railroad tracks will be widened, it should have no impact on the existing rail corridor. Given the few features identified and the limited amount of right-of-way acquisition proposed for this project, a Summary DOE of Minimal has been assigned to the Infrastructure issue.

During Project Development, FDOT District Four will coordinate with all appropriate agencies to adequately address potential project effects on infrastructure and acquire all necessary permits.

No ETAT Reviews were submitted for the Infrastructure Issue.
The following organization(s) were expected to but did not submit comments for this alternative about potential direct effects in the Infrastructure category: Not Available. Contact the ETDM Help Desk for assistance.

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Navigation

Project Effect Comments

Coordinator Summary Degree of Effect: N/A *N/A / No Involvement*
Response By: FDOT District 4 (11/20/2014)
Comments:

No navigable waterways are present within the project area. Therefore, a Summary DOE of N/A / No Involvement has been assigned to the Navigation issue.

⊞ N/A **US Army Corps of Engineers (08/18/2014)**

⊞ N/A **US Coast Guard (07/24/2014)**

The following organization(s) were expected to but did not submit comments for this alternative about potential direct effects in the Navigation category: Not Available. Contact the ETDM Help Desk for assistance.

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ETAT Reviews: Special Designations

Special Designations

Project Effect Comments

Coordinator Summary Degree of Effect: 0 *None*
Response By: FDOT District 4 (11/20/2014)
Comments:

There are no Outstanding Florida Waters, aquatic preserves, scenic highways/byways, or wild or scenic rivers reported within the project vicinity. Therefore, no impacts to these resources are anticipated and a Summary DOE of None has been assigned to the Special Designations issue.

⊞ 0 **South Florida Water Management District (08/18/2014)**

⊞ 0 **US Environmental Protection Agency (09/06/2014)**

The following organization(s) were expected to but did not submit comments for this alternative about potential direct effects in the Special Designations category: Not Available. Contact the ETDM Help Desk for assistance.

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Appendix C

ETDM Agency Comment Project #14180 – SR-9/I-95 at Boynton Beach Boulevard Interchange

Agency Environmental Comments

#14180 - SR-9/I-95 at SR-804/Boynton Beach Boulevard Interchange Submit Comment | Request Response | Watch Project

District: District 4 **Phase:** Programming Screen **Contact Information:** Gaspar Jorge Padron (850) 777-4320 gaspar.padron@dot.state.fl.us

Alternative #1

Project Effects Overview for Alternative #1

Issue	Degree of Effect	Organization	Date Reviewed
Social and Economic			
Land Use Changes	2 Minimal	FDOT District 4	08/21/2014
Land Use Changes	0 None	FL Department of Economic Opportunity	08/11/2014
Land Use Changes	2 Minimal	Federal Highway Administration	10/23/2014
Social	2 Minimal	Federal Highway Administration	10/24/2014
Social	3 Moderate	US Environmental Protection Agency	08/24/2014
Social	2 Minimal	FDOT District 4	08/21/2014
Relocation Potential	2 Minimal	FDOT District 4	08/21/2014
Relocation Potential	2 Minimal	Federal Highway Administration	10/24/2014
Farmlands	0 None	Natural Resources Conservation Service	07/14/2014
Farmlands	0 None	Federal Highway Administration	10/23/2014
Aesthetic Effects	2 Minimal	Federal Highway Administration	10/23/2014
Aesthetic Effects	2 Minimal	FDOT District 4	08/21/2014
Economic	0 None	FL Department of Economic Opportunity	08/11/2014
Economic	2 Minimal	Federal Highway Administration	10/23/2014
Economic	2 Minimal	FDOT District 4	08/21/2014
Mobility	1 Enhanced	Federal Highway Administration	10/23/2014
Mobility	1 Enhanced	FDOT District 4	08/21/2014
Cultural			
Section 4(f) Potential	3 Moderate	Federal Highway Administration	10/24/2014
Section 4(f) Potential	N/A N/A / No Involvement	FL Department of Agriculture and Consumer Services	08/14/2014
Historic and Archaeological Sites	3 Moderate	FL Department of State	08/07/2014
Historic and Archaeological Sites	3 Moderate	Federal Highway Administration	10/23/2014
Recreation Areas	0 None	South Florida Water Management District	08/18/2014
Recreation Areas	0 None	US Environmental Protection Agency	08/24/2014

Recreation Areas	N/A N/A / No Involvement	National Park Service	08/01/2014
Recreation Areas	3 Moderate	Federal Highway Administration	10/24/2014
Recreation Areas	0 None	FL Department of Environmental Protection	08/22/2014
Natural			
Wetlands	2 Minimal	National Marine Fisheries Service	08/12/2014
Wetlands	0 None	Federal Highway Administration	10/24/2014
Wetlands	0 None	US Army Corps of Engineers	08/18/2014
Wetlands	0 None	South Florida Water Management District	08/18/2014
Wetlands	0 None	US Environmental Protection Agency	08/24/2014
Wetlands	2 Minimal	US Fish and Wildlife Service	07/11/2014
Wetlands	0 None	FL Department of Environmental Protection	08/22/2014
Water Quality and Quantity	0 None	US Environmental Protection Agency	08/24/2014
Water Quality and Quantity	2 Minimal	South Florida Water Management District	08/18/2014
Water Quality and Quantity	0 None	FL Department of Environmental Protection	08/22/2014
Water Quality and Quantity	2 Minimal	Federal Highway Administration	10/24/2014
Floodplains	0 None	Federal Highway Administration	10/23/2014
Floodplains	0 None	South Florida Water Management District	08/18/2014
Floodplains	0 None	US Environmental Protection Agency	08/24/2014
Wildlife and Habitat	2 Minimal	FL Fish and Wildlife Conservation Commission	08/05/2014
Wildlife and Habitat	2 Minimal	US Fish and Wildlife Service	07/11/2014
Wildlife and Habitat	0 None	Federal Highway Administration	10/24/2014
Coastal and Marine	0 None	Federal Highway Administration	10/23/2014
Coastal and Marine	0 None	National Marine Fisheries Service	08/12/2014
Coastal and Marine	0 None	South Florida Water Management District	08/18/2014
Physical			
Noise	2 Minimal	Federal Highway Administration	10/23/2014
Air Quality	2 Minimal	Federal Highway Administration	10/23/2014
Air Quality	0 None	US Environmental Protection Agency	08/24/2014
Contamination	3 Moderate	FL Department of Environmental Protection	08/22/2014
Contamination	3 Moderate	US Environmental Protection Agency	08/24/2014
Contamination	3 Moderate	Federal Highway Administration	10/23/2014

Contamination	0 None	South Florida Water Management District	08/18/2014
Infrastructure	2 Minimal	Federal Highway Administration	10/23/2014
Navigation	0 None	Federal Highway Administration	10/23/2014
Navigation	0 None	US Army Corps of Engineers	08/18/2014
Navigation	N/A N/A / No Involvement	US Coast Guard	07/17/2014
Special Designations			
Special Designations	0 None	Federal Highway Administration	10/24/2014
Special Designations	0 None	South Florida Water Management District	08/18/2014
Special Designations	0 None	US Environmental Protection Agency	08/24/2014

ETAT Reviews: Social and Economic

Land Use Changes

Project Effect Comments

Coordinator Summary Degree of Effect: 2 *Minimal*
Response By: FDOT District 4 (11/20/2014)
Comments:

FDEO reported that the project is compatible with the development goals of the City of Boynton Beach. FDEO noted that the project is not located in an Area of Critical State Concern or within the Coastal High Hazard Area and does not encroach on a military base; however, since the project is located near public parks, impacts to Section 4(f) resources should be analyzed. The project is included in the FY 2014 - 2019 FDOT Work Program, the Strategic Intermodal System Cost Feasible Plan 2024 - 2040, and the Palm Beach Metropolitan Planning Organization (MPO) FY 2015 - 2019 Transportation Improvement Program (TIP); it is not identified in the Palm Beach MPO Cost Feasible 2035 Long Range Transportation Plan (LRTP) or the State Transportation Improvement Program (STIP). Since the project is intended to enhance access to the City's established Community Redevelopment Area and accommodate future mobility needs of the growing residential and commercial/office activities within the area (through enhanced traffic operations), a Summary DOE of Minimal has been assigned to the Land Use Changes issue.

During the Project Development phase, public outreach will be conducted by FDOT District Four in coordination with the Palm Beach MPO and the City of Boynton Beach to obtain feedback from residents and businesses that may be impacted by the interchange improvement. FDOT District Four will also assess potential Section 4(f) impacts, as well as coordinate with the City of Boynton Beach and the Palm Beach MPO to ensure that 1) the project is included on the Future Transportation Map of the adopted City of Boynton Beach Comprehensive Plan and is consistent with the adopted Palm Beach MPO LRTP and 2) funding is identified for all future project phases in the TIP, LRTP, STIP, and FDOT SIS Cost Feasible Plan.

⊞ 2 **FDOT District 4 (08/21/2014)**

⊞ 0 **FL Department of Economic Opportunity (08/11/2014)**

⊞ 2 **Federal Highway Administration (10/23/2014)**

The following organization(s) were expected to but did not submit comments for this alternative about potential direct effects in the Land Use Changes category: Not Available. Contact the ETDM Help Desk for assistance.

Back to Alternative #1

Social

Project Effect Comments

Coordinator Summary Degree of Effect: 3 *Moderate*
Response By: FDOT District 4 (11/20/2014)
Comments:

FDEO reported that the project is compatible with the development goals of the City of Boynton Beach. FDEO noted that the project is not located in an Area of Critical State Concern or within the Coastal High Hazard Area and does not encroach on a military base; however, since the project is located near public parks, impacts to Section 4(f) resources should be analyzed. The project is included in the FY 2014 - 2019 FDOT Work Program, the Strategic Intermodal System Cost Feasible Plan 2024 - 2040, and the Palm Beach Metropolitan Planning Organization (MPO) FY 2015 - 2019 Transportation Improvement Program (TIP); it is not identified in the Palm Beach MPO Cost Feasible 2035 Long Range Transportation Plan (LRTP) or the State Transportation Improvement Program (STIP). Since the project is intended to enhance access to the City's established Community Redevelopment Area and accommodate future mobility needs of the growing residential and commercial/office activities within the area (through enhanced traffic operations), a Summary DOE of Minimal has been assigned to the Land Use Changes issue.

During the Project Development phase, public outreach will be conducted by FDOT District Four in coordination with the Palm Beach MPO and the City of Boynton Beach to obtain feedback from residents and businesses that may be impacted by the interchange improvement. FDOT District Four will also assess potential Section 4(f) impacts, as well as coordinate with the City of Boynton Beach and the Palm Beach MPO to ensure that 1) the project is included on the Future Transportation Map of the adopted City of Boynton Beach Comprehensive Plan and is consistent with the adopted Palm Beach MPO LRTP and 2) funding is identified for all future project phases in the TIP, LRTP, STIP, and FDOT SIS Cost Feasible Plan.

⊞ 2 **Federal Highway Administration (10/24/2014)**

⊞ 3 **US Environmental Protection Agency (08/24/2014)**

⊞ 2 **FDOT District 4 (08/21/2014)**

The following organization(s) were expected to but did not submit comments for this alternative about potential direct effects in the Social category: Not Available. Contact the ETDM Help Desk for assistance.

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Relocation Potential

Project Effect Comments

Coordinator Summary Degree of Effect: 2 *Minimal*
Response By: FDOT District 4 (11/20/2014)
Comments:

Minor right-of-way acquisition is proposed along SR-804/Boynton Beach Boulevard. No residences are expected to be impacted by the proposed right-of-way acquisition only businesses - specifically eleven commercial businesses located west of the interchange and eight businesses east of the interchange. While access to businesses could temporarily be affected and/or modified during project construction, no relocations are anticipated. For these reasons, a Summary DOE of Minimal has been assigned to the Relocation Potential issue.

Potential relocation effects will be assessed further during Project Development as more detailed and finalized project information regarding right-of-way needs becomes available. The proposed interchange improvements will be adjusted so as to avoid or minimize impacts to identified features.

⊞ 2 **FDOT District 4 (08/21/2014)**

⊞ 2 **Federal Highway Administration (10/24/2014)**

The following organization(s) were expected to but did not submit comments for this alternative about potential direct effects in the Relocation Potential category: Not Available. Contact the ETDM Help Desk for assistance.

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Farmlands

Project Effect Comments

Coordinator Summary Degree of Effect: 0 *None*
Response By: FDOT District 4 (11/20/2014)

Comments:

NRCS determined that there are no Prime, Unique or Locally Important Farmland soils within the 500-foot project buffer. In addition, the project is located within the Miami Urbanized Area. According to Part 2, Chapter 28, Section 28-2.1 of the FDOT PD&E Manual, transportation projects situated within urbanized areas with no adjacent present or future agricultural lands are excluded from Farmland Assessments. Since the project is located within a designated urban area anticipated to continue to support residential and commercial uses, a Summary DOE of None has been assigned to the Farmlands issue.

⊞ 0 **Natural Resources Conservation Service (07/14/2014)**

⊞ 0 **Federal Highway Administration (10/23/2014)**

The following organization(s) were expected to but did not submit comments for this alternative about potential direct effects in the Farmlands category: Not Available. Contact the ETDM Help Desk for assistance.

Back to Alternative #1

Aesthetic Effects

Project Effect Comments

Coordinator Summary Degree of Effect: 2 *Minimal*
Response By: FDOT District 4 (11/20/2014)
Comments:

The project is consistent with the area's future land use vision as it is expected to enhance access to the established Community Redevelopment Area of the City of Boynton Beach and support growing residential and commercial activities. Given the urban nature of the surrounding project area, impacts to aesthetics/the existing visual environment should be limited. Therefore, a Summary DOE of Minimal has been assigned to the Aesthetic Effects issue.

During the Project Development phase, public outreach will be conducted by FDOT District Four in coordination with the Palm Beach Metropolitan Planning Organization and the City of Boynton Beach to solicit opinions and preferences from residents and businesses on potential project effects and general design concepts related to aesthetics.

⊞ 2 **Federal Highway Administration (10/23/2014)**

⊞ 2 **FDOT District 4 (08/21/2014)**

The following organization(s) were expected to but did not submit comments for this alternative about potential direct effects in the Aesthetic Effects category: Not Available. Contact the ETDM Help Desk for assistance.

Back to Alternative #1

Economic

Project Effect Comments

Coordinator Summary Degree of Effect: 2 *Minimal*
Response By: FDOT District 4 (11/20/2014)
Comments:

By improving operational capacity and overall traffic operations, the project is intended to accommodate future travel demand as a result of expanding commercial and residential uses within the vicinity of the interchange. In addition, the improvements will enhance access to SR-9/I-95 (from the east and west) and other major transportation facilities and employment centers (including freight facilities) of Southeast Florida. While no business relocations are anticipated, access to residences and businesses could temporarily be affected and/or modified during construction. Therefore, a Summary DOE of Minimal has been assigned to the Economic issue.

During Project Development, public outreach will be conducted by FDOT District Four in coordination with the Palm Beach Metropolitan Planning Organization and the City of Boynton Beach to solicit input from residents and businesses (located within the vicinity of the interchange) regarding potential economic enhancements/impacts (particularly access to businesses) as a result of the project.

⊞ 0 **FL Department of Economic Opportunity (08/11/2014)**

⊞ 2 **Federal Highway Administration (10/23/2014)**

⊞ 2 **FDOT District 4 (08/21/2014)**

The following organization(s) were expected to but did not submit comments for this alternative about potential direct effects in the Economic category: Not Available. Contact the ETDM Help Desk for assistance.

Back to Alternative #1

Mobility

Project Effect Comments

Coordinator Summary Degree of Effect: 1 *Enhanced*
Response By: FDOT District 4 (11/20/2014)
Comments:

Through improved operational capacity and overall traffic operations, the proposed interchange improvement is anticipated to 1) accommodate future travel demand (thus achieving acceptable Levels of Service at the interchange), 2) allow SR-9/I-95 to continue to facilitate the north-south movement of local and regional traffic, 3) enhance access to SR-9/I-95 and other major transportation facilities and employment centers in Southeast Florida, 4) improve freight mobility, 5) enhance emergency evacuation and response times, and 6) reduce conflict points and the potential occurrence of rear-end collisions. Therefore, a Summary DOE of Enhanced has been assigned to the Mobility issue.

During Project Development, public outreach will be conducted by FDOT District Four in coordination with the Palm Beach Metropolitan Planning Organization and the City of Boynton Beach to solicit community opinions and preferences, targeting input from the transportation disadvantaged population, regarding the project.

⊞ 1 **Federal Highway Administration (10/23/2014)**

⊞ 1 **FDOT District 4 (08/21/2014)**

The following organization(s) were expected to but did not submit comments for this alternative about potential direct effects in the Mobility category: Not Available. Contact the ETDM Help Desk for assistance.

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ETAT Reviews: Cultural

Section 4(f) Potential

Project Effect Comments

Coordinator Summary Degree of Effect: 3 *Moderate*
Response By: FDOT District 4 (11/21/2014)
Comments:

Potentially protected Section 4(f) resources reported within the 200-foot project buffer include Barton Memorial Park and Galaxy Park. Access to these recreational features could be temporarily impeded and/or modified by project construction. In addition, unrecorded cultural resources (eligible or potentially eligible for listing in the National Register of Historic Places) may exist since a comprehensive survey has not been conducted for the project area. For these reasons, a Summary DOE of Minimal has been assigned to the Section 4(f) Potential issue.

During Project Development, a Section 4(f) Determination of Applicability (DOA) will be conducted in coordination with FHWA (in accordance with Part 2, Chapter 13 of the FDOT PD&E Manual) to determine the extent of Section 4(f) involvement and focus any required documents on the avoidance and/or minimization of impacts.

⊞ 3 **Federal Highway Administration (10/24/2014)**

⊞ N/A **FL Department of Agriculture and Consumer Services (08/14/2014)**
The following organization(s) were expected to but did not submit comments for this alternative about potential direct effects in the Section 4(f) Potential category: Not Available. Contact the ETDM Help Desk for assistance.

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Historic and Archaeological Sites

Project Effect Comments

Coordinator Summary Degree of Effect: 3 *Moderate*
Response By: FDOT District 4 (11/20/2014)
Comments:

FDOS commented that there is one known significant resource in the project area (the Seaboard Air Line Railway); other recorded structures of potential significance within the area have not been evaluated to date by the SHPO. FDOS also indicated that four neighborhoods within the immediate project vicinity may be historic districts; while portions of all four have been surveyed, none have been evaluated by the SHPO. For these reasons and due to the possible presence of unrecorded cultural resources [eligible or potentially eligible for listing in the National Register of Historic Places (NRHP)] within the project area, a Summary DOE of Moderate has been assigned to the Historic and Archaeological Sites issue.

During Project Development, a Cultural Resource Assessment Survey will be conducted (in accordance with Part 2, Chapter 12 of the FDOT PD&E Manual) to determine the presence of historic, cultural and archeological resources in the area and evaluate their eligibility for listing in the NRHP. Any potential impacts to such resources will be avoided and/or minimized during the process.

⊞ 3 **FL Department of State (08/07/2014)**

⊞ 3 **Federal Highway Administration (10/23/2014)**
The following organization(s) were expected to but did not submit comments for this alternative about potential direct effects in the Historic and Archaeological Sites category: Not Available. Contact the ETDM Help Desk for assistance.

Back to Alternative #1

Recreation Areas

Project Effect Comments

Coordinator Summary Degree of Effect: 3 *Moderate*
Response By: FDOT District 4 (11/21/2014)
Comments:

While the two parks within the 200-foot buffer, Barton Memorial Park and Galaxy Park, are not anticipated to be directly impacted by the project, access to these features may be temporarily affected during project construction. For this reason, a Summary DOE of Minimal has been assigned to the Recreation Areas issue.

An assessment of potential impacts to recreational features/areas will be conducted during Project Development. Future environmental documentation will include an evaluation of the direct, indirect, and cumulative impacts of the proposed project and construction on any public lands and proposed acquisition sites. Impacts will be avoided and/or minimized during the process. FDOT District Four will coordinate with the appropriate agencies concerning the necessary studies, documentation and commitments needed to adequately address any identified resources in accordance with federal, state, and local laws and regulations.

⊞ 0 **South Florida Water Management District (08/18/2014)**

⊞ 0 **US Environmental Protection Agency (08/24/2014)**

⊞ N/A **National Park Service (08/01/2014)**

⊞ 3 **Federal Highway Administration (10/24/2014)**

⊞ 0 **FL Department of Environmental Protection (08/22/2014)**
The following organization(s) were expected to but did not submit comments for this alternative about potential direct effects in the Recreation Areas category: Not Available. Contact the ETDM Help Desk for assistance.

Back to Alternative #1

ETAT Reviews: Natural

Wetlands

Project Effect Comments

Coordinator Summary Degree of Effect: 2 *Minimal*
Response By: FDOT District 4 (11/20/2014)
Comments:

USACE stated that if work is to be performed within waters of the United States (includes existing ditches, canals, etc.) to improve the stormwater management system, a nationwide permit would likely be required. SFWMD also noted that an Environmental Resource Permit and Water Use Permit may be necessary. While a series of canals and one stormwater retention pond exist within the project area, 0.1 acre of palustrine wetlands is reported within the 500-foot project buffer. Due to the limited amount of wetlands within the vicinity of the project and the fact that no impacts to this resource or surface waters are anticipated, a Summary DOE of Minimal has been assigned to the Wetlands issue.

During Project Development, potential wetland impacts will be evaluated through a Wetlands Evaluation Technical Memorandum to be prepared in accordance with Part 2, Chapter 18 of the FDOT PD&E Manual. All necessary measures will be taken to avoid and/or minimize impacts to wetlands to the greatest extent practicable during project design. Should avoidance and/or minimization not be practicable, a Mitigation Plan will be prepared. In addition, existing compensatory mitigation sites within the area of influence will be identified and reviewed. Further, best management practices will be utilized during project construction and all applicable permits (including an Environmental Resource Permit) will be obtained in accordance with federal, state, and local laws and regulations.

⊞ 2 **National Marine Fisheries Service (08/12/2014)**

⊞ 0 **Federal Highway Administration (10/24/2014)**

⊞ 0 **US Army Corps of Engineers (08/18/2014)**

⊞ 0 **South Florida Water Management District (08/18/2014)**

⊞ 0 **US Environmental Protection Agency (08/24/2014)**

⊞ 2 **US Fish and Wildlife Service (07/11/2014)**

⊞ 0 **FL Department of Environmental Protection (08/22/2014)**
The following organization(s) were expected to but did not submit comments for this alternative about potential direct effects in the Wetlands category: Not Available. Contact the ETDM Help Desk for assistance.

Back to Alternative #1

Water Quality and Quantity

Project Effect Comments

Coordinator Summary Degree of Effect: 2 *Minimal*
Response By: FDOT District 4 (11/20/2014)
Comments:

No impaired waters are located within the project vicinity; however, the project may result in construction related disturbances as well as additional stormwater treatment and right-of-way for retention/detention ponds or swales to meet regulatory water quality criteria. SFWMD identified an existing Environmental Resource Permit (50-04473-P) that could potentially be modified to include the project improvements; the permit must meet the

criteria of Applicant's Handbook Volume II. Based on the foregoing, a Summary DOE of Minimal has been assigned to the Water Quality and Quantity issue.

During Project Development, FDOT District Four will conduct a Water Quality Impact Evaluation (in accordance with Part 2, Chapter 20 of the FDOT PD&E Manual) and coordinate with all relevant agencies for the design of the proposed stormwater system and the requirements for stormwater treatment, evaluating existing stormwater treatment adequacy and details on the future stormwater treatment facilities. All necessary permits will be obtained in accordance with federal, state, and local laws and regulations.

⊞ 0 **US Environmental Protection Agency (08/24/2014)**

⊞ 2 **South Florida Water Management District (08/18/2014)**

⊞ 0 **FL Department of Environmental Protection (08/22/2014)**

⊞ 2 **Federal Highway Administration (10/24/2014)**

The following organization(s) were expected to but did not submit comments for this alternative about potential direct effects in the Water Quality and Quantity category: Not Available. Contact the ETDM Help Desk for assistance.

Back to Alternative #1

Floodplains

Project Effect Comments

Coordinator Summary Degree of Effect: 0 *None*
Response By: FDOT District 4 (11/20/2014)
Comments:

The proposed interchange improvements will not encroach into any special flood zone hazard areas (100-year floodplain). Therefore, a Summary DOE of None has been assigned to the Floodplains issue.

⊞ 0 **Federal Highway Administration (10/23/2014)**

⊞ 0 **South Florida Water Management District (08/18/2014)**

⊞ 0 **US Environmental Protection Agency (08/24/2014)**

The following organization(s) were expected to but did not submit comments for this alternative about potential direct effects in the Floodplains category: Not Available. Contact the ETDM Help Desk for assistance.

Back to Alternative #1

Wildlife and Habitat

Project Effect Comments

Coordinator Summary Degree of Effect: 2 *Minimal*
Response By: FDOT District 4 (11/20/2014)
Comments:

The interchange is within the South Florida Ecosystem Management Area; FWS Consultation Areas for the Florida scrub-jay, West Indian Manatee, and Atlantic Coast Plants; and Core Foraging Areas of four active nesting Wood Stork colonies. FWC indicated that the only significant area of natural habitat along the alignment (adjacent to the I-95 right-of-way) is a strip of remnant xeric scrub that is north and west of the Galaxy Elementary School campus located in the northeast quadrant of the interchange. FWC stated that impacts could be minimized if construction takes place in previously disturbed sites and avoids the remaining xeric scrub area or other natural areas. For these reasons and given the urban nature of the area, a Summary DOE of Minimal has been assigned to the Wildlife and Habitat issue.

The final design of the project will avoid and/or minimize impacts to wetlands/wildlife and habitat to the greatest extent practicable (including confining new DRAs to previously disturbed sites), and best management practices will be utilized during project design and construction; appropriate mitigation will also be provided for

unavoidable impacts. During Project Development, an Endangered Species Biological Assessment will be prepared in compliance with Section 7 of the Endangered Species Act (ESA) of 1973, as amended (16 USC 1531 et seq) and in accordance with Part 2, Chapter 27 of the FDOT PD&E Manual. FWC stated that 1) plant community mapping/wildlife surveys are to be performed along the right-of-way and within sites proposed for Drainage Retention Areas, 2) permits are to be obtained if gopher tortoises or nests of other listed species are present within any permanent or temporary construction areas, and 3) a compensatory mitigation plan is to be prepared including the replacement of any wetland, upland, or aquatic habitat lost as a result of the project. USFWS indicated that a functional assessment using the USFWS's Wood Stork Foraging Analysis Methodology is required on the foraging habitat to be impacted and the foraging habitat provided as mitigation for projects that impact 5 or more acres of wood stork foraging habitat.

⊞ 2 **FL Fish and Wildlife Conservation Commission (08/05/2014)**

⊞ 2 **US Fish and Wildlife Service (07/11/2014)**

⊞ 0 **Federal Highway Administration (10/24/2014)**

The following organization(s) were expected to but did not submit comments for this alternative about potential direct effects in the Wildlife and Habitat category: Not Available. Contact the ETDM Help Desk for assistance.

Back to Alternative #1

Coastal and Marine

Project Effect Comments

Coordinator Summary Degree of Effect: 0 *None*
Response By: FDOT District 4 (11/20/2014)
Comments:

As the project is located approximately three miles west of the Atlantic Ocean and Intracoastal Waterway, it is not within an area considered to have coastal or marine resources. The NMFS indicated that the proposed work would not directly impact areas that support essential fish habitat (EFH), NOAA trust fishery resources, or wetland areas that support NOAA trust fishery resources. As such, this project will not require an Essential Fish Habitat Assessment, nor is further consultation with the NMFS necessary unless future modifications to the project could result in adverse impacts to EFH. For these reasons, a Summary DOE of None has been assigned to the Coastal and Marine issue.

⊞ 0 **Federal Highway Administration (10/23/2014)**

⊞ 0 **National Marine Fisheries Service (08/12/2014)**

⊞ 0 **South Florida Water Management District (08/18/2014)**

The following organization(s) were expected to but did not submit comments for this alternative about potential direct effects in the Coastal and Marine category: Not Available. Contact the ETDM Help Desk for assistance.

Back to Alternative #1

ETAT Reviews: Physical

Noise

Project Effect Comments

Coordinator Summary Degree of Effect: 2 *Minimal*
Response By: FDOT District 4 (11/20/2014)
Comments:

Noise sensitive receptors identified within a quarter-mile buffer of the interchange improvements include: one hotel, one funeral home, one health care facility, one laser facility, group care facilities, schools, churches, parks, cultural resources, and single family homes. Currently, there are no sound barriers along the interchange. Although increased noise levels during construction could have potential short-term impacts on nearby residences and businesses, overall noise and vibration related impacts as a result of the project are anticipated to be minor. Therefore, a Summary DOE of Minimal has been assigned to the Noise issue.

During Project Development, a Noise Study Report will be prepared in accordance with Part 2, Chapter 17 of the FDOT PD&E Manual.

⊞ 2 **Federal Highway Administration (10/23/2014)**
The following organization(s) were expected to but did not submit comments for this alternative about potential direct effects in the Noise category: Not Available. Contact the ETDM Help Desk for assistance.

Back to Alternative #1

Air Quality

Project Effect Comments

Coordinator Summary Degree of Effect: 2 *Minimal*
Response By: FDOT District 4 (11/20/2014)
Comments:

The project is not located within a USEPA-designated Air Quality Maintenance or Non-Attainment Area for any of the four pollutants (nitrogen oxides, ozone, carbon monoxide, and small particulate matter) specified by the USEPA in National Ambient Air Quality Standards. Therefore, the Clean Air Act conformity requirements do not apply to this project at this time. While temporary impacts to air quality could occur during project construction as a result of fugitive dust and exhaust emissions, no permanent effects to air quality are anticipated. Overall, minor air quality improvement could result due to reduced emissions from idling traffic with the expansion of operational capacity. Based on the foregoing, a Summary DOE of Minimal has been assigned to the Air Quality issue.

During Project Development, an Air Quality Technical Memorandum will be prepared in accordance with Part 2, Chapter 16 of the FDOT PD&E Manual.

⊞ 2 **Federal Highway Administration (10/23/2014)**

⊞ 0 **US Environmental Protection Agency (08/24/2014)**
The following organization(s) were expected to but did not submit comments for this alternative about potential direct effects in the Air Quality category: Not Available. Contact the ETDM Help Desk for assistance.

Back to Alternative #1

Contamination

Project Effect Comments

Coordinator Summary Degree of Effect: 3 *Moderate*
Response By: FDOT District 4 (11/20/2014)
Comments:

FDEP and USEPA reported several potential contamination sites within the 500-foot project buffer including: three hazardous waste facilities, eight petroleum contamination monitoring sites, thirteen storage tank contamination monitoring sites, four Super Act risk sources, and five USEPA RCRA-regulated facilities. Due to the presence and proximity of these facilities (including potential previous contamination from these sites) and potential presence of hazardous substances associated with the existing bridge over the South Florida Rail Corridor/CSX Railroad line, a Summary DOE of Moderate has been assigned to the Contamination issue.

Contamination (including any required permits) will be evaluated during Project Development in accordance with federal, state and local laws and regulations. A Contamination Screening Evaluation Report (similar to Phase I and Phase II Audits) will be prepared in accordance with Part 2, Chapter 22 of the FDOT PD&E Manual, including site specific surveys to assess existing known subsurface contamination and proximity to construction activities, as well as historical contamination release. Contingency Plans/"Special Provisions for Unidentified Areas of Contamination" shall be included in the project's construction contract documents. These provisions will specify procedures to follow in the event any hazardous material or suspected contamination is encountered during construction or should there be any construction-related spills.

⊞ 3 **FL Department of Environmental Protection (08/22/2014)**

⊞ 3 **US Environmental Protection Agency (08/24/2014)**

⊞ 3 **Federal Highway Administration (10/23/2014)**

⊞ 0 **South Florida Water Management District (08/18/2014)**

The following organization(s) were expected to but did not submit comments for this alternative about potential direct effects in the Contamination category: Not Available. Contact the ETDM Help Desk for assistance.

Back to Alternative #1

Infrastructure

Project Effect Comments

Coordinator Summary Degree of Effect: 2 *Minimal*
Response By: FDOT District 4 (11/20/2014)
Comments:

Infrastructure-related features identified within the 500-foot project buffer include five compliance and enforcement tracking facilities, five onsite sewage facilities, and the South Florida Rail Corridor/CSX Railroad (located immediately west of the existing interchange). Although the bridge over the existing railroad tracks will be widened, it should have no impact on the existing rail corridor. Given the few features identified and the limited amount of right-of-way acquisition proposed for this project, a Summary DOE of Minimal has been assigned to the Infrastructure issue.

During Project Development, FDOT District Four will coordinate with all appropriate agencies to adequately address potential project effects on infrastructure and acquire all necessary permits.

⊞ 2 **Federal Highway Administration (10/23/2014)**

The following organization(s) were expected to but did not submit comments for this alternative about potential direct effects in the Infrastructure category: Not Available. Contact the ETDM Help Desk for assistance.

Back to Alternative #1

Navigation

Project Effect Comments

Coordinator Summary Degree of Effect: 0 *None*
Response By: FDOT District 4 (11/20/2014)
Comments:

USACE stated that if work is to be performed within waters of the United States (includes existing ditches, canals, etc.) to improve the stormwater management system, a nationwide permit would likely be required. The proposed project is not anticipated to impact the navigation of any canal or surface water within the area. Therefore, a Summary DOE of None has been assigned to the Navigation issue.

⊞ 0 **Federal Highway Administration (10/23/2014)**

⊞ 0 **US Army Corps of Engineers (08/18/2014)**

⊞ N/A **US Coast Guard (07/17/2014)**

The following organization(s) were expected to but did not submit comments for this alternative about potential direct effects in the Navigation category: Not Available. Contact the ETDM Help Desk for assistance.

Back to Alternative #1

ETAT Reviews: Special Designations

Special Designations

Project Effect Comments

Coordinator Summary Degree of Effect: 0 *None*
Response By: FDOT District 4 (11/20/2014)
Comments:

There are no Outstanding Florida Waters, aquatic preserves, scenic highways/byways, or wild or scenic rivers reported within the project vicinity. Therefore, no impacts to these resources are anticipated and a Summary DOE of None has been assigned to the Special Designations issue.

⊞ 0 **Federal Highway Administration (10/24/2014)**

⊞ 0 **South Florida Water Management District (08/18/2014)**

⊞ 0 **US Environmental Protection Agency (08/24/2014)**

The following organization(s) were expected to but did not submit comments for this alternative about potential direct effects in the Special Designations category: Not Available. Contact the ETDM Help Desk for assistance.

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Appendix D

Standard Protection Measures for the Eastern Indigo Snake

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

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

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

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

POSTER INFORMATION

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

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

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

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

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

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

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

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

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

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

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

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

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

PRE-CONSTRUCTION ACTIVITIES

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

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

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

DURING CONSTRUCTION ACTIVITIES

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

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

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

POST CONSTRUCTION ACTIVITIES

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

Appendix E

City of Boynton Beach Official Future Land Use Map

City of Boynton Beach
Official Future Land Use Map

Legend

- Community Redevelopment Area
- Urban CBD
- TCEA Boundary
- Railroads
- City Boundary
- WATER

Land Use Description

- LOW DENSITY RESIDENTIAL (LDR) Max. 4.84 D.U./Acre
- MODERATE DENSITY RESIDENTIAL (MODR) Max. 7.26 D.U./Acre
- MEDIUM DENSITY RESIDENTIAL (MEDR) Max. 9.58 D.U./Acre
- HIGH DENSITY RESIDENTIAL (HDR) Max. 10.8 D.U./Acre
- SPECIAL HIGH DENSITY RESIDENTIAL (SHDR)
- OFFICE COMMERCIAL (OC)
- LOCAL RETAIL COMMERCIAL (LRC)
- GENERAL COMMERCIAL (GC)
- INDUSTRIAL (I)
- RECREATIONAL (R)
- PUBLIC & PRIVATE GOVERNMENTAL/INSTITUTIONAL (PPGI)
- MIXED USE (MX)
- MIXED USE CORE (MXC)
- MIXED USE SUBURBAN (MXS)
- DEVELOPMENT OF REGIONAL IMPACT (DRI)
- CONSERVATION (CON)
- CONSERVATION OVERLAY (C/O)

October 15, 2012

Source: Palm Beach County GIS Digital Data 2006-2012

2,640 1,320 0 2,640 Feet

GIS1:/PROJECTS/PLANNING/PROJECTS/FUTURELAND/APR.MXD./Futurelanduse36x50.mxd

1. *This property is restricted to a maximun of 1,120 high density residential units, 10,000 s.f. of office commercial use and 149,000 s.f. of local retail commercial use.*
2. *This property is restricted to a maximun of 250,000 s.f. of local retail commercial use*

The information depicted on this map was correct as of (date of last amendment) and should be used be for informational purpose only. More recent versions of the map may be available.Please do not make any decisions based on the information herin without consulting someone on the Planning and Zoning Staff.