



Florida Department of Transportation

RON DESANTIS
GOVERNOR

605 Suwannee Street
Tallahassee, FL 32399-0450

KEVIN J. THIBAUT
SECRETARY

ETDM Summary Report

Project #14397 - SR 401 Bridge Replacement

Preliminary Programming Screen - Published on 11/16/2020

Generated by Kathaleen Linger (on behalf of FDOT District 5)

Printed on: 11/16/2020

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Introduction to Programming Screen Summary Report

The Programming Screen Summary Report shown below is a read-only version of information contained in the Programming Screen Summary Report generated by the ETDM Coordinator for the selected project after completion of the ETAT Programming Screen review. The purpose of the Programming Screen Summary Report is to summarize the results of the ETAT Programming Screen review of the project; provide details concerning agency comments about potential effects to natural, cultural, and community resources; and provide additional documentation of activities related to the Programming Phase for the project. Available information for a Programming Screen Summary Report includes:

- Screening Summary Report chart
- Project Description information (including a summary description of the project, a summary of public comments on the project, and community-desired features identified during public involvement activities)
- Purpose and Need information (including the Purpose and Need Statement and the results of agency reviews of the project Purpose and Need)
- Specific information regarding the potential transportation improvement such as alternatives or road segments that were reviewed; an overview of ETAT Programming Screen reviews; and agency comments concerning potential effects and degree of effect, by issue, to natural, cultural, and community resources
- Project Scope information, consisting of general project recommendations resulting from the ETAT Programming Screen review, permits, and technical studies required (if any)
- Class of Action determined for the project
- Dispute Resolution Activity Log (if any)

The legend for the Degree of Effect chart is provided in an appendix to the report.

For complete documentation of the project record, also see the GIS Analysis Results Report published on the same date as the Programming Screen Summary Report.

The Florida Department of Transportation may adopt this planning product into the environmental review process, pursuant to Title 23 Sec. USC 168(4)(d) or the state project development process.

#14397 SR 401 Bridge Replacement

District: District 5

County: Brevard

Planning Organization: FDOT District 5

Plan ID: Not Available

Federal Involvement: FHWA Funding USCG Bridge Permit

Phase: Programming Screen

From:

To:

Financial Management No.: 444787-1-22-01

Contact Information: Mary McGehee (386) 943-5063 mary.mcgehee@dot.state.fl.us

Snapshot Data From: Programming Screen Summary Report Published on 11/16/2020 by Kathaleen Linger
Topics and Categories are reflective of what was in place at the time of the screening event.

	Social and Economic						Cultural and Tribal			Natural					Physical						
	Social	Economic	Land Use Changes	Mobility	Aesthetic Effects	Relocation Potential	Farmlands	Section 4(f) Potential	Historic and Archaeological Sites	Recreational and Protected Lands	Wetlands and Surface Waters	Water Resources	Floodplains	Protected Species and Habitat	Coastal and Marine	Noise	Air Quality	Contamination	Infrastructure	Navigation	Special Designations
Alternative #1	2	0	1	1	2	N/A	N/A	2	3	3	4	3	3	3	3	2	2	3	2	4	3
<i>Published: 11/16/2020 Reviewed from 09/16/2020 to 10/31/2020)</i>																					

Purpose and Need

Purpose and Need

PROJECT STATUS

State Road (SR) 401 is within the jurisdiction of the Space Coast Transportation Planning Organization (TPO). This Project Development and Environment (PD&E) Study is funded in the Florida Department of Transportation's (FDOT) Statewide Transportation Improvement Program (STIP) as a Strategic Intermodal System (SIS) project. The PD&E is listed in the 2019 Amendment of the Regionally Significant Cost Feasible Plan within the 2040 Long Range Transportation Plan (LRTP) and approved July 9, 2020 for the Space Coast TPO Transportation Improvement Plan (TIP). There is currently no funding for the design, right-of-way or construction phases identified.

PURPOSE

The purpose of the project is to evaluate improvements to, or replacement of, the three existing bascules bridges over the Canaveral Barge Canal.

NEED

The need for the project is based on system linkage, and modal interrelationships.

System Linkage

SR 401 is designated a SIS connector, providing access to Cape Canaveral, a SIS Seaport. Port Canaveral's operations include major cruise terminals, cargo terminals, and substantial tanker truck traffic. Additionally, SR 401 is classified as a part of the State Strategic Highway Network (the STRAHNET) connector by the Military Surface Deployment and Distribution Command as a connection to an ocean terminal to deploy and sustain U.S. forces on a global basis. The two southbound bridges (7300030 and 700031) were constructed in 1963 and the northbound bridge (700117) was constructed in 1972. The bridges are the primary access to Cape Canaveral Air Force Station and Space Florida operations, Naval Ordnance Test Unit, facilities for the U.S. Coast Guard, and access to Space Florida operations. The maximum weight limits of the existing bridges restrict heavy loads. The 2011 Spaceport Area Transportation Infrastructure Assessment by the Space Coast TPO identified the weight limit as an impediment to expanding port freight operations and maximizing military uses.

Modal Interrelationships

The 2019-2020 Port Directory shows the port handled approximately 4.5 million passengers and approximately 6,400,000 tons of cargo in 2018, in addition to outdoor recreation such as fishing and boating. The SR 401 bridges provide access to/from Port Canaveral, but do not have pedestrian or bicycle facilities. As the second largest cruise port in the world today, the Vision Plan identifies the Port's successful growth as rooted in the link between Central Florida theme parks and the cruise industry. The surface transportation at this point is via the SR 401 bridges.

The 2017 SR 401 Bridge Alternatives Analysis Study showed 14,900 AADT with 13% truck traffic. The truck traffic includes fuel transport, which accounts for about 40% of the supply for Central Florida. While the Port Canaveral 30 Year Vision Plan notes that petroleum cargo may level off as the US switches to more renewable energy sources, cargo is expected to grow to more than 3 times the current tonnage by 2048. Today the primary transportation options to distribute cargo are currently via truck or barge. Minimizing delays for the road and vessel usage will better position Port Canaveral to provide economic growth. The bridges opening to marine vessels create traffic delays to the port and cruise terminal. Similarly, water vessels are delayed based on operation restrictions. Traffic evaluations and a vessel survey will be conducted during the PD&E study to determine factors to reduce delays. Finally, the Port's Vision Plan considers the sector north of the SR 401 bridges as having more demand for growth than land available, which further adds to the importance of this distribution connectivity.

Project Description

This Port Canaveral project in Brevard County involves the evaluation of the three existing SR 401 bascule bridges over the Canaveral Barge Canal, a navigable channel, for retrofit improvements or replacement with either a medium-level bascule bridge or a new high-level fixed span bridge. The project begins approximately 500 foot south of the SR 528 bridges over SR 401 and continues approximately 3,500 foot north to account for the various bridge profile touchdown locations expected. Concepts are likely to include the ramps in the northeast and northwest quadrants of the SR 528 at SR 401 interchange. Currently there are no pedestrian and bicycle accommodations on the bridge.

Summary of Public Comments

Summary of Public Comments is not available at this time.

Planning Consistency Status

Federal Consistency Determination

Date of Determination: 11/04/2020 by Chris Stahl

FDEP Clearinghouse Determination: CONSISTENT, WITH COMMENTS with Coastal Zone Management Program.

Comment:

Please see agency comments provided in ETDM screening.

Potential Lead Agencies

- FDOT Office of Environmental Management

Exempted Agencies

Agency Name	Justification	Date
Federal Transit Administration	FTA has requested to be exempt from reviewing any non-transit projects.	02/01/2019

Community Desired Features

No desired features have been entered into the database. This does not necessarily imply that none have been identified.

User Defined Communities Within 500 Feet

No user defined communities were found within a 500 ft. buffer distance for this project.

Census Places Within 500 Feet

No census places were found within a 500 ft. buffer distance for this project.

Purpose and Need Reviews

FDOT Office of Environmental Management

Acknowledgment	Date Reviewed	Reviewer	Comments
Accepted	10/30/2020	Denise Rach (denise.rach@dot.state.fl.us)	No Purpose and Need comments found.

FL Department of Agriculture and Consumer Services

Acknowledgment	Date Reviewed	Reviewer	Comments
Understood	10/05/2020	Mark Kiser (Mark.Kiser@fdacs.gov)	No additional comments.

FL Department of Economic Opportunity

Acknowledgment	Date Reviewed	Reviewer	Comments
Understood	10/30/2020	Matt Preston (matt.preston@deo.myflorida.com)	No Purpose and Need comments found.

FL Department of State

Acknowledgment	Date Reviewed	Reviewer	Comments
Understood	09/28/2020	Adrienne Daggett (Adrienne.Daggett@dos.myflorida.com)	No comments

FL Fish and Wildlife Conservation Commission

Acknowledgment	Date Reviewed	Reviewer	Comments
Understood	10/27/2020	Jason Hight (Jason.Hight@MyFWC.com)	No Purpose and Need comments found.

National Marine Fisheries Service

Acknowledgment	Date Reviewed	Reviewer	Comments
Understood	10/22/2020	Jennifer Schull (Jennifer.Schull@noaa.gov)	No Purpose and Need comments found.

National Park Service

Acknowledgment	Date Reviewed	Reviewer	Comments
Understood	10/20/2020	Anita Barnett (anita_barnett@nps.gov)	No Purpose and Need comments found.

Saint Johns River Water Management District

Acknowledgment	Date Reviewed	Reviewer	Comments
Understood	10/21/2020	Sandy Smith (ssmith@sjrwmd.com)	The purpose and need are understood.

US Army Corps of Engineers

Acknowledgment	Date Reviewed	Reviewer	Comments
Understood	10/29/2020	Randy Turner (Randy.L.Turner@usace.army.mil)	No Purpose and Need comments found.

US Coast Guard

Acknowledgment	Date Reviewed	Reviewer	Comments
Understood	10/21/2020	Lisia Kowalczyk (Lisia.J.Kowalczyk2@uscg.mil)	No Purpose and Need comments found.

US Environmental Protection Agency

Acknowledgment	Date Reviewed	Reviewer	Comments
Understood	10/31/2020	Roshanna White (White.Roshanna@epa.gov)	No Purpose and Need comments found.

US Fish and Wildlife Service

Acknowledgment	Date Reviewed	Reviewer	Comments
Understood	11/03/2020	Zakia Williams (zakia_williams@fws.gov)	No Purpose and Need comments found.

The following organizations were notified but did not submit a review of the Purpose and Need:

- FL Department of Environmental Protection
- National Aeronautics and Space Administration
- Natural Resources Conservation Service
- Seminole Tribe of Florida

Alternative #1

Description

Name	From	To	Type	Status	Total Length	Cost	Modes	SIS
Unnamed	?	?	Bridge	ETAT Review Complete	? mi.		Roadway	Y

Segment Description(s)

Location and Length

Segment Record	Segment Name	Facility Name	Beginning Location	Ending Location	Length (mi.)	Roadway Id	BMP	EMP
Segment 1	Segment 1	Segment 1			0	Digitized		
S-001	S-001	S-001			0			

Jurisdiction and Class

Segment Record	Segment Name	Jurisdiction	Urban Service Area	Functional Class
Segment 1	Segment 1			
S-001	S-001			

Base Conditions

Segment Record	Segment Name	Year	AADT	Lanes	Config
Segment 1	Segment 1				
S-001	S-001				

Interim Plan

Segment Record	Segment Name	Year	AADT	Lanes	Config
Segment 1	Segment 1				
S-001	S-001				

Needs Plan

Segment Record	Segment Name	Year	AADT	Lanes	Config
Segment 1	Segment 1				
S-001	S-001				

Cost Feasible Plan

Segment Record	Segment Name	Year	AADT	Lanes	Config
Segment 1	Segment 1				
S-001	S-001				

Funding Sources

No funding sources found.

Project Effects Overview for Alternative #1

Topic	Degree of Effect	Organization	Date Reviewed
Social and Economic			
Land Use Changes	1 Enhanced	FL Department of Economic Opportunity	10/30/2020
Social	2 Minimal	US Environmental Protection Agency	10/31/2020
Economic	0 None	FL Department of Economic Opportunity	10/30/2020
Cultural and Tribal			
Recreational and Protected Lands	3 Moderate	FL Department of Environmental Protection	10/27/2020
Recreational and Protected Lands	2 Minimal	Saint Johns River Water Management District	10/21/2020
Recreational and Protected Lands	N/A N/A / No Involvement	National Park Service	10/20/2020
Historic and Archaeological Sites	3 Moderate	FL Department of State	09/28/2020
Natural			

Wetlands and Surface Waters	3	Moderate	US Fish and Wildlife Service	11/03/2020
Wetlands and Surface Waters	4	Substantial	US Environmental Protection Agency	10/31/2020
Wetlands and Surface Waters	3	Moderate	US Army Corps of Engineers	10/29/2020
Wetlands and Surface Waters	3	Moderate	FL Department of Environmental Protection	10/27/2020
Wetlands and Surface Waters	3	Moderate	National Marine Fisheries Service	10/22/2020
Wetlands and Surface Waters	2	Minimal	Saint Johns River Water Management District	10/21/2020
Protected Species and Habitat	3	Moderate	US Fish and Wildlife Service	11/03/2020
Protected Species and Habitat	3	Moderate	FL Fish and Wildlife Conservation Commission	10/27/2020
Protected Species and Habitat	N/A	N/A / No Involvement	FL Department of Agriculture and Consumer Services	10/05/2020
Floodplains	3	Moderate	Saint Johns River Water Management District	10/30/2020
Coastal and Marine	3	Moderate	National Marine Fisheries Service	10/22/2020
Coastal and Marine	2	Minimal	Saint Johns River Water Management District	10/21/2020
Water Resources	3	Moderate	US Environmental Protection Agency	10/31/2020
Water Resources	3	Moderate	Saint Johns River Water Management District	10/30/2020
Water Resources	3	Moderate	FL Department of Environmental Protection	10/27/2020
Physical				
Navigation	3	Moderate	US Army Corps of Engineers	10/29/2020
Navigation	4	Substantial	US Coast Guard	10/21/2020
Contamination	3	Moderate	US Environmental Protection Agency	10/31/2020
Contamination	0	None	FL Department of Environmental Protection	10/27/2020
Air Quality	2	Minimal	US Environmental Protection Agency	10/31/2020
Special Designations				
Special Designations	3	Moderate	US Environmental Protection Agency	10/31/2020
Special Designations	2	Minimal	Saint Johns River Water Management District	10/30/2020

ETAT Reviews and Coordinator Summary: Social and Economic

Farmlands

Project Effects

Coordinator Summary Degree of Effect: N/A N/A / No Involvement assigned 11/13/2020 by FDOT District 5

Comments:

No ETAT reviews were submitted for this topic. The GIS analysis did not identify any prime farmland or farmland of local importance within the 500-foot buffer of the project. In addition, no agricultural lands were identified within the 500-foot buffer of the WMD Agricultural Lands layer. This project is completely within the Urbanized Area of Palm Bay-Melbourne. The proposed project is expected to result in no involvement with farmlands.

None found

The following organization(s) were expected to but did not submit a review of the Farmlands topic for **Alternative #1**: Natural Resources Conservation Service

Land Use Changes

Project Effects

Coordinator Summary Degree of Effect: 1 *Enhanced* assigned 11/13/2020 by FDOT District 5

Comments:

The Florida Department of Economic Opportunity (DEO) assigned a Degree of Effect of "Enhanced" for Land Use Changes. The Degree of Effect was assigned because the project is compatible with community development goals and consistent with the comprehensive plan. The existing and future land uses are generally consistent, and this project will not impact land use patterns. The FDOT has assigned a DOE of "Enhanced" for land use changes.

Degree of Effect: 1 *Enhanced* assigned 10/30/2020 by Matt Preston, FL Department of Economic Opportunity

Coordination Document:

No Involvement

Direct Effects

Identified Resources and Level of Importance:

Comprehensive Plan(s) Reviewed:

1988 Brevard County Comprehensive Plan (Adopted in July of 1981).

Comments on Effects to Resources:

Compatibility with Community Development Goals and Comprehensive Plan:

The proposed project is compatible with community development goals and consistent with the comprehensive plan.

Future Transportation Map:

The project is not included on the Future Transportation Map. DEO staff recommends that the county update its map to include the proposed project.

Land Uses:

The proposed project is surrounded by the Port future land use designation.

Parks:

The proposed project is located in close proximity to Rodney S. Ketchum Park, formerly known as Ports End Park.

Area of Critical State Concern (ACSC), Coastal High Hazard Area (CHHA), and Military Bases:

The project is not located within an Area of Critical State Concern, nor does it encroach on any military installation. Portions of the project are located within the CHHA.

Other Planning-Related Items:

- 2040 Long Range Transportation Plan
- Space Coast TPO Transportation Improvement Plan
- FDOT Future Project 407402-4

The project does consist of critical transportation infrastructure to Cape Canaveral Air Force Station, Space Florida operations, Naval Ordinance Test Unit, and facilities for the U.S. Coast Guard.

Recommended Avoidance, Minimization, and Mitigation Opportunities:

Additional Comments (optional):

CLC Recommendations:

Indirect Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Recommended Avoidance, Minimization, and Mitigation Opportunities:

FDOT District 5 Feedback to FL Department of Economic Opportunity's Review (11/13/2020): Thank you for your review

and comments. FDOT will coordinate with the County on updates to the Future Transportation Map.

Aesthetic Effects

Project Effects

Coordinator Summary Degree of Effect: 2 *Minimal* assigned 11/13/2020 by FDOT District 5

Comments:

No ETAT reviews were submitted for this topic. Potential landscaping and other aesthetic treatments, such as bridge aesthetics, will be identified in either the PD&E Study or in future phases, i.e., final design. The southern terminus of the project is located within the limits of the Indian River Lagoon National Scenic Byway. Coordination with the local government, surrounding businesses, District Scenic Highways Coordinator (DSHC) and the chairperson of the Corridor Management Entity (Byway Organization) for the scenic corridor will take place during the PD&E Study. A Degree of Effect (DOE) of "Minimal" is being assigned to Aesthetic Effects. None found

Relocation Potential

Project Effects

Coordinator Summary Degree of Effect: N/A *N/A / No Involvement* assigned 11/13/2020 by FDOT District 5

Comments:

No ETAT reviews were submitted for this topic. The proposed project is not expected to result in any residential relocations or business displacements. A Conceptual Stage Relocation Plan will be prepared if it is determined that residential relocations or business displacements occur. None found

Social

Project Effects

Coordinator Summary Degree of Effect: 2 *Minimal* assigned 11/13/2020 by FDOT District 5

Comments:

The US Environmental Protection Agency reviewed this topic and assigned a Degree of Effect (DOE) of "Minimal" since a "social GIS analysis within 500-ft. identified one 2010 US Census Block with a minority population greater than 40%." The FDOT has assigned a DOE of "Minimal" for this category.

Degree of Effect: 2 *Minimal* assigned 10/31/2020 by Roshanna White, US Environmental Protection Agency

Coordination Document:

To Be Determined: Further Coordination Required

Direct Effects

Identified Resources and Level of Importance:

FDOT Preliminary Environmental Discussion acknowledged within a 500-ft. buffer a minority population of approximately 4% of the total population and 7.69% of households are below poverty level. Social GIS analysis within 500-ft. identified one 2010 US Census Block with a minority population greater than 40%. Therefore, the EPA assigns a Minimal Degree of Effect for Social.

Comments on Effects to Resources:

If potential EJ communities are identified as the project continues, identify the impacts of the project that appear to fall disproportionately on minority and low-income populations in accordance with EO 12898.

Recommended Avoidance, Minimization, and Mitigation Opportunities:

Consider meaningful public involvement that enables transportation professionals to develop systems, services, and solutions that meet the needs of the community and the vulnerable populations that potentially will be temporarily or permanently impacted by the project.

Additional Comments (optional):

CLC Recommendations:

Indirect Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Recommended Avoidance, Minimization, and Mitigation Opportunities:

FDOT District 5 Feedback to US Environmental Protection Agency's Review (11/13/2020): Thank you for your review and comments. Executive Orders 13045 and 12898 will be considered during the public outreach and alternative analysis phases of the Project Development and Environment (PD&E) Study.

This project will be developed without regard to race, color, national origin, age, sex, religion, disability, or family status. A proactive public involvement approach, consistent with the PD&E Manual, will be implemented for these projects to ensure that opportunity is given to all residents and businesses along the corridor to provide input into this project. The FDOT may further analyze sociocultural effects during the PD&E study.

Economic

Project Effects

Coordinator Summary Degree of Effect: 0 None assigned 11/13/2020 by FDOT District 5

Comments:

The Department of Economic Opportunity assigned a Degree of Effect (DOE) of "none" since "there is very limited potential for the proposed project to attract new development and generate additional employment opportunities." FDOT notes that the bridge improvements will enhance mobility by providing for travel time reliability and a potential benefit to the port in support of their 30-year Port Master Plan, which factors into the efficient movement of goods and freight.

Degree of Effect: 0 None assigned 10/30/2020 by Matt Preston, FL Department of Economic Opportunity

Coordination Document:

No Involvement

Direct Effects

Identified Resources and Level of Importance:

Comprehensive Plan(s) Reviewed:

1988 Brevard County Comprehensive Plan (Adopted in July of 1981).

Comments on Effects to Resources:

The project *is not* located within a Rural Area of Opportunity.

There is very limited potential for the proposed project to attract new development and generate additional employment opportunities.

Recommended Avoidance, Minimization, and Mitigation Opportunities:

Additional Comments (optional):

CLC Recommendations:

Indirect Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Recommended Avoidance, Minimization, and Mitigation Opportunities:

FDOT District 5 Feedback to FL Department of Economic Opportunity's Review (11/13/2020): Thank you for your review and comments.

Mobility

Project Effects

Coordinator Summary Degree of Effect: **1** *Enhanced* assigned 11/13/2020 by FDOT District 5

Comments:

No ETAT reviews were submitted for this topic. A Degree of Effect of "Enhanced" is being assigned for the potential of this project to enhance mobility to and from the Port and related facilities.

None found

ETAT Reviews and Coordinator Summary: Cultural and Tribal

Recreational and Protected Lands

Project Effects

Coordinator Summary Degree of Effect: **3** *Moderate* assigned 11/13/2020 by FDOT District 5

Comments:

The National Park Service assigned a Degree of Effect (DOE) of "N/A No involvement", and the St. Johns Florida Water Management District assigned a DOE of "Minimal". The FL Department of Environmental Protection assigned a DOE of "Moderate" noting that "the proposed project contacts or is within 500 feet of the Banana River Aquatic Preserve and the Merritt Island National Wildlife Refuge." An overall DOE of "Moderate" is being assigned for Recreation Areas.

Degree of Effect: **3** *Moderate* assigned 10/27/2020 by Chris Stahl, FL Department of Environmental Protection

Coordination Document:

PD&E Support Document As Per PD&E Manual

Direct Effects

Identified Resources and Level of Importance:

The proposed project contacts or is within 500 feet of the Banana River Aquatic Preserve and the Merritt Island National Wildlife Refuge

Comments on Effects to Resources:

The Department is interested in preserving the area's recreational trail and alternative transportation opportunities. Therefore, future environmental documentation should include an evaluation of the primary, secondary, and cumulative impacts of highway expansion on the adjacent trails and any proposed acquisition sites.

Recommended Avoidance, Minimization, and Mitigation Opportunities:

Additional Comments (optional):

CLC Recommendations:

Indirect Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Recommended Avoidance, Minimization, and Mitigation Opportunities:

FDOT District 5 Feedback to FL Department of Environmental Protection's Review (11/13/2020): Thank you for your review and comment and for identifying the resources within the 500-foot buffer.

Degree of Effect: 2 Minimal assigned 10/21/2020 by Sandy Smith, Saint Johns River Water Management District

Coordination Document:
Permit or Technical Study Required

Direct Effects

Identified Resources and Level of Importance:

The project has two marine protected areas (Merritt Island National Wildlife Refuge and Banana River Aquatic Preserve) impacts proposed in these areas often require mitigation to occur within the protected area. It appears the bridge span over the Canaveral barge canal could have open water impacts and shoreline mangrove impacts.

The project is located within Regulatory Basin 21 (North Indian River Lagoon). This basin has three mitigation banks, Green Wing, Neoverde and Webster Creek mitigation banks. Green Wing Mitigation Bank has no state or federal credits available. Neoverde Mitigation Bank has both forested and herbaceous freshwater credits available but no marine state or federal credits. Webster Creek Mitigation Bank has state forested and herbaceous marine credits, but no federal credits are available.

Comments on Effects to Resources:

If mangrove, grass beds or wetland impacts are proposed in the area of the project mitigation will be warranted. Any impacts within the protected areas could require site specific mitigation within the preserve area.

Recommended Avoidance, Minimization, and Mitigation Opportunities:

All ramps and proposed pond sites should be located within the project to avoid wetlands to the maximum extent possible.

Additional Comments (optional):

CLC Recommendations:

Indirect Effects

Identified Resources and Level of Importance:

Secondary wetland impacts outside the direct wetland impacts may need to be quantified based on the layout of the project.

Comments on Effects to Resources:

Wetland impacts should be cross hatched, quantified and identified on the plans. There should be a clear indication of the type of impact and mitigation should be in like kind of the impacts. Any temporary impacts as a result of construction methods should be addressed including any temporary mixing zones at the location of the bridge replacements.

Recommended Avoidance, Minimization, and Mitigation Opportunities:

All wetland impacts should be minimized to the maximum extent practical. The project is located within Regulatory Basin 21 (North Indian River Lagoon). This basin has three mitigation banks, Green Wing, Neoverde and Webster Creek mitigation banks. Green Wing Mitigation Bank has no state or federal credits available. Neoverde Mitigation Bank has both forested and herbaceous freshwater credits available but no marine state or federal credits. Webster Creek Mitigation Bank has state forested and herbaceous marine credits, but no federal credits are available. Impacts within the protected areas may require site specific mitigation within the respective preserve area.

FDOT District 5 Feedback to Saint Johns River Water Management District's Review (11/13/2020): Thank you for your review and comments.

Degree of Effect: N/A N/A / No Involvement assigned 10/20/2020 by Anita Barnett, National Park Service

Coordination Document:
No Involvement

Direct Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Recommended Avoidance, Minimization, and Mitigation Opportunities:

Additional Comments (optional):

CLC Recommendations:

Indirect Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Recommended Avoidance, Minimization, and Mitigation Opportunities:

FDOT District 5 Feedback to National Park Service's Review (11/13/2020): Thank you for your review.

Section 4(f) Potential

Project Effects

Coordinator Summary Degree of Effect: 2 *Minimal* assigned 11/13/2020 by FDOT District 5

Comments:

No ETAT reviews were submitted for Section 4(f) Potential. The FDOT has assigned a Degree of Effect (DOE) of "Minimal" because of the proximity of the Rodney S. Ketchum Ports End Park, Ports End Park Boat Ramp, and Canaveral Lock; however, impacts to these resources are not yet known. The FDOT will take all measures to develop avoidance alternatives and/or measures to minimize harm to these resources to the greatest extent practicable. The FDOT will complete the appropriate documentation if any of these resources are impacted by the project.

None found

Historic and Archaeological Sites

Project Effects

Coordinator Summary Degree of Effect: 3 *Moderate* assigned 11/13/2020 by FDOT District 5

Comments:

The Florida Department of State, Division of Historic Resources assigned a Degree of Effect (DOE) of "Moderate" and noted that the Canaveral Barge Canal intersects the APE. This resource dates approximately to the 1960s and has not yet been recorded. They also noted that the area has not been comprehensively surveyed. The FDOT has also assigned a DOE of "Moderate".

A Cultural Resource Assessment Survey (CRAS) will be developed in accordance with the criteria set forth in Chapter 1A-46 Florida Administrative Code and Part 2, Chapter 8 of the PD&E Manual.

Degree of Effect: 3 *Moderate* assigned 09/28/2020 by Adrienne Daggett, FL Department of State

Coordination Document:

PD&E Support Document As Per PD&E Manual

Coordination Document Comments:

Since the project area has not been comprehensively surveyed, a survey should be conducted for this project. All cultural resources, including potential historic districts, within the area of potential effect should be documented and assessed for NRHP eligibility. The resultant survey report shall conform to the specifications set forth in Chapter 1A-46 Florida Administrative Code, FDOT PD&E Manual Part 2, Chapter 8 and will need to be forwarded to this agency (or the appropriate Federal Agency) for review and comment. We look forward to reviewing the Cultural Resources Assessment Survey.

Direct Effects

Identified Resources and Level of Importance:

As reported; additionally, the Canaveral Barge Canal intersects the APE. This resource dates approximately to the 1960s and has not

yet been recorded.

Comments on Effects to Resources:

The project has the potential to impact cultural resources within and adjacent to the proposed project.

Recommended Avoidance, Minimization, and Mitigation Opportunities:

This office will consult with the project sponsors to avoid, minimize, or mitigate any adverse effects to significant cultural resources.

Additional Comments (optional):

Since the project area has not been comprehensively surveyed, a survey should be conducted for this project. All cultural resources, including potential historic districts, within the area of potential effect should be documented and assessed for NRHP eligibility. The resultant survey report shall conform to the specifications set forth in Chapter 1A-46 Florida Administrative Code, FDOT PD&E Manual Part 2, Chapter 8 and will need to be forwarded to this agency (or the appropriate Federal Agency) for review and comment. We look forward to reviewing the Cultural Resources Assessment Survey.

CLC Recommendations:

Indirect Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Recommended Avoidance, Minimization, and Mitigation Opportunities:

FDOT District 5 Feedback to FL Department of State's Review (11/13/2020): Thank you for your review and comments. Further coordination with your agency will take place during the PD&E Study, which will include a Cultural Resource Assessment Survey.

The following organization(s) were expected to but did not submit a review of the Historic and Archaeological Sites topic for **Alternative #1:** Seminole Tribe of Florida

ETAT Reviews and Coordinator Summary: Natural Wetlands and Surface Waters

Project Effects

Coordinator Summary Degree of Effect: 4 *Substantial* assigned 11/13/2020 by FDOT District 5

Comments:

The St. Johns River Water Management District assigned a Degree of Effect (DOE) of "Minimal" to the Wetlands and Surface Water topic. A "Moderate" DOE was assigned by the Florida Department of Environmental Protection (FDEP), the National Marine Fisheries Services, the US Army Corps of Engineers (USACE), and the US Fish and Wildlife Service (FWS). The US Environmental Protection Agency assigned a DOE of "Substantial".

Given the potential impacts to wetlands and surface waters identified by the ETAT, the FDOT is assigning a DOE of "Substantial" to this topic.

Measures to avoid or minimize impacts to wetlands, mitigation options, as well as cumulative impacts will be documented in the Natural Resource Evaluation during the PD&E Study. The project will be designed to meet state water quality and quantity requirements, and the FDOT will implement best management practices during construction.

Degree of Effect: 3 *Moderate* assigned 11/03/2020 by Zakia Williams, US Fish and Wildlife Service

Coordination Document:

PD&E Support Document As Per PD&E Manual

Direct Effects

Identified Resources and Level of Importance:

Wood Stork (*Mycteria americana*)

The action area falls within the Core Foraging Area (CFA) of the wood stork. The project is not located close to any wood stork nesting colonies. Although the project area falls within the CFA it is unlikely that wood storks are utilizing this area for foraging.

Piping Plover (*Charadrius melodus*)

The piping plover is a federally-threatened coastal shorebird that requires beaches, sandflats, or tidal mudflats (FNAI, 2001). No Critical Habitat for this species is designated in within the project area. The project area contains tidal saltmarshes and tidal mudflats.

West Indian Manatee

The action area falls within an Important Manatee Area and the 500-foot buffer lies within designated critical habitat for the manatee.

Sea Turtles

Depending on the activities involved in the reconstruction of the bridge, the sea turtles will need to be considered in the NRE.

Comments on Effects to Resources:

Wood Stork

The Service believes that the loss of wetlands within a CFA due to an action could result in the loss of foraging habitat for the wood stork. To minimize adverse effects to the wood stork, we recommend that any lost foraging habitat resulting from the project be replaced within the CFA of the affected nesting colony. Moreover, wetlands provided as mitigation should adequately replace the wetland functions lost as a result of the action. In some cases, the Service accepts wetlands compensation located outside the CFA of the affected wood stork nesting colony. Specifically, wetland credits purchased from a "Service Approved" mitigation bank located outside of the CFA would be acceptable to the Service provided that the impacted wetland occur within the permitted service area of the bank.

To minimize adverse effects to the wood stork and other wetland dependent species, we recommend that impacts to suitable foraging habitat be avoided. If avoidance is not possible, minimization measure should be employed and best management practices to avoid further degradation of the site. Mitigation for wetland impacts should be discussed with USFWS and will require further coordination. Please refer to the North Florida Field Office website for WOST colony locations. <http://www.fws.gov/northflorida>

Piping Plover

Depending on the activities involved in the reconstruction of the bridge, the piping plover will need to be considered in the NRE.

West Indian Manatee

The action area falls within an Important Manatee Area and the 500-foot buffer lies within designated critical habitat for the manatee. To avoid impacts to the manatee special provisions would need to be implemented.

Coordination with the Office of Migratory birds will be needed for all projects involving migratory birds and eagles, please contact Ulgonda Kilpatrick in our Migratory Birds Permit Office at:

Migratory Birds Permit Office
1875 Century Boulevard, NE
Atlanta, Georgia 30345
352-406-6780 cell (MAIN)

Surveys for all federally listed plants found in Brevard County can be found on our website northflorida.fws.gov. Should a survey be needed it should be conducted by a trained botanist during the appropriate time of year.

Florida has 229 species of plants found nowhere else in the world, and most of them are rare and declining. Diverse plant communities are essential for maintaining a healthy environment for fish, wildlife, and people, and improved land conservation and land management can help restore these rare plants. To this end, the Service worked with the Florida Department of Agriculture and Consumer Services, and many universities and non-profits, to establish the Florida Rare Plant Conservation Endowment. The Endowment funds projects that are critical to preventing the extinction of Florida's rare plants. To ensure the survival of Florida's unique and rare plants the Service encourages the applicant to make a voluntary contribution of \$5,000 to the Endowment. All contributions are voluntary and tax deductible.

Recommended Avoidance, Minimization, and Mitigation Opportunities:

Additional Comments (optional):

CLC Recommendations:

Indirect Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Recommended Avoidance, Minimization, and Mitigation Opportunities:

FDOT District 5 Feedback to US Fish and Wildlife Service's Review (11/13/2020): Thank you for your review and comments regarding wetlands and surface waters. The scoping of this project will include these comments and considerations, and FDOT looks forward to working closely with your agency during the PD&E Study and future phases of project development.

Degree of Effect: **4** *Substantial* assigned 10/31/2020 by Roshanna White, US Environmental Protection Agency

Coordination Document:

To Be Determined: Further Coordination Required

Direct Effects

Identified Resources and Level of Importance:

FDOT Preliminary Environmental Discussion acknowledged within a 500-ft. buffer 27.59 acres of estuarine wetlands, 13.88 acres of palustrine wetlands, 11.77 acres of mangrove swamp, and 1.42 acres of continuous seagrass. GIS analysis for Coastal and Marine identified within a 500-ft buffer sensitive coastal habitats and wildlife, the Banana River Aquatic Preserve, and the Merritt Island National Wildlife Refuge.

The EPA considers mangroves, saltwater marshes, and seagrasses (SAVs) to be Essential Fish Habitat (EFH) as well as Aquatic Resources of National Importance (ARNI) due to the myriad ecological services and functions they provide. Storm water runoff from urban sources, including roadways, carries pollutants such as volatile organics, petroleum hydrocarbons, heavy metals, and pesticides/herbicides can degrade important natural resources for ARNI. Therefore, the EPA assigns a Substantial Degree of Effect for Wetlands and Surface Waters.

Comments on Effects to Resources:

Urbanization increases the amount of pollutants carried into water bodies. Contaminants can increase the turbidity of a water body. Turbid waters heat more rapidly when exposed to sunlight and decrease primary production and dissolved oxygen levels. Increases in water temperature may decrease dissolved oxygen which adversely effects coastal shorelines. Mangroves control runoff, turbidity, and stabilize sediment. They are first line of defense in protecting infrastructure from storm surges and flood risks; the submerged roots provide protection for juvenile fish and buttress shorelines by keeping soil in place that would otherwise be carried away by the wind and waves. Additionally, seagrasses pollution uptake contributes to water quality maintenance. The reduction in natural surfaces from impervious surfaces, improperly treated stormwater runoff, insufficient storm water systems contribute to the degradation of these natural resources.

Recommended Avoidance, Minimization, and Mitigation Opportunities:

The EPA recommends:

- Pre-and post-project SAV surveys to quantify the actual direct and indirect impacts.
- Linear stormwater best management practices and a more detailed explanation of Storm water Management that accommodates major storm events and changes in rainfall.
- Remain within current footprint to prevent or reduce further degradation on wetlands, seagrasses, and surface waters.
- Protect the shoreline and minimize erosion by incorporating natural shoreline protection and treat stormwater runoff that may be discharged.
- Reduce the impact of pollution runoff from construction activities.
- Identify and quantify incremental and cumulative impacts on water quality as a result of the past, present, and reasonably

foreseeable actions, including the proposed project and other land use actions.

Additional Comments (optional):

CLC Recommendations:

Indirect Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Recommended Avoidance, Minimization, and Mitigation Opportunities:

FDOT District 5 Feedback to US Environmental Protection Agency's Review (11/13/2020): Thank you for your review and comments regarding wetlands and surface waters. The scoping of this project will include these comments and considerations, and FDOT looks forward to working closely with your agency during the PD&E Study and future phases of project development.

Degree of Effect: **3** *Moderate* assigned 10/29/2020 by Randy Turner, US Army Corps of Engineers

Coordination Document:

Permit or Technical Study Required

Permits

Section 404 - Individual or General

Comments:

The proposed project will more than likely be permitted using a Standard Individual Permit review, given that the project corridor is within tidal waters and are Outstanding Florida Waters in the Merritt Island National Wildlife Refuge. There is a possibility that a Nationwide 3 (Maintenance) or/and a Nationwide 23 (Approved Categorical Exclusions)) could be used as the project development and planning moves forward.

Technical Studies

Wetlands Evaluation Report

Comments:

Wetlands Evaluation Report should be prepared during the PD&E that evaluates the actual presence and locations and functional assessment of jurisdictional waters of the U.S. within the corridor of the bridge improvement and/or replacements.

Direct Effects

Identified Resources and Level of Importance:

The waters of the U.S. (wetlands and surface waters) are Outstanding Florida Waters and included in the Merritt Island National Wildlife Refuge and Banana River Aquatic Preserve adjacent to the southern portion of the project area. 27.59 acres of estuarine wetlands and 13.88 acres of palustrine wetlands (freshwater pond) exist within a 500 foot buffer; 3.34 acres of estuarine wetlands and 1.45 acres of palustrine wetlands (freshwater pond), and 0.98 acres of estuarine wetlands and 0.04 acres of palustrine wetlands (freshwater pond) exist within a 100 foot buffer. The Canaveral Barge Channel is a Federal navigational channel. The level of importance would be Moderate for the new bridge replacements across the Canaveral Barge Channel.

Comments on Effects to Resources:

The proposed project is improvements to, or replacement of, the three existing bascules bridges over the Canaveral Barge Canal for retrofit improvements or replacement with either a medium-level bascule bridge or a new high-level fixed span bridge. Any estuarine wetlands in the project area deemed to be jurisdictional along the existing roadway should contain higher quality wetlands including mangroves swamps and Submerged Aquatic Vegetation (SAV) (seagrasses) considered Essential Fish Habitat (EFH). Due to the potential for providing compensatory mitigation for unavoidable impacts to estuarine resources (mangroves and possibly submerged aquatic vegetation, any impacts to these resources will be moderate.

Recommended Avoidance, Minimization, and Mitigation Opportunities:

The Corps recommends a continued emphasis on wetland avoidance and minimization opportunities throughout the planning process. A wetland survey should be conducted within the study area to identify the wetlands and a jurisdictional determination should be completed. A review of the Corps RIBITS indicates that there are no federally approved mitigation banks with service areas that covers the project area. Permittee-responsible on-site or off-site mitigation under a watershed approach, should be planned early. This is a major issue with other current projects in this geographical area within the same watershed, including another bridge replacement project (FPN 440424-1-22-01-NASA Causeway (SR 405)).

Additional Comments (optional):

CLC Recommendations:

Indirect Effects

Identified Resources and Level of Importance:

See comments for direct effects.

Comments on Effects to Resources:

Additional secondary impacts would include bridge shading to adjacent wetlands and surface waters, however the Corps has no authority to require compensatory compensation for bridge shading indirect effects since the Corps does not regulate bridges, only the fill and work in waters of the U.S.

Recommended Avoidance, Minimization, and Mitigation Opportunities:

See comments for direct effects.

FDOT District 5 Feedback to US Army Corps of Engineers's Review (11/13/2020): Thank you for your review and comments regarding wetlands and surface waters. The scoping of this project will include these comments and considerations, and FDOT looks forward to working closely with your agency during the PD&E Study and future phases of project development.

Degree of Effect: **3** *Moderate* assigned 10/27/2020 by Chris Stahl, FL Department of Environmental Protection

Coordination Document:

PD&E Support Document As Per PD&E Manual

Direct Effects

Identified Resources and Level of Importance:

The National Wetlands Inventory GIS report indicates that there are 40+ acres of wetlands within the 500-ft. project buffer zone.

Comments on Effects to Resources:

The proposed project may require an environmental resource permit (ERP). If any wetlands are affected, the ERP applicant will be required to eliminate or reduce the proposed wetland resource impacts of roadway construction to the greatest extent practicable.

Recommended Avoidance, Minimization, and Mitigation Opportunities:

Additionally there are 1.42 acres of sea grasses and 11.77 acres of mangrove swamp within the 500-foot project buffer.

Additional Comments (optional):

CLC Recommendations:

Indirect Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Recommended Avoidance, Minimization, and Mitigation Opportunities:

FDOT District 5 Feedback to FL Department of Environmental Protection's Review (11/13/2020): Thank you for your review and comments. The scoping of this project will include these comments and considerations, and FDOT looks forward to working with your agency during the PD&E Study.

Degree of Effect: **3** *Moderate* assigned 10/22/2020 by Jennifer Schull, National Marine Fisheries Service

Coordination Document:

PD&E Support Document As Per PD&E Manual

Coordination Document Comments:

The applicant should prepare a Natural Resource Evaluation and a Biological Assessment in support of this project.

Direct Effects**Identified Resources and Level of Importance:**

Based on our review of the information provided on the ETDM website and aerial image interpretation, NOAA's National Marine Fisheries Service (NMFS) has determined that seagrass, mangroves, and sand/shell bottom may occur at the project site. The project consists of the retrofitting or replacement of three bascule bridges crossing the Canaveral Barge Canal associated with Port Canaveral. The project area includes the Banana River Aquatic Preserve and the Merritt Island National Wildlife Refuge and is associated with the Indian River Lagoon ecosystem. Since this environment is fairly urbanized, wetlands generally are in low quality, although nearby seagrass beds and mangrove forests may be of higher quality. The South Atlantic Fishery Management Council (SAFMC) has designated these habitats as essential fish habitat (EFH). Mangrove and seagrass habitats are also considered Habitat Areas of Particular Concern (HAPC). HAPC's are subsets of EFH that are rare, particularly susceptible to human-induced degradation, especially ecologically important, or located in an environmentally stressed area.

Federally managed fishery species associated with mangrove and seagrass habitat include many species in the snapper-grouper complex. Seagrass and sand/shell bottom are also essential fish habitat for penaeid shrimp. The SAFMC provides additional information on EFH and HAPCs and their support of federally managed fishery species in the *Fishery Ecosystem Plan of the South Atlantic Region*, which is available at www.safmc.net.

The seagrass and mangroves are part of a habitat complex that supports a diverse community of fish and invertebrates within the area, including recreationally and commercially important reef, migratory, and pelagic fish. Seagrass and mangroves also benefit fishery resources by providing important nursery and forage habitat. Seagrass provides important water quality maintenance functions such as pollution uptake, stabilizing sediments, attenuating wave action, and producing and exporting detritus (decaying organic material), which is an important component of marine and estuarine food chains. Mangroves in the project area indirectly support fishery habitat by controlling runoff and turbidity and by stabilizing sediment.

Several species listed as either threatened or endangered under the Endangered Species Act may inhabit the project area. These species include green sea turtle (*Chelonia mydas*), loggerhead sea turtle (*Caretta caretta*), and Kemp's ridley sea turtle (*Lepidochelys kempii*), smalltooth sawfish (*Pristis pectinata*), and the giant manta ray (*Manta birostris*), since the inlet to the Atlantic Ocean is nearby. The project site supports seagrass, which may include Johnson's seagrass (*Halophila johnsonii*), which is listed as threatened under the Endangered Species Act. The habitat within the project area may not support the specific life history needs of hawksbill sea turtle (*Eretmochelys imbricata*) or leatherback sea turtle (*Dermochelys coriacea*). However, it is incumbent on the applicant to make an effects determination for this project.

Comments on Effects to Resources:

The above listed resources may be impacted by the project. Surveys should be conducted that document and quantify all EFH present including seagrass species, location, and density, and delineation of mangrove wetlands. A protected resources Biological Assessment should also be prepared to determine if consultation under Section 7 of the ESA will be required.

Impacts to species and the environment may result from construction, re-engineering of the shoreline, right-of-way, routing of traffic, and construction of the new bridges. If possible, construction and/or rehabilitation should take place from the uplands and within the same alignment as the current bridges. Shading impacts from barge-based construction and the new bridges need to be considered. Barge spudding may impact EFH. Best Management Practices should be followed to reduce or eliminate impacts from sedimentation and runoff. It will be critically important to avoid and minimize impacts to seagrass beds in the area, as the Indian River Lagoon has experienced severe seagrass die-offs. While impacts to EFH should be avoided and minimized to the extent practical, mitigation for unavoidable impacts to EFH may be required.

With construction of the new bridge, impervious surface area will be increased. The discharge of hydrocarbons and other contaminants may degrade water quality. Subsequently, NOAA trust resources located in the receiving waters could be adversely affected. Surface and stormwater runoff must be treated prior to discharge and in accordance with state and federal (NPDES) standards.

Recommended Avoidance, Minimization, and Mitigation Opportunities:

Because this project has the potential to impact EFH and HAPC and to ensure that adequate wetland conservation and impact avoidance measures are being implemented, NMFS recommends the following recommendations be implemented as project development progresses from EST to PD&E, design, and construction:

- 1) Adverse impacts to EFH and HAPC should be sequentially avoided and/or minimized, and unavoidable impacts should be

quantified and offset in a manner that precludes a net loss of function using an appropriate mitigation strategy.

2) An endangered species biological assessment and an EFH/habitat assessment should be prepared. The biological assessment should include effects determinations for listed species and critical habitat. The habitat assessment should include characterization of the wetlands within the project site, including the size and location of wetlands that would be directly and/or indirectly impacted by the proposed project.

3) Measures to avoid and/or minimize adverse impacts to EFH within the vicinity of the project site should be identified and described.

4) Conservation measures (i.e., best management practices for water quality and erosion control) should be included in the project design and implemented during project construction.

5) A Stormwater Management Plan for containment/treatment of surface and stormwater runoff from impervious surfaces should be prepared. Treatment should be in accordance with state and federal (NPDES) standards. Details of the stormwater plan should include location, area, and cross section of proposed stormwater swales, and/or ponds and information on wetland vegetation planting if proposed.

6) A mitigation plan should be developed that includes a detailed description of the proposed mitigation, including success criteria. The plan should contain sufficient detail to ensure no net loss of habitat functions and values as a result of project authorization. A functional assessment such as UMAM should be prepared for the impact and mitigation sites.

7) A seagrass survey should be performed within the NMFS-recommended survey window (June-September).

8) Timely coordination between NMFS and FDOT staff should continue through project planning and until environmental issues are addressed and resolved.

Additional Comments (optional):

The applicant should prepare a Natural Resource Evaluation and a Biological Assessment in support of this project.

CLC Recommendations:

Indirect Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Recommended Avoidance, Minimization, and Mitigation Opportunities:

FDOT District 5 Feedback to National Marine Fisheries Service's Review (11/13/2020): Thank you for your review and comments, including information on the project's potential to impact EFH and HAPC. The scoping of this project will include these comments and considerations. FDOT will prepare a Natural Resource Evaluation, a Biological Assessment and an EFH assessment for your review.

Degree of Effect: 2 *Minimal* assigned 10/21/2020 by Sandy Smith, Saint Johns River Water Management District

Coordination Document:

Permit or Technical Study Required

Direct Effects

Identified Resources and Level of Importance:

The project has two marine protected areas (Merritt Island National Wildlife Refuge and Banana River Aquatic Preserve) impacts proposed in these areas often require mitigation to occur within the protected area. It appears the bridge span over the Canaveral barge canal could have open water impacts and shoreline mangrove impacts.

The project is located within Regulatory Basin 21 (North Indian River Lagoon). This basin has three mitigation banks, Green Wing, Neoverde and Webster Creek mitigation banks. Green Wing Mitigation Bank has no state or federal credits available. Neoverde Mitigation Bank has both forested and herbaceous freshwater credits available but no marine state or federal credits. Webster Creek Mitigation Bank has state forested and herbaceous marine credits, but no federal credits are available.

Comments on Effects to Resources:

If mangrove, grass beds or wetland impacts are proposed in the area of the project mitigation will be warranted. Any impacts within the protected areas could require site specific mitigation within the preserve area.

Recommended Avoidance, Minimization, and Mitigation Opportunities:

All ramps and proposed pond sites should be located within the project to avoid wetlands to the maximum extent possible.

Additional Comments (optional):

CLC Recommendations:

Indirect Effects

Identified Resources and Level of Importance:

Secondary wetland impacts outside the direct wetland impacts may need to be quantified based on the layout of the project.

Comments on Effects to Resources:

Wetland impacts should be cross hatched, quantified and identified on the plans. There should be a clear indication of the type of impact and mitigation should be in like kind of the impacts. Any temporary impacts as a result of construction methods should be addressed including any temporary mixing zones at the location of the bridge replacements.

Recommended Avoidance, Minimization, and Mitigation Opportunities:

All wetland impacts should be minimized to the maximum extent practical. The project is located within Regulatory Basin 21 (North Indian River Lagoon). This basin has three mitigation banks, Green Wing, Neoverde and Webster Creek mitigation banks. Green Wing Mitigation Bank has no state or federal credits available. Neoverde Mitigation Bank has both forested and herbaceous freshwater credits available but no marine state or federal credits. Webster Creek Mitigation Bank has state forested and herbaceous marine credits, but no federal credits are available. Impacts within the protected areas may require site specific mitigation within the respective preserve area.

FDOT District 5 Feedback to Saint Johns River Water Management District's Review (11/13/2020): Thank you for your review and comments regarding wetlands and surface waters. The scoping of this project will include these comments and considerations, and FDOT looks forward to working closely with your agency during the PD&E Study and future phases of project development.

Protected Species and Habitat

Project Effects

Coordinator Summary Degree of Effect: 3 *Moderate* assigned 11/13/2020 by FDOT District 5

Comments:

The Florida Fish and Wildlife Conservation Service and the US Fish and Wildlife Service (FWS) assigned a Degree of Effect (DOE) of "Moderate" to this topic. The Florida Department of Agriculture and Consumer Services (FDACS) assigned a "No Involvement" DOE. These agencies provided comments on Wildlife and Habitat citing listed species that may occur in or near the project area, including sea turtles, piping plover, smalltooth sawfish, West Indian manatee, least tern, Carter's mustard, and Lewton's polygala.

Because of the potential wildlife and habitat issues in the area, the FDOT will assign an overall Degree of Effect of Moderate. The FDOT will conduct applicable wildlife surveys during the Project Development and Environment (PD&E) study phase and coordinate with the USFWS, NMFS and FWC.

A Natural Resource Evaluation (NRE) will be conducted during the PD&E Study to assess potential impacts to listed species, develop avoidance and minimization efforts as part of the project coordination, and to document any involvement with wildlife and habitat resources. The NRE will assess potential floral and faunal species within the corridor, as well as potential habitat for these species.

Degree of Effect: **3** *Moderate* assigned 11/03/2020 by Zakia Williams, US Fish and Wildlife Service

Coordination Document:

PD&E Support Document As Per PD&E Manual

Direct Effects

Identified Resources and Level of Importance:

Wood Stork (*Mycteria americana*)

The action area falls within the Core Foraging Area (CFA) of the wood stork. The project is not located close to any wood stork nesting colonies. Although the project area falls within the CFA it is unlikely that wood storks are utilizing this area for foraging.

Piping Plover (*Charadrius melodus*)

The piping plover is a federally-threatened coastal shorebird that requires beaches, sandflats, or tidal mudflats (FNAI, 2001). No Critical Habitat for this species is designated in within the project area. The project area contains tidal saltmarshes and tidal mudflats.

West Indian Manatee

The action area falls within an Important Manatee Area and the 500-foot buffer lies within designated critical habitat for the manatee.

Sea Turtles

Depending on the activities involved in the reconstruction of the bridge, the sea turtles will need to be considered in the NRE.

Comments on Effects to Resources:

Wood Stork

The Service believes that the loss of wetlands within a CFA due to an action could result in the loss of foraging habitat for the wood stork. To minimize adverse effects to the wood stork, we recommend that any lost foraging habitat resulting from the project be replaced within the CFA of the affected nesting colony. Moreover, wetlands provided as mitigation should adequately replace the wetland functions lost as a result of the action. In some cases, the Service accepts wetlands compensation located outside the CFA of the affected wood stork nesting colony. Specifically, wetland credits purchased from a "Service Approved" mitigation bank located outside of the CFA would be acceptable to the Service provided that the impacted wetland occur within the permitted service area of the bank.

To minimize adverse effects to the wood stork and other wetland dependent species, we recommend that impacts to suitable foraging habitat be avoided. If avoidance is not possible, minimization measure should be employed and best management practices to avoid further degradation of the site. Mitigation for wetland impacts should be discussed with USFWS and will require further coordination. Please refer to the North Florida Field Office website for WOST colony locations. <http://www.fws.gov/northflorida>

Piping Plover

Depending on the activities involved in the reconstruction of the bridge, the piping plover will need to be considered in the NRE.

West Indian Manatee

The action area falls within an Important Manatee Area and the 500-foot buffer lies within designated critical habitat for the manatee. To avoid impacts to the manatee special provisions would need to be implemented.

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Consumer Services, and many universities and non-profits, to establish the Florida Rare Plant Conservation Endowment. The Endowment funds projects that are critical to preventing the extinction of Florida's rare plants. To ensure the survival of Florida's unique and rare plants the Service encourages the applicant to make a voluntary contribution of \$5,000 to the Endowment. All contributions are voluntary and tax deductible.

Recommended Avoidance, Minimization, and Mitigation Opportunities:

Additional Comments (optional):

CLC Recommendations:

Indirect Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Recommended Avoidance, Minimization, and Mitigation Opportunities:

FDOT District 5 Feedback to US Fish and Wildlife Service's Review (11/13/2020): Thank you for your review and comments and identification of flora and fauna in the study area.

Degree of Effect: **3** *Moderate* assigned 10/27/2020 by Jason Hight, FL Fish and Wildlife Conservation Commission

Coordination Document:

To Be Determined: Further Coordination Required

Direct Effects

Identified Resources and Level of Importance:

An assessment of the project area was performed on lands within 500 feet of the proposed alignment to determine potential impacts to habitat which supports listed species and other fish and wildlife resources. The inventory included a review of aerial and ground-level photography, various wildlife observation and landcover data bases, along with coordination with FWC biologists and other State and Federal agencies. A GIS analysis was performed using the Florida Department of Transportation's (FDOT) Environmental Screening Tool to determine the potential quality and extent of upland and wetland habitat, and other wildlife and fisheries resource information. FWC staff reviewed the Preliminary Environmental Discussion Comments Report provided by the FDOT and offer the following comments and recommendations.

The assessment reveals that landcover within the assessment area is primarily road right-of-way and Port Canaveral (60.18%, 78.42 acres). Other landcover types include estuarine open water (17.72%, 23.08 acres) and associated shoreline habitats of mangrove swamp (10.39%, 13.54 acres) and salt marsh (2.53%, 3.29 acres), along with cultural-lacustrine (man-made ponds, 9.18%, 11.96 acres). The most valuable fish and wildlife habitats in the project area are the open waters and shoreline wetlands of the Banana River and the Canaveral Barge Canal.

Based on range and preferred habitat type, the following species listed by the Federal Endangered Species Act and the State of Florida as Federally Endangered (FE), Federally Threatened (FT), or State-Threatened (ST) have the potential to occur in the project area: green sea turtle (FE), loggerhead sea turtle (FT), Eastern indigo snake (FT), piping plover (FT), red knot (FT), wood stork (FT), Florida manatee (FE), gopher tortoise (ST), black skimmer (ST), American oystercatcher (ST), least tern (FT), reddish egret (ST), little blue heron (ST), tricolored heron (ST), and roseate spoonbill (ST). All of the aquatic and wetland species either likely or potentially utilize appropriate habitats in the vicinity of the causeway. Least tern nesting has been documented within cleared areas or temporary dredge spoil piles near the project site. The project is within a Wood Stork Core Foraging Area.

Comments on Effects to Resources:

Primary wildlife issues associated with this project include: potential for injury to manatees, sea turtles, and other aquatic life during in-water construction operations; potential adverse effects to a moderate number of species listed by the Federal Endangered Species Act as Endangered or Threatened, or by the State of Florida as Threatened; and potential for water quality impacts during construction. It should be possible to construct this bridge replacement project without disturbing the wetlands in the vicinity.

Based on the project information provided, we believe that direct and indirect effects of this project could be moderate, if special manatee and sea turtle protection measures are adopted for any in-water work, and Best Management Practices are included in the

project design to avoid water quality degradation.

Recommended Avoidance, Minimization, and Mitigation Opportunities:

FWC staff recommend that the Project Development and Environment (PD&E) Study address natural resources by including the following measures for conserving fish and wildlife and habitat resources that may occur within and adjacent to the project area.

1. The Preliminary Environmental Discussion Comments Report referenced FDOT's commitment to prepare a Natural Resources Evaluation during the PD&E Study. This should include plant community mapping and wildlife surveys for the occurrence of wildlife species listed by the Federal Endangered Species Act as Endangered or Threatened, or by the State of Florida as Threatened or Species of Special Concern, and should be performed along the ROW and within sites proposed for equipment staging. Basic guidance for conducting wildlife surveys may be found in the FWC's Florida Wildlife Conservation Guide at <http://myfwc.com/conservation/value/fwcg/>.
2. Based on the survey results, a plan should be developed to address direct, indirect, and cumulative effects of the project on wildlife and habitat resources, including listed species. Avoidance, minimization, and mitigation measures should also be formulated and implemented. Equipment staging areas should be located in previously disturbed sites to avoid habitat destruction or degradation. The plan should address specific habitat needs which are biologically compatible with the recovery of the target species. For guidance in this effort, please review the Species Conservation Measures and Permitting Guidelines (<https://myfwc.com/wildlifehabitats/wildlife/species-guidelines/>) if they are available, or the Species Action Plans (<http://myfwc.com/wildlifehabitats/imperiled/species-action-plans/>).
3. Since no information was provided on any required in-water work, including seasonality, the length or duration of project work, methods of construction, and whether dredging or blasting will be utilized, it would be premature for us to recommend specific avoidance and minimization measures for manatees and sea turtles at this time. However, based on the information currently available, protection measures that may be needed include, but are not limited to, Standard Manatee Conditions for In-Water Work, monitoring of turbidity barriers, presence of manatee/sea turtle observers during in-water work, ramp up procedures for large concrete piling installation, no in-water work between November and March, and no nighttime work. Further coordination with our agency will be necessary in order to determine specific measures for this project. For technical assistance and coordination on manatees and sea turtles, please contact our Imperiled Species Management Section in Tallahassee at imperiledspecies@myfwc.com or (850) 922-4330 early in the planning process.
4. The proposed project is in an area where smalltooth sawfish may occur. The potential "take" of this species associated with this project may only be authorized by the National Marine Fisheries Service (NMFS). The FWC defers to NMFS, and requests that FDOT take into consideration any project-specific permit conditions, comments, recommendations and Biological Opinions regarding smalltooth sawfish that NMFS may provide for federal permitting activities associated with this project.
5. While the existing conditions onsite likely do not support least tern nesting activity, clearing associated with construction may create conditions conducive for beach-nesting bird nesting. Cleared sites such as areas that have undergone surface scraping may attract ground nesting species such as least terns or other imperiled beach-nesting birds (IBNB) during nesting season. IBNB nests have been documented on a variety of disturbed sites, including construction sites. Least terns deposit their eggs in shallow depressions or scrapes in the substrate, possibly lined with pebbles, grasses, or coquina shells. Egg-laying usually begins in late April or early May and colonies may range in size from a few breeding pairs to many hundreds. FWC staff recommends the following measures to reduce nesting potential during construction:
 - A. Conduct construction activities outside of the breeding season (generally April through August),
 - B. If the site is cleared during the breeding season, clear the site only when ready to build, and
 - C. Avoid leaving cleared areas with little to no activity for an extended amount of time.If nesting is observed, FWC staff are available to discuss necessary nest buffers and potential permitting alternatives. For additional information, please refer to FWC's Breeding Bird Protocol for Florida's Seabirds and Shorebirds located at the following web address: <https://public.myfwc.com/crossdoi/shorebirds/PDF-files/BreedingBirdProtocol.pdf>.
6. A compensatory mitigation plan should include the replacement of any wetland, upland, or aquatic habitat functional values for listed species which are lost as a result of the project. Replacement habitat for mitigation should be type for type, as productive, and equal to or of higher functional value. Please notify us immediately if the design, extent, or footprint of the current project is modified, as we may choose to provide additional comments and/or recommendations.
7. The use of clean concrete bridge material for offshore artificial reef construction has been a highly successful program in Florida for providing reef fish habitat enhancement and offshore recreational fishing and diving opportunities. If this is being considered for

the SR 401 bridges, early coordination with our agency and our county partners is essential due to required permitting, scheduling, the reef site selection and approval process, coordination with potential contractors for selection and transport of material, and to ensure that special conditions and standards are defined and adhered to, such as removal of any exposed steel rebar from bridge reef material to ensure public safety, minimize loss of fishing gear, and avoid entanglement hazards for marine life. Brevard County has active permitted offshore artificial reef sites located in the Atlantic Ocean available to accept concrete bridge material. For further coordination on artificial reef development, and input on the protection of marine resources, please contact FWC staff Keith Mille at keith.mille@MyFWC.comor (850) 617-9633, and Lisa Gregg at lisa.gregg@MyFWC.comor (850) 617-9621, within the Division of Marine Fisheries Management in Tallahassee.

Additional Comments (optional):

CLC Recommendations:

Indirect Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Recommended Avoidance, Minimization, and Mitigation Opportunities:

FDOT District 5 Feedback to FL Fish and Wildlife Conservation Commission's Review (11/13/2020): Thank you for your review and comments and identification of flora and fauna in the study area.

Degree of Effect: N/A *N/A / No Involvement* assigned 10/05/2020 by Mark Kiser, FL Department of Agriculture and Consumer Services

Coordination Document:

No Involvement

Direct Effects

Identified Resources and Level of Importance:

Approximately 14 acres of wetlands, including mangrove swamp and salt marsh, are located within 500 feet of proposed project activities, and should be conserved to the degree possible. Wetlands are the base for many aquatic and terrestrial food chains, and have high productivity, supporting a high diversity of plant and animal species. Wetlands also provide a vital breeding, feeding, and nursery habitat for many species of wildlife. Wetlands are of great economic importance, as they improve water quality and act as effective flood and erosion buffers.

Two listed plant species - Carter's mustard and Lewton's polygala - may occur within the project footprint. Carter's mustard (G3/S3) is an endangered (state and federal), endemic species which occurs in central and south FL. Lewton's polygala (G2/S2S3) is an endangered (state and federal), endemic species which occurs in central FL.

Comments on Effects to Resources:

While Florida does not have a goal of no net loss or gain of wetland acreage, regulatory rules are written in a manner that achieves a programmatic goal through implementation, and a project permitting goal of no net loss in wetland or other surface water functions. The State's Environmental Resource Permit (ERP) standard requires that activities not adversely impact the value of functions provided to fish and wildlife and listed species by wetlands and other surface waters.

Recommended Avoidance, Minimization, and Mitigation Opportunities:

Best management practices, including silt fencing, are recommended to protect wetlands from impacts. Surveys for listed plants should be conducted, and if present, should be protected to the degree possible, or translocated to a suitable alternative site by an organization such as the Florida Native Plant Society.

Additional Comments (optional):

CLC Recommendations:

Indirect Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Recommended Avoidance, Minimization, and Mitigation Opportunities:

FDOT District 5 Feedback to FL Department of Agriculture and Consumer Services's Review (11/13/2020): Thank you for your review and comments.

Floodplains

Project Effects

Coordinator Summary Degree of Effect: 3 *Moderate* assigned 11/13/2020 by FDOT District 5

Comments:

The Saint Johns River Water Management District assigned a Degree of Effect (DOE) of "Moderate" to this topic. An evaluation of floodplain impacts and alternatives to avoid adverse effects and incompatible development in the floodplains will be undertaken. Efforts will be made to avoid or minimize impacts to floodplain resources and functions.

Degree of Effect: 3 *Moderate* assigned 10/30/2020 by Melissa Bryan Parsons, Saint Johns River Water Management District

Coordination Document:

Permit or Technical Study Required

Direct Effects

Identified Resources and Level of Importance:

The project is partially located within areas identified as Flood Hazard Zone AE. The project has the potential to adversely affect floodplain storage or conveyance by direct encroachment into the floodplain or by generating stormwater runoff that could increase the rate or volume of discharge to the floodplain. However, the Degree of Effect is assumed to be "Moderate" because the project will require a General Permit or an Individual Environmental Resource Permit (ERP), and designing the project to meet the requirements for a General Permit in 62-330.443, F.A.C., or the applicable Water Management District design criteria and the conditions for issuance of an Individual ERP in 62-330.301 and 302, F.A.C., would provide reasonable assurance that the project would not result in adverse impacts to the affected floodplains. With respect to floodplain storage and conveyance, the project must be designed to meet the applicable criteria in section 3.3, SJRWMD ERP Applicant's Handbook, Volume II.

Comments on Effects to Resources:

Designing the project to meet the applicable Water Management District design criteria, and the conditions for issuance of a GP in 62-330.443, F.A.C, or an Individual ERP in 62-330.301 and 302, F.A.C., would provide reasonable assurance that the project would not result in adverse flooding to on-site or off-site property and would not result in adverse impacts to existing floodplain or surface water storage and conveyance capabilities.

Recommended Avoidance, Minimization, and Mitigation Opportunities:

If the exceeds the threshold for an Individual ERP, the project should be designed such that the floodplain, and the levels of flood flows or velocities are not adversely affected, pursuant to 3.3, SJRWMD ERP Applicant's Handbook, Volume II. Existing drainage patterns should be considered in the project design to ensure that conveyance of runoff or surface water from off-site areas to the floodplain is not adversely affected.

Additional Comments (optional):

CLC Recommendations:

Indirect Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Recommended Avoidance, Minimization, and Mitigation Opportunities:

FDOT District 5 Feedback to Saint Johns River Water Management District's Review (11/13/2020): Thank you for your review and comments, including permitting information. An evaluation of potential floodplain impacts, including associated avoidance, minimization and mitigation measures will take place during the PD&E Study.

Coastal and Marine

Project Effects

Coordinator Summary Degree of Effect: 3 Moderate assigned 11/13/2020 by FDOT District 5

Comments:

The National Marine Fisheries Service assigned aDOE of "Moderate" and the St. Johns River Water Management District assigned a DOE of "Minimal". The FDOT has assigned a DOE of "Moderate" based on the National Marine Fisheries Service's comment regarding the habitats in the area designated as essential fish habitat (EFH) and the mangrove and seagrass habitats also considered Habitat Areas of Particular Concern (HAPC).

Degree of Effect: 3 Moderate assigned 10/22/2020 by Jennifer Schull, National Marine Fisheries Service

Coordination Document:

PD&E Support Document As Per PD&E Manual

Coordination Document Comments:

The applicant should prepare a Natural Resource Evaluation and a Biological Assessment in support of this project.

Direct Effects

Identified Resources and Level of Importance:

Based on our review of the information provided on the ETDM website and aerial image interpretation, NOAA's National Marine Fisheries Service (NMFS) has determined that seagrass, mangroves, and sand/shell bottom may occur at the project site. The project consists of the retrofitting or replacement of three bascule bridges crossing the Canaveral Barge Canal associated with Port Canaveral. The project area includes the Banana River Aquatic Preserve and the Merritt Island National Wildlife Refuge and is associated with the Indian River Lagoon ecosystem. Since this environment is fairly urbanized, wetlands generally are in low quality, although nearby seagrass beds and mangrove forests may be of higher quality. The South Atlantic Fishery Management Council (SAFMC) has designated these habitats as essential fish habitat (EFH). Mangrove and seagrass habitats are also considered Habitat Areas of Particular Concern (HAPC). HAPC's are subsets of EFH that are rare, particularly susceptible to human-induced degradation, especially ecologically important, or located in an environmentally stressed area.

Federally managed fishery species associated with mangrove and seagrass habitat include many species in the snapper-grouper complex. Seagrass and sand/shell bottom are also essential fish habitat for penaeid shrimp. The SAFMC provides additional information on EFH and HAPCs and their support of federally managed fishery species in the *Fishery Ecosystem Plan of the South Atlantic Region*, which is available at www.safmc.net.

The seagrass and mangroves are part of a habitat complex that supports a diverse community of fish and invertebrates within the area, including recreationally and commercially important reef, migratory, and pelagic fish. Seagrass and mangroves also benefit fishery resources by providing important nursery and forage habitat. Seagrass provides important water quality maintenance functions such as pollution uptake, stabilizing sediments, attenuating wave action, and producing and exporting detritus (decaying organic material), which is an important component of marine and estuarine food chains. Mangroves in the project area indirectly support fishery habitat by controlling runoff and turbidity and by stabilizing sediment.

Several species listed as either threatened or endangered under the Endangered Species Act may inhabit the project area. These species include green sea turtle (*Chelonia mydas*), loggerhead sea turtle (*Caretta caretta*), and Kemp's ridley sea turtle (*Lepidochelys kempii*), smalltooth sawfish (*Pristis pectinata*), and the giant manta ray (*Manta birostris*), since the inlet to the Atlantic Ocean is nearby. The project site supports seagrass, which may include Johnson's seagrass (*Halophila johnsonii*), which is listed as threatened under the Endangered Species Act. The habitat within the project area may not support the specific life history needs of hawksbill sea turtle (*Eretmochelys imbricata*) or leatherback sea turtle (*Dermochelys coriacea*). However, it is incumbent on the applicant to make an effects determination for this project.

Comments on Effects to Resources:

The above listed resources may be impacted by the project. Surveys should be conducted that document and quantify all EFH present including seagrass species, location, and density, and delineation of mangrove wetlands. A protected resources Biological

Assessment should also be prepared to determine if consultation under Section 7 of the ESA will be required.

Impacts to species and the environment may result from construction, re-engineering of the shoreline, right-of-way, routing of traffic, and construction of the new bridges. If possible, construction and/or rehabilitation should take place from the uplands and within the same alignment as the current bridges. Shading impacts from barge-based construction and the new bridges need to be considered. Barge spudding may impact EFH. Best Management Practices should be followed to reduce or eliminate impacts from sedimentation and runoff. It will be critically important to avoid and minimize impacts to seagrass beds in the area, as the Indian River Lagoon has experienced severe seagrass die-offs. While impacts to EFH should be avoided and minimized to the extent practical, mitigation for unavoidable impacts to EFH may be required.

With construction of the new bridge, impervious surface area will be increased. The discharge of hydrocarbons and other contaminants may degrade water quality. Subsequently, NOAA trust resources located in the receiving waters could be adversely affected. Surface and stormwater runoff must be treated prior to discharge and in accordance with state and federal (NPDES) standards.

Recommended Avoidance, Minimization, and Mitigation Opportunities:

Because this project has the potential to impact EFH and HAPC and to ensure that adequate wetland conservation and impact avoidance measures are being implemented, NMFS recommends the following recommendations be implemented as project development progresses from EST to PD&E, design, and construction:

- 1) Adverse impacts to EFH and HAPC should be sequentially avoided and/or minimized, and unavoidable impacts should be quantified and offset in a manner that precludes a net loss of function using an appropriate mitigation strategy.
- 2) An endangered species biological assessment and an EFH/habitat assessment should be prepared. The biological assessment should include effects determinations for listed species and critical habitat. The habitat assessment should include characterization of the wetlands within the project site, including the size and location of wetlands that would be directly and/or indirectly impacted by the proposed project.
- 3) Measures to avoid and/or minimize adverse impacts to EFH within the vicinity of the project site should be identified and described.
- 4) Conservation measures (i.e., best management practices for water quality and erosion control) should be included in the project design and implemented during project construction.
- 5) A Stormwater Management Plan for containment/treatment of surface and stormwater runoff from impervious surfaces should be prepared. Treatment should be in accordance with state and federal (NPDES) standards. Details of the stormwater plan should include location, area, and cross section of proposed stormwater swales, and/or ponds and information on wetland vegetation planting if proposed.
- 6) A mitigation plan should be developed that includes a detailed description of the proposed mitigation, including success criteria. The plan should contain sufficient detail to ensure no net loss of habitat functions and values as a result of project authorization. A functional assessment such as UMAM should be prepared for the impact and mitigation sites.
- 7) A seagrass survey should be performed within the NMFS-recommended survey window (June-September).
- 8) Timely coordination between NMFS and FDOT staff should continue through project planning and until environmental issues are addressed and resolved.

Additional Comments (optional):

The applicant should prepare a Natural Resource Evaluation and a Biological Assessment in support of this project.

CLC Recommendations:

Indirect Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Recommended Avoidance, Minimization, and Mitigation Opportunities:

FDOT District 5 Feedback to National Marine Fisheries Service's Review (11/13/2020): Thank you for your review and information regarding the project's potential to affect EFH and HAPC's. FDOT will prepare a Natural Resource Evaluation, a Biological Assessment, and an EFH assessment for your review.

Degree of Effect: 2 *Minimal* assigned 10/21/2020 by Sandy Smith, Saint Johns River Water Management District

Coordination Document:

Permit or Technical Study Required

Permits

Environmental Resource Permit

Comments:

An Environmental Resource Permit is required.

Technical Studies

Wetlands Evaluation Report

Comments:

Wetland impacts should be cross hatched, quantified and identified on the plans. There should be a clear indication of the type of impact and mitigation should be in like kind of the impacts. Any temporary impacts as a result of construction methods should be addressed including any temporary mixing zones at the location of the bridge replacements

Direct Effects

Identified Resources and Level of Importance:

The project has two marine protected areas (Merritt Island National Wildlife Refuge and Banana River Aquatic Preserve) impacts proposed in these areas often require mitigation to occur within the protected area. It appears the bridge span over the Canaveral barge canal could have open water impacts and shoreline mangrove impacts.

The project is located within Regulatory Basin 21 (North Indian River Lagoon). This basin has three mitigation banks, Green Wing, Neoverde and Webster Creek mitigation banks. Green Wing Mitigation Bank has no state or federal credits available. Neoverde Mitigation Bank has both forested and herbaceous freshwater credits available but no marine state or federal credits. Webster Creek Mitigation Bank has state forested and herbaceous marine credits, but no federal credits are available.

Comments on Effects to Resources:

If mangrove, grass beds or wetland impacts are proposed in the area of the project mitigation will be warranted. Any impacts within the protected areas could require site specific mitigation within the preserve area.

Recommended Avoidance, Minimization, and Mitigation Opportunities:

All ramps and proposed pond sites should be located within the project to avoid wetlands to the maximum extent possible.

Additional Comments (optional):

CLC Recommendations:

Indirect Effects

Identified Resources and Level of Importance:

Secondary wetland impacts outside the direct wetland impacts may need to be quantified based on the layout of the project.

Comments on Effects to Resources:

Wetland impacts should be cross hatched, quantified and identified on the plans. There should be a clear indication of the type of impact and mitigation should be in like kind of the impacts. Any temporary impacts as a result of construction methods should be addressed including any temporary mixing zones at the location of the bridge replacements.

Recommended Avoidance, Minimization, and Mitigation Opportunities:

All wetland impacts should be minimized to the maximum extent practical. The project is located within Regulatory Basin 21 (North Indian River Lagoon). This basin has three mitigation banks, Green Wing, Neoverde and Webster Creek mitigation banks. Green Wing Mitigation Bank has no state or federal credits available. Neoverde Mitigation Bank has both forested and herbaceous freshwater credits available but no marine state or federal credits. Webster Creek Mitigation Bank has state forested and herbaceous marine credits, but no federal credits are available. Impacts within the protected areas may require site specific mitigation within the respective preserve area.

FDOT District 5 Feedback to Saint Johns River Water Management District's Review (11/13/2020): Thank you for your review and comments.

Water Resources

Project Effects

Coordinator Summary Degree of Effect: **3** *Moderate* assigned 11/13/2020 by FDOT District 5

Comments:

Water Resources was given a "Moderate" Degree of Effect (DOE) by the Florida Department of Environmental Protection, the St. Johns Water Management District, and the US Environmental Protection Agency.

A Summary DOE of "Moderate" is being assigned to this topic. The project will be designed to meet state water quality and quantity requirements, and the FDOT will implement best management practices during construction to ensure adherence to water quality standards. A Water Quality Impact Evaluation will be prepared as part of this study.

Degree of Effect: **3** *Moderate* assigned 10/31/2020 by Roshanna White, US Environmental Protection Agency

Coordination Document:

To Be Determined: Further Coordination Required

Direct Effects

Identified Resources and Level of Importance:

FDOT Preliminary Environmental Discussion acknowledged within a 500-ft. buffer Indian River Lagoon Basin Management Plan (BMAP), the Banana River Aquatic Preserve, the Merritt Island National Wildlife Refuge and the impaired Banana River. Coastal habitats and wildlife depend on clean water for survival. The EPA considers mangroves, saltwater marshes, and seagrasses (SAVs) to be Essential Fish Habitat (EFH) as well as Aquatic Resources of National Importance (ARNI) due to the myriad ecological services and functions they provide. Stormwater runoff from urban sources, including roadways, carries pollutants such as volatile organics, petroleum hydrocarbons, heavy metals, and pesticides/herbicides can degrade important natural resources for ARNI. Therefore, the EPA assigns a Moderate Degree of Effect for Water Resources.

Comments on Effects to Resources:

Banana River's impairment from organic enrichment from non-point sources such as contaminants from roadways causes oxygen depletion. Urbanization increases the amount of pollutants carried into water bodies. Contaminants can increase the turbidity of a water body. Turbid waters heat more rapidly when exposed to sunlight and decrease primary production and dissolved oxygen levels. Additionally, organic enrichment can contribute to algal growth. Algal reflects sunlight which reduces the amount of sunlight available for photosynthesis by seagrass within the project area.

Recommended Avoidance, Minimization, and Mitigation Opportunities:

The EPA recommends:

-Linear stormwater best management practices and a more detailed explanation of Storm water Management that accommodates major storm events and changes in rainfall.

-Reduce the impact of pollution runoff from construction activities.

-Reduce the effects of erosion, sedimentation, and runoff to maintain or improve water quality.

-Identify and quantify incremental and cumulative impacts on water quality as a result of the past, present, and reasonably foreseeable actions, including the proposed project and other land use actions.

Additional Comments (optional):

CLC Recommendations:

Indirect Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Recommended Avoidance, Minimization, and Mitigation Opportunities:

FDOT District 5 Feedback to US Environmental Protection Agency's Review (11/13/2020): Thank you for your review, comments, and recommendations. The project will be designed to meet state water quality and quantity requirements, and the FDOT will implement best management practices during construction to ensure adherence to water quality standards. A Water Quality Impact Evaluation will be prepared as part of this study.

Degree of Effect: 3 *Moderate* assigned 10/30/2020 by Melissa Bryan Parsons, Saint Johns River Water Management District

Coordination Document:
Permit or Technical Study Required

Direct Effects

Identified Resources and Level of Importance:

The project is adjacent to and/or partially within the limits of the Merritt Island National Wildlife Refuge and the Banana River Aquatic Preserve, which are designated as an Outstanding Florida Waters (OFWs). Additionally, although the receiving water bodies adjacent to the project location are OFWs, the project is located within watersheds that may be impaired for nutrients. The proposed project is expected to generate stormwater runoff that could potentially cause adverse water quality and quantity impacts to receiving waters and adjacent lands. Additionally, the proposed project may potentially affect existing permitted systems within and/or adjacent to the project boundary. However, the Degree of Effect is assumed to be "Moderate" because the project will require an General Permit or Individual Environmental Resource Permit (ERP), and designing the project to meet the requirements for a General Permit in 62-330.443, F.A.C., or the applicable Water Management District design criteria and the conditions for issuance of an Individual ERP in 62-330.301 and 302, F.A.C., would provide reasonable assurance that the project would not result in adverse water quality or quantity impacts to water resources and adjacent lands.

Water Quality:

Unless the project qualifies for a General Permit pursuant to 62-330.443, F.A.C., the proposed project should be designed to provide water quality treatment for discharge to OFWs, if applicable, as required per Parts IV and V, SJRWMD ERP Applicant's Handbook (A.H.), Volume II, and subsection 62-330.301(1)(e), F.A.C. The required treatment volumes and recovery times are based on the methodology of treatment, which can be found in Parts V and IX, SJRWMD ERP A.H., Volume II. If the discharge from the surface water management system is considered a direct discharge to a nutrient-impaired water body, the project design should include a demonstration that that system will provide a net improvement in the load of nutrients discharged to the water body.

Water Quantity:

Unless the project qualifies for a General Permit pursuant to 62-330.443, F.A.C., the proposed project should be designed to provide water quantity treatment as required per Part III, SJRWMD ERP A.H., Volume II, and 62-330.301(1)(a), (b) and (c), F.A.C. Peak rate of discharge attenuation may be required pursuant to subsections 3.2.1(a) and (b), and 3.2.7, SJRWMD ERP A.H., Volume II.

The project traverses a floodplain. Pursuant to subsection 3.3.1, SJRWMD ERP A.H., Volume II, any project that alters any existing conveyance systems must not adversely affect existing conveyance capabilities. The project must be designed such that the applicable criteria in subsections 3.3.2 through 3.3.4, SJRWMD ERP A.H., Volume II, are met to demonstrate that the project will not adversely impact the floodplain, the levels of flood flows or velocities, and the off-site storage and conveyance capacities of the water resource.

Comments on Effects to Resources:

Designing the project to meet the applicable Water Management District design criteria, and the conditions for issuance of a GP in 62-330.443, F.A.C, or an Individual ERP in 62-330.301 and 302, F.A.C., would provide reasonable assurance that the project would not result in adverse water quality or quantity impacts to water resources and adjacent lands.

Recommended Avoidance, Minimization, and Mitigation Opportunities:

If the project exceeds the threshold for an Individual ERP, the project should be designed to include systems (ponds, swales, etc.) to infiltrate, retain and/or detain stormwater runoff to provide direct water quality treatment and/or compensatory water quality treatment, if applicable, and to provide peak rate of discharge attenuation of stormwater runoff. The project should also be designed to mitigate any adverse effects to the floodplain.

Additional Comments (optional):

CLC Recommendations:

Indirect Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Recommended Avoidance, Minimization, and Mitigation Opportunities:

FDOT District 5 Feedback to Saint Johns River Water Management District's Review (11/13/2020): Thank you for your review and comments regarding permit information and water quality. The project will be designed to meet state water quality and quantity requirements, and the FDOT will implement best management practices during construction to ensure adherence to water quality standards, and will be designed to mitigate any adverse effects to the floodplain.

Degree of Effect: 3 *Moderate* assigned 10/27/2020 by Chris Stahl, FL Department of Environmental Protection

Coordination Document:

PD&E Support Document As Per PD&E Manual

Direct Effects

Identified Resources and Level of Importance:

Stormwater runoff from the road surface may alter adjacent wetlands and surface waters through increased pollutant loading. Natural resource impacts within and adjacent to the proposed road right-of-way will likely include alteration of the existing surface water hydrology and natural drainage patterns, and reduction in flood attenuation capacity of area creeks, ditches, and sloughs as a result of increased impervious surface within the watershed.

Comments on Effects to Resources:

Every effort should be made to maximize the treatment of stormwater runoff from the proposed road project to prevent ground and surface water contamination. Stormwater treatment should be designed to maintain the natural predevelopment hydroperiod and water quality, as well as to protect the natural functions of adjacent wetlands. We recommend that the PD&E study include an evaluation of existing stormwater treatment adequacy and details on the future stormwater treatment facilities. Retro-fitting of stormwater conveyance systems would help reduce impacts to water quality.

Recommended Avoidance, Minimization, and Mitigation Opportunities:

The project is located within the boundary of the Indian River Lagoon Basin Management Action Plan (BMAP). A BMAP is the "blueprint" for restoring impaired waters by reducing pollutant loadings to meet the allowable loadings established in a Total Maximum Daily Load. For more information on the BMAP, <https://floridadep.gov/dear/water-quality-restoration/content/basin-management-action-plans-bmaps>

Additional Comments (optional):

CLC Recommendations:

Indirect Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Recommended Avoidance, Minimization, and Mitigation Opportunities:

FDOT District 5 Feedback to FL Department of Environmental Protection's Review (11/13/2020): Thank you for your review and comments. The project will be designed to maximize the treatment of stormwater runoff from the proposed road project to prevent ground and surface water contamination and to meet state water quality and quantity requirements. The FDOT will implement best management practices during construction to ensure adherence to water quality standards.

ETAT Reviews and Coordinator Summary: Physical

Noise

Project Effects

Coordinator Summary Degree of Effect: 2 *Minimal* assigned 11/13/2020 by FDOT District 5

Comments:

No ETAT reviews were submitted for this topic. A Degree of Effect of "Minimal" is being assigned to this resource based on the lack of Residential Lands adjacent to the project area. Other noise sensitive sites present within the study area (Merritt Island National Wildlife Refuge, Indian River Lagoon National Scenic Byway, Ports End Park Boat Ramp, Merritt Island, Banana River Aquatic Preserve, Banana River, and Air Force-Cape Canaveral Air Station) will be analyzed, and noise impacts will be documented in the Noise Study Report as part of the Project Development and Environment (PD&E) study in accordance with Part 2, Chapter 18 of the FDOT PD&E Manual.

None found

Navigation

Project Effects

Coordinator Summary Degree of Effect: 4 *Substantial* assigned 11/13/2020 by FDOT District 5

Comments:

The US Army Corps of Engineers assigned a Degree of Effect (DOE) of "Moderate", and the US Coast Guard assigned a DOE of "Substantial" due to concern for potential navigation impacts including during construction within a heavily traveled area. They also noted that a navigational survey will be required.

Degree of Effect: 3 *Moderate* assigned 10/29/2020 by Randy Turner, US Army Corps of Engineers

Coordination Document:

Permit or Technical Study Required

Direct Effects

Identified Resources and Level of Importance:

The project proposes to evaluate improvements to, or replacement of, the three existing bascules bridges over the Canaveral Barge Canal (CBC), which is a Traditional Navigable Water (TNW) of the U.S. under Section 10 of the Rivers and Harbors Act of 1899. The CBC is part of the territorial seas, and waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including waters which are subject to the ebb and flow of the tide. The U.S. Coast Guard will be the agency charged with ensuring the clearance is met as it will also be the lead federal permitting agency. Any discharge of fill material into waters of the U.S. in conjunction with the bridge replacements will require a Corps permit. The level of importance is moderate.

Comments on Effects to Resources:

The permanent effect to the federal waterway is that the new bridge would follow bridge clearances to support institutional, commercial and recreational navigation. There may be temporary impacts to navigation during construction activities.

Recommended Avoidance, Minimization, and Mitigation Opportunities:

A Standard Individual Permit review be applicable for any estuarine wetland impacts associated with the new bridge replacement construction. A Standard Individual Permit review, given that the project corridor is within tidal estuarine waters and are within Outstanding Florida Waters in the Merritt Island National Wildlife Refuge. There is a possibility that a Nationwide 3 (Maintenance) and/or a Nationwide 23 (Approved Categorical Exclusions)) could be used as the project development and planning moves forward.

Additional Comments (optional):

CLC Recommendations:

Indirect Effects

Identified Resources and Level of Importance:

See comments for direct effects.

Comments on Effects to Resources:

Additional secondary impacts would include bridge shading to adjacent wetlands and surface waters, however the Corps has no authority to require compensatory compensation for bridge shading indirect effects since the Corps does not regulate bridges, only the fill and work in waters of the U.S.

Recommended Avoidance, Minimization, and Mitigation Opportunities:

See comments for direct effects.

FDOT District 5 Feedback to US Army Corps of Engineers's Review (11/13/2020): Thank you for your review and comments.

Degree of Effect: 4 *Substantial* assigned 10/21/2020 by Lisia Kowalczyk, US Coast Guard

Coordination Document:

Permit or Technical Study Required

Permits

Bridge Permit

Comments:

Navigational survey needed

Direct Effects

Identified Resources and Level of Importance:

Multiple span replacement could create navigation impacts including during construction within a heavily traveled area,

Comments on Effects to Resources:

Multiple span replacement could create navigation impacts including during construction within a heavily traveled area.

Recommended Avoidance, Minimization, and Mitigation Opportunities:

Efforts should be made to minimize vessel interaction during construction. All efforts should be made to retain or increase navigational clearances.

Additional Comments (optional):

CLC Recommendations:

Indirect Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Recommended Avoidance, Minimization, and Mitigation Opportunities:

FDOT District 5 Feedback to US Coast Guard's Review (11/13/2020): Thank you for your review, comments, and recommendations.

Contamination

Project Effects

Coordinator Summary Degree of Effect: 3 *Moderate* assigned 11/13/2020 by FDOT District 5

Comments:

The Florida Department of Environmental Protection assigned a DOE of "None", while the USEPA assigned a Degree of Effect (DOE) of "Moderate". The FDOT is assigning a DOE of "Moderate" due to "potential sources of sub-surface contamination (that) can adversely affect water quality and quantity."

The PD&E Study will include a Contamination Screening Evaluation Report that identifies all low, medium and high-risk sites.

Degree of Effect: 3 *Moderate* assigned 10/31/2020 by Roshanna White, US Environmental Protection Agency

Coordination Document:

To Be Determined: Further Coordination Required

Direct Effects

Identified Resources and Level of Importance:

FDOT Preliminary Environmental Discussion (PED) acknowledged within a 500-ft. buffer five (5) Storage Tank Contamination Monitoring Sites, one (1) US Environmental Protection Agency (EPA) National Pollutant Discharge Elimination System (NPDES), and one (1) USEPA

Resource Conservation and Recovery Act (RCRA) Regulated Facility.

Potential sources of sub-surface contamination can adversely affect water quality and quantity. Therefore, the EPA assigns a Moderate Degree of Effect for Contamination.

Comments on Effects to Resources:

Nearby waterbodies experience dissolved oxygen levels or nitrogen pollution. Impervious surfaces from urbanization increases the amount of pollutants carried into water bodies. Stormwater runoff, which contains dissolved or suspended anthropogenic contaminants, from the built environment is a principal contributor to water quality impairment of waterbodies. Also, potential sources of contamination reported in the PED have not been investigated to determine their potential risk.

Recommended Avoidance, Minimization, and Mitigation Opportunities:

The EPA recommends:

- Corrective action is completed before commencement of project activities, if applicable.
- Reduce the impact of pollution runoff from construction activities.

Additional Comments (optional):

CLC Recommendations:

Indirect Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Recommended Avoidance, Minimization, and Mitigation Opportunities:

FDOT District 5 Feedback to US Environmental Protection Agency's Review (11/13/2020): Thank you for your comments. A Contamination Screening Evaluation Report will be conducted during the Project Development and Environment (PD&E) Study.

Degree of Effect: 0 *None* assigned 10/27/2020 by Chris Stahl, FL Department of Environmental Protection

Coordination Document:

No Involvement

Direct Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Recommended Avoidance, Minimization, and Mitigation Opportunities:

Additional Comments (optional):

CLC Recommendations:

Indirect Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Recommended Avoidance, Minimization, and Mitigation Opportunities:

FDOT District 5 Feedback to FL Department of Environmental Protection's Review (11/13/2020): Thank you for your review.

Infrastructure

Project Effects

Coordinator Summary Degree of Effect: 2 *Minimal* assigned 11/13/2020 by FDOT District 5

Comments:

No ETAT reviews were submitted for this topic. A Degree of Effect of "Minimal" is being assigned to this resource; however, FDOT notes the location of the overhead transmission lines which will be assessed as part of the Utility Assessment Package.

None found

Air Quality

Project Effects

Coordinator Summary Degree of Effect: 2 *Minimal* assigned 11/13/2020 by FDOT District 5

Comments:

The US Environmental Protection Agency reviewed this topic and assigned a Degree of Effect of "Minimal" since this project falls in an attainment area, and therefore the impacts to air quality are expected to be minimal. A DOE of minimal is being assigned to this Air Quality.

Degree of Effect: 2 *Minimal* assigned 10/31/2020 by Roshanna White, US Environmental Protection Agency

Coordination Document:

To Be Determined: Further Coordination Required

Direct Effects

Identified Resources and Level of Importance:

A wide variety of air pollutants can be emitted from stationary and mobile sources. The EPA establishes the National Ambient Air Quality Standards (NAAQS) to protect public health and public welfare and regulates emissions of hazardous air pollutants. The proposed project is in an attainment area, so criteria pollutants under NAAQS are considered to be an acceptable level. Therefore, EPA expects the project to have Minimal impact on air quality.

Comments on Effects to Resources:

The project area air quality can possibly be affected by airborne dust, and other ambient air pollutants from project construction.

Recommended Avoidance, Minimization, and Mitigation Opportunities:

To maintain healthy air quality consider the use of diesel controls, cleaner fuel and cleaner construction practices for on-road and off-road equipment used for transportation, soil movement, or other project activities.

Additional Comments (optional):

CLC Recommendations:

Indirect Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Recommended Avoidance, Minimization, and Mitigation Opportunities:

ETAT Reviews and Coordinator Summary: Special Designations

Special Designations

Project Effects

Coordinator Summary Degree of Effect: 3 *Moderate* assigned 11/13/2020 by FDOT District 5

Comments:

A Degree of Effect of Moderate is being assigned to Special Designations. The St. Johns River Water Management District assigned a Degree of Effect of Minimal stating the project the project is adjacent to and/or partially within the limits of the Merritt Island National Wildlife Refuge and the Banana River Aquatic Preserve, which are designated as Outstanding Florida Waters (OFWs). USEPA assigned a degree of Moderate because "of the myriad of environmental natural resources and their sensitivity to pollutants".

Degree of Effect: 3 *Moderate* assigned 10/31/2020 by Roshanna White, US Environmental Protection Agency

Coordination Document:

To Be Determined: Further Coordination Required

Direct Effects

Identified Resources and Level of Importance:

FDOT Preliminary Environmental Discussion acknowledged within a 500-ft. the Banana River Aquatic Preserve and the Merritt Island National Wildlife Refuge. Because of the myriad of environmental natural resources and their sensitivity to pollutants the EPA assigns a Moderate degree of effect to Special Designations.

Comments on Effects to Resources:

Urbanization increases the amount of pollutants carried into water bodies. Contaminants can increase the turbidity of a water body. Turbid waters heat more rapidly when exposed to sunlight and decrease primary production and dissolved oxygen levels. Additionally, organic enrichment can contribute to algal growth. Algal reflects sunlight which reduces the amount of sunlight available for photosynthesis by seagrass within the project area.

Recommended Avoidance, Minimization, and Mitigation Opportunities:

The EPA recommends:

- Pre-and post-project SAV surveys to quantify the actual direct and indirect impacts.
- Linear stormwater best management practices and a more detailed explanation of Storm water Management that accommodates major storm events and changes in rainfall.
- Remain within current footprint to prevent or reduce further degradation on wetlands, seagrasses, and surface waters.
- Protect the shoreline and minimize erosion by incorporating natural shoreline protection and treat stormwater runoff that may be discharged
- Reduce the impact of pollution runoff from construction activities.
- Identify and quantify incremental and cumulative impacts on water quality as a result of the past, present, and reasonably foreseeable actions, including the proposed project and other land use actions.
- Corrective action is completed before commencement of project activities, if applicable.

Additional Comments (optional):

CLC Recommendations:

Indirect Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Recommended Avoidance, Minimization, and Mitigation Opportunities:

FDOT District 5 Feedback to US Environmental Protection Agency's Review (11/13/2020): Thank you for your review and comments and for recommendations regarding Avoidance, Minimization, and Mitigation Opportunities.

Degree of Effect: 2 Minimal assigned 10/30/2020 by Melissa Bryan Parsons, Saint Johns River Water Management District

Coordination Document:
Permit or Technical Study Required

Direct Effects

Identified Resources and Level of Importance:

The project is not located within a special regulatory basin of the SJRWMD. However, the project is adjacent to and/or partially within the limits of the Merritt Island National Wildlife Refuge and the Banana River Aquatic Preserve, which are designated as an Outstanding Florida Waters (OFWs).

Comments on Effects to Resources:

Unless the project qualifies for a General Permit to the Florida Department of Transportation, County, and Municipalities for Minor Bridge Alteration, Placement, Replacement, Removal, Maintenance and Operation pursuant to 62-330.443, F.A.C., an Individual Environmental Resource Permit (ERP) must be obtained for the project to pursuant to 62-330, F.A.C. Pre-application coordination with the SJRWMD is recommended to discuss applicable design criteria.

Recommended Avoidance, Minimization, and Mitigation Opportunities:

Additional Comments (optional):

CLC Recommendations:

Indirect Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Recommended Avoidance, Minimization, and Mitigation Opportunities:

FDOT District 5 Feedback to Saint Johns River Water Management District's Review (11/13/2020): Thank you for your review and comments.

Eliminated Alternatives

There are no eliminated alternatives for this project.

Project Scope

General Project Recommendations

There are no general project recommendations identified for this project in the EST.

Anticipated Permits

Permit	Type	Comments	Assigned By	Date
Section 404 - Individual or General	USACE		FDOT District 5	11/13/20
Bridge Permit	USCG		FDOT District 5	02/01/19
Section 10 - Navigable Waters	USACE		FDOT District 5	11/13/20
Environmental Resource Permit	Water		FDOT District 5	11/13/20

Permitting Timetable

Federal Permitting Agencies identified are also Co-operating Agencies for the development of this project. Permit application occurs when design plans are developed with sufficient engineering detail to support a complete permit application. This is expected to occur within one year FEIS/ROD approval and Location Design Concept Approval for the selected alternative, unless otherwise agreed upon during project development.

Anticipated Technical Studies

Technical Study Name	Type	Comments	Assigned By	Date
Location Hydraulics Report	ENGINEERING		FDOT District 5	11/13/2020
Geotechnical Report	ENGINEERING		FDOT District 5	11/13/2020
Typical Section Package	ENGINEERING		FDOT District 5	11/13/2020
Bridge Hydraulic Report	ENGINEERING		FDOT District 5	11/13/2020
Value Engineering Information Report	ENGINEERING		FDOT District 5	11/13/2020
Public Involvement Plan	ENVIRONMENTAL		FDOT District 5	11/13/2020
Class of Action Determination	ENVIRONMENTAL		FDOT District 5	11/13/2020
Contamination Screening Evaluation Report	ENVIRONMENTAL		FDOT District 5	11/13/2020
Public Hearing Transcript	ENVIRONMENTAL		FDOT District 5	11/13/2020
Wetlands Evaluation Report	ENVIRONMENTAL		FDOT District 5	11/13/2020
Water Quality Impact Evaluation	Other		FDOT District 5	11/13/2020
Essential Fish Habitat Assessment	ENVIRONMENTAL		FDOT District 5	11/13/2020
Preliminary Engineering Report	ENGINEERING		FDOT District 5	11/13/2020
Air Quality Technical Memorandum	ENVIRONMENTAL		FDOT District 5	11/13/2020
Navigation Study	Other		FDOT District 5	11/13/2020
Cultural Resource Assessment Survey	ENVIRONMENTAL		FDOT District 5	11/13/2020
Noise Study Technical Memorandum	ENVIRONMENTAL		FDOT District 5	11/13/2020
Utility Assessment Package	ENGINEERING		FDOT District 5	11/13/2020
Bridge Analysis Report	ENGINEERING		FDOT District 5	11/13/2020
Natural Resources Evaluation (NRE)	ENVIRONMENTAL		FDOT District 5	11/13/2020

Issue Resolution Activity Log

There are no dispute actions identified for this project in the EST.

Appendices

Preliminary Environmental Discussion Comments

Social and Economic

Social

Project Level

The Environmental Screening Tool (EST) Sociocultural Data Report (SDR) was used for demographic data (the SDR can be found within the Community Coordination section of the EST). The SDR uses the Census 2014-2018, American Community Survey (ACS) data and reflects the approximation of the population based on a 500-foot project buffer area intersecting the Census Block Groups along the project corridor. Within the 500-foot buffer, the SDR identified the following demographics:

Population and Income

The SDR identified 13 households with a population of 25 people. The median household income is estimated at \$42,500 annually. 7.69% of those households are below poverty level, although none receive public assistance.

Race and Ethnicity

The minority population comprises approximately 4% of the total population (1 person).

Age and Disability

Persons age 65 and over comprise approximately 64% of the population. There are 0 people between the ages of 20 and 64 that have a disability.

Housing

There are 23 housing units. 22 are multi-family units.

Language

No people were shown to speak English "not at all" or "not well". Based on this data, Limited English Proficiency (LEP) services would not likely be needed.

The EST Geographic Information System (GIS) analysis identified the Ports End Park Boat Ramp as a Recreational Facility within the 500-foot buffer.

The proposed project is expected to result in minimal involvement with social resources.

Economic

Project Level

The GIS analysis did not identify any Developments of Regional Impact within the 500-foot buffer.

The bridge improvements will enhance mobility by providing for travel time reliability and a potential benefit to the port in support of their 30-year Port Master Plan, which factors into the efficient movement of goods and freight.

Land Use Changes

Project Level

The project area is located within the jurisdiction of St. Johns River Water Management District (SJRWMD). The project is located within 1-mile of two (2) Census Designated Places; Cape Canaveral & Merritt Island.

The Geographic Information System (GIS) analysis of the WMD Florida Land Use and Land Cover layer identified the following four major land uses within a 500-foot buffer: Port Facilities with 42.94 acres (29.66%); Roads with 41.96 acres (28.99%); Bays and Estuaries with 27.18 acres (18.78%); and Mangrove Swamp with 11.77 acres (8.13%).

The proposed project is not anticipated to impact existing or future land use patterns.

Mobility

Project Level

The GIS analysis identified the Canaveral Barge Canal and one (1) boat ramp (Rodney S. Ketchum Ports End Park) within the 500-foot buffer of the project. Within the 1-mile buffer of the project the GIS analysis identified the Banana River Park Kayak Launch. There are three (3) marinas (Scorpion's New Port Marina, Ocean Club Marina, and Port Canaveral Yacht Club) within the 500-foot buffer and another marina is within 1,320 feet (Cape Marina).

There is one (1) existing recreational trail (the Florida Circumnavigational Saltwater Paddling Trail) within the 1-mile buffer. There are three (3) Office of Greenways Paddling Trail Opportunities, two (2) within 1,320 feet (Cross Barge Canal Paddleway and Manatee Sanctuary Paddling Trail) and one (1) within a 1-mile buffer (Florida Circumnavigational Saltwater Paddling Trail).

The proposed project will enhance mobility resources.

Aesthetic Effects

Project Level

The WMD Residential Dataset identified Rural, Low, Medium, and High Density Residential as absent from the 500-foot buffer and quarter-mile buffer. Therefore, future land uses are not anticipated to be affected by the project; moreover, the proposed project is expected to result in minimal involvement with aesthetics.

The part of A1A/SR 528 where this proposed bridge will touch down to the south, is designated as the Indian River Lagoon National Scenic Byway (<http://www.indianriverlagoonbyway.com/>). Coordination will occur, as necessary, during the PD&E Study.

Relocation Potential

Project Level

There are no residential areas documented within the 1,320 feet buffer of the project limits. A total of 20.83 acres (3.57 acres medium density and 17.26 acres high density) of residential development occurs within one mile of the project. The project will be evaluated for both residential relocations and business displacements. Should residents or businesses require relocation or displacement, a right-of-way (ROW) and relocation program will be implemented in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970. A Conceptual Stage Relocation Plan will be prepared for this project provided that any potential ROW acquisition results in necessary relocations. The proposed project is expected to result in no involvement with relocations.

Farmlands

Project Level

The GIS analysis did not identify any prime farmland or farmland of local importance within the 500-foot buffer of the project. In addition, no agricultural lands were identified within the 500-foot buffer of the WMD Agricultural Lands layer.

This project is completely within the Urbanized Area of Palm Bay-Melbourne.

The proposed project is expected to have no involvement with farmland resources.

Cultural and Tribal

Section 4(f) Potential

Project Level

Several resources that may be protected under Section 4(f) of the Department of Transportation Act of 1966 are located along the corridor: Rodney S. Ketchum Ports End Park and the submerged lands that occur within the 500-foot buffer, which include the Banana River Aquatic Preserve and Merritt Island National Wildlife Refuge (within the 200-ft buffer). Local Florida Parks and Recreational Facility Boundaries/Parks and Recreational Facilities (Points) shows Ports End Park Boat Ramp within a 100-ft/200-ft buffer. There is also one linear resource eligible for listing on the National Register of Historic Places (NRHP) by the SHPO within a 100-ft buffer: Canaveral Lock (BR02936).

Section 4(f) impacts will be assessed during the PD&E Study, but the project is expected to result in minimal involvement with

Section 4(f) properties.

Historic and Archaeological Sites

Project Level

The GIS analysis identified the three (3) SR 401 Bridges as historic (built in 1965 and 1971) but ineligible for listing on the National Register of Historic Places (NRHP). There are two (2) linear resources within 500 feet of the project that were recorded in the Florida Master Site File (FMSF). One is the Canaveral Lock (BR02936), which is eligible for the NRHP. It is significant for listing in the NRHP under Criterion A for its association with the Florida Space Industry and NASA, as well as its transportation associations. It was constructed by the US Army Corps of Engineers (USACE) in 1965 in order to provide safe passage for vessels from the Banana River to Port Canaveral and the Atlantic Ocean. The other linear resource is the SR 528 Causeway (BR03394), which shows as ineligible for the NRHP by the State Historic Preservation Officer (SHPO). The evaluation shows that that it is not eligible individually or as a contributing resource within a potential or existing historic district, due to lack of sufficient historic significance and architectural distinction.

A previous Cultural Resource Assessment Survey (CRAS) for SR 528 included the three 401 bridges. An updated CRAS will be prepared during the PD&E Study, and coordination with the SHPO will be conducted.

The proposed project is expected to result in moderate involvement with historic and archaeological sites.

Recreational and Protected Lands

Project Level

Within the 500-foot buffer, the GIS analysis identified one (1) boat ramp (Rodney S. Ketchum Ports End Park), one FWRI Great Florida Birding Trail Sites (Rodney S. Ketchum Park), one (1) Florida Managed Areas (Merritt Island National Wildlife Refuge), one (1) Local Florida Parks and Recreational Facility Boundaries/Parks and Recreational Facilities (Ports End Park Boat Ramp), and one (1) hiking/multi-use trail opportunity (SR A1A Urban Trail Corridor). The proposed project is anticipated to result in minimal involvement with recreational and protected lands.

Natural

Wetlands and Surface Waters

Project Level

The USFWS National Wetlands Inventory dataset identified 27.59 acres (19.07% of the area) as estuarine and 13.88 acres (9.6% of the area) as palustrine (freshwater pond) wetlands within the 500-foot buffer. The WMD (St. Johns River Water Management District) Wetlands dataset identified the wetlands in their jurisdiction as mangrove swamp and saltwater marsh. The data identified 11.77 acres of mangrove swamp and 1.42 acres of continuous seagrass within the 500-foot buffer of the project.

A Natural Resources Evaluation (NRE) will be conducted during the PD&E Study and will include coordination with the USACE, FDEP, NMFS, and SJRWMD.

Based on the small percentage of wetland resources within 500 feet of the project, minimal involvement with wetlands and surface waters is anticipated.

Water Resources

Project Level

The GIS analysis identified the Indian River Lagoon Basin Management Action Plan (BMAP) within the 500-foot buffer. One Verified Impaired Florida Water (Banana River) occurs within the 500-foot buffer. According to the GIS data, the project occurs within 500 feet of two (2) Outstanding Florida Waters (Merritt Island National Wildlife Refuge and the Banana River Aquatic Preserve) as designated by FDEP. As stated in other sections, this project is within the jurisdiction of the SJRWMD. Within the 500-foot buffer, the Recharge Areas of the Floridan Aquifer shows a "Discharge less than 1" as 100%.

The project will meet state water quality and quantity requirements, and best management practices will be utilized during construction. The proposed project is expected to result in moderate involvement with water resources.

Floodplains

Project Level

The GIS analysis identified the following Special Flood Hazard Areas within the 500-foot buffer area: 37.49 acres (25.92%) in Zone AE and 107.14 acres (74.08%) outside the 100-year floodplain. The D-FIRM 100-year Flood Plain dataset identifies 1.43 acres (4.15%) of area within the 100-foot project buffer area that is within the 100-year floodplain. During the PD&E Study, engineering design features and hydrological drainage structures will be designed such that stormwater transport, flow, and discharge meet or exceed flood control requirements.

The proposed project is expected to have minimal involvement with floodplain resources.

Protected Species and Habitat

Project Level

The GIS analysis identified the project as within the USFWS designated Consultation Area for the Atlantic salt marsh snake, piping plover, Florida scrub-jay, and West Indian manatee. The 500-foot buffer of the project contains 27.34 acres of designated critical habitat for the West Indian manatee.

The Atlantic Sturgeon, the green sea turtle, black skimmer, Wilson's plover, black-necked stilt, and least tern have been documented within the 500-foot buffer of the project. The project occurs within the 15-mile Core Foraging Radius of several wood stork nesting colonies.

The USFWS Information for Planning and Consultation (IPAC) dataset identified the crested caracara, eastern black rail, Everglade snail kite, Florida grasshopper sparrow, red knot, red cockaded woodpecker, Eastern indigo snake, gopher tortoise, hawksbill sea turtle, leatherback sea turtle, loggerhead sea turtle, southeastern beach mouse, Carter's mustard, and Lewton's polygala as also potentially occurring within the region.

No nesting eagle territories are documented.

A Natural Resources Evaluation (NRE) will be conducted during the PD&E Study and will include coordination with the USFWS, NMFS, and FFWCC.

The proposed project is expected to result in moderate involvement with protected species and habitat resources.

Coastal and Marine

Project Level

The GIS analysis did not identify any Coastal Barrier Resources within the 500-foot buffer. However, the project has documented Environmentally Sensitive Shorelines, which primarily include fine- to medium-grained sand beaches, sheltered solid man-made structures, and sheltered riprap within the 500-foot buffer. The project has two (2) marine protected areas (Merritt Island National Wildlife Refuge and Banana River Aquatic Preserve), and a US Army Corps of Engineers Port (New Port Marina Pier) within the 500-foot buffer.

There are 1.42 acres (0.98%) of continuous seagrass mapped within the 500-foot buffer of the project. The WMD Florida Land Use and Land Cover data set shows there are 11.77 acres (8.13%) of mangrove swamps. The project area is located within existing Sovereign Submerged Lands.

The proposed project is anticipated to have minimal involvement with coastal or marine resources.

Physical

Noise

Project Level

According to the GIS analysis, the following potential noise-sensitive sites are found within a 500-foot buffer: one (1) National Wildlife Refuge (Merritt Island), one (1) Florida Scenic Byway (Indian River Lagoon National Scenic Byway), one (1) Recreational Facility (Ports End Park Boat Ramp), two (2) marine protected areas (Merritt Island and Banana River Aquatic Preserve), one (1) aquatic preserve (Banana River), and one (1) military installation (Air Force-Cape Canaveral Air Station).

The WMD Residential Area dataset did not identify Rural, Low-, Medium-, or High-Density Residential Lands within the 500-foot buffer.

The proposed project is expected to result in minimal involvement regarding noise issues. A noise analysis will be conducted during the PD&E Study

Air Quality

Project Level

Since the project is located in an attainment area, Air Quality Modeling is not anticipated to be conducted for this project.

Contamination

Project Level

Within the 500-foot buffer, the GIS analysis identified: five (5) Storage Tank Contamination Monitoring Sites, one (1) US Environmental Protection Agency (EPA) National Pollutant Discharge Elimination System (NPDES), and one (1) USEPA Resource Conservation and Recovery Act (RCRA) Regulated Facility.

Within the 500-foot buffer, the GIS analysis did not identify any Hazardous Waste Facilities, Onsite Sewage Sites, Petroleum Contamination Monitoring Sites, Super Act Risk Sources, Super Act Wells, Biomedical Waste Sites, Brownfield locations, FDEP Dry Cleaning Program Sites, Large Quantity Generators of Hazardous Waste, Solid Waste Facilities, State funded Hazardous Waste Cleanup Sites, Superfund Hazardous Waste Sites, or US EPA Regulated Air Emissions Facilities.

The existing bridges will be evaluated for lead paint and asbestos.

A Contamination Screening Evaluation Report (CSER) will be prepared during the PD&E Study. Any contaminated site identified will be assessed to determine the need for avoidance, minimization, or remediation prior to construction.

The proposed project is expected to result in moderate involvement with potential sources of contamination.

Infrastructure

Project Level

Within the 500-foot buffer, the GIS analysis identified one (1) Power Transmission Line, two (2) open storage tank contamination monitoring sites and three (3) closed tank contamination monitoring sites, three (3) marinas (Scorpion's New Port Marina, Ocean Club Marina, and the Port Canaveral Yacht club) , and one (1) boat ramp (Rodney S. Ketchum Ports End Park).

The proposed project is expected to result in minimal involvement with infrastructure resources.

Navigation

Project Level

The GIS analysis identified the Canaveral Barge Canal as a navigable waterway; therefore, coordination will occur with the U.S. Coast Guard (USCG), as necessary. A Vessel Survey will be conducted during the PD&E study.

Special Designations

Special Designations: Outstanding Florida Waters

Project Level

The GIS analysis identified the Merritt Island National Wildlife Refuge within the 100-foot buffer and the Banana River Aquatic Preserve within the 200-foot buffer; both of which are designated as Outstanding Florida Waters.

The proposed project is expected to have moderate involvement with Outstanding Florida Waters.

Special Designations: Aquatic Preserves

Project Level

The GIS analysis identified the Banana River Aquatic Preserve within the 200-foot buffer and coordination will occur with FDEP and related agencies, as applicable.

Special Designations: Wild and Scenic Rivers

Project Level

The GIS analysis did not identify any Wild and Scenic Rivers within the 500-foot buffer; the proposed project will have no involvement with this resource.

Special Designations: Sole Source Aquifers

Project Level

The GIS analysis did not identify any Sole Source Aquifers within the 500-foot buffer; the proposed project will have no involvement with this resource.

Advance Notification Comments

FL Department of Agriculture and Consumer Services Comment --

No further comments.

--Mark Kiser, 10/5/2020

No response

FL Department of State Comment --

No comments

--Adrienne Daggett, 9/28/2020

No response

Saint Johns River Water Management District Comment --

No additional comments.

--Sandy Smith, 10/21/2020

No response

US Army Corps of Engineers Comment --

The purpose and need are understood. The Corps concurs with the initial assessment of Wetlands and Surface Waters except for the minimum involvement with wetlands and surface waters. The involvement should be moderate involvement with wetlands and surface waters at this time due to the potential for providing compensatory mitigation for unavoidable impacts to estuarine resources (mangroves and possibly submerged aquatic vegetation (continuous seagrasses (1.42 acres within the 500 feet buffer but not the 100 or 200 feet buffers)). Further comments on project effects are provided in the Review Project tool.

--Randy Turner, 10/29/2020

No response

GIS Analyses

Since there are so many GIS Analyses available for Project #14397 - SR 401 Bridge Replacement, they have not been included in this ETDM Summary Report. GIS Analyses, however, are always available for this project on the Public ETDM Website. Please click on the link below (or copy this link into your Web Browser) in order to view detailed GIS tabular information for this project:

<http://etdmpub.fl.a-etat.org/est/index.jsp?tpID=14397&startPageName=GIS%20Analysis%20Results>

Special Note: Please be sure that when the GIS Analysis Results page loads, the **Programming Screen Summary Report Published on 11/16/2020 by Kathaleen Linger Milestone** is selected. GIS Analyses snapshots have been taken for Project #14397 at various points throughout the project's life-cycle, so it is important that you view the correct snapshot.

Project Attachments

There are no attachments for this project.

Degree of Effect Legend

Color Code	Meaning	ETAT	Public Involvement
N/A	Not Applicable / No Involvement	There is no presence of the topic in relationship to the project, or the topic is irrelevant in relationship to the proposed transportation action.	
0	None (after 12/5/2005)	The topic is present, but the project will have no impact on the topic; project has no adverse effect on ETAT resources; permit issuance or consultation involves routine interaction with the agency. The <i>None</i> degree of effect is new as of 12/5/2005.	No community opposition to the planned project. No adverse effect on the community.
1	Enhanced	Project has positive effect on the ETAT resource or can reverse a previous adverse effect leading to environmental improvement.	Affected community supports the proposed project. Project has positive effect.
2	Minimal	Project has little adverse effect on ETAT resources. Permit issuance or consultation involves routine interaction with the agency. Low cost options are available to address concerns.	Minimum community opposition to the planned project. Minimum adverse effect on the community.
2	Minimal to None (assigned prior to 12/5/2005)	Project has little adverse effect on ETAT resources. Permit issuance or consultation involves routine interaction with the agency. Low cost options are available to address concerns.	Minimum community opposition to the planned project. Minimum adverse effect on the community.
3	Moderate	Agency resources are affected by the proposed project, but avoidance and minimization options are available and can be addressed during development with a moderated amount of agency involvement and moderate cost impact.	Project has adverse effect on elements of the affected community. Public Involvement is needed to seek alternatives more acceptable to the community. Moderate community interaction will be required during project development.
4	Substantial	The project has substantial adverse effects but ETAT understands the project need and will be able to seek avoidance and minimization or mitigation options during project development. Substantial interaction will be required during project development and permitting.	Project has substantial adverse effects on the community and faces substantial community opposition. Intensive community interaction with focused Public Involvement will be required during project development to address community concerns.
5	Potential Issue (Planning Screen)	Project may not conform to agency statutory requirements and may not be permitted. Project modification or evaluation of alternatives is required before advancing to the LRTP Programming Screen.	Community strongly opposes the project. Project is not in conformity with local comprehensive plan and has severe negative impact on the affected community.
5	Issue Resolution (Programming Screen)	Project does not conform to agency statutory requirements and will not be permitted. Issue resolution is required before the project proceeds to programming.	Community strongly opposes the project. Project is not in conformity with local comprehensive plan and has severe negative impact on the affected community.
	No ETAT Consensus	ETAT members from different agencies assigned a different degree of effect to this project, and the ETDM coordinator has not assigned a summary degree of effect.	
	No ETAT Reviews	No ETAT members have reviewed the corresponding topic for this project, and the ETDM coordinator has not assigned a summary degree of effect.	

Project-Level Hardcopy Maps

No Project-Level Hardcopy Maps Available.