Appendix 5.3.6-A

ESA Section 7 Consultation

September 6, 2013

USACOE, USFWS, and NMFS Meeting Minutes
AMEC Project No. 6063120212

Meeting Date: September 6, 2012

Meeting Location: USACE, Cocoa Office

Meeting Attendees:
Andy Phillips, ACOE
Jose Gonzalez, AAF
Alex Gonzalez, AAF
Lucien Tender, AMEC
Shannon McMorrow, AMEC
John Miklos, Biotech
Heath Rauschenberger, USFWS
Brandon Howard, NMFS
John Wrublik, USFWS

Project overview: Passenger service along the N-S route stopped in 1968. This project is intended to reestablish passenger service (Orlando to Miami) and will require new line from Orlando to Cocoa Beach. All Aboard is sorting through alternatives right now. The project can be broken down in 3 phases:

- Phase 1: Miami to West Palm Beach (Double Track)- this is rehab of existing track and will involve no in-water work or impacts to T&E species- this is covered by the prepared EA (still in draft format).
- Phase 2: Miami to West Palm Beach Bridges- right now we plan on permitting the bridges as nationwides (~ 10 acres of wetland impacts based on HDR report)
- Phase 3: West Palm Beach to Orlando- Individual Permit (~ 100 acres of wetland impacts based on HDR report)

Phase 2 and 3 discussion points:
Phase 2 and 3 will not involved any work outside of the existing Right of Way

Miami to West Palm Beach: 79 MPH, Hourly Train service (tentatively 6AM-9PM), 4 trains.
West Palm Beach to Orlando: 110 MPH, Hourly Train service (tentatively 6AM-9PM), 4 trains.

USFWS comments

- USFWS will require manatee construction conditions, small tooth sawfish construction condition, indigo snake construction conditions, and sea turtle construction conditions (for work areas where these species may occur)- by adhering to these conditions we can assume not likely to affect.
- Biotech will need to perform surveys in areas where there is suitable habitat for scrub jays to determine how the operation of the rail will impact that species.
- Unlikely concerned with red-cockaded wood pecker- but we should verify there is no known cavities in the vicinity of the project area.

Correspondence:
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404 SW 140th Terrace
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USA 32669-3000
Tel + 1 352 332 3318
Fax + 1 352 333 6622

NMFS comments:

- Step 1- identify if there are salinity control structures downstream of any of the bridges- if there are we can eliminate those from consultation for Essential Fish Habitat
- Step 2- identify the habitat at the bridges- mangroves, seagrasses, naturally occuring oyster habitat will require mitigation
- Step 3- narrow our list of fish down based on the habitat present at our sites and address them in the EFH

EFH vs. ESA- Essential fish habiat assessment is for marine fish and impacts will need to be addressed in the EFH, but mitigation is not required. Endangered Species Act Biological Assessment will be required for smalltooth sawfish and Johnson's Seagrass if determined to likely be impacted- The trigger for consultation for small tooth sawfish is impacts to red mangroves- the amount of impacts will trigger the formal consultation- however, by adhering the the smalltoothed sawfish construction conditions we can minimize impacts.

For Miami to WPB we will prepare separate documentation for the bridges, but ACOE will bundle when they consult with NOAA. EFH consultation will take 30 days, ESA consultation can take a long time if there are impacts to Johnson's Seagrass. Mitigation options for seagrass are limited- however if necessary we should contact Broward County West Lake, Palm Beach County, and they didn't have a suggestion for Miami-Dade or we could get creative- John from Biotech seems to have some good ideas- if we need to do this.

The survey period for seagrass ends September 30- so we need to schedule site visits with the regulators to confirm presence/absence- tentatively the week of September 24.

Phase 3- WPB to Orlando Discussion Points:
Corp will assume lead agency at this point and coordinate with USFWS and NMFS

USFWS comments:

- Jonathon Dickinson State Park, St. John's River, Econ- and other conservation areas/state parks along the corridor. Since we are not going outside the existing corridor (ROW) and there is existing vehicular traffic (Train or Car) through the entire corridor, the impacts associated with the operation of the passenger train are not as severe as if we were putting this project in a new corridor- but we need to considered the increased risk of strike with the frequency and speed of the train- also for example- adding the new rail will move the trains closer to the adjacent scrub habitat. Idea- consider fencing around the train to prevent scrub-jays from colliding with the trains- however, this may impede movement of other species.
- Andy (ACOE) requested that USFWS come up with areas for potential widlife corridors along the route that could be included in the design. Also talk with Steve Tonjes District 5 DOT- he led the planning of the 528 and may have information guidance on wildlife issues they addressed in their design- 386-943-5394
- Impacts to wood stork habitat can be offset with mitigation- can be done through wetland mitigation banks.
- Indigo snakes- no survey requirements- we can assume indigo snake construction conditions and inidigo snakes found during the tortoise relocation will be relocated as well.

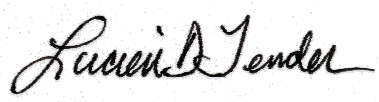
- Given that the alignment for the rail is already next to road or existing tracks the impacts of habitat fragmentation or wildlife movement already exist.

Action Items:

- Brandon (NMFS) will provide Bridge Checklist (already recieved)
- Site visits week of Sept 24
- Oz will provide the guidelines for the alternatives analysis

Sincerely,

AMEC Environment & Infrastructure, Inc.



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Bio-Tech Consulting Inc.
Environmental and Permitting Services

DATE: □AN□AR□ □□□□□□□

TO: □OS□ □ON□A□□□ □ A□□□ □ON□A□□□

FROM: □A□ □A□□R

CC: □OHN M□□□OS; SHANNON MCMORROW

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A meeting with John Wrublik of the U.S. Fish and Wildlife Service (USFWS), Shannon McMorrow of AMEC, and Jay Baker, Steve Lau, and Steffenie Widows of Bio-Tech Consulting Inc (BTC). was conducted on January 9, 2012 at the Vero Beach USFWS office to discuss wildlife concerns regarding the All Aboard Florida (AAF) commuter rail project for the portion extending from Miami-Dade to Indian River Counties. Mr. Wrublik stated that he only had three (3) wildlife species of concern to discuss within this portion of the project. These species include, the Florida scrub-jay (*Aphelocoma coerulescens*) (Federally designated Threatened), Eastern indigo snake (*Drymarchon corais couperi*) (Federally designated Threatened), and Woodstork (*Mycteria americana*) (Federally designated Endangered).

Florida Scrub-Jays

Mr. Wrublik is requiring BTC to conduct an official scrub-jay survey of the AAF project right-of-way within the areas of suitable scrub-jay habitat during the designated survey season for this species during early spring (especially March). He specifically stated that the survey would need to be completed before he can issue the permit and is not willing to condition the permit to allow BTC to do the surveys after the permit has been issued. His reasoning was that he feels that the USFWS needs to know where scrub-jays are present before he can give any opinion on the best management practices for this species. We did discuss the option of using high fences within areas of known scrub-jay occurrence to prevent the bird's mortality when crossing the tracks during times of consistent rail traffic. The fencing material was also discussed. The most functional and economical materials will be selected and proposed to the USFWS.

Eastern Indigo Snake

Mr. Wrublik is requiring that AAF follow the USFWS *Standard Protection Measures for the Eastern Indigo Snake* which includes the requirement that information signs to be placed in areas of Eastern indigo snake habitat along the AAF project right-of-way during times of construction. These signs are to serve as an educational tool to make construction workers aware of the snake's appearance and potential presence within the area. If snakes are observed, these signs instruct workers to, cease work and contact the environmental consultant and the USFWS office. Any dead snake that is discovered must be put on ice and again contact the environmental consultant and the USFWS.

Wood Storks

Mr. Wrublik stated that he does not see any concerns with wood storks as there are no wood stork rookeries located within the AAF project right-of-way and impacts to suitable foraging habitat will be mitigated for in a Service approved mitigation bank. He said that he will be consulting with the Army Corps of Engineers about management guidance for this species.

Additional wildlife species, including the Manatee, Snail Kite, Crested Caracara, Red Cockaded Woodpecker and the possible future listing of the Gopher Tortoise were also discussed. Mr. Wrublik did not have any concerns that any of these species would be affected by the project.

February 13, 2013

USFWS Jacksonville Meeting Minutes
AMEC Project No. 6063120212

Meeting Date: Wednesday February 13, 2013 at 10:30 AM

Meeting Location: USFWS Jacksonville Office

Meeting Attendees:
Jane Monaghan (USFWS)
Heath Rauschenberger (USFWS)
Alex Gonzalez (AAF)
Shannon McMorrow (AMEC)
Charlene Stroehlen (AMEC)
Jay Baker (Biotech)
Steffenie Widows (Biotech)

Purpose of Meeting:
- To review the All Aboard Florida Project and potential impacts to federally listed species in Brevard and Orange Counties.

Topics Discussed
- Federal Railroad Administration (FRA) will be the lead federal agency for the NEPA process
- It may be beneficial to break up the ERP/ACOE permit application by County to clearly separate USFWS Jacksonville and USFWS Vero jurisdiction.
- Secondary and cumulative impacts to wildlife including noise, vibration, habitat fragmentation, etc. must be thoroughly addressed in the biological assessment.
- USFWS suggests clearly outlining avoidance and minimization first, then mitigation for impacts to wildlife.
- USFWS suggests breaking out the impacts to wildlife by existing land use i.e. existing rail corridor, SR528 right of way, and cocoa curve.
- USFWS suggests the next meeting be scheduled with the land managers of properties adjacent to the proposed corridor. The managers could provide information on species occurrence and habitat, as well as provide feedback on the proposed design to minimize impacts.
- AMEC presented the desk-top method that has been used to assemble the list of protected species known to occur in Orange and Brevard Counties and then to further eliminate some of those species from consideration. AMEC will focus on the following Wildlife Species of Concern and presented proposed methods for completing the effects analysis and arriving at an effects determination:
    - **West Indian Manatee -** All in-water work will be conducted in accordance with standard manatee conditions for in-water work - NLAA
    - **Wood Stork -** Project footprint is within 2,500 ft of known colony- however, the existing rail corridor land use is compatible with proposed use. Unavoidable impacts to wetlands will be mitigated through purchase of credits at a USFWS approved mitigation bank- NLAA
    - **Red Cockaded Wood Pecker (RCW) -** The project area is within 0.5 miles of RCW nests; however, no suitable nesting or foraging habitat exist within the project footprint- NLAA

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- **Eastern Indigo Snake-** If less than 25 acres of xeric habitat and impacts to fewer than 25 gopher tortoise burrows, USFWS approved standard construction practices will be implemented- NLAA
- **Gopher Tortoise (Candidate Species)-** Species may be federally listed in the near future, so keep this in mind. FWC compliant survey and relocation will be conducted prior to construction.
- **Audubon's Crested Caracara-** AMEC will provide land use and aerial photograph evaluation of habitat and discuss potential nesting areas with USFWS. This will be done by the end of February. If deemed necessary, USFWS compliant surveys may be required to determine if nesting activity occurs along the corridor. If a field survey cannot be performed during the 2013 nesting season (which ends in March), USFWS will accept the BA and defer decisions related to an effects determination for this species with a caveat that prior to construction, a survey will be performed. An effects determination (and possible mitigation requirements) would be decided at that time.
- **Florida Scrub-jay-** Some marginal habitat exists adjacent to the project area in Brevard County. Biotech will provide evaluation of land use and habitat, and will perform USFWS compliant surveys, if nesting habitat is identified.
- **Bald Eagle-** The office of Migratory Birds handles bald eagles. Biotech will need to continue to coordinate with them.

Deliverables to USFWS

- AMEC will provide USFWS with the following:
  - Land use and aerial photographs including the proposed alignment in Brevard and Orange Counties
  - Location of proposed bridge work in Brevard County for Manatee habitat evaluation
  - The WPB to Miami *Finding of No Significant Impact (FONSI)*
  - FRA Noise and Vibration Guidance document

Sincerely,

AMEC Environment & Infrastructure, Inc.

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Environmental & Permitting Lead
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Shannon McMorrow
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DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT CORPS OF ENGINEERS
400 HIGH POINT DRIVE, SUITE 600
COCOA, FLORIDA 32926

September 19, 2013

REPLY TO
ATTENTION OF

North Permits Branch
Cocoa Permits Section
SAJ-2012-01564(SP-AWP)

Mr. Larry Willams
South Florida Ecological Services Office
U.S. Fish and Wildlife Service
1339 20th Street
Vero Beach, Florida 32960

Dear Mr. Williams,

The Federal Railroad Administration (FRA) is currently developing an Environmental Impact Statement (EIS) for a privately-proposed project by All Aboard Florida to provide reliable and convenient intercity passenger rail transportation between Orlando and Miami, Florida, by maximizing use of existing transportation corridors. This transportation service would offer a safe and efficient alternative to automobile travel on the Interstate-95 corridor (I-95), add transportation capacity within that corridor and encourage connectivity with other modes of transportation, all without governmental operating subsidies. Because the project may impact waters of the United States within the jurisdiction of the U.S. Army Corps of Engineers (Corps) the Corps has agreed to be a cooperating agency in the development of the EIS. As a cooperating agency; the Corps has assumed responsibility for completing consultation with the U.S. Fish and Wildlife Service for the proposed EIS. A draft EIS is expected to be published in the Federal Register in October 2013.

The applicant's preferred alternative for the North/South corridor occurs within the right-of-way of the existing Florida East Coast Railroad from Miami to Cocoa, Florida and will include in-water work at fifteen (15) distinct locations within the project footprint. Additionally the project would require improvements which will impact wetlands and uplands utilized by federally listed species. The applicant has completed a Biological Assessment (BA), Attachment 1, which outlines the specific locations and impacts associated with the proposed work. The Corps has reviewed the BA and completed an evaluation of the impacts the work may have on the West Indian manatee, Audubon's crested caracara, wood stork, Everglades snail kite, red-cockaded woodpecker, Florida scrub-jay, eastern indigo snake. Based on information available from the applicant (Biological Assessment, Attachment 1) our initial determinations are as follows:

Based upon review of the Wood Stork Key for South Florida dated May 18, 2010, the proposed project resulted in the following sequential determination: A > B > C > E = "Not likely to adversely affect" the wood stork. This determination is based on the project not being located within 2,500 feet of an active colony site; impacts to suitable foraging habitat (SFH) will be greater than 0.5 acre, project impacts to SFH are within the Core Foraging Area (CFA) of a colony site, prior to construction the applicant would provide SFH compensation in accordance with the CWA section 404(b)(1) guidelines and is not contrary to the Habitat Management Guidlines; habitat compensation would be within the appropriate CFA or within the service area of a Service-approved mitigation bank; and habitat compensation replaces foraging value,

consisting of wetland enhancement or restoration matching the hydroperiod of the wetlands affected, and provides foraging value similar to, or higher than, that of impacted wetlands.

Based upon review of the North and South Florida Eastern indigo snake key dated August 13, 2013, the proposed project would result in the following sequential determination: A > B > C = "*not likely to adversely affect*" the Eastern indigo snake. This determination is based on the project not being located in open water; Commitments in the EIS will include the use of the Service's *Standard Protection Measures For The Eastern Indigo Snake (August 12, 2013)* during site preparation and project construction; there are gopher tortoise burrows, holes, cavities, or other refugia where a snake could be buried or trapped and injured during project activities; the project will impact less than 25 acres of xeric habitat supporting less than 25 active and inactive gopher tortoise burrows; any permit will be conditioned such that all gopher tortoise burrows, active or inactive, will be evacuated prior to site manipulation in the vicinity of the burrow. If an indigo snake is encountered, the snake must be allowed to vacate the area prior to additional site manipulation in the vicinity. Any permit will also be conditioned such that holes, cavities, and snake refugia other than gopher tortoise burrows will be inspected each morning before planned site manipulation of a particular area, and, if occupied by an indigo snake, no work will commence until the snake has vacated the vicinity of proposed work.

Based upon review of the Manatee Key dated April 2013, the proposed project would result in the following sequential determination: A > B > C > E > N > O > P = "*not likely to adversely affect*". This determination is based on the project is located in waters accessible to manatees **or** directly or indirectly affects manatees; project is other than the activities listed above; project is not located in an Important Manatee Area; project includes dredging of less than 50,000 cubic yards; project is for dredging a residential dock facility or is a land-based dredging operation; Project impacts to submerged aquatic vegetation, emergent vegetation or mangrove will have beneficial, insignificant, discountable or no effects on the manatee; project proponent **elects** to follow standard manatee conditions for in-water work and requirements, as appropriate for the proposed activity, prescribed on the maps; if project is a residential dock facility, shoreline stabilization, or dredging, the determination of "*may affect, not likely to adversely affect*" is appropriate and no further consultation with the Service is necessary.

The applicant has identified and surveyed the project area for the Florida scrub-jay. The applicant has confirmed the presence of the species within the project area, but outside of the work area. Surveys completed by the applicant suggest the Florida scrub-jay is unlikely to cross the existing and future tracts. As such the Corps has determined the proposed rail addition "*may affect, not likely to adversely affect*" Florida scrub-jay.

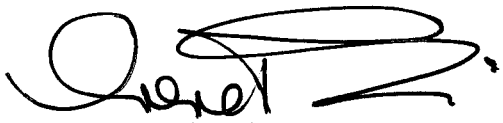
The Corps has determined the proposed work will have "*no effect*" to the Florida panter, Everglade snail kite, red-cockaded woodpecker, and piping plover based on lack of suitable habitat, known species range within the project area, and/or lack of visual confirmation during surveys of the project corridor.

Because the project occurs with the jurisdictional ranges of both the U.S. Fish and Wildlife Service, North and South Florida Ecological Services Field Offices the effect determinations in this letter are specifically tailored to the South Florida Ecological Service Office. Pursuant to Section 7 of the Endangered Species Act we request your concurrence with these determinations within 30 days. A separate consultation request is being submitted to the North Florida

Ecological Services Office. You are reminded that the Corps is acting as a cooperating agency on the proposed EIS; all required compensatory mitigation measures will be included as commitments in the EIS and may eventually be applied to a Department of the Army permit should the Corps evaluate and approve the project for compliance with Clean Water Act and Rivers and Harbors Act.

Please advise if you agree with the above determinations or provide a date when formal consultation would commence. If you have any questions regarding this letter, please contact Andrew Phillips at the letterhead address, by telephone at 321-504-3771 extension 14, or by email at andrew.w.phillips@usace.army.mil.

Sincerely,



Irene Sadowski
Chief, Cocoa Permits Section

Enclosure

Copies Furnished: (electronically)

FRA; Mary Hassell

DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT CORPS OF ENGINEERS
400 HIGH POINT DRIVE, SUITE 600
COCOA, FLORIDA 32926

REPLY TO
ATTENTION OF

September 24, 2013

North Permits Branch
Cocoa Permits Section
SAJ-2012-01564(SP-AWP)

Mr. Jay Harrington
North Florida Ecological Services Office
U.S. Fish and Wildlife Service
7915 Baymeadows Way, Suite 200
Jacksonville, Florida 32256-7517

Dear Mr. Harrington,

The Federal Railroad Administration (FRA) is currently developing an Environmental Impact Statement (EIS) for a privately-proposed project by All Aboard Florida to provide reliable and convenient intercity passenger rail transportation between Orlando and Miami, Florida, by maximizing use of existing transportation corridors. This transportation service would offer a safe and efficient alternative to automobile travel on the Interstate-95 corridor (I-95), add transportation capacity within that corridor and encourage connectivity with other modes of transportation, all without governmental operating subsidies. Because the project may impact waters of the United States within the jurisdiction of the U.S. Army Corps of Engineers (Corps) the Corps has agreed to be a cooperating agency in the development of the EIS. As a cooperating agency; the Corps has assumed responsibility for completing consultation with the U.S. Fish and Wildlife Service for the proposed EIS. A draft EIS is expected to be published in the Federal Register in October 2013.

The applicant's preferred alternative for the North/South corridor occurs within the right-of-way of the existing Florida East Coast Railroad from Miami to Cocoa, Florida and will include in-water work at fifteen (15) distinct locations within the project footprint. Additionally the project would require improvements which will impact wetlands and uplands utilized by federally listed species. The applicant has completed a Biological Assessment (BA), Attachment 1, which outlines the specific locations and impacts associated with the proposed work. The Corps has reviewed the BA and completed an evaluation of the impacts the work may have on the West Indian manatee, Audubon's crested caracara, wood stork, Everglades snail kite, red-cockaded woodpecker, Florida scrub-jay, eastern indigo snake. Based on information available from the applicant (Biological Assessment, Attachment 1) our initial determinations are as follows:

Based upon review of the Wood Stork Key for South Florida dated May 18, 2010, the proposed project resulted in the following sequential determination: A > B > C > E = "Not likely to adversely affect" the wood stork. This determination is based on the project not being located within 2,500 feet of an active colony site; impacts to suitable foraging habitat (SFH) will be greater than 0.5 acre, project impacts to SFH are within the Core Foraging Area (CFA) of a colony site, prior to construction the applicant would provide SFH compensation in accordance with the CWA section 404(b)(1) guidelines and is not contrary to the Habitat Management Guidlines; habitat compensation would be within the appropriate CFA or within the service area of a Service-approved mitigation bank; and habitat compensation replaces foraging value,

consisting of wetland enhancement or restoration matching the hydroperiod of the wetlands affected, and provides foraging value similar to, or higher than, that of impacted wetlands.

Based upon review of the North and South Florida Eastern indigo snake key dated August 13, 2013, the proposed project would result in the following sequential determination: A > B > C = "*not likely to adversely affect*" the Eastern indigo snake. This determination is based on the project not being located in open water; Commitments in the EIS will include the use of the Service's *Standard Protection Measures For The Eastern Indigo Snake (August 12, 2013)* during site preparation and project construction; there are gopher tortoise burrows, holes, cavities, or other refugia where a snake could be buried or trapped and injured during project activities; the project will impact less than 25 acres of xeric habitat supporting less than 25 active and inactive gopher tortoise burrows; any permit will be conditioned such that all gopher tortoise burrows, active or inactive, will be evacuated prior to site manipulation in the vicinity of the burrow. If an indigo snake is encountered, the snake must be allowed to vacate the area prior to additional site manipulation in the vicinity. Any permit will also be conditioned such that holes, cavities, and snake refugia other than gopher tortoise burrows will be inspected each morning before planned site manipulation of a particular area, and, if occupied by an indigo snake, no work will commence until the snake has vacated the vicinity of proposed work.

Based upon review of the Manatee Key dated April 2013, the proposed project would result in the following sequential determination: A > B > C > E > N > O > P = "*not likely to adversely affect*". This determination is based on the project is located in waters accessible to manatees **or** directly or indirectly affects manatees; project is other than the activities listed above; project is not located in an Important Manatee Area; project includes dredging of less than 50,000 cubic yards; project is for dredging a residential dock facility or is a land-based dredging operation; Project impacts to submerged aquatic vegetation, emergent vegetation or mangrove will have beneficial, insignificant, discountable or no effects on the manatee; project proponent **elects** to follow standard manatee conditions for in-water work and requirements, as appropriate for the proposed activity, prescribed on the maps; if project is a residential dock facility, shoreline stabilization, or dredging, the determination of "*may affect, not likely to adversely affect*" is appropriate and no further consultation with the Service is necessary.

The applicant has identified and surveyed the project area for the Florida scrub-jay. The applicant has confirmed the presence of the species within the project area, but outside of the work area. Surveys completed by the applicant suggest the Florida scrub-jay is unlikely to cross the existing and future tracts. As such the Corps has determined the proposed rail addition "*may affect, not likely to adversely affect*" Florida scrub-jay.

The applicant has identified areas of suitable habitat, soil, and elevations for the Blue-tailed mole skink and Florida sand skink. Additional surveys are being completed by the applicant and will be coordinated with your office upon completion. Given the information currently available the Corps has determined the proposed rail addition "*may affect, not likely to adversely affect*" Blue-tailed mole skink or Florida sand skink.

The Corps has determined the proposed work will have "*no effect*" to the Florida panther, Everglade snail kite, red-cockaded woodpecker, and piping plover based on lack of suitable habitat, known species range within the project area, and/or lack of visual confirmation during surveys of the project corridor.

Because the project occurs with the jurisdictional ranges of both the U.S. Fish and Wildlife Service, North and South Florida Ecological Services Field Offices the effect determinations in this letter are specifically tailored to the North Florida Ecological Service Office. Pursuant to Section 7 of the Endangered Species Act we request your concurrence with these determinations within 30 days. A separate consultation request has been submitted to the South Florida Ecological Services Office. You are reminded that the Corps is acting as a cooperating agency on the proposed EIS; all required compensatory mitigation measures will be included as commitments in the EIS and may eventually be applied to a Department of the Army permit should the Corps evaluate and approve the project for compliance with Clean Water Act and Rivers and Harbors Act.

Please advise if you agree with the above determinations or provide a date when formal consultation would commence. If you have any questions regarding this letter, please contact Andrew Phillips at the letterhead address, by telephone at 321-504-3771 extension 14, or by email at andrew.w.phillips@usace.army.mil.

Sincerely,

for Irene Sadowski
Chief, Cocoa Permits Section

Enclosure

Copies Furnished: (electronically)

FRA; Mary Hassell

United States Department of the Interior
U. S. FISH AND WILDLIFE SERVICE
7915 BAYMEADOWS WAY, SUITE 200
JACKSONVILLE, FLORIDA 32256-7517

IN REPLY REFER TO:
FWS Log No. 41910-2014-I-0005

November 1, 2013

NOV 04 2013

Andrew Phillips
Department of the Army
U.S. Army Corps of Engineers, Cocoa Regulatory Office
400 High Point Drive, Suite 600
Cocoa, FL 32926

Dear Mr. Phillips:

Our office has reviewed your correspondence and accompanying information, dated September 24, 2013, for the following project.

APPLICANT	CORPS APPLICATION NUMBER	FWS LOG NUMBER
The Federal Railroad Administration (FRA)	SAJ-2012-01564 (SP-AWP)	41910-2014-I-0005

The applicant is currently developing an Environmental Impact Statement (EIS) for the proposed project by All Aboard Florida to provide intercity passenger rail transportation between Orlando and Miami, Florida, by maximizing use of existing transportation corridors. The applicant completed a Biological Assessment (BA) to determine if the potential impacts the proposed project may affect the West Indian Florida manatee, Audubon's crested caracara, wood stork, blue-tail mole skink and Florida sand skink, Florida scrub-jay, and the eastern indigo snake. We submit the following comments in accordance with Section 7 of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq*).

The Corps reviewed this project for potential impacts to federally-listed species and determined that the proposed project occurs within the range of the West Indian manatee *(Trichechus manatus latirostris)*, eastern indigo snake *(Drymarchon corais couperi)*, and wood stork *(Mycteria Americana)*. The Corps evaluated potential impacts to the West Indian manatee, eastern indigo snake and wood stork using the "2013 Manatee Key", "2010 Eastern Indigo Snake Key" and the "2008 Wood Stork Key". Use of the keys resulted in the conclusion that the proposed project is *"not likely to adversely affect"* these species. We concur with the determination for these species. In addition, you will include the "Standard Manatee Conditions" and the 2013 "Standard Protection Measures

for the Eastern Indigo Snake" as a special condition to the Corps permit. The applicant will also be mitigating within an approved mitigation bank for any impacts to the wood stork core foraging area within the proposed project.

Based upon review of the BA and surveys completed by the applicant and provided to the Service it has been determined that the proposed rail addition *"may affect, but is not likely to adversely affect"* the Florida scrub-jay *(Aphelocoma coerulescens)*, the blue-tailed mole skink *(Eumeces egregius lividus)* and the Florida sand skink *(Neoseps reynoldsi)*. The information provided has identified areas of suitable habitat, soil, and elevations for the Blue-tailed mole skink and the Florida sand skink. Additional surveys are being completed by the applicant and will be provided to the Service upon Completion.

The applicant has conducted several Audubon's crested caracara surveys within the proposed project site and although no active crested caracara's nest have been documented within the proposed project area, they have been observed perched on the ground within the proposed area. We ask that during the caracara's nesting season (November 1 – April 30) any suitable habitat that is to be cleared be monitored for any active nests or nesting activity. If an active nest is observed within the proposed project area please contact our office. The Service concurs with the determination that the proposed project *"may affect, but is not likely to adversely affect"* the Audubon's crested caracara.

Although this does not represent a biological opinion as described in Section 7 of the Act, it does fulfill the requirements of the Act and no further action is required. Reinitiating consultation is required if new information reveals effects of the action agency that may affect listed species or critical habitat in a manner or to an extent not considered in this consultation; the action agency is subsequently modified in a manner that causes an effect to a listed species or critical habitat not considered in this consultation; if unauthorized take of any listed species (West Indian manatee, Eastern indigo snake, wood stork, Florida scrub-jay, Blue-tail mole skink, Florida sand skink and Audubon's crested caracara) occur during construction; or a new species is listed or critical habitat designated that may be affected by the action.

If you have any questions regarding this response, please contact Zakia Williams of my staff at the address on the letterhead, or by calling (904) 731-3326.

Sincerely,

Annie Dziergowski

for Jay B. Herrington
Field Supervisor

DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT CORPS OF ENGINEERS
400 HIGH POINT DRIVE, SUITE 600
COCOA, FLORIDA 32926

January 29, 2014

REPLY TO
ATTENTION OF

North Permits Branch
Cocoa Permits Section
SAJ-2012-01564(SP-AWP)

Mr. David Bernhart
Assistant Regional Administrator
Protected Resources Division
National Marine Fisheries Service
Southeast Regional Office
263 13th Avenue South
St. Petersburg, Florida 33701

Dear Mr. Bernhart:

Reference is made to U.S. Army Corps of Engineers (Corps) request for consultation dated September 18, 2013 (currently in your review), for the development of an Environmental Impact Statement (EIS) for a private commuter rail project proposed by All Aboard Florida (AAF). Since submittal of our consultation request AAF has determined railroad bridges crossing the Eau Gallie River, Crane Creek, Turkey Creek, and the Sebastian River would eventually require replacement and the bridges crossing the Loxahatchee and St. Lucie Rivers would eventually require more substantial refurbishment than initially proposed. Given this new information AAF is seeking authorization to perform in-work and construction of new bridges alongside existing structures within the Eau Gallie River, Crane Creek, Turkey Creek, and the Sebastian River and complete structural repairs which may require in-water work at Loxahatchee and St. Lucie Rivers. A summary of the potential impacts to regulated resources are listed in the table below and the Biological Assessment included as Attachment 1. The Corps has reviewed the Biological Assessments attached and adopts its findings for this consultation.

•Source level of noise exceeds 120 dB re 1uPa RMS for continuous noise

☐ Yes ☒ No

•Source level exceeds 160 dB re 1 uPa RMS for impulsive noise

☐ Yes ☒ No

•Source level exceeds 180 dB re 1 uPa zero to peak

☐ Yes ☒ No

Effects Determination:

•For executing the action (i.e., construction activities)

☐ No Effect ☒ NLAA ☐ May Affect

•For the result of the action (i.e., new dock)

☐ No Effect ☐ NLAA ☐ May Affect

•If "No Effect" is determined for all species and critical habitat, please note your findings in a memorandum to your project file; no consultation/concurrence with/from NMFS is required.

☐ Memo made ☒ N/A

Mitigation/Protective Measures:

•Will the applicant follow the August 2001 Dock Construction Guidelines?

☐ Yes ☒ No

•Will the applicant follow the October 2002 Johnson's Seagrass Key?

☐ Yes ☒ No

•Will the Sea Turtle and Smalltooth Sawfish Construction Conditions, dated March 23, 2006, be followed?

☒ Yes ☐ No

•If not following any of the above, please explain:

Johnson seagrass is not present within the project area. Dock construction is not being performed.

- Turbidity controls? If yes, description of type used.

Yes, silt fence and floating turbidity barriers will be installed prior to construction and maintained during construction in accordance with performance standards for erosion and sediment control.

- What are the proposed avoidance, minimization, and compensatory measures?

Proposed measures include BMPs, such as silt fencing and turbidity barriers, Sea Turtle and Smalltooth Sawfish Construction Conditions, and the use of air bubble curtains to reduce noise impacts as needed.

Each consultation letter should address the impacts listed in the checklist and their associated effects on listed species and their critical habitat. An explanation of how the impacts occur, their effects, and any mitigative measures that will be implemented to reduce the projects effects on listed species and their critical habitat should be included in the consultation letter.

* If Johnson's seagrass is present, please consult the following:

- *Dock Construction Guidelines in Florida for Docks or Other Minor Structures Constructed in or over Submerged Aquatic Vegetation, Marsh or Mangrove Habitat - U.S. Army Corps of Engineers/National Marine Fisheries Service*, dated August 2001

- *Key for Construction Conditions for Docks or Other Minor Structures Constructed in or Over Johnson's Seagrass (Halophila johnsonii)National Marine Fisheries Service/U.S. Army Corps of Engineers,* dated October 2002

Updated: August 2008

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- Turbidity controls? If yes, description of type used.

Yes, silt fence and floating turbidity barriers will be installed prior to construction and maintained during construction in accordance with performance standards for erosion and sediment control.

- What are the proposed avoidance, minimization, and compensatory measures?

Proposed measures include BMPs, such as silt fencing and turbidity barriers, Sea Turtle and Smalltooth Sawfish Construction Conditions, and the use of air bubble curtains to reduce noise impacts.

Each consultation letter should address the impacts listed in the checklist and their associated effects on listed species and their critical habitat. An explanation of how the impacts occur, their effects, and any mitigative measures that will be implemented to reduce the projects effects on listed species and their critical habitat should be included in the consultation letter.

* If Johnson's seagrass is present, please consult the following:

- *Dock Construction Guidelines in Florida for Docks or Other Minor Structures Constructed in or over Submerged Aquatic Vegetation, Marsh or Mangrove Habitat - U.S. Army Corps of Engineers/National Marine Fisheries Service*, dated August 2001

- *Key for Construction Conditions for Docks or Other Minor Structures Constructed in or Over Johnson's Seagrass (Halophila johnsonii)National Marine Fisheries Service/U.S. Army Corps of Engineers,* dated October 2002

Updated: August 2008

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Checklist of Information Needed to Complete Section 7 Consultations for U.S. Army Corps of Engineers Regulatory Division Applications

Project Specifications:

- Project or name of applicant, Action ID number

All Aboard Florida- Crane Creek (Mile Post 194.36)

- Describe the location of the project site (address and latitude/longitude information). Location data **must** be given datum (e.g., NAD83) and lat/long format using decimal-degrees (**not** minutes and seconds): e.g., 27.71622N, 80.25174W.
  On-line conversion: http://www.fcc.gov/mb/audio/bickel/DDDMMSS-decimal.html

- In which body of water is the project located? If on a river or estuary, state the approximate navigable distance from the bay, ocean, or gulf).

Crane Creek. The project area is approximately 0.5 miles upstream of Indian River Lagoon

Site Description:

- Describe any existing structures and their use - for instance, acreage of overwater structures, if it's an existing marina, how many boat slips are present and what is their size.

There is an existing double track railroad bridge. The bridge is approximately 650 ft across and is constructed from concrete pilings and steel girders.

- Is the project location within designated critical habitat?

No

- If project occurs in critical habitat, are PCEs present?

Project does not occur within Critical Habitat.

- What are the baseline conditions within the project area, including substrate type?

There was a composite substrate comprised of small rocks, crushed shells, and muck

- Are seagrasses present in the project area? Include percent coverage estimates by species and the relative location of seagrass in relation to proposed structures. Was a seagrass or benthic habitat survey completed? If so, please submit. *

No seagrasses were present within Assessment Area.

- Are mangroves present in or near the project area? Which species (red, black, white) and how much?

No mangroves were present within Assessment Area

- Are corals present in or near the project area? Include density or percent coverage estimates by species and describe proximity of corals to proposed structures.

No

- Was a benthic survey conducted within Johnson's seagrass growing season (April 1 - August 31)?

☒ Yes ☐ No

Construction Methods/ Project Description:

- Construction methods, including description of any demolition of existing structures or removal of debris. Will the work be done from a barge or uplands?

Construction of one new 650-ft independent ballast deck structure located on the east side of the existing railroad bridge and one new single track bridge in the footprint of the removed western bridge. The new structures will be supported by concrete piers. The proposed superstructure will consist of Standard Precast Pre-stressed Concrete Bridge Slabs. The Bridge slabs will sit atop the pile bent cap. A crane will place the bridge slabs on the abutment. To form the end bents and backwall, a small area upslope will be excavated to install the forms. After installation is complete the area will be backfilled and compacted. Rip–rap will be placed around the abutment for slope protection. Walkways will be attached on either side of the bridge. Construction will be performed from a barge and from the shore. The existing historic bridge will be left in place and maintained by FEC. FEC will be responsible for ensuring that overtime the deterioration of the bridge does not result in impacts to navigation, floodplains, wetlands, or ecological habitat, through removal and relocation prior to deterioration and/or removal of fallen debris.

- For docks, what type of decking will be used? If grated, provide manufacturer's name/ address/grating type, and percent light transmittance (%LT) of the grating design used? If wooden planks, what is the proposed spacing between the deckboards (½-inch, ¾-inch, 1-inch, other?). *Has the applicant been advised that COE-NMFS project review is significantly simplified and expedited for dock designs incorporating >43% LT grated decking, or 1-inch deckboard- and walkway-spacing, over Johnson's seagrass areas?* Proposed height of dock? Orientation of the dock (N, S, etc.)?

N/A

- Piling construction methodology. Are pile driving methods adequately described and are potential impacts to species adequately addressed? Will submerged aquatic vegetation (SAV) be impacted by pile installation? *If necessary, will the applicant's contractor adjust the spacing between piles to avoid driving piles onto Johnson's seagrass? Avoiding all piling impacts to JSG will significantly simplify and expedite the COE-NMFS project review process.*

Piles will be driven to load bearing capacity for E80 live loads. Piles will be driven with a steel pile driving template placed to prevent movement of the pile group. SAV were not observed within the project footprint.

- Number of new slips and size of slips, if applicable. If new construction includes High-and-Dry boat storage, what is the High-and-Dry vessel storage capacity?

N/A

- How big are the boats that are planned to be moored at the dock (either in the water or on a boatlift), if known?

N/A

- For all projects **not** involving docks or marinas (i.e., seawalls, jetties, etc.), please provide project description.

N/A

- Dredging? If yes, describe depth of cut, dredge type used, how many cubic yards, and what will be done with the spoil. Describe bottom sediments. Describe area hydrodynamics, i.e., average current speed and direction.

N/A

- Blasting? If yes, describe explosive weights, blasting plan, etc.

N/A

- What is the intended construction schedule (how many days, weeks, or months for in-water work)?

Work will be completed by December 2016

Potential Effects on Species/Critical Habitat:

- Please explain any impacts/effects to the critical habitat's primary constituent elements - PCEs)? Please identify which critical habitat unit(s) is being affected (e.g., Gulf sturgeon have 14 units, seven under NMFS jurisdiction and seven under FWS jurisdiction).

N/A

- What will the effects be, if any, to each PCE?

N/A

- Square footage to be affected by project?

18,615 sq ft will be affected by the project footprint.

- Will mangroves be impacted? Explain and quantify impacts.

No mangroves were present within the Assessment Area

- How will the habitat be changed/altered as a result of the action? Could or will the alteration affect listed species? How?

Approximately 18,615 sq. ft. of surface waters will be impacted by the installation of riprap and pilings, and shading of non-vegetated surface water by the new bridge. The proposed bridge construction may have direct short-term adverse effects on the water quality in the project vicinity. Effects to the managed species known to occur in the project vicinity would include installation of the pilings and shade resulting from bridge deck construction. Pilings would ultimately result in a beneficial effect to species/life stages that prefer such structures as habitat, such as adult goliath grouper, gray snapper, and mutton snapper. Lifecycle functions will not be affected by the proposed activities.

•Listed species within the project area:

☒ Sea turtles	☒ Smalltooth sawfish	☐ Shortnose sturgeon
☐ Elkhorn coral	☐ Johnson's seagrass	☐ North Atlantic right whales
☐ Staghorn coral	☐ Gulf sturgeon	☐ Other whales

•Explain potential effects to each species checked above:

Sea turtles and smalltooth sawfish may utilize the Assessment Area for migration, but habitat requirements for foraging and nesting do not occur in the project area. It was determined that the project is not likely to affect either species because there are no anticipated impacts to mangroves and the Sea Turtle and Smalltooth Sawfish Construction Conditions will be followed.

•Shading impacts from construction.

Approximately 15,136 sq. ft. of non-vegetated surface water will be shaded by the new bridge.

•What is the estimated shadow effect of the boat (sq ft of shaded area beneath)?

N/A

•Discuss potential anchoring impacts to seagrass and corals. Discuss available water depth under the keel/propeller at Mean Low Water and the potential for prop dredging or blowouts. Discuss potential prop-scarring impacts to corals and seagrasses.

N/A

•Describe increased boat traffic impacts, if any. Are there posted speed zones in the area?

N/A

•Describe Noise Impacts (this section not applicable to single-family, multi-family, and marina dock projects where piles driven are 12 inches or less in diameter).

Noise associated with the pile driving may affect sea turtles, fish, including the smalltooth sawfish, and invertebrate species. Concrete piles will be approximately 20 inches in diameter and will be driven with a steel pile driving template. According to the Federal Railroad Administration's 2005 Noise and Vibration manual the typical noise levels 50 feet from the source for Impact Pile Drivers are 101 dBA and for Sonic Pile Drivers are 96 dBA. Based on other literature the estimated sound pressure associated with the pile driving at five meter depth is 185 Peak, 170 RMS, and 160 SEL (Illinworth & Rodkin, 2007). The contractor for this project has not yet been selected. If noise levels exceed those listed below, an air bubble curtain as well as other dampening techniques will be used while driving piles to help reduce impacts. No blasting will occur during construction.

•Source level of noise exceeds 120 dB re 1uPa RMS for continuous noise

☐ Yes ☒ No

•Source level exceeds 160 dB re 1 uPa RMS for impulsive noise

☐ Yes ☒ No

•Source level exceeds 180 dB re 1 uPa zero to peak

☐ Yes ☒ No

Effects Determination:

•For executing the action (i.e., construction activities)

☐ No Effect ☒ NLAA ☐ May Affect

•For the result of the action (i.e., new dock)

☐ No Effect ☒ NLAA ☐ May Affect

•If "No Effect" is determined for all species and critical habitat, please note your findings in a memorandum to your project file; no consultation/concurrence with/from NMFS is required.

☐ Memo made ☒ N/A

Mitigation/Protective Measures:

•Will the applicant follow the August 2001 Dock Construction Guidelines?

☐ Yes ☒ No

•Will the applicant follow the October 2002 Johnson's Seagrass Key?

☐ Yes ☒ No

•Will the Sea Turtle and Smalltooth Sawfish Construction Conditions, dated March 23, 2006, be followed?

☒ Yes ☐ No

•If not following any of the above, please explain:

Johnson seagrass is not present within the project area. Dock construction is not being performed.

- Turbidity controls? If yes, description of type used.

Yes, silt fence and floating turbidity barriers will be installed prior to construction and maintained during construction in accordance with performance standards for erosion and sediment control.

- What are the proposed avoidance, minimization, and compensatory measures?

Proposed measures include BMPs, such as silt fencing and turbidity barriers, Sea Turtle and Smalltooth Sawfish Construction Conditions, and the use of air bubble curtains to reduce noise impacts.

Each consultation letter should address the impacts listed in the checklist and their associated effects on listed species and their critical habitat. An explanation of how the impacts occur, their effects, and any mitigative measures that will be implemented to reduce the projects effects on listed species and their critical habitat should be included in the consultation letter.

* If Johnson's seagrass is present, please consult the following:

- *Dock Construction Guidelines in Florida for Docks or Other Minor Structures Constructed in or over Submerged Aquatic Vegetation, Marsh or Mangrove Habitat - U.S. Army Corps of Engineers/National Marine Fisheries Service*, dated August 2001

- *Key for Construction Conditions for Docks or Other Minor Structures Constructed in or Over Johnson's Seagrass (Halophila johnsonii)National Marine Fisheries Service/U.S. Army Corps of Engineers,* dated October 2002

Updated: August 2008

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Checklist of Information Needed to Complete Section 7 Consultations for U.S. Army Corps of Engineers Regulatory Division Applications

Project Specifications:

- Project or name of applicant, Action ID number

All Aboard Florida- Turkey Creek (Mile Post 197.70)

- Describe the location of the project site (address and latitude/longitude information). Location data **must** be given datum (e.g., NAD83) and lat/long format using decimal-degrees (**not** minutes and seconds): e.g., 27.71622N, 80.25174W.
  On-line conversion: http://www.fcc.gov/mb/audio/bickel/DDDMMSS-decimal.html

28.031966 N, -80.582232W WGS84

- In which body of water is the project located? If on a river or estuary, state the approximate navigable distance from the bay, ocean, or gulf).

Turkey Creek. The project area is approximately 0.5 miles upstream of Indian River Lagoon

Site Description:

- Describe any existing structures and their use - for instance, acreage of overwater structures, if it's an existing marina, how many boat slips are present and what is their size.

There is an existing double track railroad bridge. The bridge is approximately 180 ft across and is constructed from concrete pilings and steel girders.

- Is the project location within designated critical habitat?

No

- If project occurs in critical habitat, are PCEs present?

Project does not occur within Critical Habitat.

•What are the baseline conditions within the project area, including substrate type?

The bottom substrate was comprised of muck.

•Are seagrasses present in the project area? Include percent coverage estimates by species and the relative location of seagrass in relation to proposed structures. Was a seagrass or benthic habitat survey completed? If so, please submit. *

No seagrasses were present within Assessment Area.

•Are mangroves present in or near the project area? Which species (red, black, white) and how much?

No mangroves were present within the project area

•Are corals present in or near the project area? Include density or percent coverage estimates by species and describe proximity of corals to proposed structures.

No

•Was a benthic survey conducted within Johnson's seagrass growing season (April 1 - August 31)?

☒ Yes ☐ No

Construction Methods/ Project Description:

•Construction methods, including description of any demolition of existing structures or removal of debris. Will the work be done from a barge or uplands?

Construction of new twin 181-ft independent ballast deck structures located on the west side of the existing bridge. The ballast deck structures will be supported by concrete piers. The proposed superstructure will consist of Standard Precast Pre-stressed Concrete Bridge Slabs. The Bridge slabs will sit atop the pile bent cap. A crane will place the bridge slabs on the abutment. To form the end bents and backwall, a small area upslope will be excavated to install the forms. After installation is complete the area will be backfilled and compacted. Rip–rap will be placed around the abutment for slope protection. Walkways will be attached on either side of the bridge. Construction will be performed from a barge unless deemed unsafe or ineffective due to shallow depths, alternatively, a temporary in-water platform will be installed from which construction will ocur. The existing historic bridge will be left in place and maintained by FEC. FEC will be responsible for ensuring that overtime the deterioration of the bridge does not result in impacts to navigation, floodplains, wetlands, or ecological habitat, through removal and relocation prior to deterioration and/or removal of fallen debris.

- For docks, what type of decking will be used? If grated, provide manufacturer's name/ address/grating type, and percent light transmittance (%LT) of the grating design used? If wooden planks, what is the proposed spacing between the deckboards (½-inch, ¾-inch, 1-inch, other?). *Has the applicant been advised that COE-NMFS project review is significantly simplified and expedited for dock designs incorporating >43% LT grated decking, or 1-inch deckboard- and walkway-spacing, over Johnson's seagrass areas?* Proposed height of dock? Orientation of the dock (N, S, etc.)?

N/A

- Piling construction methodology. Are pile driving methods adequately described and are potential impacts to species adequately addressed? Will submerged aquatic vegetation (SAV) be impacted by pile installation? *If necessary, will the applicant's contractor adjust the spacing between piles to avoid driving piles onto Johnson's seagrass? Avoiding all piling impacts to JSG will significantly simplify and expedite the COE-NMFS project review process.*

Piles will be driven to load bearing capacity for E80 live loads. Piles will be driven with a steel pile driving template placed to prevent movement of the pile group. SAV were not observed within the project footprint.

- Number of new slips and size of slips, if applicable. If new construction includes High-and-Dry boat storage, what is the High-and-Dry vessel storage capacity?

N/A

- How big are the boats that are planned to be moored at the dock (either in the water or on a boatlift), if known?

N/A

- For all projects **not** involving docks or marinas (i.e., seawalls, jetties, etc.), please provide project description.

N/A

- Dredging? If yes, describe depth of cut, dredge type used, how many cubic yards, and what will be done with the spoil. Describe bottom sediments. Describe area hydrodynamics, i.e., average current speed and direction.

N/A

- Blasting? If yes, describe explosive weights, blasting plan, etc.

N/A

- What is the intended construction schedule (how many days, weeks, or months for in-water work)?

Work will be completed by December 2016

Potential Effects on Species/Critical Habitat:

- Please explain any impacts/effects to the critical habitat's primary constituent elements - PCEs)? Please identify which critical habitat unit(s) is being affected (e.g., Gulf sturgeon have 14 units, seven under NMFS jurisdiction and seven under FWS jurisdiction).

N/A

- What will the effects be, if any, to each PCE?

N/A

- Square footage to be affected by project?

3,936 sq ft will be affected by the project footprint.

- Will mangroves be impacted? Explain and quantify impacts.

No mangrove were present within the Assessment Area.

- How will the habitat be changed/altered as a result of the action? Could or will the alteration affect listed species? How?

Approximately 3,936 sq. ft. of surface waters and wetlands will be impacted by the installation of riprap and pilings, and shading of non-vegetated surface water by the new bridge. The proposed bridge construction may have direct short-term adverse effects on the water quality in the project vicinity. Effects to the managed species known to occur in the project vicinity would include installation of the t pilings and shade resulting from bridge deck construction. Pilings would ultimately result in a beneficial effect to species/life stages that prefer such structures as habitat, such as adult goliath grouper, gray snapper, and mutton snapper. Lifecycle functions will not be affected by the proposed activities.

•Listed species within the project area:

☒ Sea turtles	☒ Smalltooth sawfish	☐ Shortnose sturgeon
☐ Elkhorn coral	☐ Johnson's seagrass	☐ North Atlantic right whales
☐ Staghorn coral	☐ Gulf sturgeon	☐ Other whales

•Explain potential effects to each species checked above:

Sea turtles and smalltooth sawfish may utilize the Assessment Area for migration, but habitat requirements for foraging and nesting do not occur in the project area. It was determined that the project is not likely to affect either species because there are no anticipated impacts to mangroves and the Sea Turtle and Smalltooth Sawfish Construction Conditions will be followed.

•Shading impacts from construction.

Approximately 3,823 sq. ft. of non-vegetated surface water will be shaded by the new bridge.

•What is the estimated shadow effect of the boat (sq ft of shaded area beneath)?

N/A

•Discuss potential anchoring impacts to seagrass and corals. Discuss available water depth under the keel/propeller at Mean Low Water and the potential for prop dredging or blowouts. Discuss potential prop-scarring impacts to corals and seagrasses.

N/A

•Describe increased boat traffic impacts, if any. Are there posted speed zones in the area?

N/A

•Describe Noise Impacts (this section not applicable to single-family, multi-family, and marina dock projects where piles driven are 12 inches or less in diameter).

Noise associated with the pile driving may affect sea turtles, fish, including the smalltooth sawfish, and invertebrate species. Concrete piles will be approximately 20 inches in diameter and will be driven with a steel pile driving template. According to the Federal Railroad Administration's 2005 Noise and Vibration manual the typical noise levels 50 feet from the source for Impact Pile Drivers are 101 dBA and for Sonic Pile Drivers are 96 dBA. Based on other literature the estimated sound pressure associated with the pile driving at five meter depth is 185 Peak, 170 RMS, and 160 SEL (Illinworth & Rodkin, 2007). The contractor for this project has not yet been selected. If noise levels exceed those listed below, an air bubble curtain as well as other dampening techniques will be used while driving piles to help reduce impacts. No blasting will occur during construction.

•Source level of noise exceeds 120 dB re 1uPa RMS for continuous noise

☐ Yes ☒ No

•Source level exceeds 160 dB re 1 uPa RMS for impulsive noise

☐ Yes ☒ No

•Source level exceeds 180 dB re 1 uPa zero to peak

☐ Yes ☒ No

Effects Determination:

•For executing the action (i.e., construction activities)

☐ No Effect ☒ NLAA ☐ May Affect

•For the result of the action (i.e., new dock)

☐ No Effect ☒ NLAA ☐ May Affect

•If "No Effect" is determined for all species and critical habitat, please note your findings in a memorandum to your project file; no consultation/concurrence with/from NMFS is required.

☐ Memo made ☒ N/A

Mitigation/Protective Measures:

•Will the applicant follow the August 2001 Dock Construction Guidelines?

☐ Yes ☒ No

•Will the applicant follow the October 2002 Johnson's Seagrass Key?

☐ Yes ☒ No

•Will the Sea Turtle and Smalltooth Sawfish Construction Conditions, dated March 23, 2006, be followed?

☒ Yes ☐ No

•If not following any of the above, please explain:

Johnson seagrass is not present within the project area. Dock construction is not being performed.

- Turbidity controls? If yes, description of type used.

Yes, silt fence and floating turbidity barriers will be installed prior to construction and maintained during construction in accordance with performance standards for erosion and sediment control.

- What are the proposed avoidance, minimization, and compensatory measures?

Proposed measures include BMPs, such as silt fencing and turbidity barriers, Sea Turtle and Smalltooth Sawfish Construction Conditions, and the use of air bubble curtains to reduce noise impacts.

Each consultation letter should address the impacts listed in the checklist and their associated effects on listed species and their critical habitat. An explanation of how the impacts occur, their effects, and any mitigative measures that will be implemented to reduce the projects effects on listed species and their critical habitat should be included in the consultation letter.

* If Johnson's seagrass is present, please consult the following:

- *Dock Construction Guidelines in Florida for Docks or Other Minor Structures Constructed in or over Submerged Aquatic Vegetation, Marsh or Mangrove Habitat - U.S. Army Corps of Engineers/National Marine Fisheries Service*, dated August 2001

- *Key for Construction Conditions for Docks or Other Minor Structures Constructed in or Over Johnson's Seagrass (Halophila johnsonii)National Marine Fisheries Service/U.S. Army Corps of Engineers,* dated October 2002

Updated: August 2008

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Checklist of Information Needed to Complete Section 7 Consultations for U.S. Army Corps of Engineers Regulatory Division Applications

Project Specifications:

- Project or name of applicant, Action ID number

All Aboard Florida- Sebastian River (Mile Post 212.07)

- Describe the location of the project site (address and latitude/longitude information). Location data **must** be given datum (e.g., NAD83) and lat/long format using decimal-degrees (**not** minutes and seconds): e.g., 27.71622N, 80.25174W.
  On-line conversion: http://www.fcc.gov/mb/audio/bickel/DDDMMSS-decimal.html

27.838405 N, -80.496927W WGS84

- In which body of water is the project located? If on a river or estuary, state the approximate navigable distance from the bay, ocean, or gulf).

Sebastian River. The project area is approximately 1 miles upstream of Indian River Lagoon

Site Description:

- Describe any existing structures and their use - for instance, acreage of overwater structures, if it's an existing marina, how many boat slips are present and what is their size.

There is an existing double track railroad bridge. The bridge is approximately 1,625 ft across and is constructed from concrete pilings and steel girders.

- Is the project location within designated critical habitat?

No

- If project occurs in critical habitat, are PCEs present?

Project does not occur within Critical Habitat.

•What are the baseline conditions within the project area, including substrate type?

The bottom substrate was comprised of small rocks, muck, and shells.

•Are seagrasses present in the project area? Include percent coverage estimates by species and the relative location of seagrass in relation to proposed structures. Was a seagrass or benthic habitat survey completed? If so, please submit. *

No seagrasses were present within Assessment Area.

•Are mangroves present in or near the project area? Which species (red, black, white) and how much?

No mangroves observed within the Assessment area. Red mangroves were observed in the vicinity of the Assessment Area.

•Are corals present in or near the project area? Include density or percent coverage estimates by species and describe proximity of corals to proposed structures.

No

•Was a benthic survey conducted within Johnson's seagrass growing season (April 1 - August 31)?

☒ Yes ☐ No

Construction Methods/ Project Description:

•Construction methods, including description of any demolition of existing structures or removal of debris. Will the work be done from a barge or uplands?

Construction of twin new independent ballast deck structures located to the east of the existing railroad bridge. The ballast deck structures will be supported by concrete piers. The proposed superstructure will consist of Standard Precast Pre-stressed Concrete Bridge Slabs. The Bridge slabs will sit atop the pile bent cap. A crane will place the bridge slabs on the abutment. To form the end bents and backwall, a small area upslope will be excavated to install the forms. After installation is complete the area will be backfilled and compacted. Rip–rap will be placed around the abutment for slope protection. Walkways will be attached on either side of the bridge. Construction will be performed from a barge unless deemed unsafe or ineffective. An alternative to a barge would be the installation of a temporary platform from which construction activities would occur. The existing historic bridge will be left in place and maintained by FEC. FEC will be responsible for ensuring that overtime the deterioration of the bridge does not result in impacts to navigation, floodplains, wetlands, or ecological habitat through removal and relocation prior to deterioration and/or removal of fallen debris.

- For docks, what type of decking will be used? If grated, provide manufacturer's name/ address/grating type, and percent light transmittance (%LT) of the grating design used? If wooden planks, what is the proposed spacing between the deckboards (½-inch, ¾-inch, 1-inch, other?). *Has the applicant been advised that COE-NMFS project review is significantly simplified and expedited for dock designs incorporating >43% LT grated decking, or 1-inch deckboard- and walkway-spacing, over Johnson's seagrass areas?* Proposed height of dock? Orientation of the dock (N, S, etc.)?

N/A

- Piling construction methodology. Are pile driving methods adequately described and are potential impacts to species adequately addressed? Will submerged aquatic vegetation (SAV) be impacted by pile installation? *If necessary, will the applicant's contractor adjust the spacing between piles to avoid driving piles onto Johnson's seagrass? Avoiding all piling impacts to JSG will significantly simplify and expedite the COE-NMFS project review process.*

Piles will be driven to load bearing capacity for E80 live loads. Piles will be driven with a steel pile driving template placed to prevent movement of the pile group. SAV were not observed within the project footprint.

- Number of new slips and size of slips, if applicable. If new construction includes High-and-Dry boat storage, what is the High-and-Dry vessel storage capacity?

N/A

- How big are the boats that are planned to be moored at the dock (either in the water or on a boatlift), if known?

N/A

- For all projects **not** involving docks or marinas (i.e., seawalls, jetties, etc.), please provide project description.

N/A

- Dredging? If yes, describe depth of cut, dredge type used, how many cubic yards, and what will be done with the spoil. Describe bottom sediments. Describe area hydrodynamics, i.e., average current speed and direction.

N/A

- Blasting? If yes, describe explosive weights, blasting plan, etc.

N/A

- What is the intended construction schedule (how many days, weeks, or months for in-water work)?

Work will be completed by December 2016

Potential Effects on Species/Critical Habitat:

- Please explain any impacts/effects to the critical habitat's primary constituent elements - PCEs)? Please identify which critical habitat unit(s) is being affected (e.g., Gulf sturgeon have 14 units, seven under NMFS jurisdiction and seven under FWS jurisdiction).

N/A

- What will the effects be, if any, to each PCE?

N/A

- Square footage to be affected by project?

37,350 sq ft will be affected by the project footprint.

- Will mangroves be impacted? Explain and quantify impacts.

Mangrove impacts are not anticipated.

- How will the habitat be changed/altered as a result of the action? Could or will the alteration affect listed species? How?

Approximately 37,350 sq. ft. of surface waters and wetlands will be impacted by the installation of riprap and pilings, and shading of non-vegetated surface water by the new bridge. The proposed bridge construction may have direct short-term adverse effects on the water quality in the project vicinity. Effects to the managed species known to occur in the project vicinity would include installation of the replacement pilings and shade resulting from bridge deck construction. Pilings would ultimately result in a beneficial effect to species/life stages that prefer such structures as habitat, such as adult goliath grouper, gray snapper, and mutton snapper. Lifecycle functions will not be affected by the proposed activities.

•Listed species within the project area:

☒ Sea turtles	☒ Smalltooth sawfish	☐ Shortnose sturgeon
☐ Elkhorn coral	☐ Johnson's seagrass	☐ North Atlantic right whales
☐ Staghorn coral	☐ Gulf sturgeon	☐ Other whales

•Explain potential effects to each species checked above:

Sea turtles and smalltooth sawfish may utilize the Assessment Area for migration, but habitat requirements for foraging and nesting do not occur in the project area. It was determined that the project is not likely to affect either species because there are no anticipated impacts to mangroves and the Sea Turtle and Smalltooth Sawfish Construction Conditions will be followed.

•Shading impacts from construction.

Approximately 35,350 sq. ft. of non-vegetated surface water will be shaded by the new bridge.

•What is the estimated shadow effect of the boat (sq ft of shaded area beneath)?

N/A

•Discuss potential anchoring impacts to seagrass and corals. Discuss available water depth under the keel/propeller at Mean Low Water and the potential for prop dredging or blowouts. Discuss potential prop-scarring impacts to corals and seagrasses.

N/A

•Describe increased boat traffic impacts, if any. Are there posted speed zones in the area?

N/A

•Describe Noise Impacts (this section not applicable to single-family, multi-family, and marina dock projects where piles driven are 12 inches or less in diameter).

Noise associated with the pile driving may affect sea turtles, fish, including the smalltooth sawfish, and invertebrate species. Concrete piles will be approximately 20 inches in diameter and will be driven with a steel pile driving template. According to the Federal Railroad Administration's 2005 Noise and Vibration manual the typical noise levels 50 feet from the source for Impact Pile Drivers are 101 dBA and for Sonic Pile Drivers are 96 dBA. Based on other literature the estimated sound pressure associated with the pile driving at five meter depth is 185 Peak, 170 RMS, and 160 SEL (Illinworth & Rodkin, 2007). The contractor for this project has not yet been selected. If noise levels exceed those listed below, an air bubble curtain as well as other dampening techniques will be used while driving piles to help reduce impacts. No blasting will occur during construction.

•Source level of noise exceeds 120 dB re 1uPa RMS for continuous noise

☐ Yes ☒ No

•Source level exceeds 160 dB re 1 uPa RMS for impulsive noise

☐ Yes ☒ No

•Source level exceeds 180 dB re 1 uPa zero to peak

☐ Yes ☒ No

Effects Determination:

•For executing the action (i.e., construction activities)

☐ No Effect ☒ NLAA ☐ May Affect

•For the result of the action (i.e., new dock)

☐ No Effect ☒ NLAA ☐ May Affect

•If "No Effect" is determined for all species and critical habitat, please note your findings in a memorandum to your project file; no consultation/concurrence with/from NMFS is required.

☐ Memo made ☒ N/A

Mitigation/Protective Measures:

•Will the applicant follow the August 2001 Dock Construction Guidelines?

☐ Yes ☒ No

•Will the applicant follow the October 2002 Johnson's Seagrass Key?

☐ Yes ☒ No

•Will the Sea Turtle and Smalltooth Sawfish Construction Conditions, dated March 23, 2006, be followed?

☒ Yes ☐ No

•If not following any of the above, please explain:

Johnson seagrass is not present within the project area. Dock construction is not being performed.

- Turbidity controls? If yes, description of type used.

Yes, silt fence and floating turbidity barriers will be installed prior to construction and maintained during construction in accordance with performance standards for erosion and sediment control.

- What are the proposed avoidance, minimization, and compensatory measures?

Proposed measures include BMPs, such as silt fencing and turbidity barriers, mangrove trimming according to FDEP guidelines as needed, Sea Turtle and Smalltooth Sawfish Construction Conditions, and the use of air bubble curtains to reduce noise impacts.

Each consultation letter should address the impacts listed in the checklist and their associated effects on listed species and their critical habitat. An explanation of how the impacts occur, their effects, and any mitigative measures that will be implemented to reduce the projects effects on listed species and their critical habitat should be included in the consultation letter.

* If Johnson's seagrass is present, please consult the following:

- *Dock Construction Guidelines in Florida for Docks or Other Minor Structures Constructed in or over Submerged Aquatic Vegetation, Marsh or Mangrove Habitat - U.S. Army Corps of Engineers/National Marine Fisheries Service*, dated August 2001

- *Key for Construction Conditions for Docks or Other Minor Structures Constructed in or Over Johnson's Seagrass (Halophila johnsonii)National Marine Fisheries Service/U.S. Army Corps of Engineers,* dated October 2002

Updated: August 2008

Print Form

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Checklist of Information Needed to Complete Section 7 Consultations for U.S. Army Corps of Engineers Regulatory Division Applications

Project Specifications:

- Project or name of applicant, Action ID number

All Aboard Florida- St. Lucie River (Mile Post 260.93)

- Describe the location of the project site (address and latitude/longitude information). Location data **must** be given datum (e.g., NAD83) and lat/long format using decimal-degrees (**not** minutes and seconds): e.g., 27.71622N, 80.25174W.
  On-line conversion: http://www.fcc.gov/mb/audio/bickel/DDDMMSS-decimal.html

27.203706 N, -80.260088W WGS84

- In which body of water is the project located? If on a river or estuary, state the approximate navigable distance from the bay, ocean, or gulf).

St. Lucie River. The project area is approximately 5.5 miles upstream of Atlantic Ocean

Site Description:

- Describe any existing structures and their use - for instance, acreage of overwater structures, if it's an existing marina, how many boat slips are present and what is their size.

There is an existing single track operational railroad draw bridge. The bridge is approximately 1,260 ft across and is constructed from concrete pilings and steel girders.

- Is the project location within designated critical habitat?

No

- If project occurs in critical habitat, are PCEs present?

Project does not occur within Critical Habitat.

- What are the baseline conditions within the project area, including substrate type?

The bottom substrate was comprised of muck and small rocks.

- Are seagrasses present in the project area? Include percent coverage estimates by species and the relative location of seagrass in relation to proposed structures. Was a seagrass or benthic habitat survey completed? If so, please submit. *

No seagrasses were present within Assessment Area.

- Are mangroves present in or near the project area? Which species (red, black, white) and how much?

Red and White mangroves were observed near the Assessment area

- Are corals present in or near the project area? Include density or percent coverage estimates by species and describe proximity of corals to proposed structures.

No

- Was a benthic survey conducted within Johnson's seagrass growing season (April 1 - August 31)?

☒ Yes ☐ No

Construction Methods/ Project Description:

- Construction methods, including description of any demolition of existing structures or removal of debris. Will the work be done from a barge or uplands?

Rehabilitation of existing structural steel, concrete piers, and mechanical and electrical systems.

Bridge restoration activities will be performed from a barge unless deemed unsafe or ineffective. An alternative would be the installation of a temporary platform from which restoration activities would occur.

Although in-water work is currently not proposed there may be a potential need for in-water work, pending further examination of the existing bridge structures, and required construction methods; therefore, ESA consultation should be conducted assuming in-water work at this location.

- For docks, what type of decking will be used? If grated, provide manufacturer's name/ address/grating type, and percent light transmittance (%LT) of the grating design used? If wooden planks, what is the proposed spacing between the deckboards (½-inch, ¾-inch, 1-inch, other?). *Has the applicant been advised that COE-NMFS project review is significantly simplified and expedited for dock designs incorporating >43% LT grated decking, or 1-inch deckboard- and walkway-spacing, over Johnson's seagrass areas?* Proposed height of dock? Orientation of the dock (N, S, etc.)?

N/A

- Piling construction methodology. Are pile driving methods adequately described and are potential impacts to species adequately addressed? Will submerged aquatic vegetation (SAV) be impacted by pile installation? *If necessary, will the applicant's contractor adjust the spacing between piles to avoid driving piles onto Johnson's seagrass? Avoiding all piling impacts to JSG will significantly simplify and expedite the COE-NMFS project review process.*

If pile installation is necessary, piles will be driven to load bearing capacity for E80 live loads. Piles will be driven with a steel pile driving template placed to prevent movement of the pile group. SAV were not observed within the project footprint.

- Number of new slips and size of slips, if applicable. If new construction includes High-and-Dry boat storage, what is the High-and-Dry vessel storage capacity?

N/A

- How big are the boats that are planned to be moored at the dock (either in the water or on a boatlift), if known?

N/A

- For all projects **not** involving docks or marinas (i.e., seawalls, jetties, etc.), please provide project description.

N/A

- Dredging? If yes, describe depth of cut, dredge type used, how many cubic yards, and what will be done with the spoil. Describe bottom sediments. Describe area hydrodynamics, i.e., average current speed and direction.

N/A

- Blasting? If yes, describe explosive weights, blasting plan, etc.

N/A

- What is the intended construction schedule (how many days, weeks, or months for in-water work)?

Work will be completed by December 2016

Potential Effects on Species/Critical Habitat:

- Please explain any impacts/effects to the critical habitat's primary constituent elements - PCEs)? Please identify which critical habitat unit(s) is being affected (e.g., Gulf sturgeon have 14 units, seven under NMFS jurisdiction and seven under FWS jurisdiction).

N/A

- What will the effects be, if any, to each PCE?

N/A

- Square footage to be affected by project?

The proposed work is limited to updates to the existing structures. If in-water work is necessary, the maximum footprint would be 14,381 square feet (footprint of bridge)

- Will mangroves be impacted? Explain and quantify impacts.

Mangrove impacts are not anticipated.

- How will the habitat be changed/altered as a result of the action? Could or will the alteration affect listed species? How?

Currently the proposed project will not result in modification to any habitats; however, if in-water work is deemed necessary, surface waters and wetlands may be impacted through installation of riprap and pilings, as well as shading of non-vegetated surface waters. If in-water work is deemed necessary, there may be direct short-term adverse effects on the water quality in the project vicinity. Effects to the managed species known to occur in the project vicinity may include installation of pilings (temporary or permanent) and shade resulting from additional bridge deck construction. Pilings would ultimately result in a beneficial effect to species/life stages that prefer such structures as habitat, such as adult goliath grouper, gray snapper, and mutton snapper. Lifecycle functions will not be affected by the proposed activities.

•Listed species within the project area:

☒ Sea turtles	☒ Smalltooth sawfish	☐ Shortnose sturgeon
☐ Elkhorn coral	☐ Johnson's seagrass	☐ North Atlantic right whales
☐ Staghorn coral	☐ Gulf sturgeon	☐ Other whales

•Explain potential effects to each species checked above:

Sea turtles and smalltooth sawfish may utilize the Assessment Area for migration, but habitat requirements for foraging and nesting do not occur in the project area. It was determined that the project is not likely to affect either species because there are no anticipated impacts to mangroves and if in-water work is deemed necessary, the Sea Turtle and Smalltooth Sawfish Construction Conditions will be followed.

•Shading impacts from construction.

No new shading impacts are proposed within the Assessment Area.

•What is the estimated shadow effect of the boat (sq ft of shaded area beneath)?

N/A

•Discuss potential anchoring impacts to seagrass and corals. Discuss available water depth under the keel/propeller at Mean Low Water and the potential for prop dredging or blowouts. Discuss potential prop-scarring impacts to corals and seagrasses.

N/A

•Describe increased boat traffic impacts, if any. Are there posted speed zones in the area?

N/A

•Describe Noise Impacts (this section not applicable to single-family, multi-family, and marina dock projects where piles driven are 12 inches or less in diameter).

Currently, no pile driving is proposed within the Assessment Area. However, if deemed necessary, noise associated with pile driving may affect sea turtles, fish, including the smalltooth sawfish, and invertebrate species. Concrete piles would be approximately 20 inches in diameter and be driven with a steel pile driving template. According to the Federal Railroad Administration's 2005 Noise and Vibration manual the typical noise levels 50 feet from the source for Impact Pile Drivers are 101 dBA and for Sonic Pile Drivers are 96 dBA. Based on other literature the estimated sound pressure associated with the pile driving at five meter depth is 185 Peak, 170 RMS, and 160 SEL (Illinworth & Rodkin, 2007). The contractor for this project has not yet been selected. If noise levels exceed those listed below, an air bubble curtain as well as other dampening techniques will be used while driving piles to help reduce impacts. No blasting will occur during construction.

•Source level of noise exceeds 120 dB re 1uPa RMS for continuous noise

☐ Yes ☒ No

•Source level exceeds 160 dB re 1 uPa RMS for impulsive noise

☐ Yes ☒ No

•Source level exceeds 180 dB re 1 uPa zero to peak

☐ Yes ☒ No

Effects Determination:

•For executing the action (i.e., construction activities)

☐ No Effect ☑ NLAA ☐ May Affect

•For the result of the action (i.e., new dock)

☐ No Effect ☑ NLAA ☐ May Affect

•If "No Effect" is determined for all species and critical habitat, please note your findings in a memorandum to your project file; no consultation/concurrence with/from NMFS is required.

☐ Memo made ☒ N/A

Mitigation/Protective Measures:

•Will the applicant follow the August 2001 Dock Construction Guidelines?

☐ Yes ☒ No

•Will the applicant follow the October 2002 Johnson's Seagrass Key?

☐ Yes ☒ No

•Will the Sea Turtle and Smalltooth Sawfish Construction Conditions, dated March 23, 2006, be followed?

☒ Yes ☐ No

•If not following any of the above, please explain:

Johnson seagrass is not present within the project area. Dock construction is not being performed.

- Turbidity controls? If yes, description of type used.

Yes, silt fence and floating turbidity barriers will be installed prior to construction and maintained during construction in accordance with performance standards for erosion and sediment control.

- What are the proposed avoidance, minimization, and compensatory measures?

Proposed measures include BMPs, such as silt fencing and turbidity barriers, Sea Turtle and Smalltooth Sawfish Construction Conditions, and the use of air bubble curtains to reduce noise impacts, as necessary.

Each consultation letter should address the impacts listed in the checklist and their associated effects on listed species and their critical habitat. An explanation of how the impacts occur, their effects, and any mitigative measures that will be implemented to reduce the projects effects on listed species and their critical habitat should be included in the consultation letter.

* If Johnson's seagrass is present, please consult the following:

- *Dock Construction Guidelines in Florida for Docks or Other Minor Structures Constructed in or over Submerged Aquatic Vegetation, Marsh or Mangrove Habitat - U.S. Army Corps of Engineers/National Marine Fisheries Service*, dated August 2001

- *Key for Construction Conditions for Docks or Other Minor Structures Constructed in or Over Johnson's Seagrass (Halophila johnsonii)National Marine Fisheries Service/U.S. Army Corps of Engineers,* dated October 2002

Updated: August 2008

Print Form

Print Form

Checklist of Information Needed to Complete Section 7 Consultations for U.S. Army Corps of Engineers Regulatory Division Applications

Project Specifications:

- Project or name of applicant, Action ID number

All Aboard Florida- Loxahatchee River (Mile Post 282.58)

- Describe the location of the project site (address and latitude/longitude information). Location data **must** be given datum (e.g., NAD83) and lat/long format using decimal-degrees (**not** minutes and seconds): e.g., 27.71622N, 80.25174W.
  On-line conversion: http://www.fcc.gov/mb/audio/bickel/DDDMMSS-decimal.html

26.947660 N, -80.090311W WGS84

- In which body of water is the project located? If on a river or estuary, state the approximate navigable distance from the bay, ocean, or gulf).

Loxahatchee River. The project area is approximately 1.25 miles upstream of the Atlandtic Ocean

Site Description:

- Describe any existing structures and their use - for instance, acreage of overwater structures, if it's an existing marina, how many boat slips are present and what is their size.

There is an existing double track operational railroad with a draw bridge. The bridge is approximately 590 ft across and is constructed from concrete pilings and steel girders.

- Is the project location within designated critical habitat?

No

- If project occurs in critical habitat, are PCEs present?

Project does not occur within Critical Habitat.

- What are the baseline conditions within the project area, including substrate type?

The bottom substrate was comprised of sand and crushed shells

- Are seagrasses present in the project area? Include percent coverage estimates by species and the relative location of seagrass in relation to proposed structures. Was a seagrass or benthic habitat survey completed? If so, please submit. *

No seagrasses were present within Assessment Area.

- Are mangroves present in or near the project area? Which species (red, black, white) and how much?

Red and White mangroves were observed near the Assessment area

- Are corals present in or near the project area? Include density or percent coverage estimates by species and describe proximity of corals to proposed structures.

No

- Was a benthic survey conducted within Johnson's seagrass growing season (April 1 - August 31)?

☒ Yes ☐ No

Construction Methods/ Project Description:

- Construction methods, including description of any demolition of existing structures or removal of debris. Will the work be done from a barge or uplands?

Rehabilitation or replacement of existing structural steel girders, concrete piers, and mechanical and electrical systems. The process will return the span back to a movable double track bridge.

Bridge restoration activities will be performed from a barge unless deemed unsafe or ineffective. An alternative would be the installation of a temporary platform from which restoration activities would occur.

Although in-water work is currently not proposed there may be a potential need for in-water work, pending further examination of the existing bridge structures, and required construction methods; therefore, ESA consultation should be conducted assuming in-water work at this location.

- For docks, what type of decking will be used? If grated, provide manufacturer's name/ address/grating type, and percent light transmittance (%LT) of the grating design used? If wooden planks, what is the proposed spacing between the deckboards (½-inch, ¾-inch, 1-inch, other?). *Has the applicant been advised that COE-NMFS project review is significantly simplified and expedited for dock designs incorporating >43% LT grated decking, or 1-inch deckboard- and walkway-spacing, over Johnson's seagrass areas?* Proposed height of dock? Orientation of the dock (N, S, etc.)?

N/A

- Piling construction methodology. Are pile driving methods adequately described and are potential impacts to species adequately addressed? Will submerged aquatic vegetation (SAV) be impacted by pile installation? *If necessary, will the applicant's contractor adjust the spacing between piles to avoid driving piles onto Johnson's seagrass? Avoiding all piling impacts to JSG will significantly simplify and expedite the COE-NMFS project review process.*

If pile installation is necessary, piles will be driven to load bearing capacity for E80 live loads. Piles will be driven with a steel pile driving template placed to prevent movement of the pile group. SAV were not observed within the project footprint.

- Number of new slips and size of slips, if applicable. If new construction includes High-and-Dry boat storage, what is the High-and-Dry vessel storage capacity?

N/A

- How big are the boats that are planned to be moored at the dock (either in the water or on a boatlift), if known?

N/A

- For all projects **not** involving docks or marinas (i.e., seawalls, jetties, etc.), please provide project description.

N/A

- Dredging? If yes, describe depth of cut, dredge type used, how many cubic yards, and what will be done with the spoil. Describe bottom sediments. Describe area hydrodynamics, i.e., average current speed and direction.

N/A

- Blasting? If yes, describe explosive weights, blasting plan, etc.

N/A

- What is the intended construction schedule (how many days, weeks, or months for in-water work)?

Work will be completed by December 2016

Potential Effects on Species/Critical Habitat:

- Please explain any impacts/effects to the critical habitat's primary constituent elements - PCEs)? Please identify which critical habitat unit(s) is being affected (e.g., Gulf sturgeon have 14 units, seven under NMFS jurisdiction and seven under FWS jurisdiction).

N/A

- What will the effects be, if any, to each PCE?

N/A

- Square footage to be affected by project?

The proposed work is limited to updates to the existing structures, with no new footprint. If in-water work is necessary, the maximum footprint would be 13,825 square ft (footprint of bridge)

- Will mangroves be impacted? Explain and quantify impacts.

Mangrove impacts are not anticipated. Potential trimming will be done in accordance with FDEP Guidance.

- How will the habitat be changed/altered as a result of the action? Could or will the alteration affect listed species? How?

Currently the proposed project will not result in modification to any habitats; however, if in-water work is deemed necessary, surface waters and wetlands may be impacted through installation of riprap and pilings, as well as shading of non-vegetated surface waters. If in-water work is deemed necessary, there may be direct short-term adverse effects on the water quality in the project vicinity. Effects to the managed species known to occur in the project vicinity may include installation of pilings (temporary or permanent) and shade resulting from additional bridge deck construction. Pilings would ultimately result in a beneficial effect to species/life stages that prefer such structures as habitat, such as adult goliath grouper, gray snapper, and mutton snapper. Lifecycle functions will not be affected by the proposed activities.

•Listed species within the project area:

☒ Sea turtles	☒ Smalltooth sawfish	☐ Shortnose sturgeon
☐ Elkhorn coral	☐ Johnson's seagrass	☐ North Atlantic right whales
☐ Staghorn coral	☐ Gulf sturgeon	☐ Other whales

•Explain potential effects to each species checked above:

Sea turtles and smalltooth sawfish may utilize the Assessment Area for migration, but habitat requirements for foraging and nesting do not occur in the project area. It was determined that the project is not likely to affect either species because there are no anticipated impacts to mangroves and if in-water work is deemed necessary, the Sea Turtle and Smalltooth Sawfish Construction Conditions will be followed.

•Shading impacts from construction.

No new shading impacts are proposed within the Assessment Area.

•What is the estimated shadow effect of the boat (sq ft of shaded area beneath)?

N/A

•Discuss potential anchoring impacts to seagrass and corals. Discuss available water depth under the keel/propeller at Mean Low Water and the potential for prop dredging or blowouts. Discuss potential prop-scarring impacts to corals and seagrasses.

N/A

•Describe increased boat traffic impacts, if any. Are there posted speed zones in the area?

N/A

•Describe Noise Impacts (this section not applicable to single-family, multi-family, and marina dock projects where piles driven are 12 inches or less in diameter).

Currently, no pile driving is proposed within the Assessment Area. However, if deemed necessary, noise associated with pile driving may affect sea turtles, fish, including the smalltooth sawfish, and invertebrate species. Concrete piles would be approximately 20 inches in diameter and be driven with a steel pile driving template. According to the Federal Railroad Administration's 2005 Noise and Vibration manual the typical noise levels 50 feet from the source for Impact Pile Drivers are 101 dBA and for Sonic Pile Drivers are 96 dBA. Based on other literature the estimated sound pressure associated with the pile driving at five meter depth is 185 Peak, 170 RMS, and 160 SEL (Illinworth & Rodkin, 2007). The contractor for this project has not yet been selected. If noise levels exceed those listed below, an air bubble curtain as well as other dampening techniques will be used while driving piles to help reduce impacts. No blasting will occur during construction.

Table 1

Name and Mile Post (MP)	Mangroves Present	Red Mangroves Present	Seagrass Observed within Project Area	Oyster beds Observed on natural substrate	Bottom substrate	May Affect Not Likely to Adversely affect swimming sea turtles*	May affect not likely to adversely affect smalltooth sawfish	No affects to Johnson's seagrass, Atlantic sturgeon, shortnose sturgeon
Loxahatchee River (MP 282.50)	Yes	Yes	No	No	Sand and crushed shells	X	X	X
St. Lucie River (MP 260.93)	Yes	Yes	No	No	Small rocks and muck	X	X	X
Sebastian River (MP 212.07)	Yes**	No	No	Yes	Small rocks, muck,and shells	X	X	X
Turkey Creek (MP 197.70)***	No	No	No	No	Muck	X	X	X
Crane Creek (MP 194.36)	No	No	No	No	Small rocks, crushed shells, and muck	X	X	X
Eau Gallie River (MP 190.47)	Yes	No	No	Yes	Mud, small rocks, and crushed shells	X	X	X

*swimming sea turtles include: loggerhead sea turtle (*Caretta caretta*), green sea turtle (*Chelonia mydas*), Kemp's Ridley sea turtle (*Lepidochelys kempii*), hawksbill sea turtle (*Eretmochelys imbricate*), leatherback sea turtle (*Dermochelys coriacea*

**Mangrove not within project area

***Benthic survey was limited due to presence of Alligator

The Corps has completed an evaluation of the impacts the work may have on the loggerhead sea turtle (*Caretta caretta*), green sea turtle (*Chelonia mydas*), Kemp's Ridley sea turtle (*Lepidochelys kempii*), hawksbill sea turtle (*Eretmochelys imbricate*), leatherback sea turtle (*Dermochelys coriacea*); smalltooth sawfish *(Pristis pectinata*), Atlantic sturgeon (*Acipenser oxyrinchus),* shortnose sturgeon (*Acipenser brevirostrum*), Johnson's seagrass.

Based on information provided by the applicant, technical assistance from Mr. Brandon Howard and field assessments completed with Mr. Howard the Corps has determined that the proposed project would cause the following effects on federally listed species:

No effect: Atlantic sturgeon and shortnose sturgeon based on the proposed work occurring outside of their know range

No effect: Johnson's seagrass based on the absence of the species within the proposed work areas.

May affect, not likely to adversely affect: swimming sea turtles based on the applicant's agreement to follow the Sea turtle and Smalltooth Sawfish Construction Conditions during construction

May affect, not likely to adversely affect: smalltooth sawfish based on the applicant's proposed compensatory mitigation for loss of red mangrove habitat, absence of seagrass beds within the in-water work areas, and the applicant's agreement to follow the Sea turtle and Smalltooth Sawfish Construction Conditions during construction

Pursuant to Section 7 of the Endangered Species Act we request your concurrence with these determinations within 30 days. The attached Biological Assessment includes checklists for each in-water work location and provide information in accordance with 50 CFR §402.12 and 14(c) to assist you in concurrence with our determination for the proposed intercity passenger rail transportation between Orlando and Miami, Florida and/or preparation of a biological opinion for the proposed project.

An Essential Fish Habitat Assessment will be sent to NMFS, Habitat Conservation Division by separate letter.

Please advise if you agree with the above determination or provide a date when formal consultation would commence. If you have any questions regarding this letter, please contact Andrew Phillips at the letterhead address, by telephone at 321-504-3771 extension 14, or by electronic mail at andrew.w.phillips@usace.army.mil.

Sincerely,

Irene Sadowski
Chief, Cocoa Permits Section

Enclosures

Copy Furnished w/o enclosure: (electronically)

FRA; daniel.orlaskey@dot.gov

January 24, 2014

Mr. Andrew Philips
United States Army Corps of Engineers
Cocoa Permits Section
400 High Point Drive, Suite 600
Cocoa, Florida, 32926

Subject: Addendum 1 to AAF NOAA Fisheries Biological Assessment dated September 1, 2013

Dear Mr. Phillips:

AMEC Environment & Infrastructure, Inc. (AMEC), on behalf of All Aboard Florida – Operations LLC (AAF), submitted the *Biological Assessment for the All Aboard Florida Passenger Rail Project from Orlando to Miami, Florida: Species under NOAA Fisheries Jurisdiction* to the United States Army Corps of Engineers (USACE) on September 3, 2013 (BA). Following submission of this document, further study was conducted by representatives of AAF that examined the capability of existing bridges and 6 bridges were identified as requiring additional assessment. The results of the additional assessment concluded that each of the four (4) railroad bridges crossing the Eau Gallie River, Crane Creek, Turkey Creek, and the Sebastian River would eventually require replacement while the bridges crossing the Loxahatchee River and St. Lucie River would eventually require more substantial refurbishment than initially proposed. The locations of the aforementioned bridges are illustrated on Figure 1 (Attachment 1).

In light of the foregoing, AAF is studying whether to complete the Project with additional work at these locations as part of the initial construction of the Project (the "Bridge Alternative"). The Bridge Alternative includes the proposal to (a) complete new bridges alongside existing structures at the following locations due to the potential for those existing railroad bridges crossings to be eligible for listing on the National Register of Historic Places (NRHP): the Eau Gallie River, Crane Creek, Turkey Creek, and the Sebastian River; and (b) complete additional work at the bridges crossing the Loxahatchee River and St. Lucie River. The following summary details the proposed activities at each crossing that are being contemplated as part of the Bridge Alternative:

1. Mile Post (MP) 282.50 (Loxahatchee River) – Rehabilitation or replacement of existing structural steel girders, concrete piers, and mechanical and electrical systems. The process will return the span back to a movable double track bridge.
2. MP 260.93 (St. Lucie River) – Rehabilitation of existing structural steel, concrete piers, and mechanical and electrical systems.
3. MP 212.07 (Sebastian River) - Construction of twin new independent ballast deck structures located to the east of the existing railroad bridge. The ballast deck structures will be supported by concrete piers.
4. MP 197.70 (Turkey Creek) – Construction of new twin 181-ft independent ballast deck structures located on the west side of the existing bridge. The ballast deck structures will be supported by concrete piers.

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5. MP 194.36 (Crane Creek) – Construction of one new 650-ft independent ballast deck structure located on the east sides of the existing railroad bridge and one new single track bridge in the footprint of the removed western bridge. The new structures will be supported by concrete piers.
6. MP 190.47 (Eau Gallie River) - Construction of twin new 575-ft independent ballast deck structures located to the east of the existing railroad bridge. The ballast deck will be supported by concrete piers.

Although in-water work is currently not proposed at the Loxahatchee River and St. Lucie River, there may be a potential need for in-water work, pending further examination of the existing bridge structures, and required construction methods; therefore, ESA consultation should be conducted assuming in-water work at these locations. In addition, The existing historic bridges at the Eau Gallie River, Crane Creek, Turkey Creek, and Sebastian RIver will be left in place and maintained by FEC. FEC will be responsible for ensuring that overtime the deterioration of the bridges does not result in impacts to navigation, floodplains, wetlands, or ecological habitat through removal and relocation prior to deterioration and/or removal of fallen debris.

In addition, silt fence and floating turbidity barriers will be installed and maintained during construction in accordance with performance standards for erosion and sediment control and stormwater treatment set forth in section 62-40.432, FAC.

In light of the possibility that the Bridge Alternative may be incorporated into the Proposed Project (as defined in the BA), this addendum has been prepared to provide information regarding these additional bridge assessment areas (Bridge Assessment Areas) and potential impacts to protected species associated with the Bridge Alternative.

1.0 Existing Conditions and Action Area

The route for the Proposed Project is approximately 235 miles long. The North South Corridor lies along the Atlantic coast from Miami to Cocoa. The six bridges affected by the Bridge Alternative include bridges at Eau Gallie River, Crane Creek, Turkey Creek, Sebastian River, St., Lucie River, and Loxahatchee River (Attachment 1-Figure 1).

1.1 Survey Methods

Desktop surveys for known distribution of federally protected species were performed. County records on listed species available from the USFWS[1] and the Florida Natural Area Inventory (FNAI) Biodiversity Matrix[2] provided information on federally protected species documented, or expected to occur in the vicinity of the Project Area.

Field surveys included wetland delineations, pedestrian transects within Project Areas, incidental observations of protected species' presence and habitat type and quality; in-water seagrass and benthic resource surveys; and qualitative evaluation of habitats in the vicinity of proposed construction sites.

[1] United States Fish and Wildlife Service (USFWS). 2012. Species by County Report. Website: http://ecos.fws. gov/tess_public/. Accessed August 2012.
[2] Florida Natural Area Inventory (FNAI). 2013. Biodiversity Matrix. Website accessed: http://www.fnai.org/biointro.cfm

In October 2013, AMEC scientists evaluated the six Bridge Assessment Areas that are slated for improvements on account of the Bridge Alternative that may require in-water work. In-water benthic surveys were completed at all locations where there was potential for seagrass to occur. AMEC performed visual in-water reconnaissance of the Bridge Assessment Areas. The purpose of the benthic surveys was to characterize the bottom composition as well as determine the presence of seagrass beds, oyster beds, sponges, red mangrove wetlands, and other benthic resources. Visual assessment from bridge decks was used to identify whether or not an in-water survey should be conducted. Where deemed appropriate, benthic surveys were performed in accordance with NOAA Fisheries guidance for assessing medium and large project[3]. As part of the in-water seagrass survey protocol, if seagrasses were determined to be rooted within the assessment area, field personnel would delineate and quantify patch distribution[4].

1.2 Survey Results

The desktop survey identified the following federally listed plants and animals under NOAA Fisheries jurisdiction that might be found in the Project Area: sea turtles- Loggerhead (*Caretta caretta*), Green (*Chelonia mydas*), Kemp's Ridley (*Lepidochelys kempii*), Hawksbill (*Eremochelys imbricate*), and Leatherback (*Demochelys coriacea*); smalltooth sawfish (*Pristis pectinata)*, and Johnson's seagrass (*Halophila johnsonii)*. These species are discussed in detail in the BA. Critical habitat for these species was not identified within the vicinity of the Bridge Assessment Areas.

Potential habitat for sea turtles and smalltooth sawfish were observed during the field studies, including mangrove wetlands. No populations of Johnson's seagrass were identified within the Bridge Assessment Areas and none of the above referenced species were observed during the field surveys.

The results of the field surveys including the benthic resource surveys at each Bridge Assessment Area are described below and summarized in Table 1. The design for the bridges is not final yet; however, direct wetland impacts have been estimated based on the proposed footprint of the bridge, as the maximum potential impact acreage (including shading). Estimated wetland and surface water impacts at the six Bridge Assessment Areas are outlined in Table 2. A photograph log for the bridge project areas is located in Attachment 2. Aerial photographs of each bridge location are located in Attachment 3.

Eau Gallie River

Wetlands along the Eau Gallie River are limited to a narrow fringe along the shorelines. The steep river banks along the Eau Gallie River near the FEC bridge as well as the placement of ballast between the abutments and the river reduce the amount of area that wetland resources can establish. Due to the aforementioned disturbance, the vegetation within the fringe wetland and associated upland is comprised of mainly Florida Exotic Pest Plant Council (FLEPPC) listed invasive species (i.e. Brazilian Pepper (*Schinus terebinthifolius*) and Australian Pine (*Casuarina spp.*). Although the wetland has been diminished and is currently dominated by invasive vegetation, the tidally influenced brackish water has allowed for the establishment of a few white mangroves

[3] National Oceanic Atmospheric Association (NOAA) National Marine Fisheries Service. 2012. Recommendations for Sampling *Halophila johnsoii* at a Project Site. Website. http://sero.nmfs.noaa.gov/pr/docs/JSG%20 Survey%20Guidelines.pdf Accessed August 2012

[4] Florida Fish and Wildlife Conservation Commission (FWC) 2011. Recommended Survey Protocols for Estuarine and Marine Submerged Aquatic Vegetation (SAV) related to Permitting Applications (Draft).

(*Laguncularia racemosa)* along the northern bank of the Eau Gallie River. Their presence just west of the bridge platform along the northern bank is a positive characteristic when compared to the surrounding ecosystem. Additional plants observed growing within the Bridge Assessment Area included spike rush *(Eleocharis spp)*, coastal willow (*Salix caroliniana*), and saw palmetto (*Sabal palmetto*). Although visibility was noted as being moderate, AMEC scientists were able to view the bottom without obstruction. The results of the benthic survey indicated that the Eau Gallie River bottom in the Bridge Assessment Area was comprised of a slurry of mud, small rocks (less than 1 inch in size) and crushed shells. The survey did identify a few oyster shells within the Bridge Assessment Area; however, no oyster beds were observed. Given the composition of the aforementioned substrate and water quality, the aquatic environment near where the FEC railroad bridge does not appear to be conducive to either seagrass or oyster bed establishment. AMEC did not observe the presence of seagrasses or other submerged aquatic vegetation (SAV), oyster beds, sponges or associated species within the Bridge Assessment Area.

Crane Creek

Vegetation along the slopes of Crane Creek bridge included: common reed (*Phragmites australis*), pennywort (*Hydrocotyle spp*), and maidencane (*Panicum hem.*). The list of species growing within the delineated wetland also included Brazilian Pepper and Lead Tree (*Leucaena leucocephala*). Each of the aforementioned species is listed as a Category I FLEPPC invasive plant. Although, the bridge is located in a tidally influenced portion of Crane Creek, the observed wetland vegetation is indicative of freshwater wetland systems. During the October 9, 2013 survey, field personnel noted that mangroves were not observed within or near the above referenced Bridge Assessment Area. Additional signs of disturbance within the wetland included the placement of ballast at the approach to the abutment on the south side of the bridge. The results of the benthic survey indicated that Crane Creek bottom of the Bridge Assessment Area was comprised of small rocks (less than 0.5 inches in diameter), crushed shells, and highly decomposed organic matter. Based on the observed conditions, the aquatic environment near the Crane Creek railroad bridge does not appear to be conducive to either seagrass or oyster bed establishment. AMEC did not observe the presence of seagrasses or other submerged aquatic vegetation, oyster beds, sponges or associated species within the Bridge Assessment Area.

Turkey Creek

Due to the relatively steep slopes along Turkey Creek in the Bridge Assessment Area, wetlands are limited to a fringe wetland surrounding the bridge. Immediately to the west of the Bridge Assessment Areas, Turkey Creek meanders through a large stand of cattails (*Typha lancifolia*). Additional vegetation observed near the Bridge Assessment Area included cabbage palms (*Sabal palmetto*), Brazilian Pepper, and air potato (*Dioscorea bulbifera*). Both Brazilian Pepper and air potato are listed as a Category I FLEPPC invasive species. Although it is assumed that due to the Bridge Assessment Areas close proximity to the inter-coastal waterway (ICW), the water within the creek would be brackish; the observed lack of halophytic vegetation indicates the water within Turkey Creek is primarily fresh. Due to extremely poor visibility (black tinted water) and the presence of a large American Alligator, the survey only included a small area near the south and north banks of Turkey Creek near the railroad bridge. The limited benthic survey indicated that the bottom is mainly comprised of small rocks and muck. Based on the field observations of the substrate, the presence of freshwater vegetation, and black tinted water, the Turkey Creek Bridge Assessment Area does not appear to provide suitable habitat for seagrass or oysters beds. AMEC did not observe the presence of seagrasses or other submerged aquatic SAV, oysters, sponges or associated species within the Bridge Assessment Area.

Sebastian River

The steep river banks along the Sebastian River near the bridge as well as the placement of ballast between the abutments and the river have reduced the amount of wetland resources within the Bridge Assessment Area. Due to the steep banks and presence of ballast, the wetland area in the Bridge Assessment Area is limited to a narrow fringe along the river shoreline. Due to the aforementioned disturbance, the vegetation within the fringe wetland and associated upland was comprised of mainly of FLEPPC listed invasive species (i.e. Brazilian Pepper and air potato). There were no mangroves growing within the Bridge Assessment Area. Historically, the Sebastian River served as habitat for protected seagrasses and large oyster beds; however, residents and fisherman have stated that the aforementioned resources have become either non-existent in the case of seagrasses or in the case of the oysters contaminated and diminished. Although visibility was noted as being moderate and the water maintained a substantial chop, AMEC scientists were able to view the bottom without obstruction. The results of the benthic survey indicated that the shallow Sebastian River bottom of the Bridge Assessment Area was comprised of unconsolidated small rocks (less than 0.5 inch in size), highly decomposed organic matter, and shells. Although a very shallow sand bar was noted as being present near the middle of the river, seagrasses were not observed growing within or adjacent to the Bridge Assessment Area. The survey did identify an oyster bed on the northwest side of the bridge; however, it was mainly comprised of broken shells. Although portions of the Bridge Assessment Area maintained suitable substrate, the current aquatic environment does not appear to be conducive to seagrass establishment. AMEC did not observe the presence of seagrasses or other SAV, sponges or associated species within the Bridge Assessment Area.

St. Lucie River

The armoring of the shoreline with concrete bulkheads and metal sheet piling associated with the existing rail bridge has resulted in limited wetland resources within the Bridge Assessment Area. During the October 7, 2013 survey, a few red mangroves (*Rhizophora mangle*) and white mangroves were observed growing on both the north and south banks of the St. Lucie River near the Bridge Assessment Area. The red mangroves on the north side of the river were noted as being more mature than those on the south side of the river. Additional species observed growing within the fringe wetland included sea grape (*Coccoloba uvifera*) and Brazilian Pepper. AMEC scientists noted that visibility within the river was extremely poor with substantial amounts of sediment suspended in the water column. During the survey AMEC scientists noted that a thick layer of sediment covered the bottom of the river throughout most of the Bridge Assessment Area. Based on the observed turbid water and thick sediment layer covering the river bottom, the aquatic environment currently does not appear to be conducive to seagrass or oyster bed establishment. AMEC did not observe the presence of seagrasses or other SAV, oysters, sponges or associated species within the Bridge Assessment Area. During the October 7, 2013 survey, AMEC scientists noted the presence of several dolphins swimming in and around the Bridge Assessment Area.

Loxahatchee River

Wetland resources within the Bridge Assessment Area at the Loxahatchee River have been substantially reduced and limited to fringe wetlands along the shoreline. In areas of the shoreline that were not armored during the construction of the existing rail and road bridges, the railroad has since placed ballast down to the water's edge. During the October 7 and 8, 2013 survey, AMEC scientists did identify both red mangroves (*Rhizophora mangle)* and white mangroves growing near the existing railroad bridge and approach within the Bridge Assessment Area. Although mangroves were noted as being present, Brazilian Pepper and seaside mahoe (*Thespesia populnea*) were noted as being the dominant species within the wetland areas. Both Brazillian pepper and seaside

mahoe are FLEPPC listed species. Although seagrass are commonly observed growing throughout the central embayment of the Loxahatchee River, seagrasses were not observed within the Bridge Assessment Area. AMEC scientists noted that visibility within the river was excellent and the river bottom was viewed without obstruction. The bottom of the Bridge Assessment Area was comprised mainly of a thin layer of sand and crushed shells. It is assumed that the lack of seagrasses within the Bridge Assessment Area is due to the presence of two large bridges that have substantially reduced the amount of available light as well as increased the velocity of water moving through the Bridge Assessment Area. AMEC did not observe the presence of seagrasses or other SAV, oysters, sponges or associated species within the Bridge Assessment Area. During the October 8, 2013 in-water survey, AMEC scientist identified French angel fish, barracudas, sergeant majors, school master snappers, dog faced puffers, as well as various species of grunts swimming around the bridges.

Table 1. In-Stream Habitat at Bridge Crossings

Name and Mile Post (MP)	Fresh Water During Site Visit	Mangroves Present	Red Mangroves Present	Seagrasses Observed	In-Water Seagrass Survey Performed	Johnson's Seagrasses Observed	Oyster Beds Observed On Natural Substrate	Bottom Substrate
Eau Gallie (190.47)	No	Yes	No	No	Yes	No	No	mud, small rocks, and crushed shells
Crane Creek (194.34)	Yes	No	No	No	Yes	No	No	small rocks, crushed shells, and muck
Turkey Creek (197.70)	Yes	No	No	No	Yes*	No	No	muck
Sebastian River (212.07)	No	Yes**	No	No	Yes	No	Yes	small rocks, muck, and shells
St. Lucie River (260.93)	No	Yes	Yes	No	Yes	No	No	small rocks and muck
Loxahatchee River (282.58)	No	Yes	Yes	No	Yes	No	No	sand and crushed shells

*Benthic survey was limited due to presence of Alligator
** Mangrove not within project area

Table 2. Summary of estimated wetland/surface water impacts at the six Bridge Assessment Areas surveyed along the North-South Corridor

County	Name and Mile Post (MP)	Estimated Direct Impact Area (acres)	
		Wetlands	Surface Waters
Brevard	Eau Gallie (MP 190.47)	0.069	0.212
	Crane Creek (MP 194.34)	0.080	0.347
	Turkey Creek (MP 197.70)	0.003	0.088
	Sebastian River (MP 212.07)	0.046	0.812
Martin	St Lucie River (MP 260.93)	0.008*	0.323*
Palm Beach	Loxahatchee River (MP 282.58)	0.000*	0.317*
Total Impacts		0.205	2.099

*Currently, no in-water work is proposed at these sites; however, the number listed is the footprint of the bridge

1.3 Protected Species and Critical Habitat Likely to be Present in the Project Area

As discussed in the BA, five species of federally listed sea turtles [loggerhead sea turtle (*Caretta caretta*), green sea turtle (*Chelonia mydas*), Kemp's ridley sea turtle (*Lepidochelys kempii*), hawksbill sea turtle (*Eretmochelys imbricate*) and leatherback sea turtle (*Dermochelys coriacea*)], smalltooth sawfish *(Pristis pectinata*), and Johnson's seagrass (*Halophilia johnsonii*) are the federally protected species (under NOAA Fisheries jurisdiction) that have the potential to occur within the Project Area.

2.0 Effects Analysis

The Bridge Assessment Areas are located along the existing FEC rail corridor and are therefore currently impacted by existing freight train traffic. Primary issues associated with this Project for protected species under NOAA Fisheries jurisdiction include potential effects from construction associated with removal and replacement of bridges. Impact to habitat associated with construction include placement of pilings, placement of riprap/fill at the location of abutments, removal of existing timber pilings, and shading resulting from bridge construction. Long-term impacts to protected species associated with the Project may also include potential disturbance by an increase in noise from increased train traffic. To aid in the effect analysis AMEC utilized the *Checklist of Information Needed to Complete Section 7 Consultation* provided by NOAA Fisheries. A checklist for each of the six Bridge Assessment Areas is included in Attachment 4.

Impacts associated with the rehabilitation of the rail bridges within the six Bridge Assessment Areas are similar to the impacts outlined in the BA (See Section 4.0). Below is a summary of potential impacts to the protected species.

2.1 Sea Turtle

The only potential habitat for sea turtles in the Bridge Assessment Areas is located at the Sebastian River, St. Lucie River, and Loxahatchee River. It is unlikely sea turtle would be found within the other Bridge Assessment Areas. The potential habitat within the Sebastian River, St. Lucie River, and Loxahatchee River is limited to a migratory path way, as there is no foraging habitat (SAV) at these locations. Based on the findings from the October 2013 benthic surveys, seagrass beds were not identified within any of the Bridge Assessment Areas. With strict compliance to the sea turtle mitigation measures (described in detail in the BA Section 6.0) and use of air bubble curtains, it is

anticipated that the proposed action **may affect, but is not likely to adversely affect** the protected sea turtle species.

2.2 Smalltooth Sawfish

The proposed action at the six Bridge Assessment Areas will not result in permanent or temporary impacts to mangrove wetlands. Mangroves observed at the Eau Gallie River, the Sebastian River, the St. Lucie River, and Loxahatchee River are not anticipated to be effected by the Bridge Alternative. Furthermore, it is anticipated that the proposed maintenance activities at the Loxahatchee and St. Lucie River bridges will result in no permanent wetland impacts. Mitigation measures to reduce potential impacts to smalltooth sawfish will include strict adherence to sea turtle and smalltooth sawfish construction conditions (described in detail in the BA Section 6.0). The placement of fill and riprap in wetlands resulting from bridge construction are considered permanent impacts to jurisdictional wetlands. As a result, an appropriate CWA Section 404 permit will be obtained from the USACE prior to construction, and mitigation would be implemented as required by wetland permit conditions. With strict adherence to the sea turtle and smalltooth sawfish construction conditions and proposed mitigation, it is anticipated that the proposed action **may affect, but is not likely to adversely affect** smalltooth sawfish.

2.3 Johnson's Seagrass

Based on the results of the October 2013 field assessments (summarized in Table 1) it was determined that none of the Bridge Assessment Areas have populations of Johnson's seagrass.

The water quality protection measures that will be observed at all of the in-water construction areas to protect sea turtles and smalltooth sawfish should provide protection to downstream populations of seagrasses and other SAV.

It is anticipated that the proposed action will have **no effect** to Johnson's seagrass.

3.0 Take Analysis

No direct take is anticipated for federally listed species under NOAA Fisheries jurisdiction.

4.0 Conservation and Mitigation Measures

The corridor of the Project passes through important fish and wildlife habitat. Although no direct take is anticipated, the measures outlined in the BA will be implemented to reduce or eliminate potential environmental impacts associated with the proposed action, including implementation of the Sea Turtle and Smalltooth Sawfish Construction Conditions[5].

The placement of fill and riprap in wetlands resulting from bridge construction are considered permanent impacts to jurisdictional wetlands. As a result, an appropriate CWA Section 404 permit will be obtained from the USACE prior to construction, and mitigation would be implemented as required by wetland permit conditions. AAF proposes to purchase credits at approved mitigation

[5] National Marine Fisheries Service (NMFS). 2006. Sea Turtle and Smalltooth Sawfish Construction Conditions. http://www.dep.state.fl.us/Water/ wetlands/forms/spgp/SPGP_IV_Attachment_14-Sawfish_SeaTurtlesConstCond.pdf. Accessed December 29, 2009.

banks to provide compensatory mitigation for impacts to wetlands. As of the date of this report, construction drawings have not been finalized and therefore wetland (including mangrove) impacts have not been calculated. Once impact acreage is calculated, UMAM (Chapter 62-345, FAC), WRAP/EWRAP, or WATER assessment methods will be used to evaluate the wetlands and mitigation credits will be purchased from the appropriate banks.

5.0 Determination of Effect

The information available for the Project has been analyzed, and it has been concluded that the implementation of the Bridge Alternative would have a negligible probability of take of listed species. The additional work proposed at the six Bridge Assessment Areas will not change the determination of effects made in the BA (Table 7-1). As outlined in the BA, the determination of effect for the species likely to occur at the six Bridge Assessment Areas is summarized in Table 3. The rationale for each of these determinations is discussed in detail above.

Table 3. Listed Species and Determination of Effect

Listed Species	Determination of Effect
Green Sea Turtle	May affect, but is not likely to adversely affect
Loggerhead Sea Turtle	May affect, but is not likely to adversely affect
Leatherback Sea Turtle	May affect, but is not likely to adversely affect
Kemp's Ridley Sea Turtle	May affect, but is not likely to adversely affect
Hawksbill Sea Turtle	May affect, but is not likely to adversely affect
Smalltooth Sawfish	May affect, but is not likely to adversely affect
Johnson's Seagrass	No effect

Source: AMEC, 2013. Prepared by: SEM Checked by: RJM

Sincerely,

AMEC Environment & Infrastructure, Inc.

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Attachments:
Attachment 1- Figures
Attachment 2- Photograph Log
Attachment 3- Aerial Photographs
Attachment 4- ESA Checklists

Attachment 1

Figures

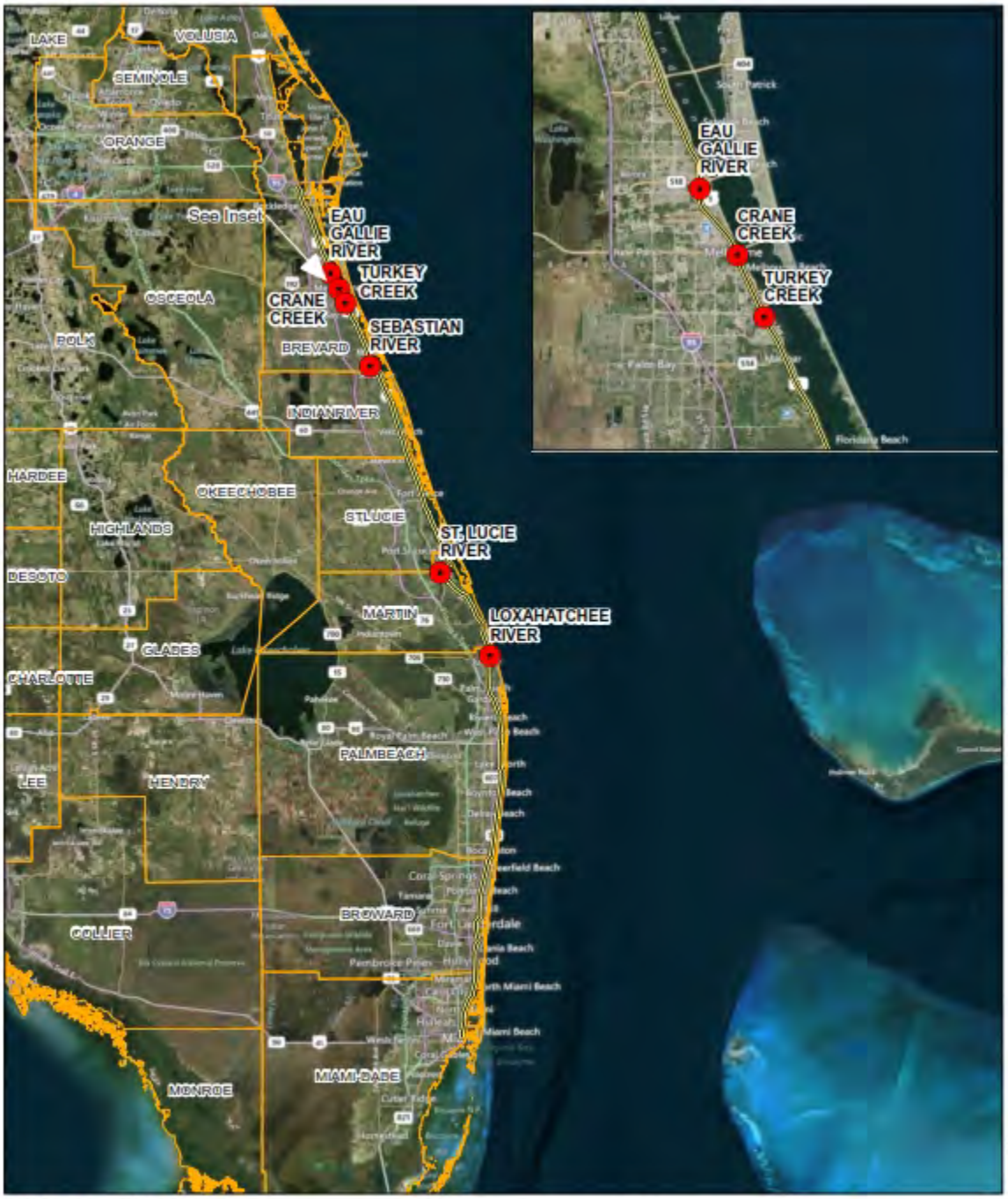
LAKE
VOLUSIA
SEMINOLE
ORANGE
See Inset
EAU GALLIE RIVER
TURKEY CREEK
CRANE CREEK
SEBASTIAN RIVER
OSCEOLA
POLK
BREVARD
INDIANRIVER
HARDEE
OKEECHOBEE
HIGHLANDS
STLUCIE
ST. LUCIE RIVER
DESOTO
MARTIN
LOXAHATCHEE RIVER
GLADES
CHARLOTTE
PALMBEACH
LEE
HENDRY
BROWARD
COLLIER
MIAMI-DADE
MONROE
EAU GALLIE RIVER
CRANE CREEK
TURKEY CREEK
Explanation of Features
Bridges
N-S Corridor
Data Sources: ESRI Bing Maps 2012 Imagery, FRA 2012, AMEC 2013
Six New Bridge Asssessment Areas
All Aboard Florida Intercity Passenger Rail Project
Drawn
Date
DLA
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Fig 1

Attachment 2

Photograph Log

Photograph 1. Eau Gallie River (Mile Post: 190.47), Facing south across the Eau Gallie River

Photograph 2. Eau Gallie River (Mile Post: 190.47), White mangrove and saw palmetto growing beneath the bridge

Photograph 3. Crane Creek Bridge (Mile Post: 194.47), Facing south from the northern bank

Photograph 4. Crane Creek Bridge (Mile Post: 194.47), Facing north toward to the waterside park

Photograph 5. Turkey Creek Bridge (Mile Post 170.70), View facing north.

Photograph 6. Turkey Creek Bridge (Mile Post 170.70), View facing south

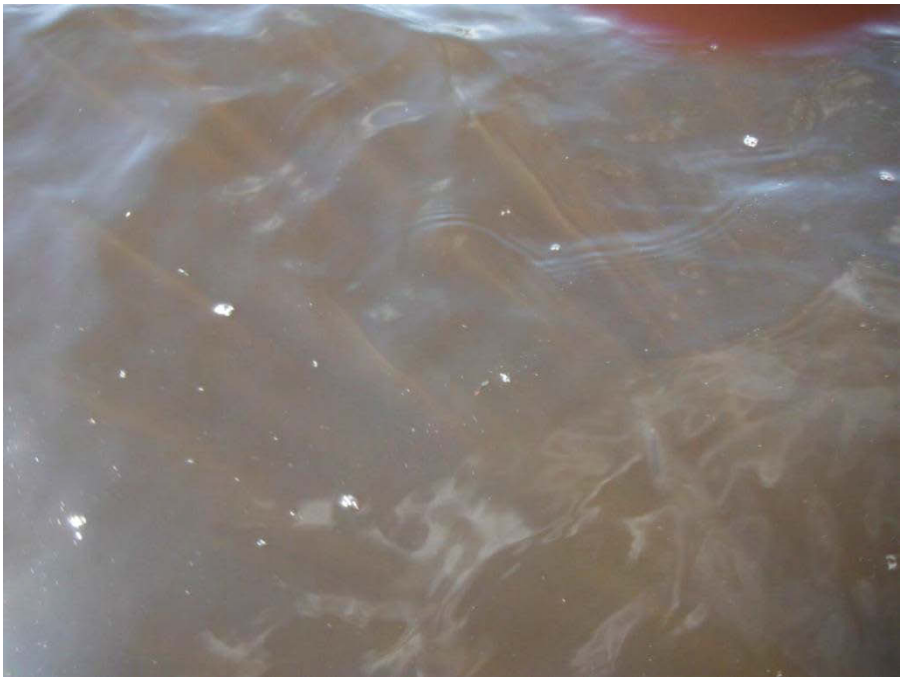
Photograph 7. Sebastian River (Mile Post: 212.07), Sebastian River FEC Railroad Bridge

Photograph 8. Sebastian River (Mile Post: 212.07), South Side of the Sebastian River Railroad Bridge

Photograph 9. Sebastian River (Mile Post: 212.07), In-water benthic survey

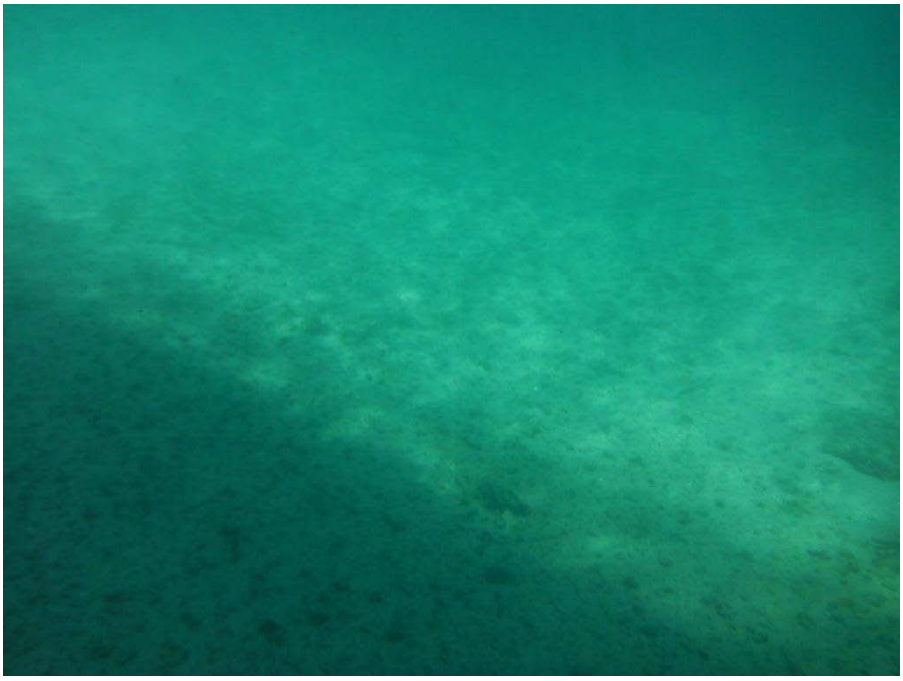
Photograph 10. St. Lucie River Bridge (Mile Post 260.93), Facing north across the St. Lucie River

Photograph 11. St. Lucie River Bridge (Mile Post 260.93), Disturbed mangrove wetland located on the northern bank of the river



Photograph 12. St. Lucie River Bridge (Mile Post 260.93), Turbid condition of the water throughout the St. Lucie River

Photograph 13. Loxahatchee River Bridge (Mile Post 282.58), Facing north across the Loxahatchee River



Photograph 14. Loxahatchee River Bridge (Mile Post 282.58), Example of the sandy covered benthos within the project area

Photograph 15. Loxahatchee River Bridge (Mile Post 282.58), Sandy bottom with algae covered shells and rocks

Photograph 16. Loxahatchee River Bridge (Mile Post 282.58), Puffer fish and sergeant majors schooling near the algae cover rip rap near the southern shoreline.

Attachment 3

Aerial Photographs

Explanation of Features

Project Area (1.94 ac.)

North/South Study Area Line

Data Sources: ESRI Bing Maps 2012 Imagery, NWI 2012, AAF 2012, AMEC 2012

Eau Gallie River Bridge Site Map

Bridge Over Eau Gallie River at Milepost 190.47 Along AAF Rail Corridor

Drawn	Date
TSK	09/18/2013
Checked	Date
GWC	10/30/2012

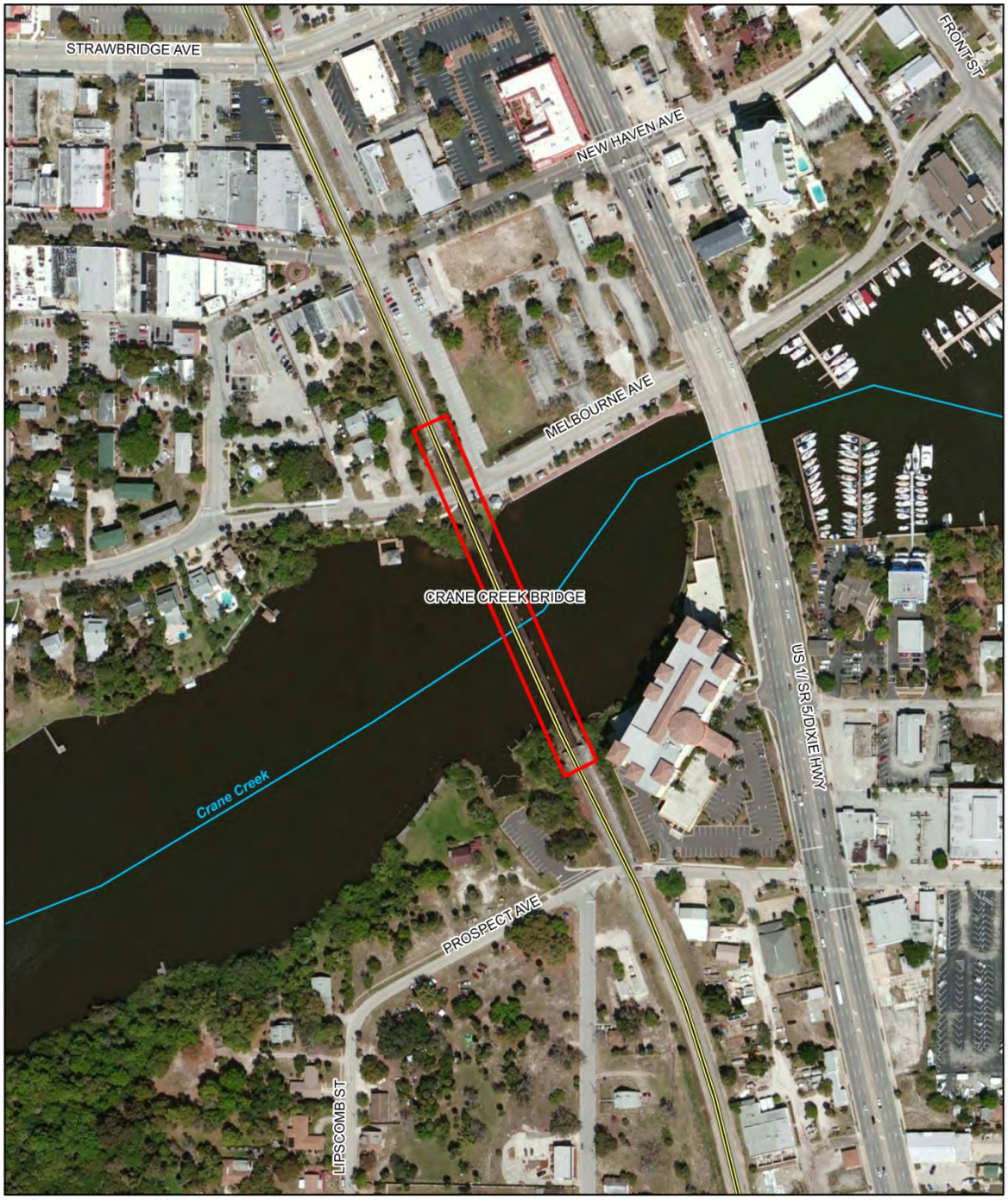
N 0 100 200 ft

amec

Figure 1

Path: F:\FEC\FECI_GDB\MXD\Permitting\ACOE\Eau Gallie\Figure 1 Site Map.mxd

Project # 6063-12-0212



Explanation of Features

Project Area (1.20 ac.)

North/South Study Area Line

Data Sources: ESRI Bing Maps 2012 Imagery , AAF 2012

Crane Creek Bridge Site Map

Bridge Over Crane Creek at Milepost 194.47 Along AAF Rail Corridor

Drawn	Date
TSK	09/18/2013
Checked	Date
GWC	09/18/2013

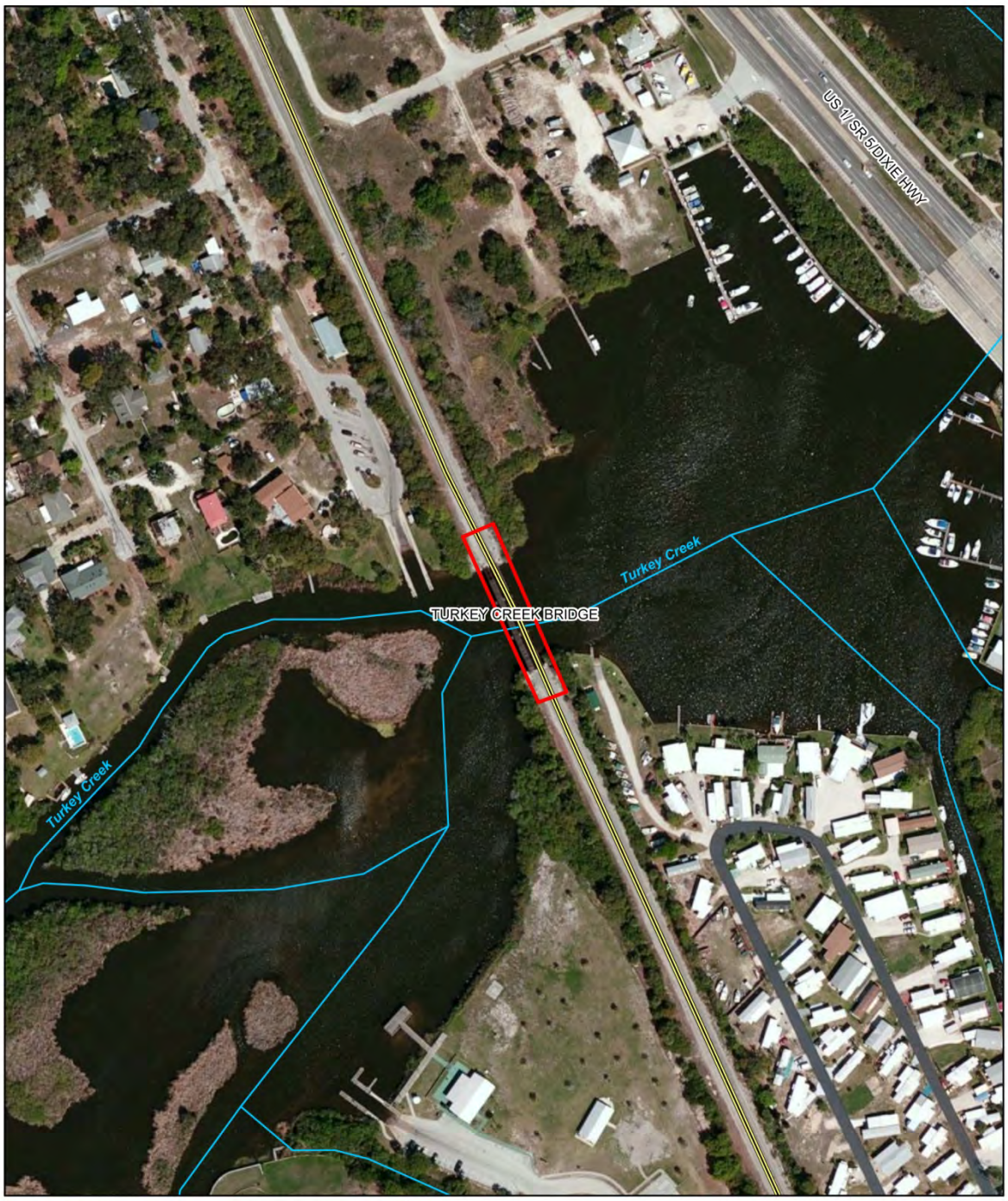
N 0 100 200 ft

amec

Figure 1

Path: F:\FEC\FECI_GDB\MXD\Permitting\ACOE\Crane Creek\Figure 1 Site Map.mxd

Project # 6063-12-0212



Explanation of Features

Project Area (0.33 ac.)

North/South Study Area Line

Data Sources: ESRI Bing Maps 2012 Imagery, NWI 2012, AAF 2012

Turkey Creek Bridge Site Map

Bridge Over Turkey Creek at Milepost 197.70 Along AAF Rail Corridor

Drawn	Date
TSK	09/18/2013
Checked	Date
GWC	09/18/2013

N 0 100 200 ft

amec

Figure 1

Path: F:\FEC\FECI_GDB\MXD\Permitting\ACOE\Turkey Creek\Figure 1 Site Map.mxd

Project # 6063-12-0212

Explanation of Features

- Project Area (1.81 ac.)
- North/South Study Area Line
- Transect
- Decomposed Oyster Bed
- Shallow Sand Bar
- Small Rock/Sand/Crushed Shell/Minor Organics

Data Sources: ESRI Bing Maps 2012 Imagery, NWI 2012, AAF 2012, AMEC 2013

Sebastian River Bridge Benthic & Seagrass Survey Map

Bridge Over Sebastian River at Milepost 212.07 Along AAF Rail Corridor

Drawn	Date
TSK	09/18/2013
Checked	Date
GWC	09/18/2013

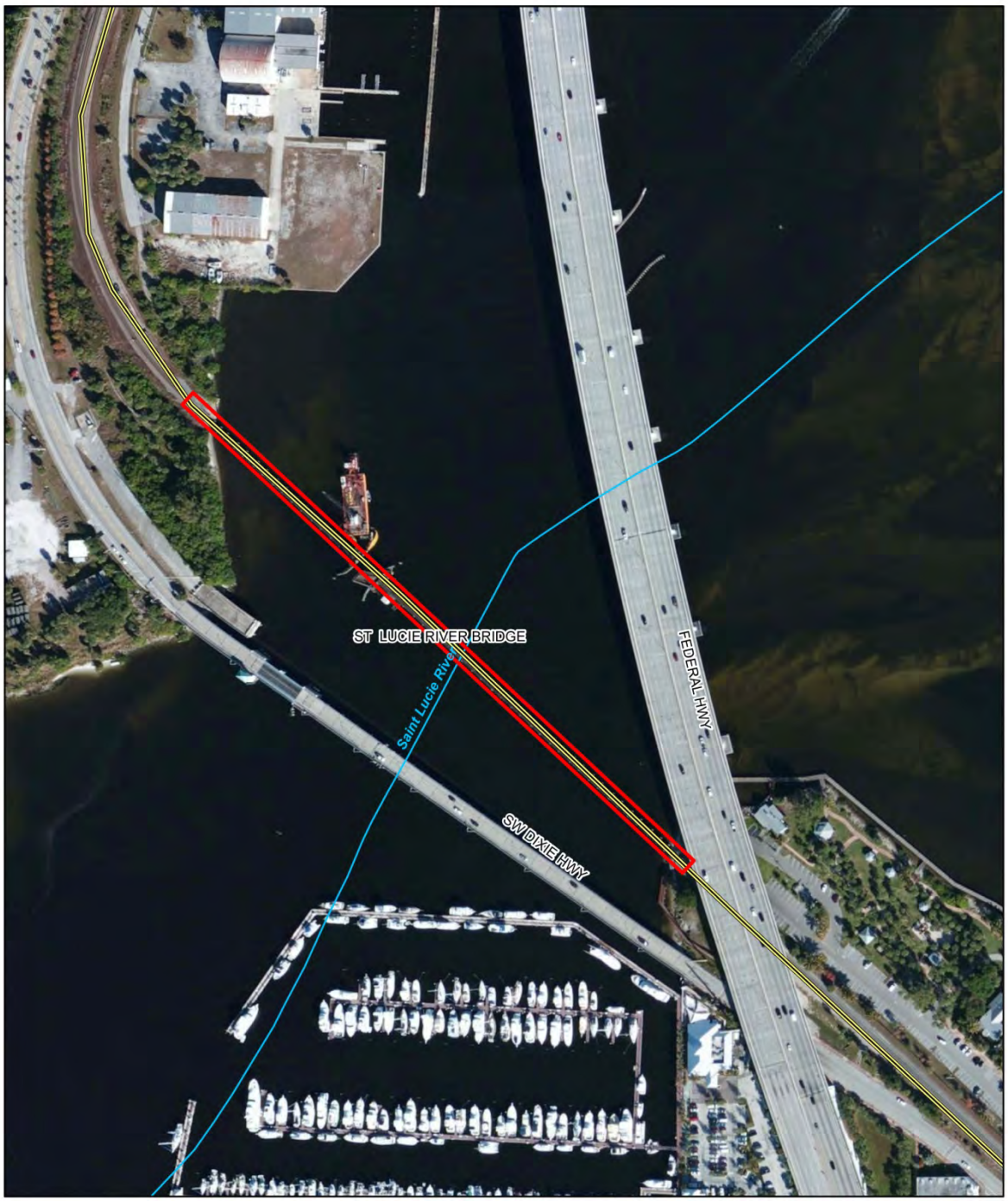
N 0 75 150 ft

amec

Figure 3

Path: F:\FEC\FECI_GDB\MXD\Permitting\ACOE\Sebastian River\Figure 3 Benthic & Seagrass Survey Map.mxd

Project # 6063-12-0212



Explanation of Features

Project Area (1.0 ac.)

North/South Study Area Line

Data Sources: ESRI Bing Maps 2012 Imagery, NWI 2012, AAF 2012

St. Lucie River Bridge Site Map

Bridge Over St. Lucie River at Milepost 260.93 Along AAF Rail Corridor

Drawn	Date
TSK	09/19/2013
Checked	Date
GWC	09/19/2013

N

0 100 200 ft

amec

Figure 1

Path: F:\FEC\FECI_GDB\MXD\Permitting\ACOE\St. Lucie River\Figure 1 Site Map.mxd

Project # 6063-12-0212


JUPITER COVE RD
Loxahatchee River
LOXAHATCHEE RIVER BRIDGE
A1A
Explanation of Features
Project Area (0.84 ac.)
North/South Study Area Line
Data Sources: ESRI Bing Maps 2012 Imagery, NWI 2012, AAF 2012, AMEC 2012
Loxahatchee River Bridge Site Map
Bridge Over Loxahatchee River at MP 282.58 Along AAF Rail Corridor
Drawn
Date
TSK
09/19/2013
Checked
Date
GWC
09/19/2013
N
0
100
200
ft
amec
Figure 1

Attachment 4

ESA Checklists

Print Form

Checklist of Information Needed to Complete Section 7 Consultations for U.S. Army Corps of Engineers Regulatory Division Applications

Project Specifications:

- Project or name of applicant, Action ID number

All Aboard Florida- Eau Gallie River (Mile Post 190.47)

- Describe the location of the project site (address and latitude/longitude information). Location data **must** be given datum (e.g., NAD83) and lat/long format using decimal-degrees (**not** minutes and seconds): e.g., 27.71622N, 80.25174W.
  On-line conversion: http://www.fcc.gov/mb/audio/bickel/DDDMMSS-decimal.html

28.124032N, 80.63387W WGS84

- In which body of water is the project located? If on a river or estuary, state the approximate navigable distance from the bay, ocean, or gulf).

Eau Gallie River. The project area is approximately 0.6 miles upstream of Indian River Lagoon

Site Description:

- Describe any existing structures and their use - for instance, acreage of overwater structures, if it's an existing marina, how many boat slips are present and what is their size.

There is an existing operational double track railroad bridge. The bridge is approximately 575 ft across and is constructed from concrete pilings and steel girders.

- Is the project location within designated critical habitat?

No

- If project occurs in critical habitat, are PCEs present?

Project does not occur within Critical Habitat.

- What are the baseline conditions within the project area, including substrate type?

There was a composite substrate comprised of mud, small rocks, and sand/shell.

- Are seagrasses present in the project area? Include percent coverage estimates by species and the relative location of seagrass in relation to proposed structures. Was a seagrass or benthic habitat survey completed? If so, please submit. *

No seagrasses were present within Assessment Area.

- Are mangroves present in or near the project area? Which species (red, black, white) and how much?

White mangroves are present within the project area; however, they were located west of the bridge footprint and will not be impacted by the project.

- Are corals present in or near the project area? Include density or percent coverage estimates by species and describe proximity of corals to proposed structures.

No

- Was a benthic survey conducted within Johnson's seagrass growing season (April 1 - August 31)?

☒ Yes ☐ No

Construction Methods/ Project Description:

- Construction methods, including description of any demolition of existing structures or removal of debris. Will the work be done from a barge or uplands?

Construction of twin new 575-ft independent ballast deck structures located to the east of the existing railroad bridge. The ballast deck will be supported by concrete piers.

The proposed superstructure will consist of Standard Precast Pre-stressed Concrete Bridge Slabs. The Bridge slabs will sit atop the pile bent cap. A crane will place the bridge slabs on the abutment. To form the end bents and backwall, a small area upslope will be excavated to install the forms. After installation is complete the area will be backfilled and compacted. Rip–rap will be placed around the abutment for slope protection. Walkways will be attached on either side of the bridge. Construction will be performed from the shore. An in-water platform may be required for pile installation. The existing historic bridge will be left in place and maintained by FEC. FEC will be responsible for ensuring that overtime the deterioration of the bridge does not result in impacts to navigation, floodplains, wetlands, or ecological habitat through removal and relocation prior to deterioration and/or removal of fallen debris.

- For docks, what type of decking will be used? If grated, provide manufacturer's name/ address/grating type, and percent light transmittance (%LT) of the grating design used? If wooden planks, what is the proposed spacing between the deckboards (½-inch, ¾-inch, 1-inch, other?). *Has the applicant been advised that COE-NMFS project review is significantly simplified and expedited for dock designs incorporating >43% LT grated decking, or 1-inch deckboard- and walkway-spacing, over Johnson's seagrass areas?* Proposed height of dock? Orientation of the dock (N, S, etc.)?

N/A

- Piling construction methodology. Are pile driving methods adequately described and are potential impacts to species adequately addressed? Will submerged aquatic vegetation (SAV) be impacted by pile installation? *If necessary, will the applicant's contractor adjust the spacing between piles to avoid driving piles onto Johnson's seagrass? Avoiding all piling impacts to JSG will significantly simplify and expedite the COE-NMFS project review process.*

Piles will be driven to load bearing capacity for E80 live loads. Piles will be driven with a steel pile driving template placed to prevent movement of the pile group. SAV were not observed within the project footprint.

- Number of new slips and size of slips, if applicable. If new construction includes High-and-Dry boat storage, what is the High-and-Dry vessel storage capacity?

N/A

- How big are the boats that are planned to be moored at the dock (either in the water or on a boatlift), if known?

N/A

- For all projects **not** involving docks or marinas (i.e., seawalls, jetties, etc.), please provide project description.

N/A

- Dredging? If yes, describe depth of cut, dredge type used, how many cubic yards, and what will be done with the spoil. Describe bottom sediments. Describe area hydrodynamics, i.e., average current speed and direction.

N/A

- Blasting? If yes, describe explosive weights, blasting plan, etc.

N/A

- What is the intended construction schedule (how many days, weeks, or months for in-water work)?

Work will be completed by December 2016

Potential Effects on Species/Critical Habitat:

- Please explain any impacts/effects to the critical habitat's primary constituent elements - PCEs)? Please identify which critical habitat unit(s) is being affected (e.g., Gulf sturgeon have 14 units, seven under NMFS jurisdiction and seven under FWS jurisdiction).

N/A

- What will the effects be, if any, to each PCE?

N/A

- Square footage to be affected by project?

12,268 sq ft will be affected by the project footprint.

- Will mangroves be impacted? Explain and quantify impacts.

Mangrove impacts and trimming are not anticipated.

- How will the habitat be changed/altered as a result of the action? Could or will the alteration affect listed species? How?

Approximately 12,268 sq. ft. of surface waters and wetlands will be impacted by the installation of riprap and pilings, and shading of non-vegetated surface water by the new bridge. The proposed bridge construction may have direct short-term adverse effects on the water quality in the project vicinity. Effects to the managed species known to occur in the project vicinity would include installation of pilings and shade resulting from bridge deck construction. Pilings would ultimately result in a beneficial effect to species/life stages that prefer such structures as habitat, such as adult goliath grouper, gray snapper, and mutton snapper. Lifecycle functions will not be affected by the proposed activities.

•Listed species within the project area:

☒ Sea turtles	☒ Smalltooth sawfish	☐ Shortnose sturgeon
☐ Elkhorn coral	☐ Johnson's seagrass	☐ North Atlantic right whales
☐ Staghorn coral	☐ Gulf sturgeon	☐ Other whales

•Explain potential effects to each species checked above:

Sea turtles and smalltooth sawfish may utilize the Assessment Area for migration, but habitat requirements for foraging and nesting do not occur in the project area. It was determined that the project is not likely to affect either species because there are no anticipated impacts to mangroves and the Sea Turtle and Smalltooth Sawfish Construction Conditions will be followed.

•Shading impacts from construction.

Approximately 9,250 sq. ft. of non-vegetated surface water will be shaded by the new bridges.

•What is the estimated shadow effect of the boat (sq ft of shaded area beneath)?

N/A

•Discuss potential anchoring impacts to seagrass and corals. Discuss available water depth under the keel/propeller at Mean Low Water and the potential for prop dredging or blowouts. Discuss potential prop-scarring impacts to corals and seagrasses.

N/A

•Describe increased boat traffic impacts, if any. Are there posted speed zones in the area?

N/A

•Describe Noise Impacts (this section not applicable to single-family, multi-family, and marina dock projects where piles driven are 12 inches or less in diameter).

Noise associated with the pile driving may affect sea turtles, fish, including the smalltooth sawfish, and invertebrate species. Concrete piles will be approximately 20 inches in diameter and will be driven with a steel pile driving template. According to the Federal Railroad Administration's 2005 Noise and Vibration manual the typical noise levels 50 feet from the source for Impact Pile Drivers are 101 dBA and for Sonic Pile Drivers are 96 dBA. Based on other literature the estimated sound pressure associated with the pile driving at five meter depth is 185 Peak, 170 RMS, and 160 SEL (Illinworth & Rodkin, 2007). The contractor for this project has not yet been selected. If noise levels exceed those listed below, an air bubble curtain as well as other dampening techniques will be used while driving piles to help reduce impacts. No blasting will occur during construction.

•Source level of noise exceeds 120 dB re 1uPa RMS for continuous noise

☐ Yes ☒ No

•Source level exceeds 160 dB re 1 uPa RMS for impulsive noise

☐ Yes ☒ No

•Source level exceeds 180 dB re 1 uPa zero to peak

☐ Yes ☒ No

Effects Determination:

•For executing the action (i.e., construction activities)

☐ No Effect ☒ NLAA ☐ May Affect

•For the result of the action (i.e., new dock)

☐ No Effect ☒ NLAA ☐ May Affect

•If "No Effect" is determined for all species and critical habitat, please note your findings in a memorandum to your project file; no consultation/concurrence with/from NMFS is required.

☐ Memo made ☒ N/A

Mitigation/Protective Measures:

•Will the applicant follow the August 2001 Dock Construction Guidelines?

☐ Yes ☒ No

•Will the applicant follow the October 2002 Johnson's Seagrass Key?

☐ Yes ☒ No

•Will the Sea Turtle and Smalltooth Sawfish Construction Conditions, dated March 23, 2006, be followed?

☒ Yes ☐ No

•If not following any of the above, please explain:

Johnson seagrass is not present within the project area. Dock construction is not being performed.

DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT CORPS OF ENGINEERS
400 HIGH POINT DRIVE, SUITE 600
COCOA, FLORIDA 32926

March 26, 2015

REPLY TO
ATTENTION OF

Regulatory Division
North Permits Branch
Cocoa Permits Section
SAJ-2012-01564(SP-AWP)

Mr. Larry Williams
U.S. Fish and Wildlife Service
South Florida Ecological Services Office
1339 20th Street
Vero Beach, Florida 32960

Dear Mr. Williams:

Reference is made to the U.S. Army Corps of Engineers (Corps) letters dated September 19, 2013 and November 21, 2014, in which we requested consultation in response to the Federal Railroad Administration's development of a Draft Environmental Impact Statement (DEIS) for the All Aboard Florida Commuter Passenger Rail project. By electronic letter dated November 6, 2014, your office provided technical assistance stating that the effects from the All Aboard Florida project from West Palm Beach to the Brevard County line will result in adverse effects and take of the threatened Florida scrub-jay, and recommend that the Corps initiate formal consultation for the project's effects on the scrub-jay pursuant to Section 7 of the Endangered Species Act.

The Corps inadvertently misinterpreted the Manatee Key dated April 2013. The Corps previously determined the proposed work would not occur in an Important Manatee Area. The Corps has re-evaluated the project based on work proposed in important manatee areas. Based upon review of the Manatee Key dated April 2013, the proposed project would result in the following sequential determination: A > B > C > D > E > N > O > P = "*not likely to adversely affect*". This determination is based on the project is located in waters accessible to manatees **or** directly or indirectly affects manatees; **project is located in an Important Manatee Area**; project includes dredging of less than 50,000 cubic yards; dredging would be a land-based operation; project impacts to submerged aquatic vegetation, emergent vegetation or mangrove will have beneficial, insignificant, discountable or no effects on the manatee and the applicant proposes compensatory mitigation to offset impacts to Essential Fish Habitat; project proponent **elects** to follow standard manatee conditions for in-water work and requirements; if project is a residential dock facility, shoreline stabilization, or dredging, the determination of "*may affect, not likely to adversely affect*" is appropriate and no further consultation with the Service is necessary.

By electronic letter dated February 9, 2015, your office in consultation with AFF concluded the best way to minimize incidental take of the scrub-jay resulting from the proposed project is to acquire two (2) credits from a U.S. Fish and Wildlife Service (USFWS) approved scrub-jay conservation bank in Florida. This measure is intended to benefit the Florida scrub-jay by protecting occupied habitat for the species within its range that was previously not protected, and managing this habitat in perpetuity. By letter dated March 6, 2015, AAF provided a credit receipt which shows two (2) compensatory mitigation credits to offset potential impacts within the Morgan Lake Wales Preserve have been transferred from the Morgan Lake Wales Preserve Conservation Bank Credit Ledger to All Aboard Florida, Attachment 1.

By electronic letter dated March 9, 2015, your office indicated the endangered Fragrant prickly apple cactus *(Cereus eriophorus var. fragrans = Harissia fragrans)* was observed in the existing Florida East Coast Railroad (FECR) track right-of-way near the Savannas Preserve State Park. Additionally, the endangered Lakela's mint (*Diceranda immaculata*) may be located within the existing FECR right-of-way in the vicinity of the park.

By letter dated March 25, 2015, the applicant provided Addendum number 4 to the USFWS Biological Assessment, Attachment 2. The Addendum suggests the following activities would be performed to ensure no adverse impacts would occur to the prickly apple cactus and Lakela's mint as a result of the proposed project:

1) Conduct species specific surveys prior to construction.
2) Establish a 20 foot buffer around individual species if observed during the survey period.
3) Transplant found individuals within protected areas of the three referenced conservation areas.
4) Proposed relocation areas will meet comparable environmental conditions from which the species is observed.
5) If possible, professional biologists will collect seeds for future propagation.
6) If either of the endangered species is observed during the pre-construction survey, FECR will avoid the further use of herbicides as part of their roadway maintenance operations within a 300 foot buffer of the observed occurrence until after the plants have been relocated to a suitable conservation area.

The Corps has completed an evaluation of the impacts the work may have on prickly apple cactus and Lakela's mint. Based on information available from a variety of sources, including the applicant's biological assessment which includes survey, conservation measures, and protection measures; our initial determination is the project may affect but is not likely to adversely affect the prickly apple cactus or Lakela's mint.

Pursuant to Section 7 of the Endangered Species Act we request your concurrence with this determination within 30 days.

Please advise if you agree with the above determination or provide a date when formal consultation would commence. If you have any questions regarding this letter, please contact Andrew Phillips at the letterhead address, by telephone at 321-504-3771 extension 14, or by email at andrew.w.phillips@usace.army.mil.

Sincerely,

for Irene Sadowski
Chief, Cocoa Permits Section

Enclosures

Copies Furnished: (electronically)

John Winkle; FRA - john.winkle@dot.gov
Lisa Standley; VHB - LStandley@VHB.com
Chris Bonanti; AAF - Christopher.Bonanti@allaboardflorida.com

CREDIT RECEIPT

This certifies that the CHM Morgan Lake Wales Preserve Conservation Bank has provided compensatory Florida scrub jay *(Aphelocoma coerulescens)* habitat mitigation for the **AAF Holdings, LLC Projects commonly known as All Aboard Florida**. These projects pertain to Buyer's pending application to the United States Department of the Interior, Fish and Wildlife Service ("USFWS") (the "USFWS Application"). Accordingly, two (2) compensatory mitigation credits to offset potential impacts within the Morgan Lake Wales Preserve have been transferred from the Morgan Lake Wales Preserve Conservation Bank Credit Ledger to **AAF Holdings, LLC** this 6 day of March, 2015.

WITNESSES:

Cheryl L. Gotsis

Print: Cheryl L. Gotsis

Robert P. Major

Print: Robert P. Major

CHM, LLC,
A Florida Limited Liability Company

By: _____
Jeffry B. Fuqua
Manager

Dated: 3/6/, 2015

U.S. Army Corps of Engineers
Permit # SAS-2012-01564
Date: Mar. 26, 2015
Attachment: 1

March 25, 2015

Mr. Andrew Philips
United States Army Corps of Engineers
Cocoa Permits Section
400 High Point Drive, Suite 600
Cocoa, Florida, 32926

Subject: Addendum 4 to AAF USFWS Biological Assessment dated September 3, 2013

Dear Mr. Phillips:

Amec Foster Wheeler Environment & Infrastructure, Inc. (Amec Foster Wheeler), on behalf of All Aboard Florida – Operations LLC (AAF), submitted the *Biological Assessment for the All Aboard Florida Passenger Rail Project from Orlando to Miami, Florida: Species under* United States Fish and Wildlife Service *(USFWS) Jurisdiction* to the United States Army Corps of Engineers (USACE) on September 3, 2013 (BA). This document serves as Addendum No. 4 to the aforementioned biological assessment.

Response to USFWS Comments Regarding the Potential Presence of Endangered Plant Species within Savannas Preserve State Park and Neighbouring Corridor

1) The USFWS has indicated that the State and federally endangered fragrant prickly apple cactus (*Cereus eriophorus var. fragrans* = *Harissia fragrans*) might be growing within the existing Florida East Coast Railway (FECR) right-of-way (ROW) within the vicinity of Savannas Preserve State Park. Savannas Preserve State Park is located in St. Lucie County, Florida. Although the aforementioned species were not observed during previous surveys of the ROW by AAF's consultants, Savannas Preserve State Park includes natural areas, soil, vegetation, and moisture conditions, which can support the fragrant prickly apple cactus. The typical habitat for the fragrant prickly apple cactus, includes scrubby flatwoods and xeric hammocks on the Atlantic Coastal Ridge. The plant is often associated with sand live oak, myrtle oak, cabbage palm, and prickly pear cactus. Although Florida Natural Areas Inventory (FNAI) states that the fruit bearing cactus is only known to exist in St. Lucie County; Hobe Sound National Wildlife Refuge and Jonathan Dickinson State Park in Martin County, Florida also maintain similar ecological conditions.

2) USFWS stated that there have also been reported sightings of Lakela's Mint (*Diceranda immaculata*), a State and federally endangered flowering plant, growing within the FECR corridor as it intersects Martin and St. Lucie Counties. According to FNAI, Lakela's mint is only known to occur in scrub habitat on the Atlantic Coast Ridge. Savannas Preserve State Park in St. Lucie County, Florida and Hobe Sound National Wildlife Refuge and Jonathan Dickinson State Park in Martin County, Florida are the only conservation areas within the Atlantic Coast Ridge that

U.S. Army Corps of Engineers
Permit # SAJ-2012-01564
Date: Mar. 26, 2015
Attachment: 2

Correspondence:
Amec Foster Wheeler
404 SW 140th Terrace
Newberry, Florida
USA 32669-3000
Tel + 1 352 332 3318
Fax + 1 352 333 6622

maintain extensive scrub habitat that can support the ecological conditions necessary for the plant's existence along the FECR ROW.

Outside of the three above referenced conservation areas, the remaining portions of the geographical region have been altered so significantly that the endangered species presence is not likely to occur.

Surveys

The recommended survey season for the fruit bearing cactus is April through May (flowering season) and September through October (fruit baring season) and the optimum time for observing Lakela's mint is from September to November (flowering season). AAF's consultants performed threatened and endangered species surveys in areas where the footprint of the project will go beyond the existing and historic tracks (this included some areas adjacent to Savannas Preserve State Park, Hobe Sound National Wildlife Refuge, and Jonathan Dickenson State Park). The aforementioned surveys were performed during the late summer, and early fall months by professional biologists educated in the State of Florida. AAF's consultants did not identify any federal or state listed species in these areas; however, these surveys included only permit-required project areas (project areas that extend beyond the existing developed/ballasted areas). AAF has been coordinating with land managers to identify areas of concern and in order to implement mitigating measures to prevent adversely impacting federal or state listed species.

Conservation Measures and Recommendations

As a prerequisite for the commencement of construction, AAF's botanical specialist will coordinate with the conservation area biologists to perform a survey within the FECR ROW for the fragrant prickly apple cactus and Lakela's mint as it intersects Savannas Preserve State Park, Hobe Sound National Wildlife Refuge, and Jonathan Dickinson State Park. If ecological conditions are observed during the pre-construction survey outside the boundaries of the aforementioned conservation areas that match the habitat requirements of either the fragrant prickly apple cactus or the Lakela's mint, then those areas will also be surveyed in order to identify whether the species is present.
In the circumstance that either of the plant species are indeed observed growing within the proposed areas of construction, AAF's experts will work directly and expeditiously with the land managers from each of the three conservation areas to relocate the endangered species to a safe location that will remain protected and managed for conservation purposes. The following is a list of actions that will prevent the direct permanent impact to the fragrant prickly apple cactus and Lakela's mint:

1) Conduct species specific surveys prior to construction.
2) Establish a 20 foot buffer around individual species if observed during the survey period.
3) Transplant found individuals within protected areas of the three referenced conservation areas.
4) Proposed relocation areas will meet comparable environmental conditions from which the species is observed.
5) If possible, professional biologists will collect seeds for future propagation.
6) If either of the endangered species is observed during the pre-construction survey, FECR will avoid the further use of herbicides as part of their roadway maintenance operations within a 300 foot buffer of the observed occurrence until after the plants have been relocated to a suitable conservation area.

During the survey, biologists will also look for other state and federal listed plants. If any are observed, appropriate avoidance/minimization and mitigation measures will be taken to protect these plants, as described above for the fragrant prickly apple and Lakela's mint.

Summary of Impact and Conclusion

Based on available literature, there is no known interdependent relationship between the fragrant prickly apple cactus or Lakela's mint and other threatened and endangered species. Through the implementation of the above referenced conservation measures, there is likely to be no direct or permanent impacts to either the fragrant prickly apple cactus or Lakela's mint.

Sincerely,
Amec Foster Wheeler Environment & Infrastructure, Inc.

Shannon McMorrow
Project Coordinator
Direct Tel: + 1 352 333 3634
E-mail: shannon.mcmorrow@amecfw.com

Jeremy Paris
Senior Scientist
Direct Tel: + 1 305 818 8457
E-mail: jeremy.paris@amecfw.com

cc: Chris Bonanti (AAF)
Charlene Stroehlen (Amec Foster Wheeler)
Melvin Brown (HNTB)

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southeast Regional Office
263 13th Avenue South
St. Petersburg, Florida 33701-5505
http://sero.nmfs.noaa.gov

F/SER31:JBH
SER-2013-12534

FEB 26 2015

Chief, Cocoa Permits Section
Jacksonville District Corps of Engineers
Department of the Army
400 High Point Drive, Suite 600
Cocoa, Florida 32926

Ref.: SAJ-2012-01564 (SP-AWP), All Aboard Florida, Passenger Rail Orlando to Miami Project, Florida

Dear Sir or Madam:

This responds to your letter, Endangered Species Biological Assessment (ESBA), and Section 7 Checklist dated September 18, 2013, regarding the All Aboard Florida Passenger Rail project. Discussions regarding the addition of 6 bridges to the project were held after this information was received and consultation was delayed. We received an addendum to the ESBA on July 14, 2014, but it did not include adequate information to initiate consultation. The additional information was received in the essential fish habitat assessment dated September 24, 2014, and we initiated consultation that day. You requested our concurrence with your project-effect determinations under Section 7 of the Endangered Species Act (ESA) for the referenced U.S. Army Corps of Engineers' (USACE) permit application by All Aboard Florida. You determined the project may affect, but is not likely to adversely affect, smalltooth sawfish and sea turtles (loggerhead, Kemp's ridley, green, hawksbill, and leatherback). You also determined that the project will not affect Atlantic sturgeon, shortnose sturgeon, and Johnson's seagrass, or result in an adverse modification of Johnson's seagrass-designated critical habitat. Our findings on the project's potential effects are based on the project description in this response. Changes to the proposed action may negate our findings and may require reinitiation of consultation.

The proposed rail system has 2 portions. The north-south portion will be located within the existing 100-foot (ft) Florida East Coast Railroad (FEC) right-of-way between Miami and Cocoa Beach. The east-west portion would be along State Road 528 between Cocoa Beach and Orlando, and will have no effect on tidal waters, ESA listed species, or designated critical habitat under our purview. This analysis will focus on the north-south portion of the project where it crosses 21 tidal water bodies (Table 1). The north-south portion would include replacing and expanding 40 existing bridges within the FEC right-of-way. This work would require the removal of 0.02 acre of mangroves and the trimming of 0.09 acre of mangroves. Riprap totaling 0.32 acres will be placed along the bridge abutments. The construction of the new bridges will also require the driving of 655 piles. Additional information provided by email dated October 29, 2014, confirmed that all piles will be pre-stressed 24-inch (in) by 24-in concrete piles or 20-in by 20-in concrete piles. The piles will be driven into place with an impact hammer. Bubble curtains will be used around each pile during installation to dampen sound. Construction

equipment will be brought in by vehicle or train and staged either in the uplands or from a barge via the larger water bodies (Eau Gallie River, Sebastian River, St. Lucie River, Loxahatchee River, Hillsboro River, North Fork of the Middle River, and South Fork of the Middle River). AMEC, Inc. conducted benthic resource surveys between September 5 and 20, 2012. Our staff conducted site inspections on January 23, 2013; May 1, 2013; and April 4, 2014. There is no seagrass within the project limits. Floating turbidity barriers will be used to isolate small areas of the construction sites where piles are being driven. The applicant will comply with our *Sea Turtle and Smalltooth Sawfish Construction Conditions*, dated March 23, 2006 (enclosed). The project will be completed within 24 months.

Table 1. Piles driven, mangrove impacts, and riprap area

Waterway and Location**	In-Water Piles	Mangrove feet squared (ft^2)	Riprap ft^2
Horse Creek (28.164938N, 80.647598W)	6	0	21
Eau Gallie River (28.124013N, 80.633878W)	56	0	3,018.31
Crane Creek (28.076369N, 80.603712W)	40	0	3,179.50
Turkey Creek (28.032005N, 80.582215W)	16	0	113.46
Goat Creek (27.969128N, 80.546422W)	24	35 removal	716.31
Sebastian River (27.838595N, 80.497263W)	168	0	1,994.79
North Canal (27.692272N, 80.414814W)	12	0	44.60
South Canal (27.60505N, 80.383031W)	16	0	376.87
Moore's Creek (27.450042N, 80.325878W)	6	70 trimming	106.19
Unnamed Creek (27.216775N, 80.255683W)	24	80 removal, 700 trimming	141.98
St. Lucie River (27.203259N, 80.259596W)	50		0
Unnamed Creek (27.145436N, 80.197419W)	3	37 removal, 285 trimming	392.99
Unnamed Creek (27.142794N, 80.193758W)	24	230 removal, 950 trimming	496.05
Manatee Creek Trib. (27.145472N, 80.197444W)	16	0	400
Manatee Creek Trib. (27.136327N, 80.182559W)	16	220 removal	1,340
Loxahatchee River (26.947204N, 80.090701W)	50	0	0
Hillsboro River (26.322922N, 80.098747W)	28	66 trimming	146.67
N. Fork Middle River (26.163169N, 80.131261W)	42	220 removal	168.80
S. Fork Middle River (26.153122N, 80.131008W)	42	50 removal, 200 trimming	813.80
Oleta River (25.938711N, 80.150286W)	16	75 removal, 1,300 trimming	250.36
Arch Creek (25.900994N, 80.162465W)	0	650 trimming	0
Total	**655**	**937 removal, 4,221 trimming**	**13,721.68**

* Coordinates are in North American Datum 1983

You determined the project will have no effect on Atlantic sturgeon, shortnose sturgeon, and Johnson's seagrass, or result in an adverse modification of Johnson's seagrass-designated critical habitat. We believe there will be no effect on these species, because they are not present in the project area, and the individual project sites do not occur within or near Johnson's seagrass-designated critical habitat. We do not believe hawksbill or leatherback sea turtles will be present or affected because of their very specific life history, sheltering, and foraging requirements, which are not met in or near the action area - hawksbills are associated with coral reefs while leatherbacks are a deepwater, pelagic species.

Smalltooth sawfish, loggerhead sea turtles (Northwest Atlantic Ocean distinct population segment), green sea turtles, and Kemp's ridley sea turtles may be found in or near the action area and may be affected by the project. There is no critical habitat under our purview in the project area nor any habitat proposed for listing.

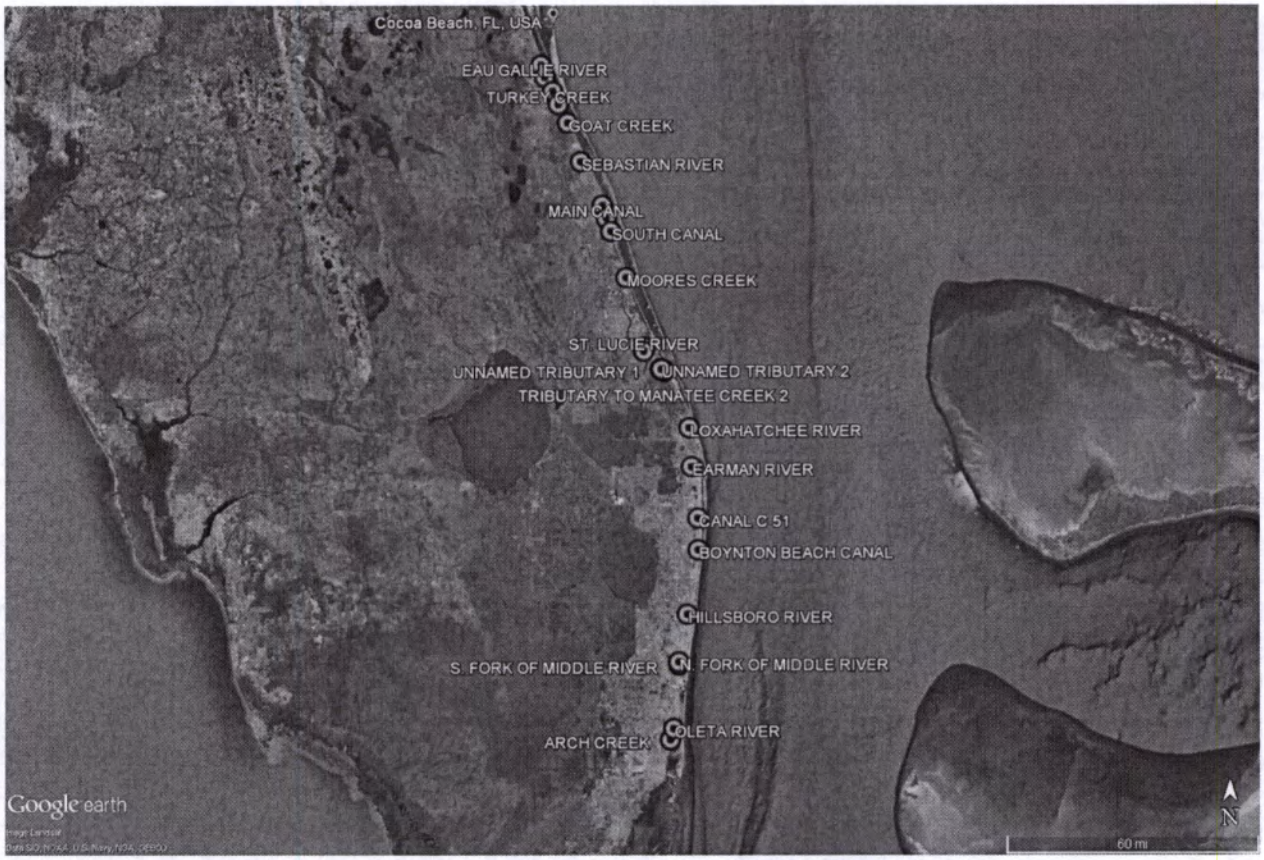


Figure 1. Google Earth© image of the project site viewed from an altitude of 252 miles

We have identified the following potential effects to smalltooth sawfish and sea turtles and concluded they are not likely to be adversely affected by the proposed action. Effects to these species include the risk of injury from construction (pile driving and riprap installation), which will be discountable due to the species' mobility. These species may be affected by being temporarily unable to use the site for forage/shelter habitat due to potential avoidance of construction activities, related noise, and physical exclusion from areas contained by turbidity

curtains, but these effects will be insignificant for the following reasons: (1) the project's small footprint at each individual bridge site; (2) lack of significant forage resources in the bridge expansion areas; (3) turbidity curtains will only enclose portions of the small individual project sites, will be removed upon project completion, and will not appreciably interfere with use of these areas by these species; and (4) availability of similar habitat in nearby areas. These species could also be affected by the permanent loss of habitat associated with mangrove removal. Smalltooth sawfish use red mangrove prop roots for shelter and nursery habitat, and could be affected by their loss. Yet, the permanent loss of 0.02 acres spread throughout the 8 project sites that include mangrove removal is inconsequential (i.e., ~108 ft^2 average mangrove removal) when considering total red mangrove habitat across Florida. The 0.09 acres of trimming will be performed in accordance with the State of Florida's Mangrove Trimming and Preservation Act. This Act attempts to ensure that trees will not die during the trimming process, as it precludes the trimming of prop roots. The permanent loss of ~0.35 acres of sand and mud bottom associated with rip rap placement and pile driving will be inconsequential due to the availability of these habitats in areas adjacent to the individual bridge sites.

Smalltooth sawfish and sea turtles may be affected by pile-driving noise, but we believe this effect will be either discountable or insignificant as indicated below. The applicant will use an impact hammer to install concrete piles and use bubble curtains to attenuate noise. The driving of piles has the potential to result in behavioral and injurious effects, if source levels exceed behavior or injury thresholds. Injury and behavioral changes can result from a single strike or from cumulative noise exposure. While the applicant states that all piles will be either 20 in or 24 in, it is unable to specify the numbers of each. The 24-in piles will result in higher decibel (dB) levels and will be the most likely to result in both injury and behavioral effects. An assumption will be made that all piles will be 24 in for the purposes of this noise analysis as this would be a worst-case scenario.

Single-strike injury effects: Injurious dB levels are expressed in units of sound exposure level (SEL or sSEL for a single pile-driving strike). The sSEL source level caused by a single strike to a 24-in by 24-in concrete pile using an impact hammer is 170 dB sSEL.[1] This source level does not exceed the noise threshold for causing injury (187 dB sSEL) to smalltooth sawfish or sea turtles. Construction crews will use bubble curtains to further mitigate dB levels. In addition to sound levels being below the injury threshold, it is extremely unlikely that these species would venture close to construction activities during pile driving, given their expected avoidance behavior. Therefore, any risk of injury from the noise of a single pile-driving strike is discountable. In addition, the All Aboard Florida will follow our *Sea Turtle and Smalltooth Sawfish Construction Conditions*, which require construction to cease should a sawfish or turtles be observed within 50 ft of construction activities. Behavioral impacts are discussed in detail below.

Daily cumulative noise exposure: Daily cumulative noise exposure (cSEL) is the exposure to pile-driving noise over time. The exposure zone is the area between the source noise (pile installation) and the onset of injury. Injury can result if daily cumulative noise exposure levels from pile driving exceed injury threshold levels and animals remain in the exposure zone during

[1] CALTRANS. 2009. Technical Guidance for Assessment and Mitigation of the Hydroacoustic Effects of Pile Driving on Fish. Report prepared by ICF Jones & Stokes and Illingworth & Rodkin, Inc.

the entire installation process. If a project is located in a confined space,[2] an animal may be inhibited to move through or past the noise source to escape it, thus resulting in cumulative noise exposure.

The cSEL threshold noise level associated with injury for fish is 187 dB and higher for sea turtles. The projects are located within tidal creek and river systems. Smalltooth sawfish and sea turtles will not be prevented from leaving the project areas and will, therefore, be able to avoid noise during pile-driving activities. The applicant has agreed to limit construction activities to daylight-only hours and restrict installation to 3 piles daily. Based on calculations derived from CALTRANS (2009), restricting the number of piles of these types to no more than 3 per day would result in the source level exceeding the cSEL injury threshold level at a distance extending 17 ft from the source. Smalltooth sawfish and sea turtles would need to remain within the injury zone at this very close distance for the entire day to incur injury, which is extremely unlikely to occur. As species can escape the immediate area upstream and downstream at every project site, we believe the risk of any cumulative injury resulting is discountable.

Behavioral response: Animal hearing is characterized by the root mean square (RMS) dB level and is the measure used to assess behavioral or non-injury responses of organisms to sound (e.g., changes in feeding or sheltering, startle or flight response, etc.). The RMS source level generated by driving 24-in concrete piles with an impact hammer is 185 dB (RMS). The RMS threshold level at which a behavioral response is elicited from this activity is 150 dB for sawfish, and 160 dB for sea turtles. The source level exceeds the thresholds and, therefore, we believe that it will elicit a behavioral response within a straight-line distance of 71 ft for smalltooth sawfish and 15 ft for sea turtles. Although this noise could result in disruptions to feeding, sheltering, and pupping, or increase the risk of predation, we would expect these species to swim away from the construction noise and remain outside those radii of a pile during installation operations due to their expected avoidance of project noise and activity. Since all piles will be driven in areas surrounded by habitats similar to those where the construction activities will occur, we expect that animals altering their behavior in response to noise will be able to resume their desired activity in the surrounding areas. If this is not the case, and such behavioral changes in response to noise prevent animals from navigating through the affected area to access the desired habitat, noise levels will be intermittent throughout the day, and will cease at night, thereby eventually allowing animals to move through the area and conduct their desired activities unimpeded by any noise induced changes in behavior. Thus, we believe these behavioral effects will be insignificant.

In summary, we conclude that smalltooth sawfish and sea turtles are not likely to be adversely affected by any project-related activities, and concur with your project-effect determinations. This concludes your consultation responsibilities under the ESA for species under our purview. Consultation must be reinitiated if a take occurs or new information reveals effects of the action not previously considered, or the identified action is subsequently modified in a manner that causes an effect to the listed species or critical habitat in a manner or to an extent not previously

[2] As described in SAJ-82, confined space as any area that has another solid object (e.g., shorelines or jetties) or structure within 150 ft of the pile installation site that would effectively serve as a barrier or otherwise prevent species from moving past it to exit the area.

considered, or if a new species is listed or critical habitat designated that may be affected by the identified action.

Additional relevant information is enclosed for your review. We look forward to further cooperation with you on other projects to ensure the conservation of our threatened and endangered marine species and designated critical habitat. If you have any questions on this consultation, please contact Brandon Howard, Fishery Biologist, at (561) 249-1652, or by email at Brandon.Howard@noaa.gov.

Sincerely,

Roy E. Crabtree, Ph.D.
Regional Administrator

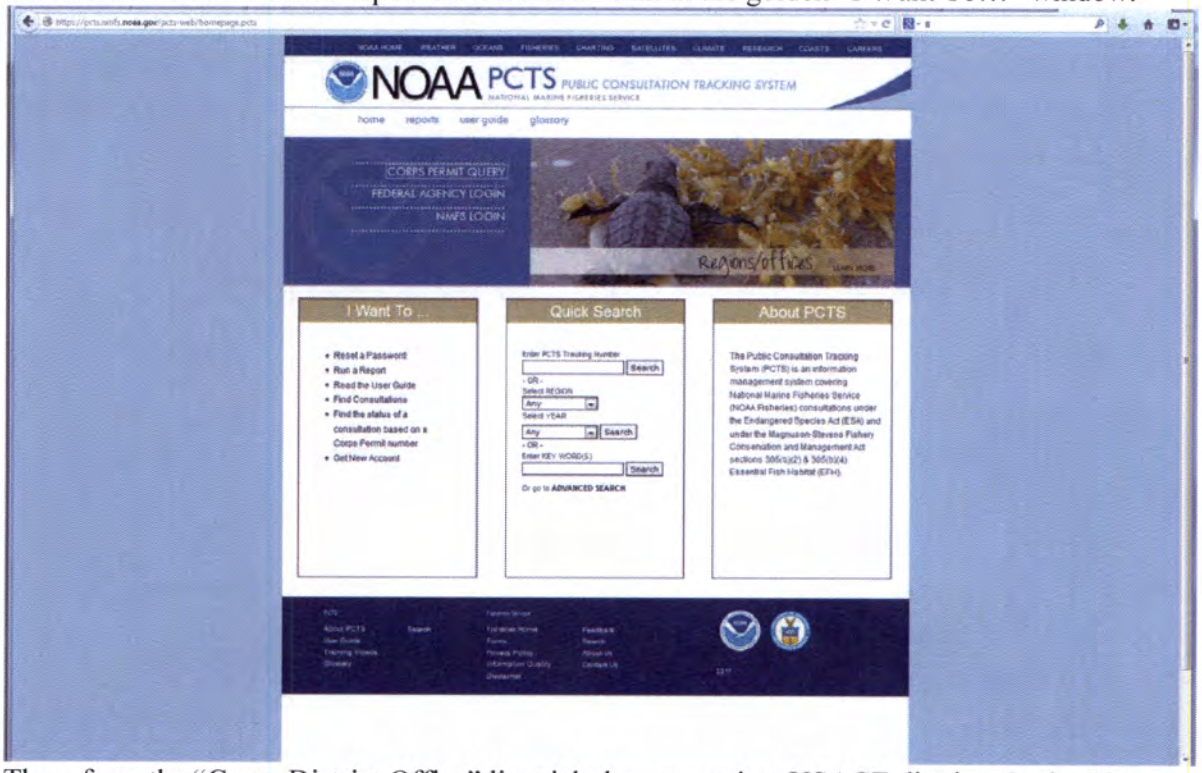
Enc.: 1. *PCTS Access and Additional Considerations for ESA Section 7 Consultations* (Revised June 11, 2103)
2. *Sea Turtle and Smalltooth Sawfish Construction Conditions* (Revised March 23, 2006)

File: 1514-22.F.4

PCTS Access and Additional Considerations for ESA Section 7 Consultations
(Revised 6-11-2013)

Public Consultation Tracking System (PCTS) Guidance: PCTS is a Web-based query system at **https://pcts.nmfs.noaa.gov/** that allows all federal agencies (e.g., U.S. Army Corps of Engineers - USACE), project managers, permit applicants, consultants, and the general public to find the current status of NMFS's Endangered Species Act (ESA) and Essential Fish Habitat (EFH) consultations which are being conducted (or have been completed) pursuant to ESA Section 7 and the Magnuson-Stevens Fishery Conservation and Management Act's (MSA) Sections 305(b)2 and 305(b)(4). Basic information including access to documents is available to all.

The PCTS Home Page is shown below. For USACE-permitted projects, the easiest and quickest way to look up a project's status, or review completed ESA/EFH consultations, is to click on either the "Corps Permit Query" link (top left); or, below it, click the "Find the status of a consultation based on the Corps Permit number" link in the golden "I Want To…" window.



Then, from the "Corps District Office" list pick the appropriate USACE district. In the "Corps Permit #" box, type in the 9-digit USACE permit number identifier, with no hyphens or letters. Simply enter the year and the permit number, joined together, using preceding zeros if necessary after the year to obtain the necessary 9-digit (no more, no less) number. For example, the USACE Jacksonville District's issued permit number SAJ-2013-0235 (LP-CMW) must be typed in as 201300235 for PCTS to run a proper search and provide complete and accurate results. For querying permit applications submitted for ESA/EFH consultation by other USACE districts, the procedure is the same. For example, an inquiry on Mobile District's permit MVN201301412 is entered as 201301412 after selecting the Mobile District from the "Corps District Office" list. PCTS questions should be directed to Eric Hawk at Eric.Hawk@noaa.gov or (727) 551-5773.

EFH Recommendations: In addition to its protected species/critical habitat consultation requirements with NMFS' Protected Resources Division pursuant to Section 7 of the ESA, prior to proceeding with the proposed action the action agency must also consult with NMFS' Habitat Conservation Division (HCD) pursuant to the MSA requirements for EFH consultation (16 U.S.C. 1855 (b)(2) and 50 CFR 600.905-.930, subpart K). The action agency should also ensure that the applicant understands the ESA and EFH processes; that ESA and EFH consultations are separate, distinct, and guided by different statutes, goals, and time lines for responding to the action agency; and that the action agency will (and the applicant may) receive separate consultation correspondence on NMFS letterhead from HCD regarding their concerns and/or finalizing EFH consultation.

Marine Mammal Protection Act (MMPA) Recommendations: The ESA Section 7 process does not authorize incidental takes of listed or non-listed marine mammals. If such takes may occur an incidental take authorization under MMPA Section 101 (a)(5) is necessary. Please contact NMFS' Permits, Conservation, and Education Division at (301) 713-2322 for more information regarding MMPA permitting procedures.

SEA TURTLE AND SMALLTOOTH SAWFISH CONSTRUCTION CONDITIONS

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

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

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

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

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

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

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

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

Revised: March 23, 2006

DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT CORPS OF ENGINEERS
400 HIGH POINT DRIVE, SUITE 600
COCOA, FLORIDA 32926

November 21, 2014

REPLY TO ATTENTION OF

Regulatory Division
North Permits Branch
Cocoa Permits Section
SAJ-2012-01564(EIS-AWP)

Mr. Larry Williams
U.S. Fish and Wildlife Service
South Florida Ecological Services Office
1339 20th Street
Vero Beach, Florida 32960

Dear Mr. Williams:

Reference is made to the U.S. Army Corps of Engineers' (Corps) letter dated September 19, 2013, in which we requested informal consultation in response to the Federal Railroad Administration's development of a Draft Environmental Impact Statement (DEIS) for the All Aboard Florida project. Because the project occurs within the jurisdictional ranges of the U.S. Fish and Wildlife Service, North and South Florida Ecological Services Field Offices the effect determinations in this letter are specifically tailored to the South Florida Ecological Service Office.

By electronic letter dated November 6, 2014, your office provided technical assistance stating that the All Aboard Florida project from West Palm Beach to the Brevard County line will result in adverse effects and take of the threatened Florida scrub-jay, and recommended that the Corps initiate formal consultation pursuant to Section 7 of the Endangered Species Act. Based on your technical assistance; the Corps hereby requests initiation of formal consultation pursuant to Section 7 of the Endangered Species Act. In accordance with guidance provided in the Endangered Species Consultation Handbook, the Corps requests that you initiate consultation upon receipt of this request or provide a response within 30 days of receipt of this request stating what information is necessary to meet the requirements of 50 CFR §402.14(c). Upon your initiation of formal consultation, please provide this office with an expected completion date so that we may inform the applicant of the associated timeframes. The following information is provided in accordance with 50 CFR §402.14(c):

Description of the activity: The applicant's preferred alternative for the North - South (N-S) corridor occurs within the Right-of-Way (ROW) of the existing Florida East Coast Railroad (FECR) from Miami to Cocoa, Florida extending approximately 128.5 miles. The FECR Corridor was originally built as a double-track railroad, but is currently

utilized as a single-track system with several sidings. The roadbed for the second track in the corridor still exists and would be used for the additional track improvements needed for the project. The proposed improvements would include relocating and upgrading existing tracks, as well as installing new tracks. The project would also include improving or replacing existing bridges and grade crossings, new signalization, and new communication and train control systems. The project is described in detail in the DEIS which can be viewed at http://www.fra.dot.gov/Page/P0672.

a. Area affected: The project extends from Orlando to Miami, Florida. The North-South Corridor utilizes the existing Florida East Coast Railroad tracks while the East-West corridor primarily occurs within the ROW of State Road 528. The affected area specific to formal consultation includes occupied habitat of the Florida scrub jay which occurs in various locations extending from West Palm Beach north into Brevard County. Please reference the Rare Species Surveys report included as Attachment 1 for location of occupied scrub jay habitat within the project corridor.

b. Listed species affected: Florida's scrub jay

c. Analysis: The applicant has provided information which suggests the Florida scrub jay cross the existing railroad tracks to fulfill a portion of its lifecycle function. This function is believed to be limited to foraging. Based on your November 6, 2014, technical assistance the Corps has determined the proposed intercity passenger rail "may affect" the Florida scrub jay.

d. Relevant reports: Reference is made to the Biological Assessment dated September 2013 previously provided to your office with our coordination letter dated 19 September 2013 and Addendum 2 to AAF USFWS Biological Assessment dated September 3, 2013 provided to your office by electronic mail dated March 5, 2014. The applicant has provided the Rare Species Surveys (attachment 1) which identifies the locations of the Florida scrub jay surveys completed by the applicant and identifies the locations where the Florida scrub jays were observed crossing the existing tracks. The documented crossings occurred in Brevard, Indian River, and Martin Counties.

e. Other relevant information: The applicant has agreed to purchase two (2) credits from a Service approved scrub-jay conservation bank as a conservation measure to benefit the scrub jay. The credit acquisition will be recorded as a Commitment in the Final EIS and will include a specified time for acquisition. Other relevant information may be obtained by reviewing the DEIS and its technical memorandums located at http://www.fra.dot.gov/Page/P0672.

The Corps continues to request concurrence with the following determinations:

Wood Stork

Based upon review of the Wood Stork Key for South Florida dated May 18, 2010, the proposed project resulted in the following sequential determination: A > B > C > E = "*Not likely to adversely affect*" the wood stork. This determination is based on the project not being located within 2,500 feet of an active colony site; impacts to suitable foraging habitat (SFH) will be greater than 0.5 acre, project impacts to SFH are within the Core Foraging Area (CFA) of a colony site, prior to construction the applicant would provide SFH compensation in accordance with the CWA section 404(b)(1) guidelines and is not contrary to the Habitat Management Guidelines; habitat compensation would be within the appropriate CFA or within the service area of a Service-approved mitigation bank; and habitat compensation replaces foraging value, consisting of wetland enhancement or restoration matching the hydro period of the wetlands affected, and provides foraging value similar to, or higher than, that of impacted wetlands.

Eastern Indigo Snake

Based upon review of the North and South Florida Eastern indigo snake key dated August 13, 2013, the proposed project would result in the following sequential determination: A > B > C > D= "*not likely to adversely affect*" the Eastern indigo snake. This determination is based on portions of the project not being located in open water; commitments in the EIS will include the use of the Service's *Standard Protection Measures For The Eastern Indigo Snake (August 12, 2013)* during site preparation and project construction additionally the applicant has agreed to use the Standard Protection Measures for the Eastern Indigo Snake (August 12, 2014) during site preparation; there are gopher tortoise burrows, holes, cavities, or other refugia where a snake could be buried or trapped and injured during project activities; the project will impact less than 25 acres of xeric habitat (scrub, sandhill, or scrubby flatwoods) or less than 25 active and inactive gopher tortoise burrows; any permit will be conditioned such that all gopher tortoise burrows, active or inactive, will be evacuated prior to site manipulation in the vicinity of the burrow. If an indigo snake is encountered, the snake must be allowed to vacate the area prior to additional site manipulation in the vicinity. Any permit will also be conditioned such that holes, cavities, and snake refugia other than gopher tortoise burrows will be inspected each morning before planned site manipulation of a particular area, and, if occupied by an indigo snake, no work will commence until the snake has vacated the vicinity of proposed work.

West Indian Manatee

Based upon review of the Manatee Key dated April 2013, the proposed project would result in the following sequential determination: A > B > D > F > G > N > O > P = "may affect, *not likely to adversely affect*". This determination is based on the portions of the project being located in waters accessible to manatees **or** directly or indirectly affects manatees; project is other than the activities listed above; project is located in Important Manatee Areas; project includes dredging of less than 50,000 cubic yards; project is for dredging a residential dock facility or is a land-based dredging operation; Project impacts to submerged aquatic vegetation, emergent vegetation or mangrove will have beneficial, insignificant, discountable or no effects on the manatee; project proponent **elects** to follow Standard Manatee Conditions for In-water Work and commitments in the EIS will include the required use of the Standard Manatee Conditions for In-water Work.

The Corps acknowledges the Manatee Key does not specifically acknowledge bridge replacement; however, it is a reference tool to base a preliminary determination on. Based on our evaluation utilizing the Manatee Key and the applicant's willingness to implement the Standard Manatee Conditions for In-water Work the Corps has determined the proposed bridge replacements and associated abutment work "*may affect, but is not likely to adversely affect*" the West Indian manatee.

Audubon's crested caracara

The proposed work occurs within the consultation area of Audubon's crested caracara. The applicant has completed surveys and found no caracara nest located within 1000-feet of the N-S corridor of the proposed project. It should be noted that a confirmed caracara sighting occurred on February 21, 2013 south of State Road 528 ROW on east bank of the St. John's River. The bird was observed flying in from the south and landed in the pasture area to the northeast of the north survey station. Caracaras were also observed during the helicopter aerial survey on April 17, 2013. Four (4) adult birds were observed perched on the ground to the far northeast of the north of the same area. The closest known Caracara nest is located approximately three (3) miles to the northeast of the proposed project development footprint within the St. John's National Wildlife Refuge. The second closest known nest is located approximately five (5) miles to the southeast of the proposed All Aboard Florida rail project development footprint within Canaveral Marshes Conservation Area. The Corps has determined the proposed work will have "*no effect"* to Audubon's crested caracara based on the project not being located within 1000 feet of a known nest and the fact that the N-S corridor currently exists.

Florida grasshopper sparrow

The project corridor occurs within the consultation area of the Florida grasshopper sparrow near the crossing of the St. Lucie River, in St. Lucie County. The Corps has

determined the proposed work will have "*no effect*" to the grasshopper sparrow due to the absence of suitable habitat within the existing ROW.

Atlantic salt marsh snake
The project corridor occurs within the consultation area of the Atlantic salt marsh snake. The Corps has determined the proposed work "*may affect, but is not likely to adversely affect*" the Atlantic salt marsh snake based on the limited amount of anticipated salt marsh proposed for impact at existing bridge locations within the N-S corridor as well as the applicant's willingness to provide compensatory mitigation to offset impacts to waters of the United States (wetlands and surface waters).

Red-cockaded woodpecker
The project corridor occurs within the consultation area of the Red-cockaded woodpecker in Brevard and Indian River Counties. The nearest known cavity tree is approximately 1.6 miles from the existing project corridor. The Corps has determined the proposed work will have "*no effect"* to the Red-cockaded woodpecker based on the fact that no active cavity trees will be removed as a result of the proposed work and the fact that the proposed work is limited to the existing ROW.

Piping plover
The project corridor occurs within the consultation area of the piping plover. The Corps has determined the proposed work will have "*no effect*" to the piping plover due to the absence of suitable nesting or foraging habitat within the existing ROW.

Everglade snail kite
The project corridor occurs within the consultation area of the Everglades snail kite. The Corps has determined the proposed work will have "*may affect, but is not likely to adversely affect*" to the Everglades snail kite due to the absence of suitable nesting habitat within the existing right-of-way. The species may utilize freshwater areas adjacent to the existing right-of-way; however, the mobility of the species would allow it to vacate the project area during construction and train operation. None were observed during surveys completed within the N-S corridor.

Florida panther
The Corps has determined the proposed work will have "*no effect"* to the Florida panther based on fact that no impacts are proposed to suitable habitat and the project corridor is outside the accepted range of the species.

Sand Skink and Blue-tailed mole skink
The Corps has determined the proposed work will have "*no effect"* to the sand skink and the blue-tailed mole skink in the N-S corridor based on fact that no impacts are

proposed to suitable habitat, suitable soils, and the proposed work is outside the accepted range of the species.

American crocodile
The project corridor occurs within the consultation area of the American crocodile. The Corps has determined the proposed work will have "*no effect*" to the American crocodile based on the limited amount of suitable foraging habitat occurring within the existing FECR ROW and the ability of the species to move out of the work area and return in a post construction scenario. No known foraging or nesting habitat will be adversely impacted by the proposed work.

Florida bonneted bat
The project corridor occurs within the consultation area, but outside the focal area, of the Florida bonneted bat. The Corps has determined the proposed work will have "*no effect*" to the Florida bonneted bat. Locations where the bat may roost will remain and additional habitats maybe added as a result of the proposed work.

Striped newt and Red knot
The striped newt and red knot are candidate species for listing. Given the long term development of this project the Corps has determined the proposed work will have "*no effect*" to the striped newt and red knot. This determination is supported is by the fact that no impacts are proposed to suitable habitat, the proposed work in the N-S corridor occurs within an active railroad corridor, and the project corridor is outside the accepted range of the species

If you have any questions regarding this correspondence, please contact Andrew Phillips at the letterhead address, by telephone at 321-504-3771 extension 14, or by email at andrew.w.phillips@usace.army.mil.

Sincerely,

Irene F. Sadowski
Chief, Cocoa Permits Section

Enclosures

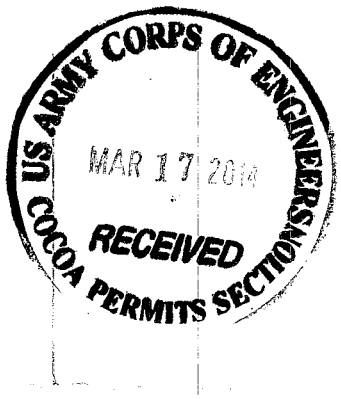
Copies Furnished (electronically):
FRA; John Winkle (w/o enclosures)
VHB; Lisa Standley (w/o enclosures)
AAF; Alex Gonzalez (w/o enclosures)

United States Department of the Interior

U. S. FISH AND WILDLIFE SERVICE

7915 BAYMEADOWS WAY, SUITE 200
JACKSONVILLE, FLORIDA 32256-7517

IN REPLY REFER TO:
FWS Log No. 41910-2014-I-0005



March 13, 2014

Andrew Phillips
Department of the Army
U.S. Army Corps of Engineers, Cocoa Regulatory Office
400 High Point Drive, Suite 600
Cocoa, FL 32926

Re: Re-initiation of All Aboard Florida (AAF)

Dear Mr. Phillips:

Our office has reviewed your correspondence and accompanying information, dated February 10, 2014, for the following project.

APPLICANT	CORPS APPLICATION NUMBER	FWS LOG NUMBER
The Federal Railroad Administration (FRA)	SAJ-2012-01564 (SP-AWP)	41910-2014-I-0005

The applicant is currently developing an Environmental Impact Statement (EIS) for the proposed project by All Aboard Florida (AAF) to provide intercity passenger rail transportation between Orlando and Miami, Florida, by maximizing use of existing transportation corridors. Since receipt of the USFWS concurrence letter dated September 24, 2013, the applicant AAF, has determined railroad bridges crossing the Eau Gallie River, Crane Creek, Turkey Creek, and the Sebastian River would require replacement. Given the new information AAF is seeking an authorization to perform in-water work and construction of new bridges alongside existing structures within the Eau Gallie River, Crane Creek, Turkey Creek, and the Sebastian River. The applicant completed a Biological Assessment (BA) to determine the potential impacts the additional bridge work may have on the West Indian Florida manatee, wood stork, blue-tail mole skink and Florida sand skink, Florida scrub-jay, and the eastern indigo snake. We submit the following comments in accordance with Section 7 of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq*).

The Corps reviewed this project for potential impacts to federally-listed species and determined that the proposed project occurs within the range of the West Indian manatee *(Trichechus manatus latirostris)*, eastern indigo snake *(Drymarchon corais couperi)*, and

wood stork *(Mycteria Americana)*. The Corps evaluated potential impacts to the West Indian manatee, eastern indigo snake and wood stork using the "2013 Manatee Key", "2010 Eastern Indigo Snake Key" and the "2008 Wood Stork Key". Use of the keys resulted in the conclusion that the proposed project is *"not likely to adversely affect"* these species. We concur with the determination for these species. In addition, you will include the "Standard Manatee Conditions" and the 2013 "Standard Protection Measures for the Eastern Indigo Snake" as a special condition to the Corps permit. The applicant will also be mitigating within an approved mitigation bank for any impacts to the wood stork core foraging area within the proposed project.

Based upon review of the BA and surveys completed by the applicant and provided to the Service it has been determined that the additional bridge work will have *"no effect"* to the Florida scrub-jay *(Aphelocoma coerulescens)*, based on lack of suitable habitat, known species range within the project area, and/or lack of visual confirmation during surveys of the project corridor. The information provided has identified no areas of suitable habitat, soil, and elevations for the blue-tailed mole skink and the Florida sand skink.

Although this does not represent a biological opinion as described in Section 7 of the Act, it does fulfill the requirements of the Act and no further action is required. Reinitiating consultation is required if new information reveals effects of the action agency that may affect listed species or critical habitat in a manner or to an extent not considered in this consultation; the action area is subsequently modified in a manner that causes an effect to a listed species or critical habitat not considered in this consultation; if unauthorized take of any listed species (West Indian manatee, Eastern indigo snake, wood stork, Florida scrub-jay, blue-tail mole skink, and the Florida sand skink) occur during construction; or a new species is listed or critical habitat designated that may be affected by the action.

If you have any questions regarding this response, please contact Zakia Williams of my staff at the address on the letterhead, or by calling (904) 731-3326.

Sincerely,

for Jay B. Herrington
Field Supervisor