

# Appendix T USCG Permit Application

**Navigation Report** 





I-526 West Lowcountry Corridor

## U.S. Coast Guard Bridge Permit Application

Prepared For:



Prepared By:



Civil Engineering Consulting Services, Inc.

October 14, 2020



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#### I. INTRODUCTION

The South Carolina Department of Transportation (SCDOT) in conjunction with the Federal Highway Administration (FHWA) is submitting this United States Coast Guard (USCG) Bridge Permit Application as part of the forthcoming infrastructure improvements and widening of Interstate 526 (I-526) in Charleston County (Attachment A). Proposed improvements to I-526 would include providing additional travel lanes over the Ashley River, through widening the existing bridges (see Attachment B Conceptual Plans).

For the USCG to issue a permit for a structure to be built over "Navigable Waters of the U.S.," the structure must meet the reasonable needs of current and foreseeable future navigation. In May 2019, a Navigation Impact Report was submitted to the USCG for review and comment. This report proposed a vertical clearance of 35 feet and a horizontal clearance of 60 feet. The USCG preliminary concurrence determination letter (June 11, 2019) of these clearances and a copy of the navigation report are included in Attachments C and D.

#### **II. EXISTING FACILITY**

The General William C. Westmoreland bridges (Westmoreland bridges) are located along I-526 and connect the city of North Charleston with the West Ashley area of Charleston, SC (refer to Appendix A, Figure 1). The twin span bridge carries two lanes of I-526 in each direction across the Ashley River and the surrounding tidal marshes. The 3,908-foot long bridge was constructed in 1980 and each bridge is approximately 43 feet wide. The existing bridge deck consists of two 12-foot travel lanes, one in each direction, a 5.5-foot inside shoulder, and a 10-foot outside shoulder. I-526 within the project limits is primarily a four-lane divided highway.



General William C. Westmoreland Bridges over the Ashley River.

#### III. PROPOSED PROJECT OVERVIEW

The I-526 Lowcountry Corridor (LCC) West project is located between Paul Cantrell Boulevard and Virginia Avenue and is approximately 11.4 miles long. SCDOT currently ranks the segment of I-526 between I-26 and Virginia Avenue as the most congested segment of interstate highway in the state. The remainder of the I-526 LCC West project, from I-26 to Paul Cantrell Boulevard, ranks among the top ten of the state's existing most congested corridors. Traffic forecasts show that segments of that corridor will continue to be among the state's most congested in 2040. The interchange of I-526 and I-26 is the major source of the congestion. The purpose of the project is to increase vehicular capacity along I-526 through infrastructure improvements to support increasing usage and population growth.

As part of the improvements to I-526, SCDOT proposes to widen the existing bridges over the Ashley River. The current bridges are approximately 42.8 feet wide. The existing bridge deck consists of two 12-foot travel lanes, two in each direction; a 5.5-foot inside left shoulder; and a 10-foot outside right shoulder. Additionally, there are barriers on each side of the bridge (2 total) that are 1.7 feet wide each. Widening I-526 would require that these bridges be widened and that the shoulders and bridge barriers be modified slightly to accommodate four lanes in each direction with shoulders and bridge barriers. The proposed bridges would have two additional travel lanes in each direction that are 12 feet wide, and shoulders in each direction of travel that are 12 feet wide (refer to Attachment B, Conceptual Bridge Plan and Profile, Sheet 5 Widening Schematic). Additionally, a 14-foot shared use path (SUP) to accommodate pedestrians and cyclists would be added to the upstream side of the existing bridge. The SUP would be located on the north side of the existing bridges, adjacent to the westbound travel lanes. The 14-foot path would be separated from the motorized travel lanes with a raised barrier separating the path from the outside 12foot paved shoulder.

The westbound additional widening to the existing bridge would be 46.956 feet and eastbound would be 31.956 feet. The westbound total final bridge width would be 89.79 feet and the eastbound bridge would be 74.79 feet wide.

#### IV. CONSTRUCTION OVERVIEW

This project is expected to be delivered either via the design build or bid build process and final construction and design plans would be determined by the contractor and/or SCDOT. To maintain

competitiveness during the bid process, means and methods of construction may not be final, giving contractors the ability to propose specific methods and equipment. The following is an outline of the likely construction activities and project designs. This may vary slightly depending on the selected contractor and bid process. Any modifications from those proposed in this document that could impact effects to listed species would require additional coordination with SCDOT and federal agencies.

During construction of the widened bridges, traffic would be maintained on the existing facility. Maintenance and improvements would be made to the existing Westmoreland bridges and the structures would be retained at their existing height and length.

Generally, the project improvements would consist of the following components:

- Widen the westbound and eastbound roadway approaches to the Westmoreland Bridges.
- Construct temporary access areas to include matting, barges, and work trestles.
- Widen existing eastbound structure to the north, or upstream side, of the existing bridge (between the current bridges) on a mix of prestressed concrete piles and drilled shafts.
- Widen existing westbound structure to the north, or upstream side of the existing bridge on a mix of prestressed concrete piles and drilled shafts.
- Extend the existing fender system to the south of the Westmoreland Bridge.
- Paint the existing and new steel beams over the Ashley River main navigational channel and over Bulls Creek.
- Install lighting for navigation and to meet SCDOT urban interstate lighting requirements ("Roadway Lighting on Interstate Routes in South Carolina").

#### Fender System

The existing fender system will be extended with a system that can accommodate all required uses of the waterway. The proposed fender system will be designed for both recreational watercraft, as well as larger vessels such as commercial fishing boats and tug boats. The fender elements would likely consist of rubber fenders, with a steel panel and polyethylene facing. Additional prestressed concrete piles will be required to support the new fender systems. These piles would not be load bearing and would not require extensive pile strikes such as those on the permanent bridge system.

#### **Temporary Access**

The Ashley River would be accessed via barges for construction. Barges may be delivered and moved via water and transport vessels or via land on flatbed trucks with cranes and other heavy equipment. At no point would barges in the Ashley River block more than 50% of the channel. Temporary work trestles would be placed in marsh and wetland areas for construction access outside of the existing eastbound bridge. Temporary trestle would be approximately 40 feet wide and would be supported by steel pipe piles. For access over marsh areas between the existing bridges either trestle or a combination of barge, barge mats, and timber mats would be needed due to the limited space between the structures.

Plans for cofferdams, falsework, or any other temporary structures to be placed in the water to facilitate the bridge construction, would be submitted to the District Commander prior to the start of construction.

#### V. REQUIRED SUPPLEMENTAL INFORMATION

At this phase in the project there are several planning and design elements that are currently underway, or are pending. Supplemental information that would be submitted to support this bridge permit application include:

- National Environmental Policy Act Documentation (Environmental Impact Statement)
- Bridge Lighting and Signal Plan
- Detailed plans for temporary construction access
- Clean Water Act Section 404 Individual Permit

#### ATTACHMENTS:

- A US Coast Guard Bridge Permit Application
- B I-526 West Lowcountry Corridor Conceptual Bridge Plan and Profile Sheets
- C US Coast Guard Navigation Clearance Letter
- D I-526 West Lowcountry Corridor Navigation Impact Report
- E Draft Section 6(F) Environmental Assessment Highland Terrace-Liberty Park Community Center Land Conversion
- F I-526 West Lowcountry Corridor Biological Assessment for USFWS
- G Draft I-526 West Lowcountry Corridor Biological Assessment for NOAA-NMFS
- H Essential Fish Habitat Assessment, I-526 Lowcountry Corridor WEST
- I Section 106 Correspondence

### Attachment A US Coast Guard Bridge Permit Application

#### Dear Mr. Overton

Application is hereby made for a Coast Guard bridge permit for the I-526 West Lowcountry Corridor Improvement Project.

#### A. ADMINISTRATIVE AND NAVIGATION INFORMATION

- 1. Application Date: October 14, 2020
  - a. Applicant information:
    - 1) Name: Will McGoldrick (South Carolina Department of Transportation)
    - 2) Address: 955 Park Street, Columbia, SC 29201
    - 3) Telephone number: 803-737-1326
    - 4) Email address: McgoldriWR@scdot.org
  - b. Consultant/Agent information (if employed):
    - 1) Name (company or individual): Maher Almassri, PE (Civil Engineering Consulting Services, Inc)
    - 2) Address: 2000 Park Street, Suite 201, Columbia, SC 29201
    - 3) Telephone number: 803-779-0311
    - 4) Email address: almassriM@cecsinc.com
    - 5) Letter authorizing a consultant/agent to obtain permits on behalf of the applicant included: Xes No (please see attached cover letter granting permission)
  - c. Name of Proposed Bridge(s): I-526 General William C. Westmoreland Bridge
    - 1) Name of the waterway that the bridge(s) would cross: Ashley River
    - Number of miles above the mouth of the waterway where the bridge(s) would be located and provide latitude and longitude coordinates (degree/minute/second) at centerline of navigation channel (contact the local Coast Guard Bridge Office for guidance): River mile 10.6 at 32.835278, -80.024444 (32° 50' 07" N, 80° 01' 28"W)
    - 3) City or town, county/parish, and state where the bridge(s) would be located at, near, or between: Charleston, South Carolina
- 4) Brief description of project to include type of bridge(s) proposed [fixed or movable (drawbridge, bascule, vertical lift, swing span, pontoon), highway, railway, pedestrian, pipeline] and existing bridge(s) at project site, if applicable: As part of the improvements to I-526, SCDOT proposes to widen the existing fixed span bridges over the Ashley River.

The current bridges are approximately 42.8 feet wide. The existing bridge deck consists of two 12-foot travel lanes, two in each direction; a 5.5-foot inside left shoulder; and a 10-foot outside right shoulder. Additionally, there are barriers on each side of the bridge (2 total) that are 1.7 feet wide each. Widening I-526 would require that these bridges be widened and that the shoulders and bridge barriers be modified slightly to accommodate four lanes in each direction with shoulders and bridge barriers. The proposed bridges would have two additional travel lanes in each direction that are 12 feet wide, and shoulders in each direction of travel that are 12 feet wide (refer to Attachment B, Conceptual Bridge Plan and Profile, Sheet 5 Widening Schematic). Additionally, a 14-foot shared use path (SUP) to accommodate pedestrians and cyclists would be added to the upstream side of the existing bridge. The SUP would be located on the north side of the existing bridges, adjacent to the westbound travel lanes. The 14-foot path would be separated from the motorized travel lanes with a raised barrier separating the path from the outside 12-foot paved shoulder.

The westbound additional widening to the existing bridge would be 46.956 feet and eastbound would be 31.956 feet. The westbound total final bridge width would be 89.79 feet and the eastbound bridge would be 74.79 feet wide.

- 5) Drawbridge Regulations (if applicable): N/A
- 6) Date of plans and number of plan sheets: October 14, 2020 5 sheets
- 7) Estimated cost of bridge(s) and approaches:
  - a) Provide the estimated cost of the bridge(s) as proposed, with vertical and horizontal navigational clearances: \$45,000,000
  - b) Provide the estimated cost of a low-level bridge(s) on the same alignment with only sufficient clearance to pass high water while meeting the intended purpose and need: N/A
- 8) Type and source of project funding (federal, state, private, etc.): Federal, state
- 9) Proposed project timeline: Construction is expected to begin in 2022. Construction of the bridge phase over the Ashley River would last approximately 3 years. Within that 3-year period, in-water work of an estimated 5 months would be needed.
- 10) Other Federal actions (e.g., permits, approvals, funding, etc.) associated with the proposal: NEPA Draft EIS, Final EIS, Record of Decision, Clean Water Act Section 404 Individual Permit
- d. Legal authority for proposed action:
  - 1) Cite appropriate Bridge Act: General Bridge Act of 1946 (33 U.S.C. 525-533).
  - 2) If not the owner of the existing bridge(s) that is being replaced or modified, include a signed statement from the bridge owner authorizing the removal or modification work and cite its location: Owner is SCDOT

- 3) For privately owned bridges, cite authorization for right to build (e.g. deed or easement from the property owner authorizing the proposed construction or modification work): N/A
- e. International bridges (if applicable):
  - Cite the International Bridge Act of 1972, or a copy of the Special Act of Congress if constructed prior to 1972, as the legislative authority for international bridge construction: N/A
  - 2) For permits issued under the International Bridge Act of 1972, cite Presidential approval, via the State Department, included with the application as required:

# **<u>NOTE</u>**: Please include a copy of State Department approval for international bridges in the application package for a Coast Guard bridge permit.

- f. Dimensions of the proposed bridge(s):
  - 1) Vertical clearance as indicated on plan sheets: 35 feet
  - 2) Horizontal clearance as indicated on plan sheets: 60 feet
  - 3) Length of bridge(s) project: 3,907.5 feet

If no prior permit exists, and this is a modification or replacement project, is the length the same as the old bridge: Yes

If not, what is the difference: N/A

4) Width of bridge(s) project: The westbound additional widening to the existing bridge would be 46.956 feet and eastbound would be 31.956 feet. The westbound total final bridge width would be 89.79 feet and the eastbound bridge would be 74.79 feet wide. Please see Attachment B Bridge Plans, Sheet 5, Widening Schematic).

If no prior permit exists, and this is a modification or replacement project, is the width the same as the old bridge: Yes

If not, what is the difference: N/A

- 5) Depth of the waterway at project site at MHW if tidal or OHW if non-tidal, using the appropriate elevation and datum (e.g., NGVD 1929, NAVD 1988, etc.): 25 feet NAVD 88
- 6) Width of waterway at project site at MHW if tidal or OHW if non-tidal: 1365 feet
- 7) Significant effect on flood heights and associated drift, if any, that could cause a navigation hazard: N/A
- g. Temporary Bridge(s) dimensions (vertical clearance, horizontal clearance, length and width), if applicable: No temporary bridges within Ashley River navigable waterway;

40-foot wide trestle proposed for adjacent tidal marsh only.

- h. Enclosed are the waterway data requirements as determined by the Coast Guard District Bridge Office. If a navigation impact report was conducted please cite location(s) in the case file, list title and date of document as appropriate: Ashley River Navigation Impact Report submitted May 2019. Preliminary navigational clearance provided by the USCG Seventh District Bridge Program via letter on June 11, 2019 noting a vertical clearance of at least 35 ft. and a horizontal clearance of at least 60 ft.
- i. Existing bridge(s) if applicable:
  - 1) Name of bridge(s): General William C. Westmoreland Bridge
  - Type of bridge(s) and number of lanes (e.g., fixed or moveable (drawbridge, bascule, vertical lift, swing span, pontoon, etc.); highway, railway, pedestrian, pipeline): Fixed multi span twin bridges with two vehicle lanes each; one 14-foot shared use path for pedestrians and cyclists.
  - 3) For movable spans identify the existing drawbridge operating regulation governing the structure (e.g. 33 CFR 117.XXX, if applicable): N/A

When applicable, identify if the local Coast Guard Bridge Office identified that modification of an existing drawbridge requires revision or removal of the existing regulation (e.g. if the bridge project involves replacing the existing drawbridge with a fixed bridge):

# **<u>NOTE</u>**: If the waterway is not already identified in 117 Subpart B, please note if an operating schedule other than open on demand is being considered.

- 4) Latitude and longitude coordinates (degree/minute/second) at centerline of the bridge(s): 32.835586, -80.024182 (32°50'08.1"N 80°01'27.1"W) and 32.835748, -80.024397 (32°50'08.7"N 80°01'27.8"W)
- 5) Dimensions of the existing bridge(s):
  - a) Vertical clearance(s) as indicated on previous plan sheets (include both the open and closed-to-navigation clearances for movable spans). [The proposed and existing vertical clearances must be compared using the same datums. This may require surveying the existing bridge]: 35 feet
  - b) Horizontal clearance as indicated on previous plan sheets: 60 feet
  - c) Length of existing bridge(s): 3,908 feet
  - d) Width of existing bridge(s): 43 feet
- 6) Owner of the existing bridge(s): SCDOT
- j. Discuss construction methodology, if known, and removal of existing bridge(s), as applicable:

- Discuss proposed construction methodology and restrictions: No removal of existing bridges other than chipping 2 feet of existing deck to facilitate connection with widened segment. New segments will match existing superstructure spans and configurations while supported on a mix of round columns and prestressed piles. A summary of the new bridge construction follows:
  - Widen the westbound and eastbound roadway approaches to the Westmoreland Bridges.
  - Construct temporary access areas to include matting, barges, and work trestles.
  - Widen existing eastbound structure to the north, or upstream side, of the existing bridge (between the current bridges) on a mix of prestressed concrete piles and drilled shafts.
  - Widen existing westbound structure to the north, or upstream side of the existing bridge on a mix of prestressed concrete piles and drilled shafts.
  - Extend the existing fender system to the south of the Westmoreland Bridge.
  - Paint the existing and new steel beams over the Ashley River main navigational channel and over Bulls Creek.
  - Install lighting for navigation and to meet SCDOT urban interstate lighting requirements ("Roadway Lighting on Interstate Routes in South Carolina").
- 2) Discuss maintenance of land traffic during construction activities: Traffic would be maintained on existing bridges while new bridges are constructed.
- 3) Discuss extent of removal of existing bridge(s) (e.g. in its entirety, two feet below the mud line, down to or below the natural bottom of the waterway or to a specific elevation), time needed for removal, etc.: N/A
- 4) Discuss demolition methodology: N/A

# **<u>NOTE</u>**: In the interest of navigational safety, the Coast Guard must make the final decision concerning the extent of bridge(s) removal.

- k. Other agencies with jurisdiction over the proposed project:
  - 1) Agency: U.S. Army Corps of Engineers, National Park Service
  - 2) Permits or type of approvals required for the project: Clean Water Act Section 404 Individual Permit, Section 6(f), 401 Water Quality Certification, DHEC-OCRM Critical Area Permit, and Coastal Zone Consistency Certification

#### **B. ENVIRONMENTAL INFORMATION:**

#### 1. National Environmental Policy Act

Lead Federal Agency: Federal Highway Administration (FHWA)

List Cooperating Agencies for project: US Coast Guard, US Army Corps of Engineers, National Park Service

a. Type of environmental document.

Environmental Impact Statement/Record of Decision (EIS/ROD)

Cite location(s) in the application package: EIS is currently being prepared; expected to be available late 2020.

Environmental Assessment/Finding of No Significant Impact (EA/FONSI)

Cite location(s) in the application package:

Categorical Exclusion (CE)

Cite location(s) in the application package:

b. Has the environmental document been modified, reevaluated, supplemented or rescinded for the proposed action?

Yes	$\boxtimes$	No
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If yes, cite location(s) in the application package:

#### 2. Environmental Effects Abroad

a. Does the proposed project involve a bridge connection to Canada or Mexico?

🗌 Yes 🛛 🖾 No

If yes, cite location(s) in NEPA document where environmental effects abroad are described:

#### 3. Clean Water Act

a. Has a Water Quality Certification (WQC), waiver or statement that the WQC is not required been obtained from the appropriate federal, interstate, or state agency?

 $\Box$  Yes  $\boxtimes$  No

If yes, cite location(s) in the application package: WQC application submitted to SC DHEC on August 31, 2020.

**NOTE:** The USCG will not accept an application package as complete if a WQC,

waiver, or statement from the appropriate regulatory body has not been obtained.

- b. Name of the Federal, State or Tribal certifying agency and point of contact with phone and email address, if available: Chuck Hightower, SC DHEC Bureau of Water, 803-898-0369, hightocw@dhec.sc.gov
- c. If the WQC is granted under a Programmatic Agreement (e.g., U.S. Army Corps of Engineers (USACE) Nationwide Permit (NWP) include the date of the NWP, the type of NWP (14, 15, etc.) and the NWP number and title: N/A
- d. For permit amendment actions, include a new WQC or a written confirmation from the certifying agency that the existing WQC has been reissued/renewed or is still valid for the proposed action.

New WQC Attached

Written Confirmation of WQC validity attached

#### 4. Wetlands

a. Is the proposed project located in or adjacent to a wetland?

$\boxtimes$	Yes		No
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b. If yes, what is the acreage of wetlands that will be permanently and temporarily impacted by the proposed project? TBD

Include USACE permit (nationwide authorization or individual), if required, and cite where wetland mitigation measures are described in the application package: Permit application submitted with Conceptual Mitigation Plan, August 31, 2020.

- <u>Coastal Zone Management Act</u> The Coastal Zone Management Act (CZMA) of 1972 (16 U.S.C. § 1451), as amended, and its implementing regulations (15 CFR Part 930), requires all projects located within the designated coastal zone of a state to be consistent with the State's federally approved CZM plan (CZMP).
  - a. Is the project located in a state that has an approved Coastal Zone Management Act Plan (CZMP)?

$\boxtimes$	Yes		No
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b. If yes, is the project within an area included in the federally approved CZMP?

$\boxtimes$	Yes		] No
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c. If yes, has the State specifically excluded this activity from its federally approved CZMP?

Yes	$\square$	No
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Include State CZM concurrence/with consistency certification and cite location(s) in

the application package: CZC request submitted to SC DHEC OCRM on August 31, 2020.

#### 6. Floodplains

a. Is the proposed project located in the base floodplain? An encroachment into the base floodplain does not exist when only the piers, pilings, or pile bents are located in the floodplain. Project is within Zone VE. The low member clearance relative to the 100-year flood height is 24.5 feet.



b. Is there a significant encroachment (constituting a considerable probability of loss of human life; likely future damage associated with the encroachment that could be substantial in cost or extent; or a notable adverse impact on natural and beneficial floodplain values) into the floodplain?



c. If yes, provide documentation and cite location(s) in the application package:

#### 7. Wild and Scenic Rivers

a. Is the river involved in the proposed bridge project a designated Wild and Scenic River?

No No Yes

b. If yes, attach correspondence with the river-administering agency and cite location(s) in the application package: (State scenic river only).

#### 8. Coastal Barrier Resources Act

a. Does the proposed project connect to a unit of the Coastal Barrier Resources System?



b. If yes, and the project is federally funded, cite location of Section 6 exception in the application package and any correspondence with the FWS: N/A

#### 9. Land and Water Conservation Fund Act

a. Does the proposed project involve a conversion of land or facilities funded under Section 6(f) of the Land and Water Conservation Fund Act?



 b. If yes, include correspondence with the NPS and authorization from the Secretary of the Interior for that conversion and cite location(s) in the application package: Conversion and coordination currently underway. Draft EA included in Attachment E, PDF page 119.

#### 10. National Marine Sanctuaries Act

a. Is the proposed project in or adjacent to a National Marine Sanctuary?

$\square$	Yes	$\square$	No
	100		1,0

b. Is the proposed bridge(s) likely to destroy, cause loss of, or injure a resource of a National Marine Sanctuary? (If no, provide evidence)



c. If yes, include evidence of consultation with Office of National Marine Sanctuaries and the agency's findings/conditions and cite location(s) in the application package: N/A

#### 11. Marine Protected Areas

a. Is the proposed project in or adjacent to a Marine Protected Area (MPA) as defined in section 4(d) of Executive Order 13158?



b. If yes, will the proposed project affect the natural or cultural resources that are protected by the MPA? (If no, provide evidence)



d. If yes, include evidence of correspondence with MPA Center, if applicable, and cite location(s) in the application package: N/A

#### 12. Endangered Species Act

a. Are there federally designated threatened or endangered species and/or critical habitat in the area that the proposed project is located? (If no, provide evidence) (See Attachment F for USFWS Biological Assessment, PDF page 181).



b. May the proposed project affect federally designated threatened or endangered species and/or critical habitat? (If no, provide evidence)

May effect, not likely to adversely affect Bachman's warbler, piping plover, Eastern black rail, West Indian manatee, pondberry, Canby's dropwort, Northern long-eared bat, American wood stork, and Atlantic sturgeon, shortnose sturgeon.



c. If yes, was there formal or informal consultation with the United States Fish and Wildlife Service (USFWS) or the National Marine Fisheries Service (NMFS)?

Formal consultation

#### Informal consultation

- e. If formal, provide date(s) and attach biological assessment, biological opinion, and any other relevant correspondence and cite location(s) in application package: N/A
- d. If informal, provide dates and include correspondence or documented phone conversations with and from USFWS/NMFS and cite location(s) in the application package: USFWS concurred with Section 7 effects findings on April 6, 2020 (concurrence letter attached, Attachment F). NMFS coordination was initiated on April 1, 2020 and is ongoing (Attachment G).
- e. Include Biological Assessment/Biological Evaluation, as appropriate. Biological Assessments (2) included as Attachments F and G

#### 13. Fish and Wildlife Coordination Act

a. Include any correspondence with USFWS and the relevant state wildlife agency regarding Fish and Wildlife Coordination Act coordination and cite location(s) in the application package: N/A

#### 14. Magnuson-Stevens Fishery Conservation and Management Act

a. Will the proposed project likely adversely affect designated Essential Fish Habitats (EFH) as defined in the Magnuson-Stevens Act? (If no, provide evidence)



b. Identify location of EFH assessment and relevant correspondence with NMFS in the application package: EFH Assessment submitted for review (Attachment H).

#### 15. Marine Mammal Protection Act

a. Does the proposed project involve a "take" of marine mammals as defined in the Marine Mammal Protection Act?



b. If yes, include the incidental harassment authorization or letter of authorization from NMFS and any relevant correspondence and cite location(s) in the application package: N/A

#### 16. Migratory Bird Treaty Act

a. Does the proposed project involve a potential take of migratory birds as defined in the Migratory Bird Treaty Act? (If no, provide evidence)

Yes	🖂 No
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b. If yes, is a permit required?

c. If a permit is required, include it and any correspondence with USFWS and cite location(s) in the application package: Coordination ongoing.

#### 17. Bald and Golden Eagle Protection Act

a. May the proposed project take or disturb bald or golden eagles (including nests) as defined in the Bald and Golden Eagle Protection Act? (If no, provide evidence)

Yes	🖂 No
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b. If yes, is a permit required?

Yes	$\boxtimes$	No
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c. If a permit is required, include it and any correspondence with USFWS and cite location(s) in the application package. N/A

#### 18. Invasive Species

a. Does the proposed project have potential to introduce or foster the spread of invasive species?

🗌 Yes 🛛 🖾 No

b. If yes, cite the document that describes measures that will be taken to minimize this risk and location(s) in the application package: N/A

#### 19. Section 106

a. Does the proposed project have potential to impact properties (including submerged abandoned shipwrecks) listed in or eligible for inclusion in the National Register of Historic Places?



b. If yes, provide evidence of consultation with the State Historic Preservation Officer (and the Advisory Council on Historic Preservation, if applicable) and cite location (s) in the application package. Include:

Copies of the correspondence (Section 106 correspondence: Attachment I)

Memorandum of Agreement

□ No effect determination

c. For projects involving Federal lands only provide:



Archeological reports

#### 20. Clean Air Act

a. Does the proposed project occur in an area of nonattainment or maintenance for any criteria pollutant?

🗌 Yes 🛛 🖾 No

b. If project occurs in a nonattainment or maintenance area, do the transportation or general conformity regulations, or both, apply? N/A

General	] Transportation
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c. Is the project exempt from a transportation conformity analysis for any of the reasons listed in 40 CFR § 93.126? Which reason?

 $\Box$  Yes  $\boxtimes$  No Reason:

d. Is the project exempt from a general conformity analysis for any of the reasons listed in 40 CFR § 93.153(c)?

Yes	$\square$	No
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e. If general conformity applies, is the project listed in a conforming State Implementation Plan (SIP)? N/A

Yes	🗌 No
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- f. If a general conformity determination was prepared, include the draft and final determinations and any relevant correspondence and cite their location(s) in the application package: N/A
- g. If transportation conformity applies, is the project listed in a conforming SIP, Transportation Improvement Program (TIP), Regional Transportation Plan (RTP), or Federal Implementation Plan (FIP)? N/A

Yes	🗌 No
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- h. If yes, cite location of information regarding listing in the application package:
- i. If transportation conformity applies, does the project contribute to any new localized CO, PM<sub>10</sub>, or PM<sub>2.5</sub> violations or increase the frequency or severity or any existing violations of the same?

Yes	🗌 No
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j. If yes, cite location of information in the application package:

#### 21. Actions to Address Environmental Justice in Minority or Low-Income Populations

a. Does the proposed project involve disproportionate adverse impacts to minority and/or low-income populations as defined in Executive Order 12898?

Yes No (EJ impacts will result from project but will not be disproportionately adverse. All EJ impacts will be adjacent to roadway improvement sections; no EJ impacts at or near Ashley River bridge improvements. DEIS Chapter 4 addresses EJ impacts in greater detail.)

- b. If yes, include the analysis describing the impacts and cite location(s) in the application package: N/A
- c. If yes, cite the location in the application package that describes measures to be taken to reduce those impacts: N/A

#### 22. Hazardous Materials, Substances or Wastes

a. Does the proposed project involve or is it located near a Superfund site or any site regulated under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), Resource Conservation and Recovery Act (RCRA) or State law regulating hazardous materials, substances or wastes?



b. If yes, cite the location(s) in the NEPA document where hazardous materials, substances or wastes are discussed: Draft EIS pending; sites with potential construction impacts include former Amoco (50 feet east of 6001 Rivers Avenue, North Charleston) RCRA NonGen/NLR, UST, LUST GWCI; Westvaco Paper Mill (5600 Virginia Avenue, North Charleston) SEMS-Archive, RCRA-TSDF, Airs, Manifest, GWCI; Coburg Dairy/Borden Dairy (5001 Lacross Road, North Charleston) FINDS, ECHO, RMP, TRIS

See Attachment B for plan sheets.

See Attachments C and D for Waterway Data Requirements (General William C. Westmoreland Navigation Impact Report and Preliminary Approval Letter)

See Attachment E for Section 6(f) Land Conversion Environmental Assessment

See Attachment F for I-526 West Lowcountry Corridor Biological Assessment for USFWS

See Attachment G for Draft I-526 West Lowcountry Corridor Biological Assessment for NOAA-NMFS

See Attachment H for Draft Essential Fish Habitat Assessment, I-526 Lowcountry Corridor WEST

See Attachment I for Section 106 Correspondence

## Attachment B I-526 West Lowcountry Corridor Conceptual Bridge Plan and Profile Sheets

# CONCEPTUAL PLANS UTILIZED TO OBTAIN COAST GUARD BRIDGE PERMIT WIDEN TWIN BRIDGES OVER BULLS CREEK AND ASHLEY RIVER ALONG I-526 (MARK CLARK EXPRESSWAY) IN CHARLESTON, CHARLESTON COUNTY, SOUTH CAROLINA



WIDEN 3907.5' TWIN BRIDGES ALONG I-526 (MARK CLARK EXPY) OVER BULLS CREEK & ASHLEY RIVER (GENERAL WILLIAM C. WESTMORELAND BRIDGE)







#### CONCEPTUAL PLANS NOT FOR CONSTRUCTION

Y CHK. DATE DATE: 10/13/2020

HEET NUMBER: 1 OF 5









## Attachment C US Coast Guard Navigation Clearance Letter

U.S. Department of Homeland Security

United States Coast Guard



Commander United States Coast Guard Seventh District 909 S. E. First Avenue Miami, Fl 33131 Staff Symbol: (dpb) Phone: (305) 415-6736 Fax: (305) 415-6763 Email: randall.d.overton@uscg.mil

16591/164 11 June 2019

J. Shane Belcher Environmental Coordinator Federal Highway Administration 1835 Assembly Street, Suite 1270 Columbia, S.C. 29201 Via email: Jeffrey.Belcher@dot.gov

Dear Mr. Belcher:

The Coast Guard has completed its review of the Navigation Impact Report (NIR) for the I-526 West Corridor Project in Charleston, South Carolina (draft report dated May 2019). The project under study proposes widening Interstate 526 (I-526) in Charleston County, South Carolina. The infrastructure improvement project for I-526, requires widening the existing I-526 Bridge structure across the Ashley River to accommodate additional travel lanes. The existing I-526 Bridge crosses the Ashley River at waterway mile 10.6, latitude/longitude, 32.835645, -80.024364.

In May 2019, the U.S. Coast Guard received a draft navigational impact report for the Ashely River associated with the proposed I-526 Bridge widening project. The report succinctly and accurately documented the navigational environment for this stretch of the Ashely River.

Based on our review of the navigational impact report, the Coast Guard has made a preliminary determination that to provide for the reasonable needs of navigation on this stretch of the Ashely River, a vertical clearance of at least 35 ft. and a horizontal clearance of at least 60 ft. is required for a fixed bridge structure. Please note that this preliminary determination does not constitute an approval or final agency action. The Coast Guard can only make a final determination after processing a complete bridge permit application.

Refer to the Coast Guard Bridge Permit Application Guide located at <u>https://go.usa.gov/xRFk2</u> to make application for a Coast Guard bridge permit. Please contact Mr. Randall Overton, (305) 415-6736, with any questions. We look forward to working with FHWA and SCDOT to move this project forward.

Sincerely,

RANDALL D. OVERTON Chief, Permits Division Seventh District Bridge Program U.S. Coast Guard

eCopy: Mr. Richard Keefauver (<u>Richard.D.Keefauver@uscg.mil</u>), CG Sector Charleston

## Attachment D I-526 West Lowcountry Corridor Navigation Impact Report



## TECHNICAL MEMORANDUM: GENERAL WILLIAM C. WESTMORELAND BRIDGE ASHLEY RIVER NAVIGATION IMPACT REPORT



Prepared For:



Prepared By:



Civil Engineering Consulting Services, Inc.

DRAFT May 2019



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Table 2	A sample of marine-dependent businesses in the I-526 West Navigation Study Area.
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Appendix B	Conceptual Bridge Plan and Profile
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#### I. INTRODUCTION

This Navigation Impact Report was prepared to assist the South Carolina Department of Transportation (SCDOT) in conjunction with the Federal Highway Administration (FHWA) in preparation of the forthcoming United States Coast Guard (USCG) Bridge Permit Application and the Environmental Impact Statement (EIS) regarding infrastructure improvements and widening of Interstate 526 (I-526) in Charleston County. Proposed improvements to I-526 would include providing additional travel lanes over the Ashley River, through widening the existing bridges. The permitting improvement provisions found in the 2014 Memorandum of Understanding between the United States Coast Guard (USCG) and FHWA requires applicants with to prepare a navigation impact report to analyze the navigational impacts of the bridge design alternatives. This report will be provided to the USCG Bridge Program to assist with determining the reasonable navigational clearance on the Ashley River. The USCG Bridge Program ensures marine safety, security, and stewardship and has the authority to approve the location and plans of all new bridges, modifications of existing bridges, international bridges, and causeways in or over navigable waterways of the United States. In accordance with 33 CFR 116.01, "[a]ll bridges are obstructions to navigation and are tolerated only as long as they serve the needs of land transportation while allowing for the reasonable needs of navigation." Pursuant to the Rivers and Harbors Act, "No bridge shall at any time unreasonably obstruct the free navigation of any navigable waterway of the Unites States." In addition, per the International Bridge Act of 1972, "No bridge erected or maintained under the provisions of sections 491 to 498 of this title, shall at any time unreasonably obstruct the free navigation of the waterway over which it is constructed."

The main objective of the bridge permitting process is to determine vertical and horizontal clearances of the structure spanning the navigation channel. USCG has jurisdiction over this permitting process as directed by 33 U.S.C. 401, 491, 525-533, the International Bridge Act of 1972 and additional Congressional acts.

For the USCG to issue a permit for a structure to be built over "Navigable Waters of the U.S.," the structure must meet the reasonable needs of current and foreseeable future navigation. These needs have been taken into account in this Navigation Report. This study and its recommendations are based on current facts and circumstances and may be amended if facts and circumstances surrounding the project change over time, or are discovered during the permit application and public notice process.

#### **II. EXISTING FACILITY**

The General William C. Westmoreland bridge (Westmoreland bridge) is located along I-526 and connects the city of North Charleston with the West Ashley area of Charleston, SC (refer to Appendix A, Figure 1). The twin span bridge carries two lanes of I-526 in each direction across the Ashley River and the surrounding tidal marshes. The 3,908-foot long bridge was constructed in 1980 and each bridge is 42 feet wide. The existing bridge deck consists of two 12-foot travel lanes, one in each direction, a 5.5-foot inside shoulder, and a 10-foot outside shoulder. I-526 within the project limits is primarily a four-lane divided highway.



General William C. Westmoreland Bridge over the Ashley River.

#### III. PROPOSED PROJECT OVERVIEW

The I-526 Lowcountry Corridor (LCC) West project is located between Paul Cantrell Boulevard and Virginia Avenue and is approximately 11.4 miles long. SCDOT currently ranks the segment of I-526 between I-26 and Virginia Avenue as the most congested segment of interstate highway in the state. The remainder of the I-526 LCC West project, from I-26 to Paul Cantrell Boulevard, ranks among the top ten of the state's existing most congested corridors. Traffic forecasts show that segments of that corridor will continue to be among the state's most congested in 2040. The interchange of I-526 and I-26 is the major source of the congestion. The purpose of the project is to increase vehicular capacity along I-526 through infrastructure improvements to support increasing usage and population growth.

As part of the improvements to I-526, SCDOT proposes to widen the existing bridges over the Ashley River. The proposed bridge would have two additional travel lanes in each direction that are 12 feet wide, and shoulders in each direction of travel that are 12 feet wide (refer to Appendix B, Conceptual Bridge Plan and Profile). The widened bridge structures would each be 35 feet, 5.5 inches wide. During construction of the widened bridge, traffic would be maintained on the existing facility. Maintenance and improvements would be made to the existing Westmoreland bridge and the structure would be retained at its existing height and length.

#### **IV. BRIDGE CHARACTERISTICS**

The Westmoreland bridge spans the Ashley River with a horizontal clearance of 60 feet and a vertical clearance of 35 feet when measured from mean high water (MHW). This is a twin span fixed bridge with four main spans. The longest span is approximately 120 feet. The concrete deck is approximately 43 feet wide. The bridge is in fair condition with no vehicular traffic restrictions. Within the vicinity of the Westmoreland bridge, there are 5 major upstream and downstream crossings over the Ashley River, as shown in Table 1 (refer to Appendix A, Figure 1). Additionally, overhead powerlines are present just downstream of the CSX Railroad Bridge.

Bridge	Route	Bridge Type	Horizontal Clearance	Vertical Clearance	Vertical Clearance when closed, if moveable	Measured From
<b>CSX Railroad Bridge</b> (upstream of project)	CSX RR	Moveable	60 ft	Unlimited	3 ft	MHW
General William C. Westmoreland Bridge (project site)	I-526	Fixed	60 ft	35 ft	n/a	MHW
Memorial Bridge (downstream of project)	SC 7	Fixed	100 ft	50 ft	n/a	MHW
T. Allen Legare Bridge (N/B) (downstream of project)	US 17	Moveable	110 ft	Unlimited	18 ft (at center 50 ft)	MHW
T. Allen Legare Bridge (S/B) (downstream of project)	US 17	Moveable	110 ft	Unlimited	14 ft	MHW
James Island Expressway Bridge (downstream of project)	SC 30	Fixed	110 ft	56 ft	n/a	MHW

Table 1.	Maior Ashley	/ River Crossings in	the I-526 West	Navigation Im	pact Study Area.
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Source: NOAA National Ocean Service Coast Survey, Charleston Harbor. 54th Ed. June 2015. Last Correction: 2/5/2019. Cleared through: LNM 1119 (3/12/2019), NM: 1319 (3/30/2019)
The current Westmoreland bridge has the least amount of vertical clearance of the structures in the study portion of the Ashley River. It has a similar amount of horizontal clearance (60 feet) as the CSX Railroad bridge located approximately 1.85 miles upstream. Both the CSX Railroad bridge and the existing Westmoreland bridge have the most restrictive horizonal clearance (60 feet).

#### V. WATERWAY CHARACTERISTICS

The Ashley River is a tidally influenced river with the headwaters originating in Dorchester County. The river runs for approximately 30 miles, eventually joining the Cooper River to form the Charleston Harbor before discharging into the Atlantic Ocean. The entire drainage of the Ashley River system, including its headwaters in Cypress and Wassamassaw swamps, extends approximately 60 river miles. At the project site, the width of the main deeper-water navigational channel of the Ashley River is approximately 15 feet wide. The Ashley River is a designated State Scenic River, largely in part to numerous historic properties located along the riverbanks. The proposed project is located 0.88 mile upstream from a significant bend in the Ashley River. This bend does not prohibit the safe passage of vessels in the Ashley River. The channel bottom is a mix of sand and sediment. Some shoaling and sediment deposition exists, primarily at bends in the channel and at the channel banks. Per the National Oceanic and Atmospheric Administration (NOAA) Ashley River bridge station (Station ID 8665099) the mean tidal range is 5.68 feet and the diurnal range is 6.23 feet. MHW is approximately 3.08 feet and MLW is -3.16 feet at the center of the channel. The Ashley River drains to the east, to the Atlantic Ocean.



NOAA Navigation Chart - Charleston Harbor. 54th Ed. June 2015. Last Correction: 2/5/2019.

#### VI. NAVIGATION

There are various types of navigational activities by numerous vessel types that occur along the Ashley River. To determine the types and extents of activity in the channel, existing documentation was reviewed regarding known vessel use. This included a review of bridge opening records of a nearby moveable downstream facility, the T. Allen Legare bridges, located at milepoints 2.4 and 2.5. Additionally, aerial photography was reviewed and spot verified through ground truthing. A representative sample of local boat ramps, private boat docks, marinas, and marine-dependent businesses were identified (refer to Appendix A, Figure 2, Exhibits 1 and 2). This portion of the Ashley River is not a part of commercial large-scale cargo routes.

This study does not include interviews or surveys of business, residents, or through-boaters. Additionally, camera surveys of active vessel traffic were not conducted.

#### **Residential Docks**

Through aerial photography reviews, it was noted that there are approximately 128 residential docks are located in the study area. Approximately 102 of these docks are located upstream of the project site and 26 are located downstream.

#### Pubic Boat Ramps

A large portion of marine traffic in the area surrounding the proposed project constitutes recreational and commercial boating. The W.O. Thomas Jr. Boat Landing is a public boat ramp managed by the Charleston County Park and Recreation Commission (CCPRC). This facility is located approximately 500 feet southeast or downstream of the proposed project. The landing is used by private recreational and commercial boats. The Pierpoint Public Boat Landing is located upstream of the project site, just off of Church Creek. Church Creek flows to the Ashley River. Pierpoint is also managed by the CCPRC and they recommend that due to a variety of constraints, launching standard size watercraft from Pierpoint is not recommended and the launching of kayaks and canoes is more appropriate at this location. A third public boat ramp was opened by CCPRC in 2014. Northbridge Park is considered a "gateway park" based on its location at the entrance to West Ashley from 1-26. The park consists of a fishing pier, kayak launch, vehicular ingress and egress, parking area, multi-purpose trail, and picnic area. Northbridge Park is located over 2.5 "river miles" east or downstream of the proposed project. The Wando Woods/Flynn Drive boat ramp is also



W.O Thomas Jr. Boat Landing and General William C. Westmoreland Bridge over the Ashley River.

open to the public. This provides access to the Ashley River in North Charleston from a residential street, Flynn Drive. There are no other facilities at this location and no parking available.

#### Commercial Marinas and Marine-Dependent Businesses

There is a private marina located adjacent to the proposed project (Rivers Edge Marina Sales). The marina is used to launch, store, maintain and fuel private, recreational boats. Their dry stacks can house approximately 450 boats and they have 58 outdoor slips. Rivers Edge Marina provides fuel, dockage,

vehicle parking, launch ramp, slip management and provisioning, a store, picnic/grill area, fish cleaning station, and restrooms (see Appendix C – marina phone logs). Dolphins Cove Marina is a full-service marine facility located downstream from the project area. This marina has 275 dry slips and approximately 125 wet slips to house boats of different sizes. They offer services such as boat and trailer repair, painting, fuel, and a travel lift (see Appendix C – marina phone logs). A sampling of marine facilities (marinas, major docking facilities,



Rivers Edge Marina in Charleston, SC.

and boat repair facilities) located within a 3-mile radius of the proposed project are listed in Table 2.

Facility	Address	Phone
Rivers Edge Marina	4354 Bridge View Dr, North Charleston, SC 29405	(843) 554-8901
Dolphin Cove Marina	2079 Austin Ave, Charleston, SC 29405	(843) 744-2562
Duncans Boats	4350 Bridge View Dr, North Charleston, SC 29405	(843) 744-2628
Parker Marine	68 Braswell St, North Charleston, SC 29405	(843) 853-7615
Charleston Ship Repair	5800 Dorchester Rd, North Charleston, SC 29418	(843) 642-8798
Bombadils Marine	5700 Dorchester Rd, North Charleston, SC 29418	(843) 693-3331
Jerrys Marine Services	3601 Meeting Street Rd, North Charleston, SC 29405	(843) 554-3732
Marine Diesel, Inc	3575 Meeting Street Rd, Charleston, SC 29405	(843) 377-1914
Marine Tech Tools	2652 Bonds Ave #203, North Charleston, SC 29405	(843) 253-4123
Mckay Marine	4208 A, Pace St, North Charleston, SC 29405	(843) 747-6250
Charleston Yachting	4208 Pace St, North Charleston, SC 29405	(800) 610-9065

#### Table 2. A sample of marine-dependent businesses in the I-526 West Navigation Impact Study Area.

Facility	Address	Phone
Ripley Light Yacht Club	95 Ripley Point Dr. Charleston, SC 29407	(843) 766-0908

#### **Emergency Operations**

Emergency operations are conducted by the USCG, the South Carolina Department of Natural Resources, (SCDNR), Charleston County, and the City of Charleston Fire Department Marine Units. The Charleston County Volunteer Rescue Squad responds to waterway incidents with a variety of light, medium and heavy rescue vehicles. This includes a variety of boats including an air boat and vessels equipped with specialty equipment such as side scan sonar. Charleston Fire Department operates one Fireboat, Marine 101. The responding vessel features a 980-horsepower engine, is 40 feet long, and has the capacity to pump 3,800 gallons of water a minute.

#### Moveable Bridge Records

The T. Allen Legare moveable bascule bridges open periodically for marine traffic. In relation to the project, these bridges are located downstream, beyond the fixed SC 7 Memorial bridge. The operating schedule that governs the bridge openings requires a bridge tender to be present during daytime hours from 8 a.m. to 4 p.m. daily for on signal openings. All other times a 12-hour advanced notification is required. Sport fishing boats and yachts were the most frequent vessel requiring a bridge opening. Sail boats and tug boats also require a greater clearance, with an occasional opening for a tow boat or motorboat needed as well. Bridge opening logs were reviewed from April 2018 to March 2019 and vessel openings are shown in Table 3 (daily logs available in Appendix D).

Vessel Type	Number of Openings
Sail	17
Sport fish	30
Motorboat	2
Tug	10
Tow	1
Yacht	28
TOTAL NUMBER OF OPENINGS:	88

Table 3. Number of T. Allen Legare Bridge Openings By Vessel Type.

Source: SCDOT Bridge Opening Logs for the T. Allen Legare Bridges (4/2018 to 3/2019)

#### **VII. RECOMMENDATIONS**

The proposed project does not seek to increase or decrease either the vertical or horizontal clearance of the current bridge structure or the proposed widened bridge facilities.

#### Horizontal Clearance

The proposed minimum horizontal clearance for the main navigational opening would be 60 feet between fenders. This configuration will be similar to the existing bridge, or would be less restrictive. Therefore, horizontal clearance in the Ashley River at the project site will not be restricted.

#### Vertical Clearance

A harbor of refuge is defined as a naturally or artificially protected water area that provides a place of relative safety or refuge for commercial and recreational vessels traveling along the coast or operating in a region. The proposed project involves widening the current alignment of the roadway, not altering the vertical clearance of the bridge. The proposed project will not prohibit the entry of a vessel to the local harbor of safe refuge. The vertical clearance of the proposed fixed span bridge would be a minimum of 35 feet from the MHW datum to meet the needs of mariners in the area.

#### Construction

The potential exists for temporary closures during brief stages of construction. These closures will be advertised 30 days in advance and will be no longer than 48 hours. During this 48-hour period the navigation channel will be accessible to boat traffic to the maximum extent feasible.

Due to the nature of the project, waterway users will be minimally impacted and mitigation is not recommended.

# **Appendix A**

- Figure 1. Location Map
- Figure 2. Bridges Index Sheet

Exhibit 1 Upstream Bridge

**Exhibit 2 Downstream Bridge** 









# **Appendix B**

**Conceptual Bridge Plan and Profile** 

# CONCEPTUAL PLANS UTILIZED TO OBTAIN COAST GUARD BRIDGE PERMIT WIDEN TWIN BRIDGES OVER BULLS CREEK AND ASHLEY RIVER ALONG I-526 (MARK CLARK EXPRESSWAY) IN CHARLESTON, CHARLESTON COUNTY, SOUTH CAROLINA



WIDEN 3907.5' TWIN BRIDGES ALONG I-526 (MARK CLARK EXPY) OVER BULLS CREEK & ASHLEY RIVER (GENERAL WILLIAM C. WESTMORELAND BRIDGE)







#### CONCEPTUAL PLANS NOT FOR CONSTRUCTION

Y CHK. DATE DATE: 10/13/2020

HEET NUMBER: | OF 5









# Appendix C

Marina Phone Logs



## TELEPHONE LOG

3020 Devine Street, Suite D - Columbia, SC 29205 Telephone- (803) 779-0311 Fax- (803) 779-0528 Email: cecs@cecsinc.com

JOB NO:	7714	DATE:	4/5/2019
DESCRIPTION:	USCG Navigation Report		
CALL FROM:	Amanda Harris	CALL TO:	Salesperson - Jan
COMPANY:	CECS, Inc	COMPANY:	River's Edge Marina
PHONE #:	803-779-0311 ext 219	PHONE #:	(843) 554-8901
DISCUSSION:			
How many dry s	spaces?		
450 in	warehouse.		
How many slips	?		
58 wet	slips.		

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## TELEPHONE LOG

3020 Devine Street, Suite D - Columbia, SC 29205 Telephone- (803) 779-0311 Fax- (803) 779-0528 Email: cecs@cecsinc.com

JOB NO:	7714	DATE:	4/10/2019
DESCRIPTION:	USCG Navigation Report		
CALL FROM:	Amanda Harris	CALL TO:	Salesperson
COMPANY:	CECS, Inc	COMPANY:	Dolphin Cove Marina
PHONE #:	803-779-0311 ext 219	PHONE #:	(843) 744-2562
DISCUSSION:			
How many dry s	paces?		
250 dry	y spaces.		
How many slips	?		
125 we	et slips.		

ACTION REQUIRED:	
None.	

CC:

# Appendix D

#### T. Allen LeGare Drawbridge Opening Logs

# Report of Drawbridge Openings April 2018

## STATE OF SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION

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BRIDGE NUMBER 843-577-7605

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DRAWBRIDGE SERVICES, INC.

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## STATE OF SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION

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Mav	4-23	11	9:00/2m	9100	~		Rainy	yacht	Prestlyr	Frankton
MON	4-23	12	10.30 AM	Lo ism	V	۰۰ ۱	Rainy	Hacht	Monte carlo 6	Kippen
MON	4-23	-			レ		Barry	ypeht	Flynn Fally	. E-1
MON	4-23				1		Ramy	YACh7-	Real wish	L (
Mon	1.23			and the second s	$\vee$		Roiny	slacht-	swift Trawber	Ľ (
Min	4-27					·	Rainy	Sa'l	Bonitor 38	Kakelien
MOON	423	6FF	Hipp		-			·····		Kackien
743	4-24	ON	8: Am				and the second			Chappin
This	4-24	off	· · ·						· · · · · · · · · · · · · · · · · · ·	11
wed	4.25	on	8º2m	<u> </u>	ļ	,			· · · · · · · · · · · · · · · · · · ·	rielle.
Wed	4-25	off	400m				· · · · · · · · · · · · · · · · · · ·	web-torong-toron-	Non- and the second sec	rul
Thur	4-26	in	809m			- ZEELA	-		مى بولغان بى	rith
Thurs	4-24	off	4000	<u> </u>		. <b>P</b>			and an an and a second and a se	rill
fr.	4-27	m	892m			/				Mill
fri	4-27	off	yopm	··	~			<u> </u>	00000000000000000000000000000000000000	ruh
SAT	4-28	DN	6:30A		Kattor Oriente		>	5		Karen
Sat	4-28	13	6:50	7.04	1	$\square$	clear-	PFL.	Finalli	KAREIGN
SAt	4-28	14	5:48	6:05		$\checkmark$	Blenny	Spirith	Finalli	KARPEREN
SAL	4-25/	OFF	6.15			میں میں میں میں اور میں میں اور میں میں اور میں میں اور میں				Koppien

### BRIDGE NUMBER (843)577.765 REPORT FOR THE MONTH OF ART

# STATE OF SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION REPORT OF DRAWBRIDGE OPENINGS

Form 3078 Rev.

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DAY OF WEEK	DATE	draw Opening Number	TIME GATES DROP AM OR PM	TRAE GATES OPEN AM OR PR	Dird	SCTION SCUTH	CONDITION OF WEATHER & RIVER	TYPE OF VESSEL FASEING THROUGH	NAME OR NUMBER OF VEGSEL PASSING THROUGH	NAME OF TEND
SUN	4-29	ON	8! JM				<b>~</b>			KAREtin
au	429	OFF	4; pm		-					KAPRILON
mon	4-3°	on	800 m	· · · · ·		1004UT	~ ~	-	· · · · · · · · · · · · · · · · · · ·	1 Mill
MON	4-30	off	400m						Service Se	1 nut
R K		•						· -		
			-	•						
				· · · · · · · · · · · · · · · · · · ·						
					<u> </u>				- 	
				1944 - 1944 - 1944 - 1944 - 1944 - 1944 - 1944 - 1944 - 1944 - 1944 - 1944 - 1944 - 1944 - 1944 - 1944 - 1944 -				0	<b>2</b> (1)	
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		· · · · · · · · · · · · · · · · · · ·		· · · · · · · · · · · · · · · · · · ·	$ \begin{bmatrix} \\ \\ \\ \\ \\ \end{bmatrix} $					
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# Report of Drawbridge Openings May 2018

### ENUMBER 843) 534-76605

### STATE OF SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION

Form 3079 Rev.

DBS

RE, ORT FOR THE MONTH OF MAy 20 18 NAME OF BRIDGE A-Shley, DRAWBRIDGE SERVICES, INC.

ORAW TIMË THE . CONTRACTION OF TYPE OF VESSEL NAME OR NUMBER NAME OF TENDER DAY OF DIRECTION GATES DROP GATES OPEN WEATHER & PASSING OF VESSEL IN CHARGE WEEK DATE OPENING AM OR PM AM OR PM THROUGH PASSING THROUGH OF DRAW NUMBEA RORTH SOUTH RNIR AN 8 am 5-ARRACAN Thee Saylo 40 Pagan 2: 255 wind 5 Clear Kareson Tues . ነ ቁኮ 3,30 -2 Olecr 3:43 Vater ust Ar Λ. KIPROUM 5-1 Tues > 51 OFF 4 TURS -Ander Sm - 20 ON Krippen 5-2 8 Wed An Sport Kassin 3 11:25 Webaind 5-2 11. Char VN& 10 10 OFF CARIEM We. 0 52 A 80% 20/4 28 Am 5 por + Class f ì. ~1 5 s h 6-1q Ŵ ΟÙ 120 -3 hue 6 8 cm ---here for Š 1 off 20 C-U fr., TV 8ºhn 5at  $\leq \leq$  $\hat{c}$ 100 off 564 5ú d 8 CONTRACTOR OF ON LARAMer μn 0 OFT Sui ARR los Fr An 8: No. of Concession, Name selvous ON MON Am <u>.</u> OFF -Mψ ARRIC on 8% 'Nrs  $\sim$ AV off 400-5-8  $\sim$ 

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ENUMBER 843-577-765 REPORT FOR THE MONTH OF MAY NAME OF BRIDGE WW ASNULL DRAWBRIDGE SERVICES, INC.

# STATE OF SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION

Form 3078 Rev.

DBS

DAY OF WEEK	DATE	DRAW Opening Number	TIME GATES DROP AM.OR.PM	TME GATES OPEN AM OB PM	DIFUE	CTION ROUTIS	CONDITION OF WEATHER 5 RIVER	TYPE OF VEASEL PAGAINO THROUGH	HUHE OR NUMBER OR VESSEL PASSING THROUGH	NAME OF TENDER IN CHARGE OF DRAW
Taka	5-9	ON	5;2m						And the second s	FARRIER
Wed	5-9	977 O	4:pm						1993	Karalism
Thans	5-10	<u>m</u>	860m		Ĺ	<u>(</u>	·			rite
Thurs	5-10	off	yerm				r			ruh
553	5-11	67	X02m		n					rull
Fri	6-11	off	400	ата, <sup>расан</sup> танула са на				···		rull
SAT	5-12	ON	8 m						Rainen an	Kurchen
SAT	5-12	OPF	4A	Cine and a second					۲ <u>۹۹۳ میں م</u> الای میں معر <u>ور میں میں معرود میں میں میں معرود میں میں معرود میں میں معرود میں میں معرود میں میں م محمد میں میں معرود میں میں م</u>	KARREN
Sul	5-13	ON	S'. AN					. 9	it in the second s	Korren
Sent	5-13	4	9:12	9;30	i~		Sunny	SROT TO	N/A ·	KARRIEM
Sur	5-3	5	10; 15	10:30		V	SUNNY	str	NIA.	CARRITA .
Sur	5-13	6	11, 14	11-25	1	ł	SLONDY	Stor A	Tied up	KARRION.
MON	5-14	ON	8: on							Kakeren
Mon	5-14	OFF	4 pm		-	- Currinter Verseen	میں میں ایک		and the second	KARRIDA
Tues	5-15	in	809m	,	مۇر. - رىغىمىيە				New State California State Sta	rill
Turs	5-15	. 7	1155m	12 %	$\checkmark$		Fair	Motor BT	Maniton	11
Trus	5-15	220	400	~			·			rul
Wed	5-16	OAI	Sign					-		Kareben .
Wed	5-16	〇元	4th	· · · · · ·						KARRÍON
Thurs	5-0	$\alpha$	800	-						Much

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STATE OF SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION

Form 3079 Rev.

# NAME OF BRIDGE New MONTH OF May DRAWBRIDGE SERVICES, INC.

NUMBER 843-577-7605

day of Week	DATE	ORAW OPENING	TIME GATES DROP	THE GATES OPEN	Circ	OTIÓN	CONDITION OF	TYPE OF VESSEL Filisging	name or number of veget	Hame of Tender Bi Charge
		NUMBER	AM OR PM	ALL OR PER	NORTH	BOUTH)	RNER	THROUGH	PASSING THROUGH	CF DRAW
Thus	5-17	off-	400m		_				a the second	Jule
Ę.	5-18	$\sim$	8°An							ruh
fri	5-18	8	11 Fam	11-An		<u>ب</u>	· Clandy	Eshine 18-1	Tiedup.	11
Fri	5-18	off	Yym	•••					<	ru
Sat	5-19	m	Pogan	(Manager Street			P		(*************************************	me
Sat	5-19	off	Yegm	· · · · · · · · · · · · · · · · · · ·	بمحه	,			<sup>۲</sup> این می می از این می این م می این می این	nu.
SUN	5-20	ON	8-07/4n					** <u>***********************************</u>		KARRION
SUN	5-20	OFF	Hisph	· · · · · · · · · · · · · · · · · · ·				·····		KARRIBM
MON	5-21	ON	8' AM	· · · · · · · · · · · · · · · · · · ·		_				Kappener
MON	5-2-(	OFF	4: pm	-					anne an	KARRian
The	5.26	90	8' An	-			and the state of t	Ń		KARRIEM
Ques	5-22	off								KARRIUM
wed	5-23	on	800an		ļ					rul
weg	5-23	9	3000	3%	$\checkmark$		Clear	Sgil	Megndor	11
Ned	5-23	off	U92		~			<u> </u>	· · · · · · · · · · · · · · · · · · ·	ma
Thurs	5-24	3	8 9 m	, <del></del>		~~~~~			f the second	Fut
Thus	224	off	Yean		-			······································	۲۰۰۰ ۲۰۰۰ ۲۰۰۰ ۲۰۰۰ ۲۰۰۰ ۲۰۰۰ ۲۰۰۰ ۲۰۰	ruli
En	$\overline{\varsigma}$ 28	$\sim$	Sofm	· · · · · · · · · · · · · · · · · · ·	******	~~	<u> </u>			Tull
Fri	5-25	240	Upp	•				and the second se	Passar	Mul
SAt	526	ÓN	8; An				<b></b>			KARRien

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7-7605 BRIDGE NUMBER 89 2018 REPORT FOR THE MONTH OF May NAME OF BRIDGE New Ashly DRAWBRIDGE SERVICES, INC.

# STATE OF SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION

Form 3079 Rev.

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DAY OF WEEK	DATE	DRAW OPENING NUMBER	TIME GATES GROP AM OR PM	TIME GATES OPEN AM OR PH	Dirt	NOITON	CONCITION OF WEATHER E RIVER	TYPE OF VESSEL PASSING THROUGH	NAME OR NUMBER Of Vessel Passing Through	NAME OF TENDER IN CHARGE OF DRAW
SAt	5/26	OFF	4: part		ļ			•		Forgerein
SOM	5/27	ON	8. AM							Kisecuir
SUN	5/27	OFF	4. pm		<u> </u>	l.		6	чение на водите на полнати на по водите на полнати на пол полнати на полнати на по	Kuzzeian
MON	5/28	ON .	8: An		$\vdash$	>		<u> </u>	*	KARRINGA
MON	5/25	OPF	4: m							Korrin
Tue	5/29	ON	81 An	· · ·						KARRIEM
Tues	5/29	OFF	4. pm				346	1 <u></u>		Kiserium
Wed	5/30	on	899An		~	~	~			ruit
wed	5.30	off	40pm		~	)		$\frown$		ruth
Thurs	5-31	0 v.	800m						e es antima	Mill
Thurs	5-31	off	4.22		~				<u> </u>	Mull.
	1									
<u></u>									· · · · · · · · · · · · · · · · · · ·	
	<b> </b>									
	[						-		· · · · · ·	
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# Report of Drawbridge Openings June 2018

BRIDGE NUMBER 843-577-7605 REPORT FOR THE MONTH OF Sume NAME OF BRIDGE 843- 577-7605

DRAWBRIDGE SERVICES, INC.

# STATE OF SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION

Form 3079 Rev.

085

TYPE OF VESSEL NAME OR NUMBER **DRAW** TIME TONE -DRECTION CONDITION OF HAME OF TENDER DAY OF WEATHER & GATES DROP GATES OPEN PASENG OF VESSEL IN CHARGE OPENING WEEK DATE AN OR PM AM OR PM NORTH SOUTH RVIR THROUGH PARSING THROUGH OF DRAVY NUMBER 8ºgm con 15 52 9 ysm Sai q MEAndor Sunn Fr. 6 Am 6-2 0gm Я on 00 off (...) fr T.~ 6-3 8-ON SUN (ARIXINN  $\leq$ ARRIGA 6-3 OFF 4. pon Sun 8. An ON Kisneum Man lort OFF naben 4' MOU 6-4 PM 8:Am 6-5 Īue. a ALRHEM 4. pm KARRIAN OFT 6-5 1110 Setam N2 150 · 30 ) off  $\mathcal{N}^{\bullet}$ 6 Yg2) 12; ARQuer ON Wed (5~ -4.pm AR-ARRIAN 0-6 -Seam ON off 400m 6-1 ----8 mm 6-8 .+-0M -r 4000 6-8 off me 8:An SA 6-9 DN Santen-6-9 4 gm OF-CARRIEM SA7

20 18

5 S. Opening

# BRIDGE NUMBER (843) 571-71.05

# STATE OF SOUTH GAROLINA DEPARTMENT OF TRANSPORTATION

Form 3079 Rev.

REPORT FOR THE MONTH OF June 20 15 NAME OF BRIDGE New Astrony DRAWBRIDGE SERVICES, INC.

DAY OF WEEK	DATE	draw Opening Number	TIME GATES DROP AM OR PM	TME GATES OPEN AM CR.PR	DIPRE	KORC	CONDITION OF WEATHER & RIVER	Type of Veasal Passing Through	NAME OR NUMBER OF VEGGEL PASSING THROUGH	NAME OF TENDER In Charge of Draw
Sun	6-10	ON	8: don	ş <del>300</del>						Knepsien
SUN	6-10	OFF	Hipp				<b>9</b> 2-	<u></u>		Kisneien
MON	6-11	ON	8'.m				~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~			14APRIEN
MON	611	017-	41 pm				Contraction and the second of	2		KAREIGA
Tue	6-12	0	S.AM							KARRIUM
tue	6-12	OFF	4. pm	allen og det forste en sen er	alter sytelen med and an and a second se			an na an a	An and a second an	KARRIEM
Wed	613	on	8 %m	CORDER OF CONTRACTOR	_	anon	When all and the second	··		rube
Wed	6-13	.2	9 20m	9 3°m	5		Cloudy	Tug	Angela	<i>F1</i>
Wed	6-13	-3	1095m	10 3m			Cloud	THE	Angela	11
Thue	6-14	on	gogan	÷	F********			·-+	· · ·	rule
Thurs	6-14	off	Yeyon					gans-		rill.
Eri	6-15	on	8°mm			***********		، <sub>ما</sub> بوماندانانان مارون مارون		rife
Eri	6-15	off	4ºpm				· · · · · · · · · · · · · · · · · · ·			rill
Sat	6-16	on	892m	~		- Fareara	~ ·	And and a second second second	2	nell
sat	6-16	.4	300m	31/20	1		Sunny	Fishing BT	Margarita	11
59+	-6-15	.5	350	yestin		1	Cloudy	E.S. R	-manganite	61
\$91	6-16	o'ff	4000							The
Sun	611	ON	8.Ah	······································				1		Enspelien
SW	6-17	OFF	41gm			<b>*</b>				KAERIAM
MON	6-14	ON	8. An				5 <b>*</b>	<b> </b>	And a second	Koncreian

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### STATE OF SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION **REPORT OF DRAWBRIDGE OPENINGS**

Form 3079 Rev.

BRIDGE NUMBER (843) 577-7605 REPORT FOR THE MONTH OF June NAME OF BRIDGE New Arhley Bridge DRAWBRIDGE SERVICES, INC. 20 18

DAY OF WEEK	DATE	DRAW OPENING NUMBER	TIME GATES DROP AN OR PM	TAIE GATES OPON AM OR PM	DARE	CTION SOUTH	CONDITION OF WEATHER & RIVER	TYPE OF VESSEL PASSING THROUGH	Nake or Number Of Vegel Pateng Through	Hame of Tender In Charge of Draw
MON	6-15	০ন	4:pm -	<b>.</b>		-	Ř			Rocesim
TUL	6-19	ON	8; An						an ing ing manufating ting an ing ing ing ing ing ing ing ing ing in	Kanpirm
Tues	6-19	OFT-	4; pm	And the second second		446 286/000000				KARRIEM
Wed	6-20	on	899 mm				64103=mr~ ~			ruh
wed	620	off	Y Sam	and the state of the	$\sim$		1-m1000-0-12 +			rife
Thurs	6-21	on	80%					*******		rull
Thurs	6-21	6	10 3mm	10 45		V	Sunny	Tus	KW	
That	6.21	.7	125	1250	$\checkmark$	[	Sunn	Sail	Ariel	11
Anir	6-22	<u>, 01</u>	8ºam				<u> </u>			Jul
int.	6-22	<u>off</u>	100m	······					And a second	rue
RET	6-22						Constantion Stationers		······································	A New York Carlos and Car
HT-			and the second s			ļ			مىمىرىسىپ بىرى جەنبار بىلىنىڭ بىرى جەنبار بىلىنىڭ ئېرىپى بىلىنىڭ ئېرىپى بىلىنىڭ ئېرىكى بىلى بىلىنىڭ ئېرىكى بىلىنىڭ ئېرىپى ئېرىكى ئېرىكى	
SAT	625	ON	8:An	و						<b>EARLIBU</b>
SAT	6-23	OFIT	Hipp			** <u>**</u>	-			KARRISM
SUN	6-24	ON	8-Am					· · · · · · · · · · · · · · · · · · ·	<del>_</del>	KARKIN
Sad	6-24	OFF	4 spm	e	· · · · · · · ·			* <del>*******</del> *		KARRIAN
MON	6-5	ON	S' An					, etc.	anna an Maran <mark>a' Barna D'Adden a D</mark> hilon Loniosta a' an Anna an	KURRHEN
MON	6-25	8	1: 3% pm	<u></u>			Sunny	Sail	Ariel	FARLIGN
Mon	635	OFF	et: por					میں		KiARRigh
Tues	6-26	Da	S.An						<u> </u>	VEARKSien

# BRIDGE NUMBER (843) 577-7605

## STATE OF SOUTH CAROLINA DEPARTMENT OF TRANSFORMATION

Form 3079 Rev.

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REPORT FOR THE MONTH OF Sure 20 18 NAME OF BRIDGE MUD AShing DRAWBRIDGE SERVICES, INC.

day of Week	DATE	draw Opening Number	TIME Gates Drop Am or PM	TIME GATES OPEN ALL OR PHI	Dire North	SOUTH	CONDITION OP WEATHER & RIVER	TYPE OF VESSEL PASSING THROUGH	NALE OR NUMBER OF VIIIBEL PAISING THROUGH	NAME OF TENDER IN CHARGE OF DRAW
Tur	2615	OTT	4. pm			$\geq$			->	KARRIVEN
wed	27-18	01	899m	<u> </u>				· · · · · · · · · · · · · · · · · · ·		ruch
were	21-18	off	Yeen			and a second				rite
Thurs	28-18	on	Socam	· · · · · · · · · · · · · · · · · · ·						riter
Thurs	28-8	oft	40pm						· · · · · · · · · · · · · · · · · · ·	rite
(Fri	29-18	on	8ºam						ری می این این این این این این این این این ای	Mile
(Fri	29-18	OFF	4gm	· · · ·		, <b>~</b>				Jule
Sat	30-18	on	8 Am	**************************************	•			~		rite
-Sat.	30-18	orf	4891	· · · · · · · · · · · · · · · · · · ·	10 <b>0</b> 00				· · · · · · · · · · · · · · · · · · ·	
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# Report of Drawbridge Openings July 2018

BRIDGE NUMBER 843-577-7605 REPORT FOR THE MONTH OF \_\_\_\_\_\_ 20 1 NAME OF BRIDGE \_\_\_\_\_\_ AShley River Bridge DRAWBRIDGE SERVICES, INC. 20 18

## STATE OF SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION

Form 3078 Rev.

day of Week	DATE	oraw Opening Number	TIME GATES DROP AM CR.PM	TME GATES OPEN AN CR PH	DIPE	STION SOUTH	Condition of Weather 4 River	Type of Vensel Passing Through	n alf or number of vessel paireng through	Name of Tender In Charge of Draw
Sun	7-1	ON	8: An	, <b></b> ,				·		FARRIEN
Sund	7-1	OFF	Hom							Kpirsus
MON	72	Od	S.sn							KARAfen
MON	72	OFF	4. m							Kneeliens
Tues	7-3	Dai	8, Am	د	· · · · · · · · · · · · · · · · · · · ·			· · · · · · · · · · · · · · · · · · · ·		CARROW
Tilas	7-3	OFF	4. PM	·				-		KARRIN
wed	7-4	on	8°am		_		·	~ <u> </u>	, <b>, , , , , , , , , , , , , , , , , , </b>	rith
Wed	7-4	off	400m			~	, Land C. 1977.		en e	rill
Thurs	3-5	on	8ºmm			L			· · · · · · · · · · · · · · · · · · ·	rilon
Thurs	7-5	off	4ºm	~~~~				And Conception of Second	to the second se	sitte
Er,	7-6	$\sim$	8 bir		~		~			rilla
25.	7-6	off	11m						- 300 - 100	rubh
SAT_	77	ON	8. An				3			KARRIVEM
SA-T	7-1	OFF	4.pm			· · · · · · · · · · · · · · · · · · ·		2) 2)		Karelan
Sun	78	ON	8; Am							Khareputon
SUN	7-8	OFT-	4. yran		•======					Korriem
Mon	7-9	SN	8. An							1 GARRING
MON	7-9	OFI-	4, yr			C//Dec/Parameter		2		Kaskeikan
Tüe	7-10	DN	8' AM	, and the second se						KARRIAN
The	7-10	OFF	Him				٤	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		KARRIDM

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# BRIDGE NUMBER STATIOS

## STATE OF SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION

Form 3079 Rev.

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### REPORT FOR THE MONTH OF July NAME OF BRIDGE New Ashley DRAWBRIDGE SERVICES, INC.

day of Week	DATE	DRAW OPENING NUMBER	TIMË GATES DROP AM OR PM	TME GATES OPEN AM CE PX	DIRE	CTION SOUTH	CONDITION OF WEATHER & RIVER	TYPE OF VESSEL RASEING THROUGH	nuks or number Or vegsel Haseng through	Name of Tender In Charge Sf Draw
Wet	7-11	en	8%am	sorrange				John	فالأجمع بما والعد بعدي	ruli
Wed	7-1(	off	49900	s						rill
Thurs	7-12	øn	80gm					and the second se		Juli
Thurs	7-12	. off	400							rite
Fri	7-13	on	8ºam						· ·	rife
Fri	7-13	off_	400m							Tubbe
Sg+	7-14	on	8º am							rith
Sat	7-14	off	4%	روع هادمتندرد و معرف الم						_rith
SUN	7-B	ON	8: AM							FARRIAN
SUN -	1-15	OFF	4. ph			·			Inc. I Sometime programming and the second second	KARRIGH
MON	7-16	ON	8. Am							KARRAM.
MON	7-16	OFF-	4.00			**		-		KARRION
Tue	7-17	ON	8 AM	***			· 	<u></u>	A second s	KARRIEN
The	7-17	OFF	Hipm					*		Kneel En
wed	7-18	0n	89m		, ,					NU
wed	7-18	044	Yeem	·			·····			rift
Third	7-19	00	8. com					· · · · · · · · · · · · · · · · · · ·	And the second s	Twie
Thurs	7-19	off	492	**********			1		 	rul
<u> </u>	7-20	on	8º am					· · · · · · · · · · · · · · · · · · ·		rit
Cri	1-20	off	youph				67 m 1	Araben areas	Commentation and the second	rute

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### BRIDGE NUMBER \$43-577-7605

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# STATE OF SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION

Form 3079 Rev.

DBS

DAY OF WEEK	DATE	oraw Opening Number	THE GATES DROP AM OR PM	TRIE GATES OPEN AM OR PM	Dire	NOITON SOUTON	CONCIDENTION OF WEATHER & RIVER	TYPE OF VESSEL PASSING THROUGH	NAME OR NUMBER OF VESSEL PASSING THAOLIGH	NAME OF TENDER IN CHARGE OF DRAW
Sat.	7-21	ON	S. AM							KAREION
SAt	7-21	OFF	tipm	8						KARRIGM
SUN	7-22	ON	8. sm							KARRIEM
Sun	1-22	ØFF	4. jan				<b>2</b> -	<b>-</b>		TCARRIIDON
MON'	7-23	ON	S'. An							KARRIES
MON	7-23	OFF	4. m					->>-		Kunrism
Tax	7-24	(C)w)	8. AM							KARRIGH
Tue	7-24	OFF-	4. pm		<u> </u>		2			KARRIEM
Wed	7-25	on	gor m		p	,				ruh
Wed	7-25	off	49m		20.000	~~~~				rile
Thurs	7-26	on	8 Am	-Duppinguniting	<u> </u>		***************************************			ribe
Thues	7-26	off	4ºom				· · · · · · · · · · · · · · · · · · ·			Juli-
Fri	2-27	on	18°m	and the second sec	, r		· ·····		с с <sup>одн</sup> аральных украсности на с	rule
<u> </u>	7-27	<u>off</u>	148m	1.		·				Till
Sat	7-28	01	8 mm							sil
1.25	7-28	off	4 pm	Province and a second second			· · · · · · · · · · · · · · · · · · ·			
Sw	7-29	ar	8. AM							KAPRIEM
Sund	7-29	erf	4. pm		<u> </u>			·	29 - Carrier Contraction Contraction Contraction	KIARENIEM
MOU	7-32	ON	C; AM				·			K)
MON	7-30	OFF	4:pm		<u> </u>	Contractoria		5		14

BRIDGE NUMBER (848) 57	7-765	
REPORT FOR THE MONTH OF	July	20 18
NAME OF BRIDGE Nいい	ASHIEN	
DRAWBRIDGE SERVICES, INC.	1	

# STATE OF SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION

Form 3079 Rev.

r							·			
day of Week	DATE	Oraw Opening Number	TME GATES DROP AM OR PM	TIME GATES OPEN AM OR PH	Dirt Horith	SOTION 40411	WEATHER & RIVER	Type of Vessel Passing Through	, Mart or Number Cr vesel Presel	NAME OF TENDER In Charge De Draw
Turs,	7-3	on	8 PAm	antessantestantestantestantestantesta	12 arrs,					selle
Twes.	7-31	ON	9Am	The second design of the secon					،	Cocarto
TILLS	7-31		245	3 07	-		sunny	Sail	UBIQUETAL	(AGGA
Tres	7-31	<u>Po</u>	4.PM	*****				-		Condes
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· · · · · · · · · · · · · · · · · · ·		,		<u></u>						
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<u> </u>								) ••••• <u>•</u> ••••••••••••••••••••••••••••••		
							4			

# Report of Drawbridge Openings August 2018

### BRIDGE NUMBER 843-599-7605 REPORT FOR THE MONTH OF 20 18 NAME OF BRIDGE NEW ASKIEY DRAWBRIDGE SERVICES, INC.

#### STATE OF SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION REPORT OF DRAWBRIDGE OPENINGS

Form 3079 Rev.

DAY OF WEEK	GATE	oraw Opening Number	TIME Gates Orop All or PM	TIME GATES OPEN AM CRIPH	DIRI	CTION SOUTH	CONDITION OF WEATHER & RIVER	TYPE OF VEBSEL PAGERIC THROUGH	NALE OR NUMBER OF VESSEL PASSAND "MROUGH	NAKE OF TENDER IN CHARGE OF DRAW
D'U	8-1	m	S 22m	. wasten	nanantar -			·	and the second se	Bible
wed	8-1	off	400m	······································	_		وجا بندر علائمونا الري ر	and the state of t	und beit an official lines.	Melle
Thurs	8-2	m	805 mm	• •	-		·	Announced and counter		Mill
Thurs	8-2	074	400m	1994-1233 Program		. r				Mille
Fri	8-3	on	8ºm	*=		<u> </u>	**************************************	· · · · · · · · · · · · · · · · · · ·	A Contract of the second se	rule
Fri	8-3	off	40000	·				the second s		ruin
SAT	8=4	ON	8: AM		r					Knentin
SAT	8-4	1	12:50	1.05pm	1		Rainy	Sport Fish	FinAllic	KARRIM
SAT	8-4	OFIE	4. PM	alam in the second s	: 	<b>9</b> 2000 - 2000	500m			FARRIAN
Sat	8.4	00	LIPM		-	-		,	and the second s	COGGINS
Sant	8-5	off	12 Am				.≪ <sup></sup> Ba <sub>bba</sub> ,		Server and the server	Coga , DS.
Sud	8-5	ON	8: AM	p				0000 <u>1000 1000</u> 1000 1000 1000 1000		KARRIGH
SUN	85	OFF	4:pm			`	- Korga	Calinaum/orosier	₩ŢġŦġĸţ#₩Ħ₽ĢŦġŢġţġĸĸĸĸĸĸĸĸĸ	Koreian
Sur	8-5	00	4PM	9.0000.			داهندرسو <sub>ا</sub>			Coepins
Bapl	8-50	off	12AM			_			17	(DOWNG
MON	Š-6	DN	S. Am			~		Come.		KARRIBN
MON	8-6	OFF	4 ign							Karrian
_Moss_	8-6	ON.	4 Pril	<u></u>	$\sim$	\$	fairing ~ ~		4 PROFILE CONTRACTOR	COGGAS
Tues	8-1	04	12AM	<b>L</b>		محجو	Carrow and the second s		an in the second se	Coggins
Thes	8-7	DN	8: AM						**************************************	KARLIEN

pening

### BRIDGE NUMBER 843) 577-766

STATE OF SOUTH CAROLINATDEPARTMENT OF TRANSPORTATION

Form 3079 Rev.

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REPORT FOR THE MONTH OF ALG 20 18 NAME OF BRIDGE New Ashley DRAWBRIDGE SERVICES, INC.

DAY OF WEEK	DATE	oraw Opening Number	TIME GATES DROP AM GR PM	TRME GATES OPEN AM OR PM	DIRE		CONDITION OF "WEATHER S RIVER	TYPE OF VESSEL PASSING THROUGH	, name or number of versel Pasiling through	NAME OF TENDER IN CHARGE OF DRAW
the	8-7	OFF	H: pM				· · · · · · · · · · · · · · · · · · ·		47 ATTEND 19	KARRIEM
Tue	8-7	on	4 Fm	•×	$\leq$	<u> </u>	e same	and the second se		Cocperins
Wed	8-8	off	12 Am	<u> </u>	<b></b>		404100001000000000	- <b>bar</b> end/~0	<b>THEORY</b> State of the state of	10904n C
Wed	8-8	$\sim$	80gm	· · · · · · · · · · · · · · · · · · ·				·	×	rite
mul	8-8	off_	4200	· · · · · · · · · · · · · · · · · · ·	-	·		r		rite
Thins	8-9	on	8ºgm		-				Construction of the second	rite
Thurs	8-9	off	400m	,	*		•••••			Dite
fri	8-10	on	8 gam	~~ <u>`</u>	~~~	-		-	1 <sup>949</sup>	Jul-
Fr.	8-10	off	40gm		-	*****		Parmer	/	sile
Sat:	8-11	on	82 pm					f==	f 1. j.	Julio
Sst	8-11	off	4 <u>9</u> mm							Juli
Sun	8-12	00	8 Ame		_	~	. جىماد ئە <b>رىم</b>	د به ۲۰۰۰مهور		Cociones
Sun	8-12	off	4Pm	<b></b>	ب		<u> </u>	<b>S</b>	terrenter and the second s	Coche
Sun	8-12	on	8 3cm	<u> </u>				,		Mill 3
SUN	8-12	<u> </u>	9.50m	y yom	V		Clear	VSCHT	EGR	11
Sun	8.12	ott	950m					/		Melle
Mon	8-13	02	8 ton		$\overline{}$				· · · · · · · · · · · · · · · · · · ·	Cocanas
Mon	8-13	045	4 PM				·	Children Charger - Pro-		Coage
MON	8-13	UV	4. pM			<u>~</u> ]		$\rightarrow$		Kneerum
MON	8-13	0FF	12: Am			معرفین میں معرفی مع معرفی معرفی مع	and the state of the state state of	WARNES TO WARDEN	ىتىدە يەتتەرىپىيەت مەربى ئىلىرى ئەرىكە ئەتتەرىپىيەت ئەربىيەت ئەربىيەت ئەربىيەت ئەربىيەت ئەربىيەت ئەربىيەت ئەربىي	KARRIEN

### STATE OF SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION REPORT OF DRAWBRIDGE OPENINGS

Form 3079 Rev.

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DAY OF WEEK	DATE	oraw Opening Number	TIME GATES DROP AM OR PM	TIME GATES OPEN AM CE PU	DIRE North	OTION SOUTH	CONDITION OF WEATHER & RIVER	Type of Versel Passing Through	NAME OR NUMBER OF VESSEL PRIESING THROUGH	Hame of Tender In Charge St Draw
Tues	8-14	ON	8 Am		40					COGGINS
Tues	8-14	655	4pm					Marchine		Coagins
Wed	8-15	on	8ºgam	·			and the state of the		······································	richt
Wed	21-8	3	130	1500	V.		Clear	Sail	Catalina	11
wed	8-15	<u> </u>	490m			,	gas (n v 18 % 20 Martineau Conv. 1944) (n v 16 - 44 - 44		n an	Jul
Wed	8-5	UN	4. In.	······································				and Street Street	and the second	Kprevien
Wed	8-15	OTT	12. An	مەدەبىيەر يېرىيەر يېرىك	+WOD 1-		and a particular special difference of the second		New Sector Sector Sector Sector	KARRIEM
wer	8-16	02	8ºgam	,	(				**************************************	Nehh
Wed	8-16	0-64	400m					Canada State St		rute
Thue	8-16	ON	4 pm	~			part of an entry of the second second	w		Foreguen
These	8-16	077	12:m				······	<u>ur na haya tan</u> ka wata ya tang a	975-20-20-20-20-20-20-20-20-20-20-20-20-20-	Kokeling.
Fr.	8-17	on	8°am		<b>~</b> ~~~	· · · · · · · · · · · · · · · · · · ·		•	ATTEND CONTRACTOR AND A DESCRIPTION OF A	Mill
Er.	<u>8-n</u>	off	yon				مەربىيە بىرىمىيىچە	faddar i r yaar		Millio
SAT	8-18	ON	8: AM		CONCEASE NO.					KARRIEM
SAT	8-18	Ott	4; pm				·			1 SAAREI GA
Sud	8-19	ON	8. Am	,					A DESCRIPTION OF THE OWNER OF THE	ENPRICM
SUN	8-19	044	4. pm	مبعد.		493aa900*000000	······	CARLO CARGE STREET		KAREION
Jun f	<u>5-19</u>		4 Pril	······				<u> </u>	1	(orgym)
Man	8-20	- #0	12 PHN I							(began 1
MON 8	-20	Cal	S. Am	••••••••••••••••••••••••••••••••••••••						Kondian

BRIDGE NUMBER 843-577-7605 REPORT FOR THE MONTH OF Aug 2018 NAME OF BRIDGE New AshTel DRAWBRIDGE SERVICES, INC.

#### STATE OF SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION **REPORT OF DRAWBRIDGE OPENINGS**

Form 3078 Rev.

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REPORT FOR THE MONTH OF <u>AUGUST</u> NAME OF BRIDGE <u>New ASHICL</u> DRAWBRIDGE SERVICES, INC. 2015

day qf Weex	DATE	draw Opening Number	TRAE GATES DROP AM OR PM	Time Gates Open Am or Pu	Cire Horth	iotión Iotión	CONDITION OF WEATHER &	TYPE OF VESSEL PASSING THROUGH	NALZ OR NUMBER OF VISEL PASSANS THROUGH	Name of Tender In Chârge Cr Draw
Mu	8-20	OFF	4. PM	1000	فيهدوه فد منتعينين	نىدەرىيەر ايرىپ التوپىي		ىر مەرىم سەھەرىرە يەرى بىير بىيىر		KARRIGH
Tues	8-21	5	899 m			-,	*. <u></u>	·		Melle
· Tuss	9-21	off	400 m	· · · · · · · · · · · · · · · · · · ·		E Franker	r			Thi
wed	8=22	ON	8. An	·						KARRION
Wed	8-2Z	470	4. m		·=		resulting and	WWG COLLEGE CONTRACTOR CONTRACTOR		KARDIAN
Thurs	8-23	00	Som	( <b>**</b> ****		~	ger care and a second se		مېر د د د د د د د د د د د د د د د د د د د	rul
Thurs	8-23	off	400m	· · · · · ·	ىيەرلىدىنىڭ بارىدىدىدىرىيىن	-			and the second sec	rule
(ci	8-24	6n	Som.			-	annonan in -			nill
<u>Fri</u>	8-24	oft	Your						مەرىپىغىرىي مەرىپى مەركېرىيىنىڭ ئىلغانلىرى مەرىپىيىنىڭ ئىلغانلىرى بىرىيىنىڭ ئىلغانلىرى	rite
Sat	8-25	01	8°am		<u>~</u>	-			· ·	r.u~
Sat	8-15	oft	yerm					gitative discussion part of the	*	Tull~
Sun	8.26	60	8 And	~		<u> </u>				Coopers
Sum	8-24	off	iffor	-22-44	•	<u> </u>		<u> </u>		again
Mon	8-21	<u>90</u>	8.4m		<u> </u>	`		~	• • • • • • • • • • • • • • • • • • •	Comm
Mon	8-27	<u>off</u>	4Pm	Nacco-	~					Colpins
MON	8-27	DN	47pm				Dianatur:		and the second	KAPPION
Tays	8-21	OTT	12" AM					: د نمانهایا که مدینه مورور بر <sub>من</sub> ور . 	مندسین ۲۰۰۰ میلی ۱۹۹۰ میلی میلی از میلی از میلی میلی میلی میلی میلی میلی میلی میل	KARRIEM
Tues	8-28	<u>6 8 8</u>	8Am		$\frown$		and the second s		200-2016/07-07-07-07-07-07-07-07-07-07-07-07-07-0	(Garan
Jues	8-28	<u></u>	4 Pm	<b>***</b> *********************************					10/10/10/10/10/10/10/10/10/10/10/10/10/1	Obgen
wed	8-29	on	800 am	•		_	· · · · · · · · · · · · · · · · · · ·			Mile

### BRIDGE NUMBER 843-577-7605

REPORT FOR THE MONTH OF \_\_\_\_\_\_ NAME OF BRIDGE \_\_\_\_\_\_ DRAWBRIDGE SERVICES, INC. / STATE OF SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION

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REPORT OF DRAWBRIDGE OPENINGS

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DAY OF WEEK	DATE	draw Opening Number	Tilitë GATES DROP AM OR PM	TIME GATES OPEN AN CRIPH	Direction North South	CONDITION OF VIEATHER 5 RIVER	TYPS OF VESSEL PASEING THROUGH	NAME OR NUMBER OR VESSEL PAISSNS THROUGH	NAME OF TENDER IN CHARGE OF DRAW
Werd	8-29	off	400						Juli
Wed	6-29	ON	4. pm	***********			ç		Kneelan
Wed	829	OFF	12: AM					meantain 4,44 anna 1,44 anna 1,4	KARRin
Thirds	8-30	5	800 Am						ribe
Thurs	8-3	off	400m	·····				Particular Street and Street	rille
Thur	8-30	ON	4 pm	**************************************					KARRÍUM
Thus	&-3D	OFF	12AM	······				an a	Karrish
R	8-31	on	8ºm						Much
FTIN	8-3	_4	115 Am	11 53		Clear	Yacht	EGR	
5-1	8-31	<u>ə</u> {+	400m	Show of the state					Mill
						······································	х 		· · · · · · · · · · · · · · · · · · ·
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# Report of Drawbridge Openings September 2018

# BRIDGE NUMBER 843-597-7605

## STATE OF SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION

Form 3079 Rev.

REPORT FOR THE MONTH OF Sept 20 28 NAME OF BRIDGE New MSh. 20 28 DRAWBRIDGE SERVICES, INC.

dat of Week	DATE	DRAW Opening Number	TIME GATES DROP AM OR PM	TOME GATES OPEN AM OR PM	DIRE	NORC Invoi	CONDITION OF WEATHER L RIVER	TYPE OF VESSEL RASENG THROUGH	Naue or Number Or Vegel Pairing Through	NAME OF TENDER IN CHARGE OF DRAW
SSF	9-1	ON	8, AM							Knenien
SAT	9-1	1	10:00	\$0, id		V	Clear	sourt Fish	Finall'	KARRISM
SAT	9-1	OFF	4.pm	C. State of the Content of the Conte				,		KARphen
SIN	9-2	ON	Sim	ا د د که دو او د رو د رو د رو د رو د رو د رو د ر			al ministration () have been seen as	éa	an a	KUARRIGN
SUN	7-2	OFF	4. pm	upom P			a <u></u>		، <del>المارين المارين المارين</del>	KAERIEM
MON	93	ON	8,An	). Bergenergensterrer	**************				and the state of t	Karesun
MON	9-3	2	1:20	1,40	V		Cleer	Gentral	Finalli	KARRAM
MON	93	OFF	4. pm							KARRIEM
Tues	9-4	OV	8. Am	,Payap Jon State Street				e program na del del com 14 a	y committee and committee and an and and an and and an and and	KARRIAN
TUES	9-4	OFF	4' pm						a a a a a a a a a a a a a a a a a a a	KARRIUN
Wed	9-5	on	809 m				K reasonanting			. suit.
Wed	9-5	-470	493		ļ			[ [		ribe
Thurs	9-6	on	89th				Common .		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	Milla
Thurs	9-6	0ff	yer	5		-				Sil
<u>fri</u>	9.7	5m	898m	·						The
fr.	9-7	off	490m						1	Sul
59+	9-8	$\sim$	85Am	**************************************						Mil
<u>S94</u>	9-8	off	4080		<u> </u>			30000		Jubb
Sun	9-9	on	1/200		<u> </u>		· · · · ·			Roll .
Syn	19-9	3	1149Am	115Am		6	1 fair	Sport Fish	<u>Finalli</u>	12ul
		v			$\sim$	De.	nino	\	1 Brats	

BRIDGE NUMBER 843-577-7605 REPORT FOR THE MONTH OF 5207 20 18 NAME OF BRIDGE New AShie DRAWBRIDGE SERVICES, INC.

### STATE OF SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION REPORT OF DRAWBRIDGE OPENINGS

Form 3079 Rev.

					;		·····		,	
day of Weex	DATE	DRAW Openang Nlamber	TIME GATES DROP AN OR PM	TANE GATES OPEN AM OR PM	DIRE	SOUTH SOUTH	CONOMON OF WEATHER D RIVER	Type of Versel Passing Through	NAUE OR NUMBER De Veseel Pasiung Through	NAME OF TENDER In Charge of Draw
Sur	9-9-18	off	Yoom		-					Juli
Mon	9-10	5	893m			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		-		rite
mon	9-10	Ц	1105	山場	V	Ł	Fair	Kot Eisher	Ein Allie	11.
mon	9-10	occ	Hogon	State of the second second				······		rult
THIS	9-11	on	800	and the second					· · · · · · · · · · · · · · · · · · ·	Mill
Tus	9-11	5	1152m	12:5m		$\checkmark$	Fair	V+	FGR	11
TUNS	9-11	off	1000		(			1	C C C C C C C C C C C C C C C C C C C	sull
Wed	9-12	on	839m			501. 		Variation and transformed	······································	Men
Wed	9-12	df								rute
BUN	9-16	ON	8°, Am					4		KARAcal
Sur	9-16	OPE	4 1M		49999-01-11-1	1.44-5	-Monteroll-Construction	1		KARRIEN
Ma	9-17	ON	S. AM		47943170101104 <b>4117</b> 1		"Surface in a			Krazer an
MON	9-17	6	3: DOAN	3:15 pm			Fair	vatch	EBA	FARRIAN
Mws	9-17	off	4: m	· · · · · · · · · · · · · · · · · · ·						Yarrian
Tues	9-58	ON	S' Jon		<u> </u>					Korreien
Tae	9-66	OFT	4:pm						and protocols and a second	Kaeelon
hav -	9-19	0n	Sohn	-	/	~	-			ruit
Wid	9-19	off	400m						an analas and a	sult
1 hus	9-20	ON	Stom			~	+			Mill
this	9-20	off	Yogm		4 <b></b>			· · · · ·		ril
			1						N.	

BRIDGE NUMBER 843-577-7605

STATE OF SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION **REPORT OF DRAWBRIDGE OPENINGS** 

Form 3079 Rev.

DBS

REPORT FOR THE MONTH OF DRAWBRIDGE SERVICES, INC.

ASK

Sept

10

20 18

day of Week	DATE	DR#W OPENING NUMBER	TIME GATES DROP AM OR PM	THE GATES OPEN ALL OR PM	DIRE	STION SOUTH	CONDITION OF WRATHER & RIVER	TYPE OF VEBSEL PLOENG THROUGH	NAUT OR NUMBER OF VESSE. PÄSIDNG THROUGH	Nume of tenoer In Charge De Oraw
\$Fi	9-21	on	\$00m	$\sim$						rui
Fri	9-21	OFE	4000			Ċ.	•	<b>`</b>		rute
54	9-22	on	80mm			\ 	•	·		rub
Set	9-22	140	Yesh	·			/~~			Juli
Suiv	9-23	Dal	8'del	·						KARKIM
SW	9.23	OFF	4im.				۵			Konaiin
Ma	9-21	EN	8, AM	·						KAnning
MON	9-24	OHE	Ym	· ·						Kanni
The	9-25	OV	8:Am	· · · · · · · · · · · · · · · · · · ·						KARRIEN
The	9-25	の行	24: pm							KAOPICIN
wed	9-26	on	80m	· ····································						rie.
Wed	9-26	off	40gm			,				rije
Thurs	9-27	on	Sim							rill
Thurs	9-27	off	4ºpm							run
Fri	9-35	on	8°m	·						. Juli
Fri	9-28	<u>066</u>	40pm		· · · ·		······································			<u></u>
Sat	9-29	01	8°am					$\sim$	winner 1997	
597	<u>9-25</u>	044	4ºpm				r		······································	Tuli
- Dien,	9-30	00	8			: 		s <u>s.,</u>		Canan
Sun	9-30	08	4				,	/ • • •		(appa -

# Report of Drawbridge Openings October 2018

BRIDGE NUMBER <u>843-577-7605</u> REPORT FOR THE MONTH OF October 20\_1K NAME OF BRIDGE <u>New Astronomy</u> DRAWBRIDGE SERVICES, INC.

## STATE OF SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION

Form 3079 Rev.

DAS

DAY OF WEEK	DATE	Draw Opening Number	TIME GATES DROP AM OR PM	TIME GATES OPEN AM OR PH	Dire North		CONDITION OF WEATHER & RVER	TYPE OF VESSEL PASSING THROUGH	NLME OR NUMBER OF VESSEL PRESING THROUGH	NAME OF TENDER IN CHARGE OF DRAW
Mon	10-1	00	8 And	~~~~				· · · · · · · · · · · · · · · · · · ·	،	Macay wh
Mon	10-1	20	4 pm		·	·			·····	Werning
Tues	10-2	OD.	8 AM	······································					الم من المراجع	Coopins
Tues	10-2	Pf6	4Pm							1008WAG
Mad	10-3	on	SMAM	~~~~	,		4	·	· · · · · · · · · · · · · · · · · · ·	Milli
Wed	10-3	df.	Yom	· ``			· <b></b> .	· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·	rill
Thinks	10-4	on	Rogen				• <u>•</u> ••	$\sim$		, rubba
Thurs	10-4	off	Yegen		,		/			ruhn
Eri	10-5	On	SAM	. )	(		÷.	<b></b>	· · · · · · · · · · · · · · · · · · ·	Julion
fri	10-5	ofC	400	<						Tille
Sat	10-6	ON	8, 20					· · · ·		KARRION
Sof	1D-7	OFF	4.	·····			· · · · · · · · · · · · · · · · · · ·			KARRIGH
Sw	10-7	ON	8. An	~~	<u> </u>		• • • • • • • • • • • • • • • • • • •		< < < <	Kanzian
Sus	10-7	017=-	4 pm							Kuecien
mod	10-8	CM .	8".Am				e	······································		KAREIGM
MON	10-8	off	clipm				 			Faceino
The	10-9	ON	3 m	1			• <u></u>		A CONTRACTOR OF	1Careiny
TUL	109	l	10:15	10:30	4	ĺ.	Claar	Seil boat	Daneing Lion	Karana
The	16-9	2	1; 00 M	1;15	/		Cloudy	Sailb of	Soul	Korain
The	10-9	OFF	4i pm	·						Kapelon

penings

Boats

# BRIDGE NUMBER 843 - 517 - 7605 REPORT FOR THE MONTH OF OCH NAME OF BRIDGE NEW HSL DRAWBRIDGE SERVICES, INC.

#### STATE OF SOUTH GAROLINA DEPARTMENT OF TRANSPORTATION **REPORT OF DRAWBRIDGE OPENINGS**

Form 3079 Rev.

DAS

DRAW 7042 TIME CONDITION OF TYPE OF VESSEL NAKE OR NUMBER DAY OF DIRECTION NAME OF TENDER WEATHER & DATE GATES OR OP GATES OPEN PASSING. OF VESSEL IN CHARGE WEEK OPENING NUMBER AM OR PM AM OR PH HORICH ADUTH RIVER THROUGH PASEING THROUGH OF DRAW wed g 00 10-10 Cr TAW 15 23 Vakh loud Wed 10-16 **1** RUV 34 2 r Sai Wer P? Joude 0-10  $\mathcal{O}$ 0 9 m nw 00 Ċ Ot NO 10-10 JAN Y 60 1---16-1  $\cap \mathcal{N}$ 100 Of-f 10-11 LVr 8 QQ 10-12 Ór \* An 50 S.S. 1 ใจ-เว S. 11 225 ane na 10*m* An 40 48 11 esr-10-12 i. 6 . TN M fr. off 10-12 5 8Am GN 10.14 Ô. mark 9 - ...... 540 N Sat 1035 MOMMO 1 Am 4 13.14 50 ~ m -ON 400 m ulm off SUN 10-14 N/04 AMA ħ 10-16 DN 31 AM MPAR Allie 20 pm 7 MON E.N 10.11 10-K M -0 H ON 4AM TIATED 11-16-2 .... OF 4AM TUPS 10-16 Mary 100 500 Ned Ar  $\infty$ 10-

20 18

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STATE OF SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION REPORT OF DRAWBRIDGE OPENINGS Form 3078 Rev.

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### REPORT FOR THE MONTH OF OCTUBET 20 18 NAME OF BRIDGE New AShley DRAWBRIDGE SERVICES, INC.

gay of Week	DATE	DRAW OPENING ANMAGR	TIME GATES DROP AM OR PM	TIME GATES OPEN AM OR PM	DIRECTION	CONDITION OF ' WEATHER & RIVER	Type of Verbel Massing Through	NAUE OR NUMBER OR VESSEL PASILING THROUGH	IN CHARGE
wed	1217	off	49m	<u> </u>		······································			June
wed	10-17	ON	4 in	~		2+			+ ARRIEN
Wed	10-17	OFF	12 jun						Varitteletien
Thurs	10-18	on	Segm	~_~~			·		J man-
Thurs	10-18	8	1245	1235	~	Fair	Spt Eigher	N.v.V.	
Thurs	10-18	<u>A</u>	93×	3.3		1 Equ	-sp+frli	-NV	June
Thurs	10.18	off	492	<u> </u>	`				1 and
Thus	10 -6	ON	4 on						KARRIEN
Thus	10-55	OFF	12 An	Topological Action in the second s	Olaviai.a.	and have seen a second and			KARRIEN
<u> </u>	10-19	05		للمسرين المراجع م		2			Trul
Fr.	10-19	064-	4200		*			алан уулу	rul
FEI	10-19	64	4, 1 m	42.ma				Adjustration of the second	CORRICH
FRI	10-19	OFF	12: Am	and the state of t					Koppion
SAF	10-20	on	89 am	$\frown$					Mul
SAF	10-20	off	40°pm	·		<u> </u>		·	Tur
SUN	10.21	ON	8-Am			~		· · · · · · · · · · · · · · · · · · ·	KARRIEN
BIN	10-21	062-	4. pm	har	<b> </b>				KARRIIN
SUN	10.21	an	4011		y-min.				Coociens
Siced	10-21	Off-	12pm			<u> </u>	······································		lastrons
Mov	10-22	ON	8: An		+				KARRiem

### BRIDGE NUMBER 1843 ( 577-7665

### STATE OF SOUTH CARDLINA DEPARTMENT OF TRANSPORTATION

Form 3078 Rev.

REPORT FOR THE MONTH OF OCT 20 18 NAME OF BRIDGE AND AShing DRAWBRIDGE SERVICES, INC.

#### TIME CONSTRONIOP TYPE OF VERSEL NAME OF TENDER TIMĚ NALE OR NUMBER DAY OF DRAW DRECTON OPENING GATES OROP GATES OPEN WEATHER & PASSING OF VESSEL IN CHARGE WEEK DATE AN CR PM RIVER THROUGH PASSING THROUGH OF DRAW AM OR PM soumi NUMBER NORTH KARRIEN 2-2.24 4 OF MON 1,AA LHPM -----~ OGENIN/ Mar 12-22 SN - 10-1×K D koda MAN rIE-+ -MARA Kapplin 8'. Am 10-23 ON Tues 0-23 OFF 41 KARRIBA Tises DNI ogans nt /0 ୍ว?? Ŵ 1 UNS a-ff 10-22 Tiolas Ned 8º2m 10-24 on م میں off 29m -----10-24 wed hvis . 10-25 0 05 - an 130-940 10-25 nurs Sim ---Z Stam 10-26 On $\sim$ ~^ 20 off 'ĩΛ 10-26 77 ioin 8. Am 10-2-1 1 CARRIAN SA ON OFF 4; 5A + 10-21 -APPIEM лM f ..... $\Im$ 10-27 4 · 100 manus. M A -27 THE OWNER OF CASE And the second second 10-28 8 del 87 S 0 -726 N ..... 10-28 ----n 841 20 . بروجه بسب Man and the second s

### STATE OF SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION REPORT OF DRAWBRIDGE OPENINGS

Form 3079 Rev.

577-7605 BRIDGE NUMBER\_ REPORT FOR THE MONTH OF NAME OF BRIDGE NEW ACHTEM DRAWBRIDGE SERVICES, INC.

day of Week	DATE	oraw Opening Number	TIME GATES DROP AM.OR.PM	THE GATES OPEN AM OR PM	DÍREGTION NORTH SOUTH		CONDITION OF WEATHER & RIVER	TYPE OF VESSEL PASSING THROUGH	NUME OR NUMBER OF VESSEL PRESSING THROUGH	IN CHURGE
NOD	10-29	10	1023	10 36			SUNNY	TW	Sea PROIT	(togging)
Man	02-29	D.P.	49A	and the second		-				Capita
MON	10-29	ON	High	·	-				······	Kohkingon
MON	10.27	052	12 Am	·······		~~~.				Carenar
TUBS	10-30	ON	8 Arry	مدين			100 Manager			(090ppins
Tues	10-30	<u> </u>	34571	255		<u></u>	Sunny	EGR	yatch	agying
TUM	10-31	201	I PM	<sup>وع</sup> مد من الم				e	الم المسلحة الم المسلحة المسلحة ا المسلحة المسلحة	- Congrig-
wird	10-31	on	892m	+		-			Representation and a second se	rules
wed	10-31	off	49000							And
Wet	16-31	0¥	HZ; pM	الاجتناعين، معلم المحكم ال			······	· · · · · · · · · · · · · · · · · · ·		KARRIGM
Wed	10-31	670-	121 AM	·						CARDIBAS.
2 							! 		· · · · · · · · · · · · · · · · · · ·	
		· · · · · · · · · · · · · · · · · · ·	<b></b>				 			
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# Report of Drawbridge Openings November 2018

STATE OF SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION REPORT OF DRAWBRIDGE OPENINGS

Form 3079 Rev.

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DAY OF ORAW TIME THE CONDITION OF TYPE OF VEBALL DRECTON NAME OR NUMBER NAME OF TENDER WEEK DATE OPENING GATES DROP GATES OPEN WEATHER 6 PAGENG OF VESSEL IN CHARGE NUMBER AM OR PM AM CO PIX NORTH RIVER THROUGH souni PASSING THROUGH OF ORAW 90 huố ON 11~ AW 2000 NHO hws 11-() N Thus 41 MA ARRIN OFF 12: MM Thu2 1\_\_\_ SERIEM 800 Am Fr \_2  $\infty$ \$9%m ~ 11-2 د ۳ یک \_\_\_ ሶአ 85 8 11-3  $\sim$ Sat 'Ar-68 Sh Sat 11-2 A ZAN 00 11-1 man JL 100 146 1-1 1°on 10a Pr -5 8 ON ŀ Mon An wellow MON OFF 1-5-18 24: AM Kalen Thes 1-6-04 81 AM KARRION ON 3115m 3. 15 Clear 1-6-14 THE Spat-Fis Kneeron 4. pm Tize. OFF 1-6-18 Aneiter 804 WED TAN  $\delta \sim$ 60 122M 041 11-101 40m ~~ ON ÷m.  $\boldsymbol{\varphi}$ 11-8 01 es. wed ĝ 8ºm 0m

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BRIDGE NUMBER 335-577-7665 REPORT FOR THE MONTH OF NOV

NAME OF BRIDGE New ASK

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BRIDGE NUMBER 843 - 577 - 7605 REPORT FOR THE MONTH OF NOV 20 18 NAME OF BRIDGE NEW HISHLEY DRAWBRIDGE SERVICES, INC.

## STATE OF SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION

Form 3079 Rev.

										and the second
DAY OF WEEK	OATE	oraw Opening Nukiber	TIME GATES DROP AN OR PM	TIME GATES OPEN AM OR PRI	Dire	SOUTH SOUTH	CONDITION OF WEATHER & RIVER	TYPE OF VESSEL PASSING THROUGH	naist or number of vessel Mödeng Through	NAME OF TENDER IN CHATCE OF DRAW
Thurs	11-8	off	Yest	<del>,</del>	)	-		. (		Mul
Fri	11-9	on	8 30 m		<u>~</u>				т	sill
Gri	11-9	off	4000			ļ ,				Tuth
SAT	1-10	GN	S. An		Sufferent Lamon a la				an the second	KARRISM
SAT	11-10	OFF	Lt Light							KIARRI EM
Sun	11-11	ON	8', AM	.)* 				Contraction of the second	್ಟ್ರ್ಯಾಕ್ಟರಿಸಲಿಭವಿಸಿಕು <sub>ಆಧಾನದ</sub> ರ್ಶಿಸಿಟ್ಟು	Kinneign
Sul	11-11	2	9:00Ar	9:08		V .	Fair	Spudrt FAN	Alantic Hunder	Koneim
SUN	11-11	OFF	4° en		E			•	avaanta ka	Kurreland
MAN	1412	ÔN	8: AM					· · · · · · · · · · · · · · · · · · ·	and an and a second	KARRIUM
Most	11-12	UTT	41 m							Karein
Thes	11-13	ON	8. Am							Experien.
The	1173	OFF	4. pm	*********************			-	· · · · · · · · · · · · · · · · · · ·		KARRIEM
Wed	11-14	on	892m	·				~	han an	Mille
Wed	11-14	set	4000		-			<b>(Percent</b> ) (1997)	₽₩299.5599. ₩	rul
Thurs	11-15	ON	Soft					~~		Flilda
Thur	11-15	3	33m	3/200	1	·	Cloud.	Spt Eisher	NV.	Mill "
Third	11-15	off	4 egm	$\sim$		<b>e</b> ,	 	·	a manager and a second second	rule
Fri.	11-16	on	909m	e~					and constructions and a second s	jull
Fri	11-16	off	4950						1	rul-
Sat	11-17	on	800m							mill

BRIDGE NUMBER 843-577-7605

REPORT FOR THE MONTH OF NEV

STATE OF SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION REPORT OF DRAWBRIDGE OPENINGS

Form 3078 Rev.

DBS

TWE TONE CONDITION OF TYPE OF VERSEL NAME OR NUMBER NAME OF TENDER DAY OF DRAW DIRECTION WEEK DATE OPENING GATES DROP GATES OPEN WEATHER & FAGENIC OF VESSEL IN CHARCE AN OR PM AN OR PU RIVER THROUGH PASIENG THROUGH OF DRAW NUMBER NORTH SOUTH 198n 59+ 11-17 OFF 8 AM 11-18 SUN ON KARRI EM GUN OFT 4: An LARRIAM 11-18 Sun 4 pm 11-18 noose ON Sun off 12 de a 11-18 8: AM 11-19 ON KARRIUM MON 11-19-1 4 Concertion MON OFF IM 8. AM Tue. ON GREADM 11-2019 - Tur 4' par OFF ARRIEM 11-20-5 - JAM 2-0 Weg e 41 1-748 (m 20 off Ne 11-21 iom X'2m hurg 11-22 an 20 off ١ 11-32 5m 4110 80hm 11.23 ON  $\sim$ 49gm der 72 12 8', ON AA ARRIEN 41 SA 11-24 OFF KARAIM PM JPM. 301 11-70 94 off アク Sai 8: AM SWN 1/2 ON

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STATE OF SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION

Form 3079 Rev.

### BRIDGE NUMBER 848 577-7605 REPORT FOR THE MONTH OF Advantage 2018 NAME OF BRIDGE NEW Ashier 2018 DRAWBRIDGE SERVICES, INC.

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day of Week	DATE	DRAW OPENNIG NUMBER	TIME GATES OROP ANIOR PM	THE GATES OPEN AM OR PU	DIRE	TIÔN JOUTÍ	CONDITION OF WEATHER & RIVER	Type of Veesel Rassing Through	Haly or number of vegal. Rasenig through	Name of tender In charge of dravy
SUN	H-25	OFF	4pm	· · · · · · · · · · · · · · · · · · ·				· · · · · · · · · · · · · · · · · · ·		Creerin
Mai	11-710	60	& And	Views.	<u> </u>	1	ر در این می اور میرون می می اور می می اور می		- مدد ب <b>مس</b> رد مسرد .	locano
Mon	11-24	Q.	Alm					WATER CONTRACTOR		( de tope
The	11-2	ÓN	8 Am		-				an a far an	Kishalin
Tue	11-27	OFF	41 pm							Karrian
Wid	11-28	0~	89Am	: بر بر بین میں میں میں اور						Tub-
Wed	11-28	220	498m						and a second	ruh
Wer	11-28	an	8tm							Cooras
Wes	11-28	af	4Pm		<u> </u>	. U-				- Odyens
Thurs	11-29	<u> </u>	8ºgam						<sup>واست</sup> ۲۰۰۰ - ۲۰۰۰ - ۲۰۰۰ - ۲۰۰۰ - ۲۰۰۰ - ۲۰۰۰ - ۲۰۰۰ - ۲۰۰۰ - ۲۰۰۰ - ۲۰۰۰ - ۲۰۰۰ - ۲۰۰۰ - ۲۰۰۰ - ۲۰۰۰ - ۲۰۰۰ - ۲۰۰۰ - ۲ ۲۰۰۰ - ۲۰۰۰ - ۲۰۰۰ - ۲۰۰۰ - ۲۰۰۰ - ۲۰۰۰ - ۲۰۰۰ - ۲۰۰۰ - ۲۰۰۰ - ۲۰۰۰ - ۲۰۰۰ - ۲۰۰۰ - ۲۰۰۰ - ۲۰۰۰ - ۲۰۰۰ - ۲۰۰۰ -	Mille-
Thur	11-29	off	40m							Tul.
Thins	11-29	0.0	& PM			~			·~~	logation
Thurs	11-2A	_AP	12:	<b></b>			······································	·	····	Chapping
Fri	11-30	<u>on</u>	892m				·	$\sim$		rate
Ęr.	11-30	<u></u>	yer	······			······		م ب مساله المحکم ال 	Till
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# Report of Drawbridge Openings December 2018

### BRIDGE NUMBER 843-577-7605

## STATE OF SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION

Form 3079 Rev.

DBS

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REPORT FOR THE MONTH OF Dec. 20 18 NAME OF BRIDGE Wew AShley DRAWBRIDGE SERVICES, INC.

day of Week	DATE	dravy Openang Number	TINE GATES DROP AM OR PM	THE GATES OPEN AM OR PN	DIRE	KÓR CA	CONDITION OF WEATHER 6 RIVER	TYPE OF VERSEL PASSING THROUGH	nake or numser Or vessel Päsens through	NAME OF TENDER IN CHARGE OF DRAW
Sat	12-1	on	8ºmm	*	· ~	~		· •	P	Mill
Sat	12-1	off	400 pm	· · · · · · · · · · · · · · · · · · ·				<b></b> _		rut
SUN	122	ON	8: AM	مىدەرىيىنى أ		<u> </u>		۵۵۵ <del>۵ – ۵۰۰۵ که در مرین</del> ه ۱۹۹۰ – ۱۹۹۰ – ۱۹۹۰ – ۱۹۹۰ – ۱۹۹۰ – ۱۹۹۰ – ۱۹۹۰ – ۱۹۹۰ – ۱۹۹۰ – ۱۹۹۰ – ۱۹۹۰ – ۱۹۹۰ – ۱۹۹۰ – ۱۹۹۰ – ۱۹۹۰ – ۱۹۹۰ –		Korprin
Cur	12-2	OKF	41pm							Karnian
MON	12-3	DN	8.Am							KARRIN
MON	12-3	OFF	4: pm					<u></u>	Alexandra and a second and as second and a	CARRIEN
Ty-	12-4	ON	8. AM			<u> </u>			ورون کارون کارو میرون کارون کارو	Konsein
Tue	12-4	017-	4) pm	<			<b>-</b>		f 	Kisepheny
Wed	12-5	m	8º An	and the second s						ruhe
Wig	125		1030	11 72m	~	ľ	Clear	<u>VI</u>	Liberty	14.
Wes	12-5	_2_	122000	12300			Cler	Sail	Mbigurlous	11
Wed	12-5	<u>off</u>	yeel	<u> </u>		:		······································		Mark
Thur	12-6	<u> </u>	8-gm			** <u>*******</u>				run
Thines	12-6	ott	4 pm	· · · · · · · · · · · · · · · · · · ·			····	، میں معموم میں میں میں ہے۔ ج	· · · · · · · · · · · · · · · · · · ·	Full
The	12-6	<u> </u>	Hit pon							CARRIEN
Time	126	057-	121 AM							CARRIEN .
tri	12-1	<u> </u>	52%	<u> </u>						Jun
<u> </u>	15.1		1 Zam	<u> </u>	. <u> </u>		Clear	YT	Liberty	//
Eri	12-1	<u> </u>	11 2500	11 500	~		Clenr	yt.	Liberty	
	12-1	046	1 4ºpm		-	-				Jun

opening

# BRIDGE NUMBER 843-577-7605

#### STATE OF SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION **REPORT OF DRAWBRIDGE OPENINGS**

Form 3079 Rev.

DBS

REPORT FOR THE MONTH OF December 20 18 NAME OF BRIDGE NEW ASHLEY DRAWBRIDGE SERVICES, INC.

day of Week	DATE	oraw Opennis Number	TIME GATES DROP AM OR PM	TIME GATES OPEN AN OR PR	DIRE	KONO SOUTH	CONDITION OF WEATHER S RIVER	Type of Versel Pasipho Through	name or number or vesgel passing through	NAME OF TENDER IN OMARCE OF DRAW
Gat	12-8-18	ON	8". AM							Konzein
SAT	12-8-8	5	LI! AM	11; 15AN	£.,	~	Fair	yaicht!	Liberty	KLARDINA
BAI	1248	OFF	41 pm				· · · · · · · · · · · · · · · · · · ·			Corrien
Sin	1219	ON	8: AM	· · · · · · · · · · · · · · · · · · ·	 	 	,	an an a should be should b		Kiseein
SW	12/9	OFF	4. pm		·					Knarnen
MON	12-12	6N	S: AM	معربین					····································	KARELOM
Nº ORI	12-10	OFF	41 cm	· · ·	: 					KARRION
Thes	12-11	<u>~~</u>	802m	-						rite
Tures	12-11	off	400m							ribb
wes	12-12	<u> </u>	8 dam						r s. •	ritte
wed	12-12	off	49m							Mill.
Thurs	12-13	m	8º Par						······································	Mille
Thurs	12-3	6	1230	12300	V		Cloud	Sa:1	Caesora	Tille
Thurs	<u>12-13</u>	off	4000	<u> </u>			······································			ruh
Fri	12-14	on	\$ Sopin				· · · · · · · · · · · · · · · · · · ·			Mill
Fri	12-M	off.	4ºpm			·	······································			null
SAT	12-15	ON	8. Am				· · · · · · · · · · · · · · · · · · ·			CARELON
SAT	12-15	OFF	41m	~						Koneion
SUN	12-12	ON	8. Am				944	<del>ر میں</del> در مربق میں مربق میں ا	**************************************	KUARRIER
SUN	12-11	OFF	4:rm			-		S Street Street	enne gesterne datuelle freme.	CARRIEM

# BRIDGE NUMBER 543)577-765

### STATE OF SOUTH CARDLINA DEPARTMENT OF TRANSPORTATION

Form 3079 Rev.

DBS

REPORT FOR THE MONTH OF December 20 18 NAME OF BRIDGE New Ashley DRAWBRIDGE SERVICES, INC.

DAY OF WEEK	DATE	DRAW Opening Number	TIME GATES DROP AM: OR PM	Tive Gates open Am or ph	L'IRE North	gtión South	CONDITION OF WEATHER & RIVER	TYPE OF VESSEL FAGENO THROUGH	NAME OR NUMBER OR VESTEL PASSING THROUGH	Name of Tender In Charge of Craw
Murt	12117	ON	8'AM					·		KARRIEM
NON	12/17	7	31 pm	3: 12 m			Ralier	sput-Fish	Alanfie Hunt	CARRIEM
Man	12/17	UFF.	ti pM				· · · · · · · · · · · · · · · · · · ·			KARRIEM
The	12/18	ON	8. Am				. <u></u>			Karrin
Thes	12/15	OFF	4 mm			-			**************************************	Korepiem
Wed	12-19	on	Seam	<u>~</u>					·	rule
WH	17.19	oft	4000		$\sim$					Aile
Thui	12.20	oh	Cost				~			rul
Thuế	0.20	off	499m	P						rill
Fri	12.21	on	8 egm		-				Carlos and a second	rille
fri	12.21	8FF-	40%						،	mile.
Sat	12-22	ON	8: Jan							EARRiven
Sint	12-22	OFF	Lfim							1 CIARRIGA
Sw	12-23	52	8: Am			~~~~				KARENIAN
Gur	1203	ort	4; pm		<u> </u>				ستانيونوني.	Kreenin
MIN	12/24	ON	8; AM				·			KARRIEM
MON	12/24	OFF	4 pm						·	KARRIGN
The	12/25	DN	8'An	· · · · · · · · · · · · · · · · · · ·						KANDON
The	12/23	077-	4: M	· · · · · · · · · · · · · · · · · · ·						KUADRI EM
INED	12-26	m	8ºm			ļ			New Contraction and Contraction	ruli

### BRIDGE NUMBER 843 - 577 - 7605 REPORT FOR THE MONTH OF DEC 20 NAME OF BRIDGE NEW RENALL DRAWBRIDGE SERVICES, INC.

## STATE OF SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION

Form 3079 Rev.

DAY OF WEEK	DATE	DRAW Opening Number	TULÉ GATER DROP AM.OR MM	TINE GAJIES OPEN AM OR PU	CIRE	CTIÓN SOUTH	CONDITION OF WEATHER & RIVER	Type of Vessel Passing Through	Náki or Number (pr vegel Přenk through	NAME OF TENCER IN CHARGE OF DRAW
Wed	12-26	off	400m							Tule
Thurs	12.27	on	Sam			)				rill
Durs	12.27	off	4000			-	·			rillo
Fri	12.28	on	8%m			,				rubin
fri	12.28	off	yeem	······································			·····			rill
Sit	12-29	on	8ªm		-			·		Tible
ST	17.15	275	400m				3 Martin Martin Martin			nbb
Sun	12:30	ON	8. In							KARRINIA
SUN	12:30	OFF	4 pm		<u> </u>					KARRIEN
MON	1231	ON	8. An	+ 3 <u>454 Bran</u>			·····			KARRIEM
MON	12/21	OFF	4 m				*		· · · · · · · · · · · · · · · · · · ·	KARRIGN.
							· · · · · · · · · · · · · · · · · · ·			+ <u></u>
		·		• 						
					4				· · · · · · · · · · · · · · · · · · ·	 
				······································	 					· •
-					<u> </u>				· · · · · · · · · · · · · · · · · · ·	·
			·						7	· ·
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# Report of Drawbridge Openings January 2019

# BRIDGE NUMBER (843) 571-7605

STATE OF SOUTH GAROLINA DEPARTMENT OF TRANSPORTATION

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Form 3079 Rev.

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REPORT FOR THE MONTH OF Jan NAME OF BRIDGE New Ash Jug DRAWBRIDGE SERVICES, INC.

DAY OF WEEK	DATE	DRAW Opening Number	TIME GATES OROP AM OR PM	TIME GATES OPEN AM CR. PM	Dirte North		CONDITION OF WEATHER & RIVER	Type of Versel Passing Through	NAKE CR NUMBER OF VESSEL PASSING THROUGH	NAME OF TENDER IN CHARGE OF DRAW
Tu.	1119	ON	8: AM						1	Karrium
The	1/19	OFF	41 pm			;			and the second	KLAARSIGA
wed	1-2-14	on	ç7	مىيىپ <u>لەرنىيە بىرىمەر</u>	~	<u>```</u>	~			rith
wed	1-2-19	off	·	<b>,~~~~</b> →			$\sim$		~	rible
Thurs	1-3-19	00	~	<u> </u>		<i>~</i>	<u> </u>			rill
Thurs	1-3-14	off				(	helester.			rilla
Fri	1-4-19	01			·					rubh
Fr-i	1-417	<u>_</u>	930 Am	9 37 An		~	Cloudy	Vt	Shumir	11
Fri	1-4-19	off	400		- <u>-</u>					Alla
SA7	1-519	62	8'AM	and the second secon	·					LARADON-
SA-7	1-5-1	DAF-	4 pm							KUARRI GM
SUN	1-6-19	ON	Silm	~						KARRIEN
SUN	1-6-19	OFF	4: pm				·			Kreeten
Mar	1-7-19	ON	8', AM							KARRI GM
MON	1-7-19	OFF	4: pr					······································		KARRIEM
The	1-8-19	ON	8 AN						· · · · · · · · · · · · · · · · · · ·	Kispin
Type	1-819	OH-	4. que	·······					27212-2	KARRION
Mrg	1-91-1	m	8º94m	·						rule
weat	1-9-19	off	youn		~					, rith
Thurs	1-10.19	on	80% r						Super-States and States	rulis

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#### BRIDGE NUMBER 843-577-7605 500 REPORT FOR THE MONTH OF

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NAME OF BRIDGE New

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#### STATE OF SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION **REPORT OF DRAWBRIDGE OPENINGS**

Form 3079 Rev.

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DRAWBRIDGE SERVICES, INC.											
day of Week	DATE	DRAW Opennig Number	TIME Gates Drop Am or Pal	TALE GATES OPEN AM OR PH	Directión North South		OONDITION OF WEATHER'S RIVER	TYPE OF VESSEL PASSING THROUGH	NAME OR NUMBER OF VESSEL PASSING THROUGH	NAME OF TENDER IN CHARGE OF DRAW	
Thurs	1-10-12	off	409m	~						The	
Fr.	1-11-19	on	8ºgm	- <u>-</u>	-					nu	
(cr.)	1-11-19	ott	40000		17				من من المركز المركز المركز المركز	- riv-	
59+	1-12-19	ón	800 mm				-		$\overline{}$	rill	
Sat	1-12-19	off	400m					·		win	
SIGLAN	1-13-19	ON	8. AM				· · ·			1 KARRID	
SUN	1-13-19	017-	4:pm		-			- <u></u>		KARRIGN	
Mar	1-1417	ON	8:AM				·		анны, , , , , , , , , , , , , , , , , , ,	Korrien	
MON	1-14-19	OFF	LH PM					<u></u>		Kareion	
Twe	1-15-19	62	8.Am				and the second s	·····		Kunnien	
Tu	1-15-19	2	1.2,25	12:40	V		Fair	Sat	SAZUMA	KARRINA	
the	1-15-8	DRF	41 pm							KARRINON	
Wed	1-16-19	on	80%mm	-			· · ·	With product of the second second		Til	
Wed	1-16-19	off	400			-				rillo	
Thurs	1-17-5	On	900 mm							Mille	
Thurs	1-17-19	off	400000				·	~		rit	
Fri	1-18-19	on	8.º2m		-				·	Tubb	
Fri	1-18-19	off	4 gm	$\sim$			~		· · · · · · · · · · · · · · · · · · ·	Mill	

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## BRIDGE NUMBER 96 577-7605

## STATE OF SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION

Form 3079 Rev.

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REPORT FOR THE MONTH OF Jon NAME OF BRIDGE New Ashier DRAWBRIDGE SERVICES, INC.

day of Week	DATE	DRÅW OPENING NUMBER	TD48 GATES DROP AM OR PM	Time Gater Open Am or Pu	NORTH NORTH	NÓITE INÓITE	CONDITION OF WEATHER & RIVER	TYPE OF VESSEL PASSING THROUGH	NALE OR NUKSER OF VSSEL PATSRIG THROUGH	Naks of Tender In Charge of Draw
500	1-20-19	ON	8. Am		10,17 * N			· 		Kurrecon
Sur	1-2019	OTT	4: pr				· <u>·····</u>		Commentation of the second second	KARAL in
MON	1-21-19	er	8. Am		·			· · · · · · · · · · · · · · · · · · ·	unan and a second s	KARRburn
MON	1-21-19	OFF	41 pm							Kurrion
The	1-22-19	ON	8.AM					·	• 	Kaperen
Tue	1-22-14	DEF	4. pm	· · · · · · · · · · · · · · · · · · ·						Kunapun
wed	1-2-15	<u>64</u>	800m		~					rill
Wed	1-23-19	<u> </u>	400m	·		<u> </u>				pull
Thus	1-24-19	on	8°m				· · · · · · · · · · · · · · · · · · ·	•~~~_	· · · · · · · · · · · · · · · · · · ·	ruh
Third	1-24-19	off	Yestm	¢		·		$\sim$	· · · · · · · · · · · · · · · · · · ·	Siller
Er,	1-25-19	on	8ºgm							rill.
<u>Fr:</u>	1-25-19	oft	450m		$\square$		·	«		riller
Sat	1-26-91	on	4ºhm							Mill
Sort	1-26-19	off	400m		<u> </u>		·	<u> </u>		Bald
- 5w	1-27-FJ	ON	8: AM				··· ···		· · · · · · · · · · · · · · · · · · ·	CARRIEN
Scal	1-27-Ri	OFF	4! par	- <u></u> ئىيىسبە <u></u> ئىي <u>سبە</u>			·			Kiareim
Mon	1-2449	· OW	S! AM		<u> </u>					KARRIGN
Min	J28-19	SFF	4 pm	<u>-</u> م						KARRIGN
The	1-29-19	ON	8.1 AM			- 				KARPLION
Tur	1-29-19	OFF	4. pm	PLAY			~	· · · · · · · · · · · · · · · · · · ·		Konpun
	,		r						<b>N</b>	

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BRIDGE NUMBER 843 -577-7605 REPORT FOR THE MONTH OF Jan 20 19 NAME OF BRIDGE New Ashley DRAWBRIDGE SERVICES, INC.

# STATE OF SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION

Form 3079 Rev.

DBS

DAY OF WEEK	DATE	Draw Opening Number	TIMË GATES DROP AM OR PN	TIME GATES OPEN AM CR PM	DIRE	STIÓN BOUTH	CONDITION OF WEATHER & RIVER	type of vescel Passing Through	nanje or nunber QP vesetl Passing Through	NAME OF TENDER IN CHARGE OF DRAW
wed	1-30	0~	*******	· · · · · · · · · · · · · · · · · · ·	<u> </u>	/	$\sim$	<b>~</b>		rube
WED	1-30	off	u <sub>uute</sub> tare		-		· · · · ·			ruh
Thurs	1 21	6 h				_		<b>*</b>		rith
Thurs	1 3	0.4.4	ý						<	rule
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		· · · · · · · · · · · · · · · · · · ·								
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# Report of Drawbridge Openings February 2019

BRIDGE NUMBER 843-577-7605 REPORT FOR THE MONTH OF Feb 20 19 NAME OF BRIDGE New ASLEY DRAWBRIDGE SERVICES, INC.

#### STATE OF SOUTH CARDUNA DEPARTMENT OF TRANSPORTATION REPORT OF DRAWBRIDGE OPENINGS

Form 3079 Rev.

DBS

day of Week	DATE	DRAW Opening Number	TIME Sates or op and or ph	time Gates Open Al Criph	Dif <b>e</b> Mangk	chèn Nguni	GONDITION OF WEATHER S ANYIR	Type of Vissel Passing Through	Nume or Number Or Vessel Prising Through	Hame of tender In Charge of Draw
Eri		<u>on</u>	Section Sectio	and the second s					Au	Miller
FFI	2-1	off	400	- 			A CONTRACTOR OF THE OWNER OWNE		Commenter and the second secon	ruh
SAT	2-2-19	CW	8. An		~					KARREGN
SAT :	2-2-19	OFF	41 min	: میں نہیں ورون میں ۔ کار میں میں این اور	in the second			· 901744994	enter a ser a s	KAREI IM
SUN	2-3-19	UN .	8.'AM			لىنىيەرىنىي. مەربىيەر مەربىيەر				KAREIGN.
SUN .	2-3-19	OF-	4 pm							Karrion
MON	2-419	CW ~	8. AM			500 6000 6000	and the second		interest and a second	Kianzim
MON	2-4-19	, į	8; 25 AA	8:45		1	Sunity	Jaw	USTOW	KANZIGN
MON	24-19	OFF	4: pm	• • • • • • • • • • • • • • • • • • •				ۇمىرىيە مەربىيە	ele 350/2011/2011/2011/2011/2011/2011/2011/20	Kazar Bri
The	2-5-19	3 O N	* Am			فيكتنعهموه	e Liter Alter and a second	• • • • • • • • • • • • • • • • • • •	and the second	Jesselin
The	2-5-19	ONE	41 pm	موجوع میشونیمید. موجوع میشونیمید.				, and	1000 year 1000 100 u	K-Merzign
Web	2-6-11	UN .	800 am		trisinotisto an					Mald
Wed	2-1-9	off	ils form				~			rulin
Thirs	2-7-9	64	8.92 Min		·			· · · · · · · · · · · · · · · · · · ·		rilla
Thurs	2.1-19	66	USTom				an and the second secon			Millo
Fr.C	2.349	62	8 egim							Mini
Fr.	2-9-14	A	Yesh							rule.
594	2-9-10	on	8 Phan	ر باری میں اور				<u>`</u>		Malla
Sat	2-9-19	A	1133	11 32		L.	<u>Clese</u>	Fishing DH	Ser. HawK	"rilli-
Set	2-5-19	off	4692			<u>~</u>				Milan
r			l l	3	0	pe	ening	γS <sup>`</sup>	3 Bog	75

## BRIDGE NUMBER 843-577-7605

REPORT FOR THE MONTH OF <u>Feb</u> NAME OF BRIDGE <u>INEW</u> DRAWBRIDGE SERVICES, INC.

#### STATE OF SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION

Form 3079 Rev.

#### \_ REPORT OF DRAWBRIDGE OPENINGS

DBS

day of Week	DATE	oraw Opening Number	THE GATES DROP AM OR PM	Teme Gates open Am or ph	DIRE North	STION SOUTH	CONDITION OF WEATHER & RIVER	type of Versel Proging Through	Navit or Numser Of Vessel Passing Through	Name of Tender In Charge Of Drawy
SUN	2/10/19	ON	8: AM	······		-				KARRIUN
SUN	2/10/19	OF-	4 iem	60. <u></u>					and the second	Karrein
MON	2/11/19	ON	8. AM				for any other statements	·		KARR 10M
MON	2/u/n	OF	4 ipm							Koraion
Tite	2/0-119	ON	8.º AM							Karel in
The a	Vala	OFF	4 pm							tranguin
Salv	2-13-19	pn	S/m	· · · · · · · · · · · · · · · · · · ·	$\frown$	~			and the state of the	ruh
Wed	2-13-19	off	40gm		·	·		· · · · · · · · · · · · · · · · · · ·		Till-
Thurs	2-14-9	On	Sugar		-			MCMMAnar/Minary	· · · · · · · · · · · · · · · · · · ·	Bith
This	2-14-19	df	400m						1	Millo
Er.	2-15-19	02	800 am							Sillo
Fri	2-15-15	OFF	4 pm	and the second sec			· · · · · ·			- Lille
SAL	2-12-1	DN	8:4m							KARRIN
Gate	2-16-19	OR-	4°pm	میں <u>میں م</u> ال						Korer on
BUN	2-17-19	ON	8:Am						ananarara Ang tangga ang ang ang ang ang ang ang ang an	corriem
SUN	21719	0 ਜੋ <sup>=</sup>	4. PM	······································			·	the state of the s		(CIARALICA
MAIN	2-18-19	ON	8', AM	(*************************************				Br <u>at</u>		Karner
MON	2-16-1	1 0FE	4 pm				·			KANALION
The o	2-19-19	ØN	8' AM							KARREEN
The ?	2-19-19	UFF	4: ***	مەربىيە بىرىن			-		المستحصين عن من مستحد الملك المستعلم عن المستعلم الملك المستعمد عن المستعلم المستعلم المستعم المستع	KARRION

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#### BRIDGE NUMBER 843-577-7605 REPORT FOR THE MONTH OF 60 20 19 NAME OF BRIDGE New 45 10 20 19 DRAWBRIDGE SERVICES, INC.

# STATE OF SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION

Form 3079 Rev.

DBS

DAY OF WEEK	DATE	draw Opening Number	TRAÉ GATES DROP AM OR PRI	TME GATES OPEN AM CR PM	DIRE	CTION SOUTH	CONDITION OF WEATHER E RIVER	TYPE OF VESSEL PASSING THROUGH	NAME OR NUMBER OP VESSEL Passing Through	NAME OF TENDER IN CHARGE OF DRAW
Sice	2-20	on	8%m			L		· ~		mill
URS	2-20	off	400m	~~	-				. ـــــــــــــــــــــــــــــــــــ	rikh
Thurs	2.21	00	80m	· · · · · · ·						Milla
This	2.22	off	yegm	~~~	-		· · · · · · · · · · · · · · · · · · ·	( <del></del>	ومر <u>يمه محمد المراجع</u> ي	rilla
Gri	2-22	00	SAM		<b>.</b>			منتحيي		rill
Fr.	2.72	044	45pm	$\sim$						rub
Sat	7-73	on	8º An	~	-	<b></b>		~		rill
Sat	2-23	off	49m							rull
SUN	7-24	DN	8. AM							KARRENM
SUN :	2-24	NET	4 pm					· ····································		KARRIEN
MON	2-2.5-1	ON	S. AM							KARRIEM.
MON	J-25R	3	12:15	12:32		1 mm	SUMY	Sout Fish	Finnalley	KARRIGN
Mor :	1-25-9	OFF	41 M			· · · · · · · · · · · · · · · · · · ·				KARRIEM
The :	2.26	ON	8: AM							Kinnenin
Tur	2-26	OH-	4' pm	·						KARRIDA
Wed	2-27	on	8 mm							Mull_
wer	2-27	644	400m							rul
Thurs	7-28	61	8ºsam							ruhe
Thurs	2-28	off	yeen							Mille-
				· · · · · · · · · · · · · · · · · · ·			•			1 rulton

# Report of Drawbridge Openings March 2019

# BRIDGE NUMBER 843-577-7605

#### STATE OF SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION **REPORT OF DRAWBRIDGE OPENINGS**

Form 3079 Rev.

EPORT I AME OF RAWBRI	FOR TH BRIDG	ERVICES, IN	F March Ashle	2	0	9	REPORT OF DRAWBRIDGE OPENINGS						
day of Week	DATE	draw Opening Nukber	TIME GATES OROP AN OR PM	TIME GATES OPEN AN OR PH	DIRE		CONDITION OF WEATHER & RIVER	TYPE OF VESSEL PASSING THROUGH	NAME OR NUMBER OR VESSEL PAIRING THROUGH	NAME OF TENDER IN CHARGE OF DRAW			
+1	3-1	on	800 Am							ruth			
ri I	3-1	off	400m		-				0 <u></u>	rubb			
At	3.2	ON	8. AM		+					1 CARRINA			
27	32	OFF	4, TM			-		1		Kanp on			
u.N	33	ON	8. Am		+					JCIARORI OM			
uN	3-3	OFF	A AM							1KARRION			
IUN	3-4	ON	8'AM			-				FARRIER			
oN	3-4	OT-	Him							Rockien			
10	3-5	ON	8. Am		-	_				12 annum			
re	3-5	OFF	4: pan						and the second s	Kurcentin			
Jed	2-6	on	8º2m						· · · · · · · · · · · · · · · · · · ·	rilla			
Nes	3-6	off	400m							min			
nurs	3-1	5	800 Am	·					~	Mult			
nes	3-1	OPE	40°				$\frown$			rill			
× L	300	0°	800m	r		)		· ~ _	· · · · · · · · · · · · · · · · · · ·	rubb			
Fr:	3-8	off	Yeam							ribb			
<u>597</u>	3-9	071-	80 am		-	-	·····			- Mile			
Sort	35	OFF	19gm				~		<u> </u>	Julto			
SUN	3-10'	ON	8.am							Kinepion			
sunt	3-10	OFF	4 im		-	•				CARRIER			
đ			. (		Spe	Ln	ings		6 Bo	ats			

## BRIDGE NUMBER (843) 577-7605

REPORT FOR THE MONTH OF MARCH NAME OF BRIDGE New Ash ky

DRAWBRIDGE SERVICES, INC.

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#### GTATE OF SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION REPORT OF DRAWBRIDGE OPENINGS

Form 3079 Rev.

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## BRIDGE NUMBER 843 - 577-7605 REPORT FOR THE MONTH OF March NAME OF BRIDGE NEW ASHLEY DRAWBRIDGE SERVICES, INC.

#### STATE OF SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION REPORT OF DRAWBRIDGE OPENINGS

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## BRIDGE NUMBER 843-577-7605 REPORT FOR THE MONTH OF March 2019 NAME OF BRIDGE NEW ASHLEY DRAWBRIDGE SERVICES, INC.

#### STATE OF SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION REPORT OF DRAWBRIDGE OPENINGS

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# Attachment E Section 6(F) Environmental Assessment Highland Terrace-Liberty Park Community Center Land Conversion

September 29, 2020

Mr. Justin E. Hancock State Liaison Officer South Carolina Department of Parks, Recreation, and Tourism 1205 Pendleton Street, Suite 248 Columbia, SC 29201

Re: Request for Conversion of Use Project No. 45-00691

Dear Mr. Hancock:

Please accept this letter as the initial request, by the City of North Charleston (the "City"), that certain real property owned by the City and presently restricted to public outdoor recreational use be converted to a use other than public outdoor recreation.

The real property subject to the conversion request (the "Restricted Property") comprises 0.23 acre and is located at 2401 Richardson Drive within the Highland Terrace-Liberty Park Community Center, a public, city-owned park in North Charleston, South Carolina. The real property the City proposes to restrict to public outdoor recreational use in replacement of the Restricted Property (the "Replacement Property") comprises 4.90 acres and is located at 5260 Deacon Street in North Charleston and is presently a residential parcel. The Restricted Property is shown on Exhibit A and the Replacement Property is depicted on Exhibit B.

The City believes that conversion of the Restricted Property is appropriate in this instance, for the following reasons. The Restricted Property is a small portion of the Highland Terrace-Liberty Park Community Center parcel. The South Carolina Department of Transportation (SCDOT) proposes to convert the Restricted Property to allow for permanent right of way acquisition in conjunction with the I-526 LCC WEST transportation project. The SCDOT also proposes to replace recreational facilities with a pocket park on the remaining 0.64-acre at the Highland Terrace-Liberty Park Community Center, which will still have the LWCF public outdoor recreation use restriction. Although the Community Center is within the existing LWCF boundary, replacing the structure is not a requirement of the LWCF conversion regulations since it predates establishing the LWCF boundary. There is a plan to replace the Community Center on the larger property; however, it will be subdivided from the LWCF replacement site.

The partial land conversion is necessitated by the I-526 LCC WEST transportation project, which would improve traffic conditions in North Charleston. Under the No Action alternative, no major changes would be made to the I-526/I-26 interchange and only routine maintenance would occur in future years. This alternative would result in the NPS not receiving the State's proposal, submitted on behalf of the City, to convert a portion of Highland Terrace-Liberty Park Community Center, pursuant to

the LWCF conversion regulations. This alternative would not allow land to become available for the Taylor Street realignment, additional right-of-way for the I-526 LCC WEST project, and the development of replacement facilities on the Anderson Tract. The No Action alternative would not meet the purpose of and satisfy the need for improved transportation facilities in the area, and was not selected as the preferred alternative.

The SCDOT evaluated other available land within the immediate vicinity of the affected LWCF property, in an effort to replace the facility as close to the existing facility as possible. This evaluation included several City-owned and privately-owned parcels; however, these parcels were either too small or were comprised almost entirely of wetlands. The conversion of the Restricted Property and the development of the Replacement Property for public outdoor recreational use is in the best interest of the City and its residents.

The SCDOT has a conceptual plan for the development of the Replacement Property. A host of outdoor facilities are anticipated, including a full size outdoor basketball court, educational wetlands, playground, multi-use field, and fitness loop. The acquisition and development of the Replacement Property for these public uses will benefit the citizens of North Charleston to a much greater degree than having the Restricted Property continue its function as a small portion of the Highland Terrace-Liberty Park Community Center.

More specifically, the City believes its plans for the Replacement Property satisfies several (if not all) of the State Outdoor Recreation Goals set forth in Section VII of the South Carolina Comprehensive Recreation Plan ("SCORP"). SCORP Goal 1 ("improving access to public recreation areas") will be satisfied upon the completion of the conversion and the development of the Replacement Property. The Restricted Property is (as stated above) a small portion of the existing Highland Terrace-Liberty Park Community Center parcel. The Replacement Property will be home to numerous public amenities, including sports fields, open recreation areas, and educational facilities.

SCORP Goal 2 ("promoting stewardship of resources") will be satisfied with the placement of the Replacement Property into the City's parks service, particularly with the availability of the educational wetlands. The public will have opportunities to learn about the wetland ecosystem, which will be accomplished in an urban setting easily accessed by residents of the City. The preservation of the remaining land at the Highland Terrace-Liberty Park Community Center location for recreational purposes also serves to achieve this goal.

Goal 3 ("ensuring sustainable economic benefits"), will be satisfied by the fact that the Replacement Property is a much larger space than the Restricted Property. As a very small portion of the existing park parcel, the recreational potential of the Restricted Property is inherently limited, and so is the potential to sustain any real economic benefits. The Replacement Property, comprising approximately 4.90 acres, will have vastly more potential in all areas of the SCORP, including the potential to sustain economic benefit over the years to come.

SCORP Goal 4 ("adapting to changes in recreation demand") will also be satisfied by the conversion. As a small portion of the existing park, the Restricted Property is limited by its small size and

functionality – the area includes parking spaces, a playground area, and a portion of a full-size basketball court. However, all of these amenities will be reconstructed within the proposed pocket park at the same location.

In summary, the City is confident that the conversion will result in enhanced recreational activities for its citizens and is excited about the opportunity presented to develop those uses on the Replacement Property.

In preparation for its formal request for conversion, the City, in coordination with the SCDOT, will use its best efforts to do the following:

- Complete and submit the National Park Service "Proposal Description and Environmental Screening Form" (NPS Form 10-904);
- Comply with the requirements of those portions of National Park Service Land and Water Conservation Fund State Assistance Program Manual governing the conversion process; and
- Satisfy the State Outdoor Recreation Goals set forth in Section VII of the South Carolina Comprehensive Recreation Plan, as generally outlined above.

The City of North Charleston looks forward to working with your office and the National Parks Service in the conversion process. Should you have any questions, or require any additional information, please do not hesitate to contact me.

Sincerely

Doyle Best Director of Recreation City of North Charleston (843)740.5814 djbest@northcharleston.org

#### Partial Land Conversion, North Charleston, SC Highland Terrace/Liberty Park Community Center, LWCF Projects #45-00691

The South Carolina Department of Parks, Recreation & Tourism (SCPRT) has received a request from the City of North Charleston (the City), the project's sponsor, to submit a partial conversion request to the National Park Service. The City is seeking to remove the Land & Water Conservation Fund 6(f)3 restrictions from 0.27 acre of the approximately 0.87-acre Highland Terrace/Liberty Park Community Center. The South Carolina Department of Transportation (SCDOT) proposes to convert this portion of the Highland Terrace-Liberty Park Community Center to allow for permanent right-of-way acquisition required for the I-526 LCC WEST project. The conversion will affect some of the existing recreational facilities at the Highland Terrace-Liberty Park Community Center. The converted property will be replaced with approximately 4.90 acres of residential land that will become a new park in North Charleston.

The 0.87 acre Highland Terrace/Liberty Park Community Center parcel, valued at \$380,000, will be replaced with 4.90 acres, valued at \$610,000, located off of Deacon Street in the City. The remaining 0.60 acre at the existing site will be used in the development of a pocket park. The replacement property is currently residential land that is privately owned; the property will be acquired and developed by SCDOT to provide replacement amenities, and subsequently ownership will be transferred to the City. All appraisals were prepared in accordance with Uniform Federal Appraisal Standards and reviewed by an independent appraisal reviewer.

The SC Department of Parks, Recreation & Tourism supports the Town's request for the conversions and will recommend approval to the National Park Service.

## **Environmental Assessment**

#### Highland Terrace-Liberty Park Community Center Partial Land Conversion 2401 Richardson Drive/5260 Deacon Street

A conversion of land protected under The Land and Water Conservation Fund Act

June 2021

#### For Information Contact:

Chad Long Director of Environmental Services South Carolina Department of Transportation Post Office Box 191 Columbia, SC 29202-191

#### Submitted to:

Justin Hancock Director of Recreation, Grants and Policy SC Department of Parks, Recreation & Tourism 1205 Pendleton Street Columbia, SC 29201

#### For:

Alexis John Land and Water Conservation Fund Program Officer National Park Service Southeast Region, Recreation Programs Branch 100 Alabama Street, SW 1924 Building Atlanta, GA 30303-8701 This page intentionally left blank.

The Land and Water Conservation Fund (LWCF), Stateside Assistance grant program, provides funds to states, and through states to local agencies, for the acquisition and development of outdoor recreation resources. Lands that have received funding through LWCF are protected by section 6(f)(3) of the Act unless a conversion is approved by the Secretary of the Interior as delegated to the National Park Service.

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#### SUMMARY

North Charleston, South Carolina (City) is a coastal city with incorporated areas in Berkeley, Charleston, and Dorchester Counties. With the continued growth of the metropolitan area, the City has experienced a substantial increase in population over the last decade which is expected to continue as the area is further developed. Between 2017 and 2040, the City's population is projected to increase by approximately 46%. To accommodate recent and projected growth, the I-526 LCC WEST project proposes additional lanes on I-26 as part of improvements to the I-526/I-26 interchange. These improvements would require the westward realignment of Taylor Street, which would encroach on **Highland Terrace-Liberty Park Community Center**, a resource with a federal Land and Water Conservation Fund (LWCF) Act public outdoor recreation use restriction (now codified at 54 U.S.C. § 200305) boundary, located at 2401 Richardson Drive. The South Carolina Department of Transportation (SCDOT) proposes to convert a portion of the Highland Terrace-Liberty Park Community Center to allow for permanent right-of-way acquisition.

In addition to evaluating the proposed replacement property, the SCDOT evaluated other available land within the immediate vicinity of the affected LWCF property, in an effort to replace the facility as close to the existing facility as possible. This evaluation included several City-owned and privately-owned parcels; however, these parcels were either too small or were comprised almost entirely of wetlands. After an extensive search, a privately-owned parcel located at 5260 Deacon Street, referred to as the **Anderson Tract**, was found to be a suitable location without notable environmental or cultural features. The no-build alternative was also evaluated; however, leaving the existing LWCF property in its current state would not be compatible with the purpose of the I-526 LLC WEST project nor consistent with LWCF regulatory requirements set forth by 54 U.S.C. §200305(f)(3).

The SCDOT proposes to acquire the Anderson Tract and convey ownership to the City in accordance with the LWCF conversion regulations at 36 C.F.R. § 59.3. The SCDOT also proposes to replace recreational facilities with a pocket park on the remaining 0.60-acre at the Highland Terrace-Liberty Park Community Center, which will still have the LWCF public outdoor recreation use restriction. Although the Community Center is within the existing LWCF boundary, replacing the structure is not a requirement of the LWCF conversion regulations, since it predates establishing the LWCF boundary. There is a plan to replace the Community Center on the larger property; however, it will be subdivided from the LWCF replacement site. Public input on the proposed replacement facilities occurred concurrent to the public engagement for the I-526 LCC WEST Draft Environmental Impact Statement (DEIS) in the fall of 2020 through spring 2021. Public feedback supports the construction of replacement recreational facilities and ongoing engagement is shaping the programs and amenities that will be incorporated into the replacement facilities.

As such, the combined Final Environmental Impact Statement-Record of Decision (FEIS-ROD) includes a project commitment to construct the replacement facilities prior to the displacement of the existing facility.

In light of the proposed project and associated efforts to replace the converted LWCF property, the SCDOT is requesting that SC Department of Parks, Recreation & Tourism forward a recommendation to the NPS to approve the proposed conversion and replacement.

## INTRODUCTION

In October 1977, the City received a LWCF grant for the creation of the **Highland Terrace-Liberty Park Community Center**, located at 2401 Richardson Drive, and establishing of the LWCF public outdoor recreation use boundary. Due to the proposed I-526 LCC WEST transportation improvement project, this location is needed for permanent right-of-way acquisition. The SCDOT proposes to replace impacted facilities at the Highland Terrace-Liberty Park Community Center with replacement amenities constructed at 5260 Deacon Street (**Anderson Tract**). Approximately 4.90 acres of the Anderson Tract and the City owned parcel to the north would be included within the LWCF replacement boundary. The appended vicinity map shows the location of both properties.

## PURPOSE, NEED AND BACKGROUND

North Charleston, South Carolina is a coastal city with incorporated areas in Berkeley, Charleston, and Dorchester Counties. With the continued growth of the Charleston metropolitan area, North Charleston has experienced a substantial increase in population over the last decade. The City's population grew by approximately 20% in ten years from 97,471 in 2010 to 116,440 in 2020. As shown in the chart on Page 3, the City's population is projected to increase by approximately 46% in 2040.

To accommodate recent and projected growth, the SCDOT proposes to convert land owned by the City and protected under the LWCF for permanent right-of-way acquisition as a part of the I-526 LCC WEST transportation improvement project. The SCDOT proposes replacement of the converted land with the acquisition of nearby land currently in private ownership, development of the property to provide replacement amenities, and subsequent transfer of ownership to the City.

The purpose of this project is to convert a portion of the Highland Terrace-Liberty Park Community Center to allow for permanent right-of-way acquisition required by the proposed I-526 LCC WEST transportation improvement project. The community center and associated recreational facilities are located within close proximity to I-26 and would be impacted by the proposed transportation improvements. The I-526 LCC WEST project proposes additional lanes on I-26 as part of improvements to the I-526/I-26 interchange improvements and would require the westward realignment of Taylor Street, which would encroach on the Highland Terrace-Liberty Park property.



North Charleston Population Projection (2017 to 2040)

**Description of the Highland Terrace-Liberty Park Community Center** – The Highland Terrace-Liberty Park Community Center is a publicly-owned recreational area. It provides a forum for youth development programs and community gatherings and serves as a voting center. The 0.87-acre property consists of recreational amenities including a full-size basketball court, half-size basketball court, a playground, and a 1,947 square foot community center. See appended map and photos. The City purchased the property in 1977. Per the August 14, 2020 appraisal completed by Saunders & Associates, Inc., the property is valued at \$380,000. See appended environmental features site map.

**Description of the Anderson Tract** – The Anderson Tract, owned by Hattie Ruth Levy Anderson, is a planned acquisition by SCDOT with the intent of conveying ownership to the City. The parcel is mostly wooded and contains one single-family residence along its southern boundary. The entire landholding is 5.53 acres, of which 4.56 acres is proposed as replacement LWCF land. An additional 0.34 acres is required within the City owned parcel to the north for a proposed driveway. Per the July 6, 2020 appraisal completed by Saunders & Associates, Inc., the 4.90 acres including land and the existing residence are valued at \$610,000. If the NPS approves the conversion, this property would become a recreational complex that provides full replacement of amenities impacted at the Highland Terrace-Liberty Park Community Center. The appended vicinity map shows the location of both properties. See appended environmental features site map.

### **DESCRIPTION OF ALTERNATIVES**

Alternative A (No Action) – This alternative would result in the NPS not receiving the State's proposal, submitted on behalf of the City, to convert a portion of Highland Terrace-Liberty Park Community Center, pursuant to the LWCF conversion regulations. This alternative would not allow land to become available for the Taylor Street realignment, additional right-of-way for the I-526 LCC WEST project, and the development of replacement facilities on the Anderson Tract. Alternative A was not selected because it would not meet the purpose of and satisfy the need for improved transportation facilities in the area.

Alternative B (Build Alternative) – Alternative B includes construction of the I-526 LCC WEST project and would remove federal protection from 0.27-acre of the Highland Terrace-Liberty Park Community Center to allow for permanent right-of-way acquisition. This alternative includes the creation of an outdoor recreational complex on the Anderson Tract including a full size outdoor basketball court, educational wetlands, playground, multi-use field, and fitness loop. This alternative also includes the reconstruction of outdoor recreational facilities at the existing facility (Highland Terrace-Liberty Park pocket park). See appended figures showing proposed facilities at each location.

Alternatives Evaluated But Not Carried Forward – In addition to evaluating the proposed replacement property, SCDOT evaluated other available land within the immediate vicinity of the affected LWCF property, in an effort to replace the facility as close to the existing facility as possible. This evaluation included several City-owned and privately-owned parcels; however, these parcels were either too small or were comprised almost entirely of wetlands and as such, were not carried forward as feasible alternatives.

### AFFECTED ENVIRONMENT

#### Highland Terrace-Liberty Park Community Center

Geological resources: soils, bedrock, slopes, streambeds, landforms, etc.
 Per the Phase I Environmental Site Assessment prepared by S&ME, Inc. on March 27, 2020, the project area is generally underlain by sandy and sandy loam soils.
 The Highland Terrace-Liberty Park Community Center is a fully developed parcel that consists of predominantly open space recreational areas. The tract is flat and relatively on grade with the road grades of Richardson Drive.

Air quality

Per the Air Quality Impact Analysis performed by Stantec Consulting Services, Inc. dated May 2020, the project area is in attainment for all criteria pollutants. Modeled concentrations of all MSAT pollutants are projected to experience significant reductions between 2015 and 2050.

#### • Sound (noise impacts)

The main sources of noise within the current property include a rail corridor to the north as well as motor vehicles along I-26.

#### • Water quality/quantity

According to an environmental survey performed by Civil Engineering Consulting Services, Inc. on July 23, 2020, there are no streams or other water conveyances located on the property.

#### • Stream flow characteristics

According to an environmental survey performed by Civil Engineering Consulting Services, Inc. on July 23, 2020, no streams will be affected by the proposed land conversion.

#### Marine/estuarine features

There are no known marine/estuarine features that will be affected in the proposed conversion area.

#### Floodplains/wetlands

Per Federal Emergency Management Agency (FEMA) Floodplain Mapping, the entire property is located in Zone X (moderate flood hazard zone). A small wetland area sits on the northern boundary of the parcel, as shown in the appended environmental features map.

#### • Land use/ownership patterns; property values; community livability Per an appraisal by Saunders & Associates, Inc. dated August 14, 2020, the current land use is recreational. The subject tract has primarily been designated for recreational use by the City since it was transferred on May 17, 1977. This transaction was recorded in the RMC Office of Charleston County in Deed Book L112, Page 371.

#### • Circulation, Transportation

The main circulation/transportation is currently access from Richardson Drive and Taylor Street. The nearest public transportation option is the CARTA bus route along Rivers Avenue.

#### • Plant/animal/fish species of special concern and habitat

According to an environmental survey performed by Civil Engineering Consulting Services, Inc. on July 23, 2020, there is no suitable habitat for species of special concern.

#### Federal listed or proposed for listing

According to an environmental survey performed by Civil Engineering Consulting Services, Inc. on July 23, 2020, there is no suitable habitat for federally-listed species or species proposed for listing.  Unique ecosystems, such as biosphere reserves, World Heritage sites, old growth forests, etc.

No unique ecosystems, World Heritage sites, old growth forests, or other notable terrestrial communities were identified during the environmental survey performed by Civil Engineering Consulting Services, Inc. on July 23, 2020.

- Unique or important wildlife/ wildlife habitat
   Per an e-mail from United States Fish and Wildlife Service (USFWS) dated July 28, 2020, USFWS concurs with findings that the proposed "land swap" will not alter the quality of the natural environment, and we do not offer any objections.
- Unique or important fish/habitat No unique or important fish/habitat was identified during the environmental survey performed by Civil Engineering Consulting Services, Inc. on July 23, 2020.
- Introduce or promote invasive species (plant or animal)
   There are no notable areas with invasive species currently on the property.
- Recreation resources, land, parks, open space, conservation areas, rec. trails, facilities, services, opportunities, public access, etc.
   Current recreational resources within the property will be impacted by the proposed land conversion. However, 0.60-acre of the 0.87-acre property not acquired for permanent right-of-way acquisition will be developed into a pocket park.

#### Accessibility for populations with disabilities

The Highland Terrace-Liberty Park Community Center includes access for populations with disabilities.

#### Overall aesthetics, special characteristics/features

The property is fully developed and contains a 1,947 square foot community center with recreational amenities. Outside of these facilities, there are no special characteristics or features on the property.

Historical/cultural resources, including landscapes, ethnographic, archeological, structures, etc. Attach SHPO/THPO determination.

The Highland Terrace-Liberty Park Community Center was surveyed for historic resources as part of the studies conducted for the proposed I-526 LCC WEST project. Based on the results of background research and field survey, there are no historic resources recommended eligible for listing on the National Register of Historic Places at the Highland Terrace-Liberty Park Community Center. The Highland Terrace-Liberty Park Community Center does not warrant intensive archaeological survey, as soils are defined as Urban land and located within the Filbin Creek drainage.

 Socioeconomics, including employment, occupation, income changes, tax base, infrastructure

The Highland Terrace-Liberty Park Community Center provides after school and summer programs which provide childcare options for neighborhood residents. **Minority and low-income populations** 

- The Highland Terrace-Liberty Park Community Center provides programs for the surrounding neighborhoods which are identified as minority and low-income populations.
- Energy resources (geothermal, fossil fuels, etc.) The Highland Terrace-Liberty Park Community Center does not contain any energy resources such as geothermal energy or fossil fuels.
- Other agency or tribal land use plans or policies The Highland Terrace-Liberty Park Community Center is not a focus area in any agency or tribal land use plans or policies.
- Land/structures with history of contamination/hazardous materials even if remediated

Per the Phase I Environmental Site Assessment prepared by S&ME, Inc. on March 27, 2020, no sites of concern are located on the parcel.

• Other important environmental resources to address. There are no other known environmental resources to address by the proposed land conversion.

#### Anderson Tract

Geological resources: soils, bedrock, slopes, streambeds, landforms, etc.
 Per the Phase I Environmental Site Assessment prepared by S&ME, Inc. on March 27, 2020, the project area is generally underlain by sandy and sandy loam soils.
 The Anderson Tract consists of predominantly wooded and open space areas.
 The tract is relatively flat and on grade with the road grade of Deacon Street.

Air quality

Per the Air Quality Impact Analysis performed by Stantec Consulting Services, Inc. dated May 2020, the project area is in attainment for all criteria pollutants. Modeled concentrations of all MSAT pollutants are projected to experience significant reductions between 2015 and 2050 due to improvements in vehicle emission standards.

#### • Sound (noise impacts)

The main sources of noise within the proposed recreational complex area include the adjacent rail corridor and noise from motor vehicles along I-526.

#### • Water quality/quantity

According to an environmental survey performed by Civil Engineering Consulting Services, Inc. on July 23, 2020, the only aquatic habitat observed within this site is an approximately one-half acre freshwater pond.

#### Stream flow characteristics

According to an environmental survey performed by Civil Engineering Consulting Services, Inc. on July 23, 2020, no streams will be affected by the proposed land conversion.

#### • Marine/estuarine features

According to an environmental survey performed by Civil Engineering Consulting Services, Inc. on July 23, 2020, the only aquatic habitat observed within this site is an approximately one-half acre freshwater pond.

#### • Floodplains/wetlands

Per FEMA Floodplain Mapping, the entire property is located in Zone X (moderate flood hazard zone) and 0.3-acre is located in Zone AE (1% annual chance flooding). There are no wetlands on the Anderson Tract; a small wetland area exists within the City owned parcel containing the proposed driveway to the replacement facilities.

#### • Land use/ownership patterns; property values; community livability

Mr. Samuel F. and Hattie Ruth Levy Anderson built the subject house in the 1960's. Mrs. Hattie Ruth Levy Anderson received title to the subject from Samuel F. Anderson a/k/a Samuel Anderson through Deed of Distribution on May 1, 2008. This is identified as Case Number: 2008-ES-10-00481 and recorded in the RMC Office for Charleston County in Deed Book Y658, Page 882.

#### • Circulation, Transportation

There are approximately 650 linear feet of an unpaved private driveway extending from Deacon Street to a single-family residence. Visibility and access to the rear portion of the parcel are otherwise limited due to the presence of a rail line to the west and Filbin Creek to the south. The nearest public transportation option is the CARTA bus route along Rivers Avenue.

#### • Plant/animal/fish species of special concern and habitat

According to an environmental survey performed by Civil Engineering Consulting Services, Inc. on July 23, 2020, there is no suitable habitat for species of special concern.

#### Federal listed species or species proposed for listing

According to an environmental survey performed by Civil Engineering Consulting Services, Inc. on July 23, 2020, there is no suitable habitat for federally-listed species or species proposed for listing.

 Unique ecosystems, such as biosphere reserves, World Heritage sites, old growth forests, etc.

No unique ecosystems, World Heritage sites, old growth forests, or other notable terrestrial communities were identified during the environmental survey performed by Civil Engineering Consulting Services, Inc. on July 23, 2020.

- Unique or important wildlife/ wildlife habitat No unique or important wildlife or wildlife habitat was identified during the environmental survey performed by Civil Engineering Consulting Services, Inc. on July 23, 2020.
- Unique or important fish/habitat No unique or important fish/habitat was identified during the environmental survey performed by Civil Engineering Consulting Services, Inc. on July 23, 2020.
- Introduce or promote invasive species (plant or animal)
   There are no notable areas with invasive species currently on the property.
- Recreation resources, land, parks, open space, conservation areas, rec. trails, facilities, services, opportunities, public access, etc.
   The Anderson Tract does not contain any existing recreational resources, services, or opportunities for recreation.
- Accessibility for populations with disabilities
   The Anderson Tract is privately-owned and does not include facilities specifically
   for access by populations with disabilities.
- Overall aesthetics, special characteristics/features The property is mostly wooded, and a single-family residential structure is present. no special characteristics or features are present on the property.
- Historical/cultural resources, including landscapes, ethnographic, archeological, structures, etc.

The Anderson Tract was surveyed for historic resources as part of the studies conducted for the proposed I-526 LCC WEST project. Based on the results of background research and field survey, there are no historic resources recommended eligible for listing on the National Register of Historic Places at the Anderson Tract. The Anderson Tract does not warrant intensive archaeological survey, as soils are defined as Urban land and located within the Filbin Creek drainage.

 Socioeconomics, including employment, occupation, income changes, tax base, infrastructure

The Anderson Tract does not contain any facilities or provide functions that influence or otherwise affect local socioeconomic conditions.

#### Minority and low-income populations

The Anderson Tract does not contain any facilities or provide functions that provide services for minority and low-income populations.

- Energy resources (geothermal, fossil fuels, etc.) The Anderson Tract does not contain any energy resources such as geothermal energy or fossil fuels.
- Other agency or tribal land use plans or policies The Anderson Tract is not a focus area in any agency or tribal land use plans or policies.
- Land/structures with history of contamination/hazardous materials even if remediated

Per the Phase I Environmental Site Assessment prepared by S&ME, Inc. on March 27, 2020, no sites of concern are located on the parcel.

• Other important environmental resources to address There are no other known environmental resources to address by the proposed land conversion.

### ENVIRONMENTAL IMPACTS

Recreational resources, facilities, and recreation opportunities at Highland Terrace-Liberty Park Community Center would be impacted by the proposed I-526 LCC WEST project. No impacts to the human or natural environment are anticipated from the proposed land conversion and replacement of impacted recreational facilities.

This proposal is being prepared in conjunction with the I-526 LCC WEST transportation improvement project. The I-526 LCC WEST FEIS-ROD includes a project commitment to construct the replacement facilities prior to the displacement of the existing facility.

#### Highland Terrace-Liberty Park Community Center

- Geological resources: soils, bedrock, slopes, streambeds, landforms, etc. No measurable effects to geologic resources are expected as a result of the proposed land conversion and construction of a pocket park on the land remaining at the Highland Terrace-Liberty Park Community Center.
- Air quality

No measurable effects to air quality are expected as a result of the proposed land conversion and construction of a pocket park on the land remaining at the Highland Terrace-Liberty Park Community Center.

• Sound (noise impacts) No measurable changes to existing or expected noise levels anticipated as a result of the proposed land conversion and construction of a pocket park on the land remaining at the Highland Terrace-Liberty Park Community Center.

#### • Water quality/quantity

No measurable effects to water quality or quantity are expected as a result of the proposed land conversion and construction of a pocket park on the land remaining at the Highland Terrace-Liberty Park Community Center.

#### • Stream flow characteristics

There are no streams at the existing site and no measurable effects to stream flow are expected as a result of the proposed land conversion and construction of a pocket park on the land remaining at the Highland Terrace-Liberty Park Community Center.

#### Marine/estuarine features

No measurable effects to marine/estuarine features are expected as a result of the proposed land conversion and construction of a pocket park on the land remaining at the Highland Terrace-Liberty Park Community Center.

#### Floodplains/wetlands

The small wetland along the northern boundary of the existing facility would not be impacted by the proposed conversion. No measurable effects to floodplains/wetlands are expected as a result of the proposed land conversion and construction of a pocket park on the land remaining at the Highland Terrace-Liberty Park Community Center.

#### Land use/ownership patterns; property values; community livability

The City currently owns the Highland Terrace-Liberty Park Community Center and would retain ownership of the remaining 0.60-acre pocket park. No changes to land use, ownership patterns, or other community effects would be created as a result of the proposed land conversion and construction of a pocket park on the land remaining at the Highland Terrace-Liberty Park Community Center.

#### Circulation, Transportation

No measurable effects to circulation or transportation are expected as a result of the proposed land conversion. The proposed pocket park would be accessed from Richardson Drive and the Taylor Street relocation. Currently there are eight parking spaces at the existing facility; approximately ten spaces would be created along Taylor Street as a part of the proposed conversion.

#### Plant/animal/fish species of special concern and habitat

No notable species of special concern or habitat were found during field surveys. No measurable effects on plant/animal/fish species of special concern and habitat are expected as a result of the proposed land conversion and construction of a pocket park on the land remaining at the Highland Terrace-Liberty Park Community Center.

#### • Federal listed species or species proposed for listing

No protected species or habitat were identified during field surveys. No measurable effects to federal listed or proposed for listing are expected as a

result of the proposed land conversion and construction of a pocket park on the land remaining at the Highland Terrace-Liberty Park Community Center.

• Unique ecosystems, such as biosphere reserves, World Heritage sites, old growth forests, etc.

There are no unique ecosystems located at the existing facility. No measurable effects to unique ecosystems, such as biosphere reserves, World Heritage sites, old growth forests, etc. are expected as a result of the proposed land conversion and construction of a pocket park on the land remaining at the Highland Terrace-Liberty Park Community Center.

- Unique or important wildlife/ wildlife habitat
   There is no unique or important wildlife or wildlife habitat at the existing facility.
   No measurable effects to unique or important wildlife/wildlife habitat are expected as a result of the proposed land conversion.
- Unique or important fish/habitat There is no unique or important fish habitat at the existing facility. No measurable effects to unique or important fish/habitat are expected as a result of the proposed land conversion.

## Introduce or promote invasive species (plant or animal) The proposed conversion would not create an opportunity to introduce or promote invasive species. The Highland Terrace-Liberty Park Community Center would be landscaped and regularly maintained.

Recreation resources, land, parks, open space, conservation areas, rec. trails, facilities, services, opportunities, public access, etc.
 Although amenities would be replaced at the proposed replacement property and on the remaining land at the existing facility, 0.27-acre containing recreational features would be converted to permanent transportation right-of-way.

#### Accessibility for populations with disabilities

No measurable effects on accessibility for populations with disabilities are expected as a result of the proposed land conversion and construction of a pocket park on the land remaining at the Highland Terrace-Liberty Park Community Center. Accessibility will be included in the design of both the new recreational complex and the pocket park at the existing site.

#### Overall aesthetics, special characteristics/features

Outside of typical maintenance and a small amount of landscaping, there are no special aesthetic characteristics or features currently at the Highland Terrace-Liberty Park Community Center. The proposed pocket park would be landscaped and maintained to provide a positive effect on overall aesthetics of the site.  Historical/cultural resources, including landscapes, ethnographic, archeological, structures, etc.

No measurable effects on historical/cultural resources, including landscapes, ethnographic, archeological, structures, etc. are expected as a result of the proposed land conversion.

Per a letter dated July 27, 2020 from SHPO, there are no documented historic properties that are eligible for listing or listed in the National Register of Historic Places in the proposed Area of Potential Effect (APE) and no additional cultural resources/historic property identification survey are needed.

On March 29, 2019, an invitation to be a consulting part on the I-526 LCC West project was sent via email to the Tribal Historic Preservation Officers (THPO) for the Catawba Indian Nation, Eastern Shawnee Indians, and Muscogee Creek Nation. The Catawba Indian Nation responded via email on May 6, 2019 indicating they wished to be a consulting party. On June 18, 2019, SCDOT transmitted electronic copies of the overall eligibility of resources in the project study area to the Muscogee (Creek) Nation and Eastern Shawnee Nation, and a physical copy of the report to the Catawba Indian Nation on behalf of FHWA. The Catawba Indian Nation returned a signed concurrence letter to SCDOT on June 26, 2019. On July 2, 2019, SCDOT received a concurrence letter from the Catawba Indian Nation on both the I-526 Lowcountry Corridor West Project, Charleston Co., SC Addendum II report and the I-526 West Cultural Resources Effect Determination Memo. Throughout the project a response was not received from the Eastern Shawnee Indians or Muscogee Creek Nation.

#### Socioeconomics, including employment, occupation, income changes, tax base, infrastructure

No measurable effects on socioeconomics, including employment, occupation, income changes, tax base, infrastructure are expected as a result of the proposed land conversion and construction of a pocket park on the land remaining at the Highland Terrace-Liberty Park Community Center.

#### Minority and low-income populations

No measurable effects on minority and low-income populations are expected as a result of the proposed land conversion and construction of a pocket park on the land remaining at the Highland Terrace-Liberty Park Community Center.

 Energy resources (geothermal, fossil fuels, etc.) No measurable effects on energy resources (geothermal, fossil fuels, etc.) are expected as a result of the proposed land conversion and construction of a pocket park on the land remaining at the Highland Terrace-Liberty Park Community Center.

#### • Other agency or tribal land use plans or policies No measurable effects on other agency or tribal land use plans or policies are expected as a result of the proposed land conversion and construction of a

pocket park on the land remaining at the Highland Terrace-Liberty Park Community Center.

# Land/structures with history of contamination/hazardous materials even if remediated

No measurable effects on land or structures with a history of contamination/hazardous materials even if remediated are expected as a result of the proposed land conversion and construction of a pocket park on the land remaining at the Highland Terrace-Liberty Park Community Center.

# Other important environmental resources to address No measurable effects on other important environmental resources are expected as a result of the proposed land conversion and construction of a pocket park on the land remaining at the Highland Terrace-Liberty Park Community Center.

#### Anderson Tract

• Geological resources: soils, bedrock, slopes, streambeds, landforms, etc. No measurable effects to geologic resources are expected as a result of the proposed land conversion.

#### Air quality

No measurable effects to air quality are expected as a result of the proposed land conversion.

#### • Sound (noise impacts)

No measurable changes to existing or expected noise levels are anticipated as a result of the proposed conversion.

#### • Water quality/quantity

The proposed replacement facility would increase the amount of impervious surface on the Anderson Tract; however, it is limited to the basketball court, playground, and fitness loop. To manage stormwater, two stormwater detention basins are proposed on the Anderson Tract as part of the LWCF replacement. These stormwater facilities will also serve as educational wetlands. No adverse impacts to water quality/quantity are anticipated by the proposed land conversion. No measurable effects to water quality or stream flow are expected as a result of the proposed land conversion.

#### Stream flow characteristics

No measurable effects to water quality or stream flow are expected as a result of the proposed land conversion.

#### Marine/estuarine features

No measurable effects to marine/estuarine features are expected as a result of the proposed land conversion.

#### • Floodplains/wetlands

Approximately 0.32 acre of floodplain impacts and 0.27 acre of wetland impacts are expected as a result of the proposed land conversion. As noted above, the proposed replacement facility includes stormwater management measures.

- Land use/ownership patterns; property values; community livability
   The Anderson Tract is currently a planned acquisition by SCDOT with the intent of
   conveying ownership to the City as a result of the proposed land conversion.

   The creation of recreational facilities would have a positive effect on community
   livability and cohesion which may provide benefit for adjacent property values.
- Circulation, Transportation
   The proposed replacement property would include an access drive from
   Deacon Street as well as a driveway and approximately 25 parking spaces
   which would be accessed from Elder Avenue.
- Plant/animal/fish species of special concern and habitat
   No measurable effects to plant/animal/fish species of special concern and
   habitat are expected as a result of the proposed land conversion. Per
   correspondence from USFWS dated July 28, 2020, USFWS concurs with findings
   that the proposed "land swap" will not alter the quality of the natural
   environment and does not object to the proposed conversion and replacement.
- Federal listed species or species proposed for listing No measurable effect to federal listed or proposed for listing are expected as a result of the proposed land conversion. Per correspondence from USFWS dated July 28, 2020, USFWS concurs with findings that the proposed "land swap" will not alter the quality of the natural environment and does not object to the proposed conversion and replacement.
- Unique ecosystems, such as biosphere reserves, World Heritage sites, old growth forests, etc.

No measurable effect to unique ecosystems, such as biosphere reserves, World Heritage sites, old growth forests, etc. are expected as a result of the proposed land conversion. Per correspondence from USFWS dated July 28, 2020, USFWS concurs with findings that the proposed "land swap" will not alter the quality of the natural environment and does not object to the proposed conversion and replacement.

#### Unique or important wildlife/ wildlife habitat

No measurable effects to unique or important wildlife/wildlife habitat are expected as a result of the proposed land conversion. Per correspondence from USFWS dated July 28, 2020, USFWS concurs with findings that the proposed "land swap" will not alter the quality of the natural environment and does not object to the proposed conversion and replacement.

#### • Unique or important fish/habitat

No measurable effects to unique or important fish/habitat are expected as a result of the proposed land conversion. Per correspondence from USFWS dated July 28, 2020, USFWS concurs with findings that the proposed "land swap" will not alter the quality of the natural environment and does not object to the proposed conversion and replacement.

## Introduce or promote invasive species (plant or animal) The proposed conversion would not create an opportunity to introduce or promote invasive species. The Anderson Tract would be landscaped and regularly maintained.

Recreation resources, land, parks, open space, conservation areas, rec. trails, facilities, services, opportunities, public access, etc.
 The Anderson Tract would be developed as a recreational complex if the proposed land conversion is approved. Recreational resources in the area would be improved by the addition of the recreational complex on the Anderson Tract in addition to the remaining land at the Highland Terrace-Liberty Park Community Center being retained and redeveloped for outdoor recreational purposes.

#### Accessibility for populations with disabilities

The proposed replacement recreational facilities would be designed to ensure accessibility for populations with disabilities. No measurable effects on accessibility for populations with disabilities are expected as a result of the proposed land conversion.

#### Overall aesthetics, special characteristics/features

There are no special characteristics or features currently on the Anderson Tract. The property will be landscaped and maintained to provide a positive effect on overall aesthetics of the site.

 Historical/cultural resources, including landscapes, ethnographic, archeological, structures, etc.

No measurable effects on historical/cultural resources, including landscapes, ethnographic, archeological, structures, etc. are expected as a result of the proposed land conversion.

Per a letter dated July 27, 2020 from SHPO, there are no documented historic properties that are eligible for listing or listed in the National Register of Historic Places in the proposed Area of Potential Effect (APE) and no additional cultural resources/historic property identification survey are needed.

On March 29, 2019, an invitation to be a consulting part on the I-526 LCC West project was sent via email to the Tribal Historic Preservation Officers (THPO) for the Catawba Indian Nation, Eastern Shawnee Indians, and Muscogee Creek Nation. The Catawba Indian Nation responded via email on May 6, 2019

indicating they wished to be a consulting party. On June 18, 2019, SCDOT transmitted electronic copies of the overall eligibility of resources in the project study area to the Muscogee (Creek) Nation and Eastern Shawnee Nation, and a physical copy of the report to the Catawba Indian Nation on behalf of FHWA. The Catawba Indian Nation returned a signed concurrence letter to SCDOT on June 26, 2019. On July 2, 2019, SCDOT received a concurrence letter from the Catawba Indian Nation on both the I-526 Lowcountry Corridor West Project, Charleston Co., SC Addendum II report and the I-526 West Cultural Resources Effect Determination Memo. Throughout the project a response was not received from the Eastern Shawnee Indians or Muscogee Creek Nation.

 Socioeconomics, including employment, occupation, income changes, tax base, infrastructure

No measurable effects on socioeconomics, including employment, occupation, income changes, tax base, infrastructure are expected as a result of the proposed land conversion.

- Minority and low-income populations No measurable effects on minority and low-income populations are expected as a result of the proposed land conversion.
- Energy resources (geothermal, fossil fuels, etc.) No measurable effects on energy resources (geothermal, fossil fuels, etc.) are expected as a result of the proposed land conversion.
- Other agency or tribal land use plans or policies No measurable effects on other agency or tribal land use plans or policies are expected as a result of the proposed land conversion.
- Land/structures with history of contamination/hazardous materials even if remediated

No measurable effects on land or structures with history of contamination/hazardous materials even if remediated are expected as a result of the proposed land conversion.

#### Other important environmental resources to address

No measurable effects on other important environmental resources to address are expected as a result of the proposed land conversion.
### **Coordination and Consultation**

Relevant agency correspondence and technical reports are appended to this EA. The following agencies were contacted during the preparation of this document:

- Saunders & Associates, Inc., 106 Pitt Street, Mount Pleasant, SC 29464
- Civil Engineering Consulting Services, Inc., 2551 Oscar Johnson Drive, Suite B North Charleston, SC 29405
- SC Historic Preservation Office, 8301 Parklane Road, Columbia, SC 29223-4905
- Catawba Indian Nation, 1536 Tom Stevens Road, Rock Hill, SC 29730
- Eastern Band of Cherokee Indians, P. 0. Box 445, Cherokee, NC 28719
- Muscogee Creek Nation, P. 0. Box 580, Okmulgee, OK 74447
- U.S. Fish and Wildlife Service, 176 Croghan Spur Road, Suite 200, Charleston, SC 29407
- Department of the Army Corps of Engineers Regulatory Division, Strom Thurmond Federal Building, 1835 Assembly Street, Rm 865B-1, Columbia, SC 29201

This EA will be submitted to Justin Hancock, Director of Recreation, Grants and Policy, SC Department of Parks, Recreation & Tourism, 1205 Pendleton Street, Columbia, SC 29201 for review and recommendation.

The City of North Charleston and the SCDOT entered into an intergovernmental agreement (IGA) regarding specific elements of the I-526 LCC WEST EJ Community Mitigation Plan (EJCMP) as some aspects of the EJCMP require coordination with and/or implementation through the City of North Charleston. A draft version of the IGA is included in Appendix A.

#### **Opportunities for Public Comment**

Public input on the proposed replacement facilities occurred concurrent to the public engagement for the I-526 LCC WEST Draft Environmental Impact Statement (DEIS) in the fall of 2020 through spring 2021. The Draft EA was released for a 30-day comment period coinciding with the distribution of the DEIS in October 2020. The Draft EA was available for review and comment as part of the DEIS technical appendices. The DEIS and this EA were made available for review online at the project website and at the

Project Community Office, located at 5627 Rivers Avenue (CARTA Route 10). This EA was also made available for review during normal business hours at City of North Charleston City Hall, 2500 City Hall Lane, North Charleston, SC 29406.

The project team developed a mitigation-specific survey that was distributed to EJ neighborhood residents and other area residents. The survey focused on individual preferences on a range of topics that included recreational amenities and programs for the replacement recreational facilities. The survey, along with a self-addressed envelope and stamp, was mailed to each residence in the EJ neighborhoods as well as property owners who own land within the EJ communities, but may not necessarily live there themselves. The same content was also developed into an online survey that was available to the general public and anyone in the EJ community who prefers to use an online platform. As of January 15, 2021, 199 surveys were submitted to the project team, 69 of those were completed online and 130 through the mail. A summary of the results of this survey can be found in the EJ Community Mitigation Plan (FEIS-ROD Appendix H).

Public feedback supports the construction of replacement recreational facilities and ongoing engagement is shaping the programs and amenities that will be incorporated into the replacement facilities.

#### **References** Consulted

Saunders & Associates, Inc., Appraisal of 5260 Deacon Street, North Charleston, SC

- Saunders & Associates, Inc., Appraisal of 2401 Richardson Drive, North Charleston, SC
- Stantec Consulting Services, Inc., I-526 LCC WEST Air Quality Impact Analysis, Interstate 526 & Interstate 26 Interchange
- Civil Engineering Consulting Services, Inc., Proposed LWCF Conversion of the Highland Terrace-Liberty Park Community Center, Biological Survey
- S&ME, Inc., Phase I Environmental Site Assessment, I-526 Corridor Improvements

FEMA Floodplain Maps

#### List of Preparers

The following individual, firms, and resources contributed, directly or indirectly, to the development of this EA which was prepared in consultation with the National Park Service:

- Chad Long, Director of Environmental Services, SCDOT, Post Office Box 191, Columbia, SC 29202-191
- Amy Sackaroff, Senior Transportation Planner, Stantec, 801 Jones Franklin Road Suite 300, Raleigh, NC 27606-3394

- Michael Wray, Transportation Engineer, Stantec, 801 Jones Franklin Road Suite 300, Raleigh, NC 27606-3394
- Stuart M. Saunders, Appraiser, Saunders & Associates, Inc., 106 Pitt Street, Mount Pleasant, SC 29464
- Amanda Harris, Civil Engineering Consulting Services, Inc., 2551 Oscar Johnson Drive, Suite B, North Charleston, SC 29405

# **FIGURES**



## Legend

Parcels
Anderson Tract - Proposed 6(f) Boundary
Highland Terrace-Liberty Park Community Center

Anderson Tract

500

\_\_\_\_\_Feet 1,000



I-526 Lowcountry Corridor WEST Charleston County Last Updated by AK on 9/11/2020

0



303d Impaired Streams

526

26

I-526 Lowcountry Corridor WEST Charleston County Last Updated by AK on 9/11/2020







200

100



Highland Terrace-Liberty Park Community Center Environmental Features

> I-526 Lowcountry Corridor WEST Charleston County Last Updated by AK on 4/9/2021



#### Legend

Proposed Bridge
Proposed Taylor St Relocation
Proposed Right of Way
Mitigation Barrier
Parcels
Proposed Pocket Park
Wetlands

100

On Street Parking Wood Benches

2

Full Court Basketball
 Half Court Basketball

Feet

200

25x25 Open Air Pavilion 5000 SF Playground Sidewalk Connection

5

6

7

8

Improve Cross Walks



Highland Terrace-Liberty Park Community Center Environmental Features

> I-526 Lowcountry Corridor WEST Charleston County Last Updated by AK on 4/12/2021

0

# **APPENDICES**

# **APPENDIX A**

AGENCY COORDINATION

### Cooperative Intergovernmental Agreement Between The City of North Charleston and The South Carolina Department of Transportation For Mitigation Efforts Related to the I-526 Improvement Project

This Agreement is made this \_\_\_\_\_ day of \_\_\_\_\_, 202\_\_, by and between the City of North Charleston (hereinafter "City") and the South Carolina Department of Transportation (hereinafter "SCDOT") (collectively "the Parties").

#### WITNESSETH THAT:

WHEREAS, SCDOT is developing an interstate improvement project on the I-526 Lowcountry Corridor in the greater Charleston region; and

WHEREAS, SCDOT has determined that the project will have significant impacts to the communities surrounding the existing interstate corridor that will require mitigation; and

WHEREAS, SCDOT is committed to work with City in order to properly mitigate these potential community impacts; and

WHEREAS, City is agreeable to work with SCDOT in order to meet common goals regarding mitigation efforts in the North Charleston community; and

WHEREAS, SCDOT is an agency of the State of South Carolina with the authority to enter into contracts necessary for the proper discharge of its functions and duties; and

WHEREAS, City is a body politic with the authority to enter into contracts necessary for the proper discharge of its functions and duties; and

WHEREAS, the Parties wish to set forth herein the terms of their relationship to accomplish the purpose set forth above;

NOW THEREFORE, in consideration of the mutual benefits accruing to each and to the State of South Carolina, the Parties agree as follows:

#### I. <u>DESCRIPTION</u>

This Agreement is for the replacement of community centers that will be affected by SCDOT's I-526 improvement project and for the construction of new sidewalks and shared-use pathways that will include pedestrian-scale lighting improvements that provide access to the new community centers from the connecting community streets. The work covered by this Agreement is a component of a larger mitigation plan for SCDOT's interstate improvement project.

#### II. OBLIGATIONS OF THE PARTIES

#### A. <u>SCDOT WILL:</u>

- 1. Identify an SCDOT employee to serve as SCDOT's Contact for City.
- 2. Through its normal right-of-way acquisition processes, acquire the two community centers, as applicable, and any associated real property that will be impacted by SCDOT's project. These properties are identified in Exhibit A, attached hereto and incorporated herein.
- 3. Acquire real property for locating a community center and pocket parks to mitigate the loss of those impacted by SCDOT's project. This property will be transferred to City from SCDOT upon acquisition by quitclaim deed. These properties are identified in Exhibit B, attached hereto and incorporated herein.
- 4. According to the terms of the Local Public Agency (LPA) Agreement with City, incorporated herein by reference, fund the design and construction of the replacement community center, pocket parks, and shared-use paths as specified in the mitigation plan, incorporated herein by reference. This obligation also will extend to the initial equipping and furnishing of the community center. SCDOT's funding obligation is for the community center and pocket parks as outlined in the mitigation plan. City may elect to include discretionary items in the design and construction of these, but any such discretionary items will not be reimbursable by SCDOT.
- 5. Identify an SCDOT employee to participate in City's discussions that result in the selection of designs, plans, contractors, and consultants for the replacement community center and pocket parks.
- 6. Accept maintenance responsibility only for standard transportation materials, structures, and workmanship within SCDOT rights-of-way according to common local practices. For those items which will be maintained by SCDOT, SCDOT will accept maintenance responsibility after construction of the project is complete and the project is accepted by SCDOT. This will include the portions of the shared-use path that parallel State roadways.
- 7. Perform all services required of SCDOT in accordance with SCDOT guidelines and policies.
- 8. Within the limits of the South Carolina Tort Claims Act, be responsible for any loss resulting from bodily injuries (including death) or damages to property,

arising out of any negligent act or negligent failure to act on SCDOT's part, or the part of any employee of SCDOT in performance of the work undertaken under this Agreement.

#### B. CITY WILL:

- 1. Become qualified through SCDOT as a Local Public Agency in order to manage the design and construction of the community center, pocket parks, and shared-use path.
- 2. Transfer the identified portion (see Exhibit A for further details) of the impacted community center tract to SCDOT.
- 3. Maintain or demolish, as appropriate, any structures and appurtenances on tracts conveyed to City from SCDOT.
- 4. Design and construct, through SCDOT's LPA Program, the replacement community center, two pocket parks, and the shared-use path.
- 5. Be responsible for maintenance of the community center, the pocket parks, lighting, landscaping, community entrance signs, traffic calming features (speed humps and raised crosswalks), pedestrian bridges, and portions of the shared-use path that do not parallel State roadways.
- 6. Develop and deliver enhanced programs and services at the community center in accordance with the mitigation plan (incorporated herein by reference).
- 7. Retain all records dealing with the Project for three years after the performance period of all agreements and covenants entered into for the Project. Such records shall be made available to SCDOT and FHWA upon request.
- 8. Comply with the audit requirements of 2 CFR 200, Subpart F.
- 9. Within the limitations of the South Carolina Tort Claims Act, be responsible for any loss resulting from bodily injuries (including death) or damages to property arising out of any negligent act or negligent failure to act on City's part, or the part of any employee of City in performance of the work undertaken under this Agreement.

#### III. <u>GENERAL TERMS</u>

- A. This Agreement shall take effect upon its execution and shall terminate upon the earlier of: written notification for cause from one Party to the other, or satisfaction of all terms and conditions of this Agreement.
- B. The Parties hereto agree to conform to all applicable SCDOT policies, all State, Federal, and local laws, rules, regulations, and ordinances governing agreements or contracts relative to the acquisition, design, construction, maintenance, and repair of roads and bridges, and other services covered under this Agreement.
- C. The Parties, or their authorized agents, shall agree to hold consultations with each other as may be necessary with regard to the execution of supplements, modifications, or amendments to this Agreement during the course of the Project for the purpose of resolving any unforeseen issues that may arise or items that may have been unintentionally omitted from this Agreement. Such supplements, modifications, or amendments shall be subject to the approval and proper execution of the Parties hereto. No supplement, modification, or amendment to this Agreement shall be effective or binding on any Party hereto unless such supplement, modification, or amendment has been agreed to in writing by the Parties hereto.
- D. Any and all reviews and approvals required of the Parties herein shall not be unreasonably denied, delayed, or withheld.
- E. No waiver of any event of default by a Party hereunder shall be implied from any delay or omission by the other Party to take action on account of such event of default, and no express waiver shall affect any event of default other than the event of default specified in the waiver and it shall be operative only for the time and to the extent therein stated. Waivers of any covenants, terms, or conditions contained herein must be in writing and shall not be construed as a waiver of any subsequent or other breach of the same covenant, term, or condition. The consent or approval by a Party of any act by the other requiring further consent or approval shall not be deemed to waive or render unnecessary the consent or approval to or of any subsequent or similar act. No single or partial exercise of any right or remedy of a Party hereunder shall preclude any further exercise thereof or the exercise of any other or different right or remedy.
- F. In the event a dispute or claim in connection with this Agreement shall arise between the Parties, the Parties shall meet in good faith and attempt to resolve any issues prior to taking legal or equitable action. Any lawsuit arising out of or relating to this Agreement shall be filed for non-jury proceedings in Charleston County.
- G. All notices and other correspondence will be officially delivered as follows:

As to SCDOT:

South Carolina Department of Transportation 955 Park Street Columbia, South Carolina 29202-0191

As to City:

City of North Charleston 2500 City Hall Lane North Charleston, South Carolina 29406

- H. The Parties each bind themselves, their respective successors, executors, administrators, and assigns to the other Party with respect to these requirements, and also agree that no Party shall assign, sublet, or transfer its respective interest in this Agreement without the written consent of the other.
- I. This Agreement is made and entered into for the sole protection and benefit of SCDOT, City, and their respective successors and assigns. No other persons, firms, entities, or parties shall have any rights or standing to assert any rights under this Agreement in any manner.
- J. Invalidation of any one or more of the provisions of this Agreement by a court of competent jurisdiction shall in no way affect any of the other provisions herein, all of which shall remain in full force and effect.
- K. This Agreement may be executed and delivered in counterparts, and if so executed, shall become effective when a counterpart has been executed and delivered by all Parties hereto. All counterparts taken together shall constitute one and the same Agreement and shall be fully enforceable as such. Delivery of counterparts via facsimile transmission or via email with scanned attachment shall be effective as if originals thereof were delivered.
- L. By executing this Agreement, the undersigned each affirm and certify that he or she has the authority to bind his or her principal thereto and that all necessary acts have been taken to duly authorize this Agreement under applicable law.
- M. This Agreement with attached Exhibits and Certifications constitutes the entire Agreement between the Parties. This Agreement is to be interpreted under the laws of the State of South Carolina.

[Signature blocks on next page]

**IN WITNESS WHEREOF**, the Parties have caused this Agreement to be executed on their behalf

SIGNED, SEALED, AND DELIVERED IN THE PRESENCE OF

#### CITY OF NORTH CHARLESTON

	By:
Witness	
	Title
	SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION
Witness	By: Secretary of Transportation
	RECOMMENDED BY:
	Deputy Secretary for Finance and Administration

Deputy Secretary for Engineering

### AGREEMENT BETWEEN THE SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION AND THE CITY OF NORTH CHARLESTON

THIS AGREEMENT is made this \_\_\_\_\_day of \_\_\_\_\_, 2021, by and between \_\_\_\_\_\_ (hereinafter referred to as "SUBRECIPIENT") and the South Carolina Department of Transportation (hereinafter referred to as "SCDOT") (collectively "the Parties").

#### WITNESSETH THAT:

WHEREAS, the Parties wish to work together to complete the Community Center Project in Charleston County; and

WHEREAS, SCDOT is an agency of the State of South Carolina with the authority to enter into contracts necessary for the proper discharge of its functions and duties; and

WHEREAS, SUBRECIPIENT is a body politic with all the rights and privileges of such including the power to contract as a necessary and incidental power to carry out SUBRECIPIENT's functions covered under this Agreement; and

WHEREAS, SUBRECIPIENT is a qualified Local Public Agency capable of managing the Project;

NOW THEREFORE, in consideration of the several promises to be faithfully performed by the Parties hereto as set forth herein, SCDOT and SUBRECIPIENT do hereby agree as follows:

#### I. <u>PROJECT DESCRIPTION</u>:

The Project, which is the subject of this Agreement, consists of design and construction of recreation facilities and community centers to replace facilities that will be impacted due to the I-526 widening. It is anticipated that this Project will result in the construction of one community center, two pocket parks, a shared-use path, and other pedestrian accommodations.

The Project is divided into two parts: the design of the Project and construction of the Project. These parts are defined as follows:

#### Part 1 Design:

Includes all preliminary engineering, location approval, environmental assessments and documents, hydrology studies, floodway studies, NPDES studies, obtain permits, right-of-way and construction plans, traffic control and staging plans, utility coordination, utility

relocation agreements and any and all other associated tasks as necessary to prepare acceptable plans.

#### Part 2 Construction:

Includes bidding and letting of a construction contract, the actual construction performance, construction engineering, construction inspection, sampling and testing of materials, and other associated tasks as necessary. This provision shall include the initial equipping and furnishing of the community centers.

The term PROJECT as used herein is intended to refer to the above Parts collectively unless indicated otherwise.

EXHIBIT A (attached hereto and specifically made a part of this Agreement) represents additional PROJECT details and a map depicting the PROJECT area.

#### II. OBLIGATIONS OF PARTIES

#### A. <u>SCDOT WILL:</u>

- 1. Provide SCDOT's maximum funding for the PROJECT as more specifically set out below under Section III. of this Agreement.
- 2. Identify an SCDOT employee to serve as SCDOT's Contact for SUBRECIPIENT.
- 3. Have the right to make on-site inspections during the progress of the PROJECT and conduct independent testing of all workmanship and materials to verify SUBRECIPIENT's results.
- 4. Provide necessary reviews, coordination, and oversight.
- 5. Obtain necessary environmental documents for the Project.
- 6. Perform all services required of SCDOT in accordance with SCDOT guidelines and policies.
- 7. Accept maintenance responsibility only for standard transportation materials, structures, and workmanship within SCDOT rights-of-way according to common local practices. For those items which will be maintained by SCDOT, SCDOT will accept maintenance responsibility after construction of the PROJECT is complete and the PROJECT is accepted by SCDOT.
- 8. Within the limits of the South Carolina Tort Claims Act, be responsible for any loss resulting from bodily injuries (including death) or damages to

property, arising out of any negligent act or negligent failure to act on SCDOT's part, or the part of any employee of SCDOT in performance of the work undertaken under this Agreement.

#### B. <u>SUBRECIPIENT WILL:</u>

- 1. Comply with the conditions noted in SCDOT's qualification letter dated \_\_\_\_\_\_. This qualification letter is attached as EXHIBIT B and specifically made a part hereof.
- 2. Provide SUBRECIPIENT's cost share for this PROJECT as more specifically defined under Section III. FUNDING.
- 3. Comply with the administrative procedures and accomplish all the milestones and approvals stated in "Procedures for Local Public Agency Project Administration", located on the SCDOT website at <u>http://www.scdot.org/business/lpa.aspx</u>, attached hereto and incorporated herein as EXHIBIT C.
- 4. Receive written approval from SCDOT prior to beginning any individual Part or phase of work as defined in Section I, to ensure that the PROJECT remains eligible for reimbursement.
- 5. Perform by force account, consultant, or contractor, approved by the Parties hereto, all Design, Construction, and other services required for the PROJECT including being responsible for the preparation of preliminary and construction plans, special provisions and specifications, such being subject to the written approval of SCDOT and, if required, the Federal Highway Administration (FHWA).
- 6. Be responsible for the physical location, layout, and appropriate site management for the PROJECT subject to written approval by SCDOT.
- 7. Perform all services using design standards in compliance with applicable building codes.
- 8. For transportation features, prepare all plans in a format acceptable to SCDOT. The SCDOT Plan Preparation Guide will be used a guide for plan review and can be accessed at <u>https://www.scdot.org/business/preparation-guide.aspx</u>.
- 9. Perform all surveys and sub-surface foundation investigation necessary for the PROJECT. This includes, but is not limited to: geotechnical investigations, wetland delineation, subsurface utility exploration, and other utility location work.

- 10. Perform all necessary tasks, activities, and studies for the preparation of all applications and/or documents as may be necessary for obtaining all required permits for the PROJECT in accordance with SCDOT and federal regulations and as outlined in the SCDOT/LPA Permitting Responsibility Matrix located at <a href="https://www.scdot.org/business/environmental-toolshed.aspx">https://www.scdot.org/business/environmental-toolshed.aspx</a>.
- 11. Be responsible for all traffic control necessary for the PROJECT.
- 12. Secure through competitive negotiation the services of any design or construction engineering consultant or contractor required for the PROJECT as outlined in Section V. PROCUREMENT REQUIREMENTS.
- 13. Agree that all consultants and subconsultants will comply with SCDOT's Procurement Policy Memorandum (dated February 2, 2011) Implementing FHWA Order 4470.1A, (dated October 27, 2010). This memorandum and FHWA Order reference a requirement for an approved Federal Acquisition Regulation (FAR) compliant indirect cost rate to be on file with SCDOT.
- 14. Notify SCDOT of all meetings relating to the securing of any consultant and/or contractor. All selection meetings will be documented in writing and documentation will be available for inspection by SCDOT, agencies of the State of South Carolina, and the Federal Government.
- 15. Use a consultant agreement which follows the format of SCDOT's standard consultant agreement attached hereto as EXHIBIT E.
- 16. Receive written approval from SCDOT prior to entering into any consultant agreement and/or construction contract.
- 17. Incorporate into contracts all applicable Required Provisions and Supplemental Specifications in effect at the time of execution of this Agreement. These provisions and specifications may be found at: <u>https://www.scdot.org/business/lpa.aspx</u>.
- 18. Submit an Encroachment Permit application, if necessary, to SCDOT within 30 days of the Plans, Specifications, and Estimate (PS&E) Package approval.
- 19. Be responsible for the checking and approving of all shop plans and drawings necessary for the PROJECT.
- 20. Include SCDOT in all inspections resulting in the acceptance of PROJECT work.
- 21. Arrange for and conduct a final inspection for the completed PROJECT with SCDOT to determine whether all work has been performed in accordance

with contractual requirements and secure written concurrence from SCDOT prior to notifying the contractor of the acceptance of the PROJECT.

- 22. Upon completion and acceptance of all work provided under the terms of the contract, obtain written affidavits from the contractor to the effect that all claims arising by virtue of the contract have been paid in full with any exceptions listed on the affidavits. SUBRECIPIENT will furnish one copy of each such affidavit to SCDOT.
- 23. Accept maintenance responsibility for the PROJECT. This responsibility is exclusive of the maintenance responsibilities assigned to SCDOT under Section II.A.5. of this agreement.
- 24. Perform all PROJECT services in accordance with all laws and regulations, both Federal and State, following the guidelines as established by SCDOT and other State and Federal guidelines considered by SCDOT to be appropriate, including compliance with applicable sections of the SCDOT/ Federal Highway Administration STEWARDSHIP AND OVERSIGHT PLAN dated June 2014 and any revisions, addenda, or other modifications thereto (included herein by reference), located at https://www.fhwa.dot.gov/federalaid/stewardship/agreements/sc.pdf.
- 25. Provide to SCDOT upon request copies of all basic notes, sketches, charts, plans, correspondence, and other data prepared, furnished or obtained by or for SUBRECIPIENT or its agent for the PROJECT.
- 26. Retain all records dealing with this PROJECT for three years after completion and acceptance of PROJECT and final audit, and such records will be made available to SCDOT for audit and review upon request.
- 27. Provide to SCDOT a monthly status report for the PROJECT. EXHIBIT F attached hereto and specifically made a part of this Agreement represents an acceptable format.
- 28. Include as an attachment to SUBRECIPIENT's final invoice a certification that all required services have been completed in accordance with the terms of this Agreement.
- 29. Comply with the audit requirements of 2 CFR 200, Subpart F. Subrecipients exempt from these audit a requirements, but obligated by other funding source requirements to obtain an annual financial statement audit are to submit a copy of the audit to SCDOT's Office of Contract Assurance within the earlier of 30 days after receipt of the auditor's report or nine months after the end of the audit period. Note that other funding source requirements include South Carolina Code of Law, sections 4-9-150 (counties), 5-7-240 (cities) and 6-7-170 (special purpose districts and other political subdivisions –i.e. COG). All audits must be

performed in accordance with Generally Accepted Government Audit Standards (GAGAS). Audit documentation submitted shall include: a copy of the audited financial statements; a copy of the management letter issued by the Certified Public Accountant (CPA) in conjunction with the audit report, when applicable; a copy of management's comments on all findings, recommendations, and questioned costs contained in the audit report and management letter, including detailed corrective action plan(s). Submit required documents to: SCDOT, Office of Contract Assurance - Attn. Sub-recipient Monitoring, Room 108, PO Box 191, Columbia, SC 29201. Electronic copies may be submitted via the OCA Document Submission Portal at https://www.scdot.org/business/aeconsultants.aspx#subForm.

30. Within the limitations of the South Carolina Tort Claims Act, be responsible for any loss resulting from bodily injuries (including death) or damages to property, arising out of any negligent act or negligent failure to act on SUBRECIPIENT's part, or the part of any employee or agent of SUBRECIPIENT in performance of the work undertaken under this Agreement.

#### III. **FUNDING:**

- A. SUBRECIPIENT PROJECT estimates the total cost for the to be \$
- B. SCDOT's maximum funding for the PROJECT is \$ (hereinafter Funding") referred "SCDOT's Maximum authorized to as as by \_, for use of on grant funds. SCDOT's Maximum Funding will

be distributed as follows:

- SCDOT will sub-award \$\_\_\_\_\_ of the Federal \_\_\_\_\_ 1. award as a pass-through grant to SUBRECIPIENT for administration of the PROJECT.
- SCDOT shall reserve \$\_\_\_\_\_ of the Federal \_\_\_\_\_ 2. award for SCDOT staff charges necessary to perform preconstruction and construction activities, and independent assurance testing of all workmanship and materials associated with the PROJECT (hereinafter referred to as "SCDOT Internal Cost Reserve").
- C. SCDOT will provide federal matching fund requirements as part of SCDOT's Maximum Funding for the PROJECT.
  - The required match on this grant is <u>\$\_\_\_\_\_</u>. This amount includes 1. the match requirement of \$ for the pass-through funds. Fund sources and match responsibilities for the PROJECT are shown in the funding table below.

- 2. Funding Table:
- D. SUBRECIPIENT is responsible for 100% of the cost of the PROJECT in excess of SCDOT's Maximum Funding for the PROJECT.
- E. SCDOT will make payment to SUBRECIPIENT for all eligible costs incurred by SUBRECIPIENT, up to SCDOT's Maximum Funding for the PROJECT based on a valid reimbursement request/invoice submitted by SUBRECIPIENT to SCDOT. A reimbursement request or invoice is considered valid when it includes:
  - 1. Identification of man-hours by task, classification, and rate
  - 2. A line item for overhead, where applicable
  - 3. A listing of other direct costs
  - 4. A listing of consultant/contractor services
  - 5. Signature of certification in accordance with 2 CFR 200.415, *Required Certifications*, by an authorized representative of SUBRECIPIENT
  - 6. Additional certifications relating to work performed as requested by SCDOT's Program Manager.
- F. All of SUBRECIPIENT's reimbursement requests or invoices must be supported by suppliers' invoices and SUBRECIPIENT's financial records. SUBRECIPIENT will submit reimbursement requests/invoices to SCDOT not more often than monthly. EXHIBIT G, attached hereto and specifically made a part of this Agreement, represents an acceptable reimbursement request form.
- G. Upon completion of the project, SUBRECIPIENT shall submit a Final Invoice for the PROJECT. This invoice may be a \$0.00 invoice if all reimbursements, not to exceed the SCDOT Maximum Funding, have been paid to SUBRECIPIENT. The reimbursement shall include the certification as outlined in Section II.B.34 of this Agreement.
- H. SUBRECIPIENT is responsible for refunding to SCDOT any funding provided to SUBRECIPIENT by SCDOT for work and services performed by or for SUBRECIPIENT which are determined not to be in compliance with the terms and conditions of this Agreement.

#### IV. <u>SCHEDULE:</u>

A. The effective date of this Agreement is the date of execution by the Parties hereto. SUBRECIPIENT shall begin work upon receipt of SCDOT's written notice to proceed.

- B. No work/services performed prior to the complete execution of this Agreement and issuance of a written notice to proceed from SCDOT to SUBRECIPIENT will be eligible for funding reimbursement.
- C. SUBRECIPIENT anticipates that the PROJECT will be substantially complete within \_\_\_\_\_\_ months of SCDOT's written notice to proceed.
- D. SUBRECIPIENT must request FINAL PROJECT COMPLETION and CLOSURE within 270 days of the PROJECT's substantial completion date. FINAL PROJECT COMPLETION shall include physical completion and acceptance of the PROJECT by SCDOT and submittal of all close out materials to SCDOT. If SUBRECIPIENT fails to accomplish FINAL PROJECT COMPLETION within 270 days following the substantial completion date, SUBRECIPIENT shall reimburse SCDOT all funds provided by SCDOT to the PROJECT and shall not be eligible for additional SCDOT funding for any other projects until the PROJECT is completed.
- E. SUBRECIPIENT agrees to prosecute the PROJECT work continuously and diligently from the date of SCDOT's written notice to proceed. Should SUBRECIPIENT be unable to complete the PROJECT within the above period, SUBRECIPIENT shall notify SCDOT in writing as to the reason for the delay, attach a revised PROJECT schedule, and request a revised completion date. SCDOT may, at its sole discretion, approve or deny any request for a time extension. Substantial failure to meet the stated schedule may result in termination of this agreement pursuant to Section VII. (R) of this Agreement.

#### V. <u>PROCUREMENT REQUIREMENTS</u>:

SUBRECIPIENT shall procure all goods and services necessary for the PROJECT in accordance with the following requirements:

- A. Contracts for goods and services (including all consultants and contractors) must be procured in accordance with one of the following:
  - 1. The South Carolina Consolidated Procurement Code (S.C. Code Section 11-35-10, *et seq.*) and the regulations promulgated pursuant thereto; or
  - 2. SUBRECIPIENT's own procurement procedures, provided they have been properly adopted and are substantially in accordance with the Model Procurement Ordinance proposed by the State Fiscal Accountability Authority pursuant to S.C. Code Section 11-35-50 and conform to applicable federal laws and regulations identified in 2 CFR § 200.318.
- B. Regardless of which of the above procedures are followed, SUBRECIPIENT must receive prior written approval (through SCDOT's assigned Contact Person) from SCDOT's Deputy Secretary to use either of the following project delivery methods:

- 1. Design/build, or
- 2. A method where the same contractor or consultant is performing both management and construction services.
- C. All procurements that require advertising shall be advertised in South Carolina Business Opportunities (SCBO) published by the Materials Management Office of the State Fiscal Accountability Authority in addition to any other publication in which SUBRECIPIENT deems it appropriate to advertise.
- D. At the completion of the PROJECT, SUBRECIPIENT shall complete and submit to SCDOT the Certification of Procurement attached hereto and made a part hereof as EXHIBIT H, certifying that all the above PROCUREMENT REQUIREMENTS have been met for the PROJECT and providing a list of all consultants, contractors, and vendors used on the PROJECT, and the total dollar value paid to each.

#### VI. <u>HISTORIC SIGNIFICANCE</u>:

Projects found eligible for transportation funding due to one or more historic elements as provided in federal legislation, for example: acquisition of scenic easements and scenic or historic sites; historic preservation; rehabilitation and operation of historic transportation buildings, structures, or facilities (including historic railroad facilities and canals), or archaeological planning and research shall require SUBRECIPIENT to develop the PROJECT in agreement with the State Historic Preservation Officer (SHPO) regarding the eligibility of the historic elements of the PROJECT and regarding the PROJECT's beneficial effect on those elements. The PROJECT plans and any revisions thereto that would relate to the historic elements of such a project must be reviewed by SCDOT's Environmental Section for coordination with the SHPO prior to approval.

The agreement with SHPO, including any conditions and approved changes, shall be made part of the construction contract and will be strictly enforced.

#### VII. <u>GENERAL</u>:

- A. In any dispute concerning a question of fact in connection with the work of this Agreement or compensation thereof, the decision of SCDOT's Deputy Secretary in the matter shall be final and conclusive for both Parties, subject to non-jury appeal to the South Carolina Circuit Court in Charleston County within 90 days of PROJECT completion.
- B. The Parties hereto agree that no part, portion, or phase of the PROJECT will be authorized until the specific scope of services is agreed to in writing by the Parties hereto and all funding necessary for that part, portion, or phase has been accounted for and obligated by the appropriate Party hereto.
- C. SCDOT shall have the right to accept or reject proposed consultants and/or contractors in accordance with SCDOT's procedures.

- D. The Parties hereto agree to participate in public hearings or meetings in an effort to communicate the PROJECT to the community or communities in which the PROJECT is located. The Parties hereto, including their employees and agents, further agree to maintain good relationships with the residents, businesses, and the community as a whole during all parts and phases of the PROJECT.
- E. The Parties hereto agree to conform to all applicable SCDOT, State, Federal and local laws, rules, regulations, and ordinances governing agreements or contracts relative to the acquisition, design, construction, maintenance, and repair of roads and bridges, and other services covered under this Agreement.
- F. SCDOT's examination and approval of encroachment permits, plans, specifications, drawings, maps, and other work prepared or performed by SUBRECIPIENT and SUBRECIPIENT's agent for the PROJECT does not in any manner shift responsibility to SCDOT and SCDOT officers or employees.
- G. Pursuant to SC Code § 57-5-820, if applicable, SUBRECIPIENT does hereby consent to the construction of the PROJECT within corporate limits. SUBRECIPIENT shall be responsible for obtaining consent from any other jurisdiction in which PROJECT work may occur. The forgoing consent shall be the sole approval necessary for SCDOT to complete the PROJECT as described in this Agreement, and constitutes a waiver of any and all other requirements with regard to the construction within SUBRECIPIENT's corporate limits.
- H. Any and all reviews and approvals required of the Parties herein shall not be unreasonably denied, delayed, or withheld.
- I. SUBRECIPIENT and its agents shall not discriminate on the basis of race, color, national origin, or sex in the performance of this Agreement or the work provided for herein. SUBRECIPIENT and its agents shall carry out applicable requirements of 49 CFR Part 26 in the administration of this Agreement.
- J. By execution of this Agreement SUBRECIPIENT does hereby agree:
  - 1. to certify its compliance with the requirements of Chapter 14 of Title 8 of the S.C. Code of Laws regarding Unauthorized Aliens and Public Employment;
  - 2. to provide SCDOT with any documents required to establish such compliance upon request; and
  - 3. to register and participate and require agreements from sub-contractors and sub-consultants to register and participate in the federal work authorization program to verify the employment authorization of all new employees, or

to employ only workers who supply the documents required pursuant to S.C. Code § 8-14-20(B)(2).

- K. By execution of this Agreement SUBRECIPIENT certifies that SUBRECIPIENT and all of SUBRECIPIENT's consultants, sub-consultants, contractors, employees, and agents will comply with all applicable provisions of the Drug-Free Workplace Act, Title 44, Chapter 107 of the South Carolina Code of Laws, as amended.
- L. By execution of this Agreement, SUBRECIPIENT certifies that SUBRECIPIENT and all of SUBRECIPIENT's consultants, sub-consultants, contractors, and employees will comply with South Carolina's Ethics, Government Accountability, and Campaign Reform Act of 1991, as amended. The following statutes require special attention: (a) Offering, giving, soliciting, or receiving anything of value to influence action of public employee §8-13-705, (b) Recovery of kickbacks §8-13-790, (c) Offering, soliciting, or receiving money for advice or assistance of public official §8-13-720, (d) Use or disclosure of confidential information §8-13-725, (e) Persons hired to assist in the preparation of specifications or evaluation of bids §8-13-1150, (f) Solicitation of state employees §8-13-755, §8-13-760 and §8-13-725.
- M. By execution of this Agreement, SUBRECIPIENT certifies that SUBRECIPIENT and all of SUBRECIPIENT's consultants, sub-consultants, contractors, and employees, will comply with required provisions of Form FHWA-1273 for all Projects involving federal funds.
- N. For all Projects involving federal funds, SUBRECIPIENT and all of SUBRECIPIENT's consultants, sub-consultants, contractors, employees, and agents must remain in compliance with:
  - 1. All applicable standards, orders, or regulations issued pursuant to the Clean Air Act (42 U.S.C. §§ 7401 7671q) and the Federal Water Pollution Control Act as amended (33 U.S.C. §§ 1251 13870;
  - 2. Standards and policies relating to energy efficiency contained in the Plan for State Energy Policy (S.C. Code §§ 48-52-210, *et seq.*);
  - 3. Section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act; and
  - 4. The Buy America Requirements found at 23 U.S.C. § 313 and 23 C.F.R. § 635.410.
  - 5. 2 CFR 200.216, which prohibits Contractors or Consultants, in performance of work related to this Agreement, from procuring or obtaining telecommunication or video surveillance equipment, services, or systems produced by:

- Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities).
- Hytera Communications Corporation, Hangzhou Hikvision Digital Technology Company, or Dahua Technology Company (or any subsidiary or affiliate of such entities).
- O. By execution of this Agreement, SUBRECIPIENT certifies that SUBRECIPIENT and all of SUBRECIPIENT's consultants, sub-consultants, contractors, sub-contractors, and employees will comply with all applicable provisions of the Iran Divestment Act, Title 11, Chapter 57 of the South Carolina Code of Laws, as amended.
- P. SUBRECIPIENT, or its authorized agent, shall agree to hold consultations with SCDOT as may be necessary with regard to the execution of supplements to this Agreement during the course of this PROJECT for the purpose of resolving any items that may have been unintentionally omitted from this Agreement. Such supplemental agreements shall be subject to the approval and proper execution of the Parties hereto. No amendment to this Agreement shall be effective or binding on any Party hereto unless such amendment has been agreed to in writing by all Parties hereto.
- Q. This Agreement may be terminated by SUBRECIPIENT upon written notice provided that SUBRECIPIENT covers all costs incurred prior to termination and as the result of termination, including any required repayment of federal funds. If SUBRECIPIENT fails to advance the Project to completion, SCDOT may terminate the Agreement upon written notice and SUBRECIPIENT shall be responsible for all costs incurred prior to termination and as the result of termination, including any required repayment of federal funds. Upon written notification of termination, all work on the Project shall cease, unless otherwise directed.

#### VIII. <u>SUCCESSORS AND ASSIGNS</u>:

SCDOT and SUBRECIPIENT each bind themselves, their respective successors, executors, administrators, and assigns to the other Party with respect to these requirements, and also agrees that neither Party shall assign, sublet, or transfer their respective interest in the Agreement without the written consent of the other.

#### IX. <u>BENEFIT AND RIGHTS OF THIRD PARTIES:</u>

This Agreement is made and entered into for the sole protection and benefit of SCDOT, SUBRECIPIENT, and their respective successors and assigns. No other persons, firms, entities, or parties shall have any rights, or standing to assert any rights, under this Agreement in any manner.

#### X. <u>EXECUTION IN COUNTERPARTS</u>:

This Agreement may be executed in counterparts, and if so executed, shall become effective when a counterpart has been executed and delivered by both Parties hereto. All counterparts taken

together shall constitute one and the same Agreement and shall be fully enforceable as such. Delivery of counterparts via facsimile transmission or via email with scanned attachment shall be effective as if originals thereof were delivered.

#### XI. <u>ENTIRE AGREEMENT</u>:

This Agreement with attached Exhibits and Certifications constitutes the entire Agreement between the Parties. This Agreement is to be interpreted under the laws of the State of South Carolina.

[Signature blocks on next page]

IN WITNESS WHEREOF, the Parties have caused this Agreement to be executed on

their behalf

SIGNED, SEALED AND DELIVERED IN THE PRESENCE OF

#### CITY OF NORTH CHARLESTON

Witness

By:\_\_\_\_\_

(Signature)

Title:

DUNS No.:

SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION

Witness

By:\_\_\_\_

Deputy Secretary for Finance & Administration or Designee

**RECOMMENDED BY:** 

By:\_

Deputy Secretary or Designee

**REVIEWED BY:** 

By:\_\_

Local Public Agency Administrator or Designee

#### **CERTIFICATION OF SCDOT**

I hereby certify that I am the SCDOT Deputy Secretary or Designee of the Department of Transportation of the State of South Carolina and SUBRECIPIENT or its legal representatives have not been required directly or indirectly as an expressed or implied condition in connection with obtaining or carrying out this Agreement to:

(a) employ or retain, or agree to employ or retain, any firm or person or

(b) pay, or agree to pay, to any firm, person, or organization, any fee, contribution, donation, or consideration of any kind, except as herein expressly stated (if any).

I acknowledge that this certificate is to be furnished to the Federal Highway Administration, U.S. Department of Transportation, in connection with this Agreement, and is subject to applicable State and Federal laws, both criminal and civil.

(Date)

SCDOT Signature

#### **NOTICE**

SUBRECIPIENT has agreed to comply with the SCDOT's "Procedures for Local Public Agency Project Administration" and has certified compliance with 635.105 of Title 23 CFR and the SCDOT has relied upon this compliance and certification. Failure to comply will result in termination and/or refunding as stated within this Agreement.

#### **CERTIFICATION OF SUBRECIPIENT**

I hereby certify that I am the \_\_\_\_\_\_ and duly authorized representative of SUBRECIPIENT, whose address is \_\_\_\_\_\_, South Carolina, and that neither I nor the above SUBRECIPIENT I here represent has:

(a) employed or retained for a commission, percentage, brokerage, contingent fee, or other consideration, any firm or person (other than a bona fide employee working solely for me or the above SUBRECIPIENT) to solicit or secure this Agreement,

(b) agreed, as an expressed or implied condition for obtaining this Agreement, to employ or retain the services of any firm or person in connection with carrying out the Agreement, or

(c) paid, or agreed to pay, to any firm, organization or person (other than a bona fide employee working solely for me or the above SUBRECIPIENT) any fee, contribution, donation, or consideration of any kind for, or in connection with, procuring or carrying out the Contract except as herein expressly stated (if any):

In accordance with Section 635.105 of Title 23 CFR, I further certify that any work stipulated in this Agreement to be performed for or by the SUBRECIPIENT can be more advantageously performed by said SUBRECIPIENT and that said **SUBRECIPIENT is adequately staffed and suitably equipped to undertake and satisfactorily complete such work, including the performance of proper maintenance on the highway facilities constructed under the terms of this Agreement**.

I further certify that SUBRECIPIENT's current/continuing compliance with SCDOT's "Procedures for Local Public Agency Project Administration" for this and other SCDOT funded projects.

I acknowledge that this certificate is to be furnished to SCDOT and the Federal Highway Administration, U.S. Department of Transportation, in connection with this Agreement, and is subject to applicable State and Federal laws, both criminal and civil.

(Date)

SUBRECIPIENT Signature

#### Certification for Grants, Loans, and Cooperative Agreements

The undersigned certifies, to the best of his or her knowledge and belief, that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying", in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subgrants, and contracts and subcontracts under grants, subgrants, loans, and cooperative agreements) which exceed \$100,000, and that all such subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

DATE

SCDOT SIGNATURE

DATE

SUBRECIPIENT SIGNATURE

#### EXHIBIT A

PROJECT DETAILS AND PROJECT AREA MAP

(see Attached)

#### <u>EXHIBIT B</u>

Qualification Letter from the SCDOT dated \_\_\_\_\_\_.


# EXHIBIT C

# LPA PROCEDURES

(see Attached)



# EXHIBIT D

## **DESIGN REFERENCES**

This exhibit describes the general design considerations and criteria for the proposed Project.

Design standards shall be in accordance with the following design references as supplemented or amended by specific terms of this Agreement. Any variation in design from the included information shall require written approval from SCDOT.

- SCDOT Pre-Construction Survey Manual, effective as of the execution date of this Agreement
- 2003 SCDOT Highway Design Manual with updates effective as of the execution date of this Agreement and supplemented with AASHTO A Policy on Geometric Design of Highways and Streets, 2001
- AASHTO A Policy on Design Standards Interstate System, 2005
- AASHTO Roadside Design Guide, with 2006 Chapter 6 update, 3rd Edition
- AASHTO Standard Specifications for Highway Bridges, 17th Edition
- SCDOT Standard Drawings, effective as of the execution date of this Agreement
- SCDOT Engineering Directives, effective as of the execution date of this Agreement
- SCDOT Preconstruction Design Memorandum, effective as of the execution date of this Agreement
- SCDOT Instructional Bulletins, effective as of the execution date of this Agreement
- AASHTO Guide for the Development of Bicycle Facilities, 1999
- AASHTO Guide for the Planning, Design, and Operation of Pedestrian Facilities, 2004
- SCDOT Americans with Disabilities Act Transition Plan, January 2009
- United States Access Board's Revised Draft Guidelines for Accessible Public Rightsof-Way (PROWAG), November 23, 2005
- SCDOT Roadside Plants to Avoid/Trees with Limitations on R/W, October 2014
- SCDOT Access and Roadside Management Standards, August 2008 with updates
- SCDOT Plan Preparation Guide, 2000
- SCDOT Standard Specifications for Highway Construction, 2007
- SCDOT Supplemental Specifications (2007), effective as of the execution date of this Agreement
- SCDOT Supplemental Technical Specifications, effective as of the execution date of this Agreement
- SCDOT Qualified Product Lists, effective as of the execution date of this Agreement
- SCDOT Road Design Reference Material for Consultant Prepared Plans, June 2010
- FHWA Manual on Uniform Traffic Control Devices, 2009
- SCDOT Supplement to the MUTCD

- The Rule on Work Zone Safety and Mobility
- SCDOT Procedures and Guidelines for Work Zone Traffic Control Design
- SCDOT Traffic Signal Design Guidelines, 2009 with updates
- Traffic Signal Material Specifications, effective as of the execution date of this Agreement
- Traffic Signal Supplemental Specifications, effective as of the execution date of this Agreement
- Highway Capacity Manual, 2010
- AASHTO "Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals", effective as of the execution date of this Agreement
- SCDOT Preconstruction Advisory Memorandums, effective as of the execution date of this Agreement
- SCDOT Bridge Design Manual, 2006
- SCDOT Bridge Design Memoranda, effective between July 1, 2006 and the execution date of this Agreement
- 2012 AASHTO LRFD Bridge Design Specifications, Sixth Edition (with 2013 Interim
- Revisions)
- SCDOT Geotechnical Design Manual, 2010 Edition (Version 1.1)
- SCDOT Seismic Design Specifications for Highway Bridges, 2008 (Version 2.0)
- SCDOT Bridge Drawings and Details, effective as of the execution date of this Agreement
- AASHTO/AWS D1.5M/D1.5:2010 Bridge Welding Code, with 2011 interims
- SCDOT Pavement Design Guidelines, July 2008 Edition
- SCDOT Requirements for Hydraulic Design Studies, May 2009
- SCDOT Stormwater Quality Design Manual, effective as of the execution date of this Agreement;
- AASHTO "Highway Drainage Guidelines," 2007
- AASHTO "Drainage Manual," 2014 first edition
- FEMA Regulations, 44 C.F.R. §§ 1 399
- Standards for Stormwater Management and Sediment Reduction, S.C. Code Ann. Regs. 72-405 (2012) *et seq.*
- South Carolina State Water Law

# <u>EXHIBIT E</u> STANDARD CONSULTANT AGREEMENT

## EXHIBIT F LOCAL PUBLIC AGENCY MONTHLY STATUS REPORT

	Send South Carolina Depart Attn: Local Public Agen Post Offic Columbia, South	d to: <u>ment of Tra</u> <u>cy Adminis</u> <u>e Box 191</u> a Carolina 2	ansportation stration Office 29202		
Date:	Status Report	: No	Inte	rim	Final
Name of SUBRECIPIENT:					
Contract No	(LPA, IGA, etc.)	File No	o. (Project ID	No.)	
Project Name:					
Percent of Project Design Con	nplete (i.e. 10%, 45%, N/A e	etc.)	%	Attach	n Status Summary
Comments:					
Right of Ways Acquisitions C Yes No	omplete (if applicable)	% F	Right of Ways	Certification	Approved
Comments:					
Construction –	_% Time Complete			% Coi	ntract Complete
Construction:					
Have bids been received on the project? Yes No					
Has the project been awarded? Yes No					
Date construction began	1				
Anticipated construction cor	apletion date				
Percentage of construction c	ompiete				

Comments:

\*\*No Construction Activities may begin until the Environmental Document for the Project has been approved and a statement concerning wetland permits has been submitted.

<u>EXHIBIT G</u> <u>Request for Reimbursement Form</u>					
Date:	Invoice No	Partial	Final		
Name of Subrecipient:_					
Contract No	(LPA, IGA, etc.)	File No. (Project ID No	).)	_	
Project Name:				_	
Project Implementat	ion Date				
Anticipated Constru	ction Completion Date				
Percentage of Const	ruction Complete				
	Project Charges SCDOT Share	SUBRECIPIENT's S	hare	%	
Previous Charges					
This Invoice					
Total to Date					
Payment Am	ount Due (SUBRECIPIENT): \$				
Authority: A	greement between SCDOT and	(Subrecipient) dated			

Certification: I certify as an authorized representative of (Subrecipient) that the costs invoiced are, to the best of my knowledge, true, correct and in accordance with the terms and conditions of the above dated Agreement.

(Subrecipient's Authorized Signature)

#### Distribution of Fees this Period

Engineers, Contractors, Major Suppliers	Total Dollars this Period
1.	
2.	
3.	
4.	
TOTAL	

#### Note: Attach supporting documentation – copies of invoices from contractors, major suppliers and cancelled check(s) indicating payment made - and submit to: SCDOT - Attn: Local Public Agency Administration

P. O. Box 191 Columbia, South Carolina 29202

## EXHIBIT H CERTIFICATION OF PROCUREMENT

	1.	The	undersigned	is	the	duly	authorized	representative	of
(here	inafte	r referred	to as "the SUBR	ECIPI	ENT").				
	2.	The U	Indersigned here	by cer	tifies th	at the SU	JBRECIPIENT	T has complied wit	h all
the P	ROCU	UREMEN	T REQUIREME	NTS	set fortl	h in Sect	ion V of this A	greement identifie	d as
LPA-		_ and date	d	,2	20				

3. Attached is a list of all consultants, contractors and vendors used on the PROJECT,

including name of vendors, dollar value of purchase and date of purchase.

Signature

Name

Title

Date



June 18, 2019

Joseph E. Wilkinson **Review Coordinator for Transportation Projects** State Historic Preservation Office South Carolina Department of Archives & History 8301 Parklane Road Columbia, South Carolina 29223-4905

JUN 2 0 2019 J 2019- 46-20

# RECEIVED Road h Carolina 29223-4905 Brockington and Associates' I.) Cultural Resource Sanyey of the I-526 Corridor Improvements Corridor West Project-Addend Re: Project & 2.) Cultural Resource Survey of the I-526 Lowcountry Corridor West Project-Addendum Report, Charleston County, SCDOT PIN P027507

Dear Mr. Wilkinson:

The SCDOT proposes to improve I-526 from SC Route (SC-) 461 (Paul Cantrell Boulevard) to the SC-61 Spur (Glenn McConnell Parkway). Improvements along 1-26 extend from West Montague Avenue west to Remount Road. The project may include adding a travel lane in each direction along I-526; interchange improvements at Leeds Avenue, SC-642 (Dorchester Road), West Montague Avenue, International Boulevard, and Paul Cantrell Boulevard; and the system-to-system connections at Glenn McConnell Parkway, I-26, and Rivers Avenue. Interchange improvements along 1-26 may include West Montague Avenue. Improvements are also to be evaluated along Paul Cantrell Boulevard from S- 10-1373 (Tobias Gadson Boulevard) to Charlie Hall Boulevard. This segment of Paul Cantrell Boulevard includes the intersection of S-10-1863 (Magwood Drive), which will be evaluated for a grade separation to accommodate future traffic volumes.

The two cultural resources reports referenced above cover the full Area of Potential Effect (APE) for the proposed project. This correspondence addresses the combined results of those two reports and therefore the entirety of the project APE. The purpose of this correspondence is only to establish National Register of Historic Places (NRHP) eligibility for cultural resources documented as part of the subject surveys. Additional Section 106 coordination to determine project effects upon cultural resources will be initiated when a preferred alignment for the project is developed.

Archaeological investigations for the project revisited one (1) previously identified archaeological site (38CH17) and identified one new site (38CH2523). Neither of these sites is recommended eligible for the NRHP. Underwater archaeological survey was also conducted within the project APE, and two anomalies (006-1 and 010-1) were identified. Anomaly 006-1 is recommended eligible for the NRHP. Anomaly 010-1 is recommended as not eligible for the NRHP.

The historic architectural survey identified several survey-eligible neighborhoods, individual resources, and landscape features within the APE (refer to attached reports for specifics). Only one (1) aboveground resource identified in the studies (site 7806, Bethune Elementary) is recommended eligible for the NRHP. Other aboveground resources documented in the reports are recommended (or previously recommended) as NRHP-eligible but do not fall within the project APE as currently defined.



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ost Office Box 191 **i5 Park Street** olumbia, SC 29202-0191

## Please provide your concurrence with or comment on the eligibility findings of the two subject reports.

In accordance the memorandum of agreement approved by the Federal Highway Administration (FHWA), November 29, 2011, SCDOT is providing this information as agency official designee, as defined under 36 CFR 800.2, to ensure compliance with Section 106 of the National Historic Preservation Act.

It is requested that you review the enclosed material and, if appropriate, indicate your concurrence with SCDOT findings. Please respond within 30 days if you have any objections or if you have need of additional information.

Sincere

David P. Kelly NEPA Coordinator, RPG 4

DPK:dk Enclosures: Cultural resources reports, aboveground survey forms, photographs

I (denot) concur in the above determinations.

\_ Date: \_6 /26/19 Signed: Winoual & 9

- ec: Shane Belcher, FHWA LeeAnne Wendt, Muscogee (Creek) Nation Brett Barnes, Eastern Shawnee
- cc: Wenonah G. Haire, Catawba Nation THPO Keith Derting, SCIAA

Page 2-Brockington and Associates' 1.) Cultural Resource Survey of the 1-526 Corridor Improvements Project & 2.) Cultural Resource Survey of the 1-526 Lowcountry Corridor West Project—Addendum Report, Charleston County, SCDOT PIN P027507



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Catawba Indian Nation Tribal Historic Preservation Office 1536 Tom Steven Road Rock Hill, South Carolina 29730

Office 803-328-2427 Fax 803-328-5791

August 25, 2020

Attention: Tracy Martin SCDOT P.O. Box 191 Columbia, SC 29202

 Re. THPO #
 TCNS #
 Project Description

 2020-66-22
 Partial Land Conversion on the Proposed I-526 West Lowcountry Corridor

 2020-66-22
 Improvements EIS in Charleston Co., SC

Dear Ms. Martin,

The Catawba have no immediate concerns with regard to traditional cultural properties, sacred sites or Native American archaeological sites within the boundaries of the proposed project areas. However, the Catawba are to be notified if Native American artifacts and / or human remains are located during the ground disturbance phase of this project.

If you have questions please contact Caitlin Rogers at 803-328-2427 ext. 226, or e-mail Caitlin.Rogers@catawba.com.

Sincerely,

Cattle Rogers for

Wenonah G. Haire Tribal Historic Preservation Officer



South Carolina

March 29, 2019

1835 Assembly Street, Suite 1270 Columbia, South Carolina 29201 803-765-5411 803-253-3989

> In Reply Refer To: HDA-SC

Mr. Brett Barnes Tribal Historic Preservation Officer Eastern Shawnee Tribe of OK 127 W. Oneida St. Seneca, MO 64865

Subject: Invitation to Become a Participating Agency for the Preparation of an Environmental Impact Statement (EIS) for the Proposed I-526 West Lowcountry Corridor Improvements Project in Charleston County, South Carolina; Federal Project Number P027507

Dear Mr. Barnes:

The Federal Highway Administration (FHWA), in cooperation with the South Carolina Department of Transportation (SCDOT), is preparing an Environmental Impact Statement (EIS) for the I-526 West Lowcountry Corridor Improvements Project. The proposed project would make improvements to the I-526 corridor from Virginia Avenue to Paul Cantrell Boulevard in Charleston County, South Carolina. The purpose of the proposed project is to increase capacity and improve operations at the I-26/526 interchange and along the I-526 mainline from Virginia Avenue to Paul Cantrell Boulevard (see study area map on enclosed project information sheet). The Ashley River bridge crossing would be widened to accommodate the improvements on the I-526 mainline. Since this is a major infrastructure project that is starting after August 15, 2017, it will adhere to the One Federal Decision guidance and tracked on the federal permitting dashboard.

Pursuant to Section 6002 of SAFETEA-LU, as amended by Section 1304 of the Fixing America's Surface Transportation (FAST) Act, cooperating and participating agencies are responsible for identifying, as early as possible, any issues of concern regarding the project's potential environmental, social, or economic impacts. Section 6002 is intended to assure that agencies are fully engaged in the scoping of the project and the decisions regarding alternatives to be evaluated in detail in the NEPA analysis. In accordance with the SAFETEA-LU Section 6002, FHWA is in the process of identifying local, state, and federal agencies that may have an interest in the project. This same guidance is in the Memorandum of Understanding for Implementing One Federal Decision (issued April 9, 2018), as well as the One Federal Decision Working Agreement.

The FHWA would like to take this opportunity to formally invite you to become a Participating Agency in the development of the EIS. Areas of concern to be emphasized in the EIS will include potential environmental impacts upon existing ecological resources, wetlands, water resources,

historic and archaeological resources, parks and recreation facilities, noise and air, social and community character, hazardous/contaminated materials, cumulative and indirect impacts, and potential impacts due to project construction.

Your involvement in the proposed project would entail those areas under its jurisdiction or area of expertise. No direct writing or analysis by your agency will be necessary for this document unless you request to do so. We suggest that your agency's role in the development of the above project should include the following as they relate to your area of expertise:

- 1. Participate in coordination meetings as appropriate.
- 2. Consultation on any relevant technical studies that may be required for the project.
- Timely review and comment on the environment document to reflect the views and concerns of your agency on the adequacy of the document, alternatives considered, and the anticipated impacts and mitigation.

To become a Participating Agency with the FHWA, please respond to this office in writing with an acceptance or denial of the invitation within 30 days. If you accept, please identify the appropriate contact person(s) within your organization for coordination. If your agency declines, please provide a written response that states your reason for declining the invitation, such as:

- · Has no jurisdiction or authority with respect to the project;
- · Has no expertise or information relevant to the project; and
- Does not intend to submit comments on the project.

If you have any questions or would like to discuss in more detail the project or each agency's respective roles and responsibilities during the preparation of the EIS, please contact Ms. Michelle Herrell at 803-765-5460 or by email at <u>michelle.herrell@dot.gov</u>; or Mr. J. Shane Belcher at 803-253-3187 or by e-mail at jeffrey.belcher@dot.gov.

Sincerely,

Emily O. Lawton Division Administrator

Enclosures

ec: Mr. Chad Long, SCDOT Environmental Division Manager Mr. David Kelly, SCDOT RPG 1 NEPA Coordinator Mr. Will McGoldrick, SCDOT Design-Build NEPA/Permitting Coordinator Ms. Joy Riley, SCDOT Program Manager



South Carolina

March 29, 2019

1835 Assembly Street, Suite 1270 Columbia, South Carolina 29201 803-765-5411 803-253-3989

> In Reply Refer To: HDA-SC

Ms. Corain Lowe-Zepeda Tribal Historic Preservation Officer Muscogee (Creek) Nation of OK 1008 East Eufaula Street Okmulgee, OK 74447

Subject: Invitation to Become a Participating Agency for the Preparation of an Environmental Impact Statement (EIS) for the Proposed I-526 West Lowcountry Corridor Improvements Project in Charleston County, South Carolina; Federal Project Number P027507

Dear Ms. Lowe-Zepeda:

The Federal Highway Administration (FHWA), in cooperation with the South Carolina Department of Transportation (SCDOT), is preparing an Environmental Impact Statement (EIS) for the I-526 West Lowcountry Corridor Improvements Project. The proposed project would make improvements to the I-526 corridor from Virginia Avenue to Paul Cantrell Boulevard in Charleston County, South Carolina. The purpose of the proposed project is to increase capacity and improve operations at the I-26/526 interchange and along the I-526 mainline from Virginia Avenue to Paul Cantrell Boulevard (see study area map on enclosed project information sheet). The Ashley River bridge crossing would be widened to accommodate the improvements on the I-526 mainline. Since this is a major infrastructure project that is starting after August 15, 2017, it will adhere to the One Federal Decision guidance and tracked on the federal permitting dashboard.

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- · Has no expertise or information relevant to the project; and
- Does not intend to submit comments on the project.

If you have any questions or would like to discuss in more detail the project or each agency's respective roles and responsibilities during the preparation of the EIS, please contact Ms. Michelle Herrell at 803-765-5460 or by email at <u>michelle.herrell@dot.gov</u>; or Mr. J. Shane Belcher at 803-253-3187 or by e-mail at jeffrey.belcher@dot.gov.

Sincerely

Emily O. Lawton Division Administrator

Enclosures

Ms. LeeAnne Wendt, Muscogee (Creek) Nation
 Mr. Chad Long, SCDOT Environmental Division Manager
 Mr. David Kelly, SCDOT RPG 1 NEPA Coordinator
 Mr. Will McGoldrick, SCDOT Design-Build NEPA/Permitting Coordinator
 Ms. Joy Riley, SCDOT Program Manager



July 27, 2020

Ms. Elizabeth Johnson Deputy State Historic Preservation Officer South Carolina Department of Archives and History 8301 Parklane Road Columbia, SC 29223-4905

Subject: Cultural Resources Survey for Section 6(f)(3) Partial Land Conversion (2401 Richardson Drive) on the Proposed I-526 West Lowcountry Corridor Improvements Environmental Impact Statement (EIS) in Charleston County, South Carolina; Federal Project Number P027507

Dear Ms. Johnson:

The South Carolina Department of Transportation (the Department) seeks to convert a portion of the Highland Terrace-Liberty Park Community Center, a Land and Water Conservation Fund (LWCF) Section 6(f) resource located at 2401 Richardson Drive in North Charleston, from its current recreational use to permanent right-of-way as part of the proposed I-526 Lowcountry Corridor (LCC) WEST project. The proposed replacement property, located at 5260 Deacon Street, is shown in the attached mapping.

An Environmental Assessment (EA) is being prepared to evaluate impacts associated with replacing the impacted Section 6(f) resource. The properties at Richardson Drive and Deacon Street have been surveyed for historic resources as part of the studies conducted for the proposed 1-526 LCC WEST project. The 1-526 LCC WEST Cultural Resources report is attached for reference. Based on the results of background research and field survey, there are no historic resources recommended eligible for listing on the National Register of Historic Places at 2401 Richardson Drive or 5260 Deacon Street. Neither the 2401 Richardson Drive nor the 5260 Deacon Street tracts warranted archaeological survey, as soils at both tracts are defined as Urban land and located within the Filbin Creek drainage. Therefore, **no historic properties or archaeological resources would be affected** by construction of the proposed replacement recreational facilities.

In accordance with the memorandum of agreement approved by the Federal Highway Administration, March 16, 1993, the Department is providing this information as agency official designee, as defined under 36 CFR 800.2, to ensure compliance with Section 106 of the National Historic Preservation Act.

Post Office Box 191 Columbia, South Carolina 29202-0191



Phone: (803) 737-2314 TTY: (803) 737-3670 AN EQUAL OPPORTUNITY AFFIRMATIVE ACTION EMPLOYER



Per the terms of the Section 106 Programmatic Agreement, the Department is providing this information on behalf of the Federal Highway Administration. It is requested that you review the enclosed material and, if appropriate, indicate your concurrence with the Department's findings, thus completing the Section 106 consultation process. Please respond within 30 days if you have any objections or if you have need of additional information.

Sincerely,

many Man

Tracy Martin Chief Archaeologist

CCL:ccl Enclosure

I (do not) concur in the above determination.

M. John Date: 7/27/2020 lyduth Signed:

- Mr. J. Shane Belcher, FHWA Environmental Coordinator ec: Mr. David Kelly, SCDOT RPG I NEPA Coordinator Mr. Will McGoldrick, SCDOT Design-Build Environmental Coordinator Ms. Joy Riley, SCDOT Program Manager Ms. LeeAnne Wendt, Muscogee (Creek) Nation Mr. Brett Barnes, Eastern Shawnee
- Ms. Wenonah G. Haire, Catawba Nation cc. Mr. Keith Derting, SCIAA

Post Office Box 191 Columbia, South Carolina 29202-0191



AN EQUAL OPPORTUNITY AFFIRMATIVE ACTION EMPLOYER

÷ ...

From: Caldwell, Mark <<u>mark\_caldwell@fws.gov</u>>
Sent: Tuesday, July 28, 2020 2:11 PM
To: Long, Chad C. <<u>LongCC@scdot.org</u>>
Cc: Ledwin, Jane <<u>jane\_ledwin@fws.gov</u>>
Subject: FW: [EXTERNAL] 526 Lowcountry Corridor 6f ESA Consultation

\*\*\* This is an EXTERNAL email. Please do not click on a link or open any attachments unless you are confident it is from a trusted source. \*\*\*

Chad,

I have no concerns with SCDOT's determination of no effect for this particular 6(f) conversion associated with the I-526 LCC project (attached).

Mark

Mark A. Caldwell Deputy Field Supervisor US Fish and Wildlife Service South Atlantic-Gulf Region South Carolina Ecological Services 176 Croghan Spur Road, Suite 200 Charleston, SC 29407 843-300-0426 (direct line) 843-870-0041 (cell) 843-300-0189 – facsimile

This email correspondence and any attachments to and from this sender is subject to the Freedom of Information Act and may be disclosed to third parties.

From: Long, Chad C. <LongCC@scdot.org>
Sent: Tuesday, July 28, 2020 1:49 PM
To: Caldwell, Mark <mark\_caldwell@fws.gov>
Cc: Belcher, Jeffery - FHWA <Jeffrey.Belcher@dot.gov>
Subject: [EXTERNAL] 526 Lowcountry Corridor 6f ESA Consultation

This email has been received from outside of DOI - Use caution before clicking on links,

#### Mark,

We are preparing an environmental assessment for the proposed Section 6(f) conversion associated with the 526 WEST Lowcountry Corridor project. Our consultant recently conducted an endangered species survey for the proposed community center replacement property (see attached).

Please review and let me know if you have any comments/questions regarding the "no effect" determination.

Regards,

Chad C. Long | Director Environmental Services Office South Carolina Department of Transportation 955 Park Street | Room 509 Columbia, South Carolina 29201 Phone 803.737.1396 (office)| 803.420.8115 (mobile)



Safety 1<sup>st</sup> – Live By It! Let 'em Work, Let 'em Live!



July 27, 2020

Ms. Elizabeth Johnson Deputy State Historic Preservation Officer South Carolina Department of Archives and History 8301 Parklane Road Columbia, SC 29223-4905

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Post Office Box 191 Columbia, South Carolina 29202-0191



Phone: (803) 737-2314 TTY: (803) 737-3670 AN EQUAL OPPORTUNITY AFFIRMATIVE ACTION EMPLOYER



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Sincerely,

many Mar=

Tracy Martin Chief Archaeologist

CCL:ccl Enclosure

I (do not) concur in the above determination.

M. John Date: 7/27/2020 lythit , Signed:

ec: Mr. J. Shane Belcher, FHWA Environmental Coordinator Mr. David Kelly, SCDOT RPG 1 NEPA Coordinator Mr. Will McGoldrick, SCDOT Design-Build Environmental Coordinator Ms. Joy Riley, SCDOT Program Manager Ms. LeeAnne Wendt, Muscogee (Creek) Nation

- Mr. Brett Barnes, Eastern Shawnee
- cc. Ms. Wenonah G. Haire, Catawba Nation Mr. Keith Derting, SCIAA

Post Office Box 191 Columbia, South Carolina 29202-0191



AN EQUAL OPPORTUNITY AFFIRMATIVE ACTION EMPLOYER

÷ ...

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Sent: Tuesday, July 28, 2020 2:11 PM
To: Long, Chad C. <<u>LongCC@scdot.org</u>>
Cc: Ledwin, Jane <<u>jane\_ledwin@fws.gov</u>>
Subject: FW: [EXTERNAL] 526 Lowcountry Corridor 6f ESA Consultation

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Mark A. Caldwell Deputy Field Supervisor US Fish and Wildlife Service South Atlantic-Gulf Region South Carolina Ecological Services 176 Croghan Spur Road, Suite 200 Charleston, SC 29407 843-300-0426 (direct line) 843-870-0041 (cell) 843-300-0189 – facsimile

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Sent: Tuesday, July 28, 2020 1:49 PM
To: Caldwell, Mark <mark\_caldwell@fws.gov>
Cc: Belcher, Jeffery - FHWA <Jeffrey.Belcher@dot.gov>
Subject: [EXTERNAL] 526 Lowcountry Corridor 6f ESA Consultation

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Regards,

Chad C. Long | Director Environmental Services Office South Carolina Department of Transportation 955 Park Street | Room 509 Columbia, South Carolina 29201 Phone 803.737.1396 (office)| 803.420.8115 (mobile)



Safety 1<sup>st</sup> – Live By It! Let 'em Work, Let 'em Live!

Belcher, Jeffrey (FHWA)
Kelly, David P. (KellyDP@scdot.org); Herrell, Michelle (FHWA)
Heather Robbins
FW: Consulting Party for I-526 West and US 278
Monday, May 6, 2019 7:18:35 AM

For your files. Since the Catawba Indian Nation did not provide a letter please keep this e-mail for your official record for both projects.

Thanks,

# J. Shane Belcher

Environmental Coordinator Federal Highway Administration 1835 Assembly Street, Suite 1270 Columbia, SC 29201 Phone: 803-253-3187 Fax: 803-253-3989 From: Caitlin Rogers [mailto:caitlinh@ccppcrafts.com] Sent: Friday, May 03, 2019 2:35 PM To: Belcher, Jeffrey (FHWA) <Jeffrey.Belcher@dot.gov> Subject: Consulting Party

Mr. Belcher,

The Catawba wish to be a consulting party for the Proposed I-526 West Lowcountry Corridor Improvements and the Proposed US 278 Corridor Improvements. If you need anything else from us let me know. Thanks

Caitlin

Caitlin Rogers Catawba Indian Nation Tribal Historic Preservation Office 1536 Tom Steven Road Rock Hill, SC 29730

803-328-2427 ext. 226 Caitlinh@ccppcrafts.com

\*Please Note: We CANNOT accept Section 106 forms via e-mail, unless requested. Please send us hard copies. Thank you for your understanding\*



South Carolina

March 29, 2019

1835 Assembly Street, Suite 1270 Columbia, South Carolina 29201 803-765-5411 803-253-3989

> In Reply Refer To: HDA-SC

Ms. Wenonah Haire Tribal Historic Preservation Officer Catawba Indian Nation 1536 Tom Steven Road Rock Hill, SC 29730

Subject: Invitation to Become a Participating Agency for the Preparation of an Environmental Impact Statement (EIS) for the Proposed I-526 West Lowcountry Corridor Improvements Project in Charleston County, South Carolina; Federal Project Number P027507

Dear Ms. Haire:

The Federal Highway Administration (FHWA), in cooperation with the South Carolina Department of Transportation (SCDOT), is preparing an Environmental Impact Statement (EIS) for the I-526 West Lowcountry Corridor Improvements Project. The proposed project would make improvements to the I-526 corridor from Virginia Avenue to Paul Cantrell Boulevard in Charleston County, South Carolina. The purpose of the proposed project is to increase capacity and improve operations at the I-26/526 interchange and along the I-526 mainline from Virginia Avenue to Paul Cantrell Boulevard (see study area map on enclosed project information sheet). The Ashley River bridge crossing would be widened to accommodate the improvements on the I-526 mainline. Since this is a major infrastructure project that is starting after August 15, 2017, it will adhere to the One Federal Decision guidance and tracked on the federal permitting dashboard.

Pursuant to Section 6002 of SAFETEA-LU, as amended by Section 1304 of the Fixing America's Surface Transportation (FAST) Act, cooperating and participating agencies are responsible for identifying, as early as possible, any issues of concern regarding the project's potential environmental, social, or economic impacts. Section 6002 is intended to assure that agencies are fully engaged in the scoping of the project and the decisions regarding alternatives to be evaluated in detail in the NEPA analysis. In accordance with the SAFETEA-LU Section 6002, FHWA is in the process of identifying local, state, and federal agencies that may have an interest in the project. This same guidance is in the Memorandum of Understanding for Implementing One Federal Decision (issued April 9, 2018), as well as the One Federal Decision Working Agreement.

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historic and archaeological resources, parks and recreation facilities, noise and air, social and community character, hazardous/contaminated materials, cumulative and indirect impacts, and potential impacts due to project construction.

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- 1. Participate in coordination meetings as appropriate.
- 2. Consultation on any relevant technical studies that may be required for the project.
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- Does not intend to submit comments on the project.

If you have any questions or would like to discuss in more detail the project or each agency's respective roles and responsibilities during the preparation of the EIS, please contact Ms. Michelle Herrell at 803-765-5460 or by email at <u>michelle.herrell@dot.gov</u>; or Mr. J. Shane Belcher at 803-253-3187 or by e-mail at jeffrey.belcher@dot.gov.

Sincerely

Emily O. Lawton Division Administrator

Enclosures

ec: Ms. Caitlin Totherow, Catawba Indian Nation
 Mr. Chad Long, SCDOT Environmental Division Manager
 Mr. David Kelly, SCDOT RPG 1 NEPA Coordinator
 Mr. Will McGoldrick, SCDOT Design-Build NEPA/Permitting Coordinator
 Ms. Joy Riley, SCDOT Program Manager



June 18, 2019

Joseph E. Wilkinson **Review Coordinator for Transportation Projects** State Historic Preservation Office South Carolina Department of Archives & History 8301 Parklane Road Columbia, South Carolina 29223-4905

JUN 2 0 2019 J 2019- 46-20

# RECEIVED Road h Carolina 29223-4905 Brockington and Associates' I.) Cultural Resource Sanyey of the I-526 Corridor Improvements Corridor West Project-Addend Re: Project & 2.) Cultural Resource Survey of the I-526 Lowcountry Corridor West Project-Addendum Report, Charleston County, SCDOT PIN P027507

Dear Mr. Wilkinson:

The SCDOT proposes to improve I-526 from SC Route (SC-) 461 (Paul Cantrell Boulevard) to the SC-61 Spur (Glenn McConnell Parkway). Improvements along 1-26 extend from West Montague Avenue west to Remount Road. The project may include adding a travel lane in each direction along I-526; interchange improvements at Leeds Avenue, SC-642 (Dorchester Road), West Montague Avenue, International Boulevard, and Paul Cantrell Boulevard; and the system-to-system connections at Glenn McConnell Parkway, I-26, and Rivers Avenue. Interchange improvements along 1-26 may include West Montague Avenue. Improvements are also to be evaluated along Paul Cantrell Boulevard from S- 10-1373 (Tobias Gadson Boulevard) to Charlie Hall Boulevard. This segment of Paul Cantrell Boulevard includes the intersection of S-10-1863 (Magwood Drive), which will be evaluated for a grade separation to accommodate future traffic volumes.

The two cultural resources reports referenced above cover the full Area of Potential Effect (APE) for the proposed project. This correspondence addresses the combined results of those two reports and therefore the entirety of the project APE. The purpose of this correspondence is only to establish National Register of Historic Places (NRHP) eligibility for cultural resources documented as part of the subject surveys. Additional Section 106 coordination to determine project effects upon cultural resources will be initiated when a preferred alignment for the project is developed.

Archaeological investigations for the project revisited one (1) previously identified archaeological site (38CH17) and identified one new site (38CH2523). Neither of these sites is recommended eligible for the NRHP. Underwater archaeological survey was also conducted within the project APE, and two anomalies (006-1 and 010-1) were identified. Anomaly 006-1 is recommended eligible for the NRHP. Anomaly 010-1 is recommended as not eligible for the NRHP.

The historic architectural survey identified several survey-eligible neighborhoods, individual resources, and landscape features within the APE (refer to attached reports for specifics). Only one (1) aboveground resource identified in the studies (site 7806, Bethune Elementary) is recommended eligible for the NRHP. Other aboveground resources documented in the reports are recommended (or previously recommended) as NRHP-eligible but do not fall within the project APE as currently defined.



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ost Office Box 191 **i5 Park Street** olumbia, SC 29202-0191

## Please provide your concurrence with or comment on the eligibility findings of the two subject reports.

In accordance the memorandum of agreement approved by the Federal Highway Administration (FHWA), November 29, 2011, SCDOT is providing this information as agency official designee, as defined under 36 CFR 800.2, to ensure compliance with Section 106 of the National Historic Preservation Act.

It is requested that you review the enclosed material and, if appropriate, indicate your concurrence with SCDOT findings. Please respond within 30 days if you have any objections or if you have need of additional information.

Sincere

David P. Kelly NEPA Coordinator, RPG 4

DPK:dk Enclosures: Cultural resources reports, aboveground survey forms, photographs

I (denot) concur in the above determinations.

\_ Date: \_6 /26/19 Signed: Winoual & 9

- ec: Shane Belcher, FHWA LeeAnne Wendt, Muscogee (Creek) Nation Brett Barnes, Eastern Shawnee
- cc: Wenonah G. Haire, Catawba Nation THPO Keith Derting, SCIAA

Page 2-Brockington and Associates' 1.) Cultural Resource Survey of the 1-526 Corridor Improvements Project & 2.) Cultural Resource Survey of the 1-526 Lowcountry Corridor West Project—Addendum Report, Charleston County, SCDOT PIN P027507



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South Carolina

March 29, 2019

1835 Assembly Street, Suite 1270 Columbia, South Carolina 29201 803-765-5411 803-253-3989

> In Reply Refer To: HDA-SC

Mr. Brett Barnes Tribal Historic Preservation Officer Eastern Shawnee Tribe of OK 127 W. Oneida St. Seneca, MO 64865

Subject: Invitation to Become a Participating Agency for the Preparation of an Environmental Impact Statement (EIS) for the Proposed I-526 West Lowcountry Corridor Improvements Project in Charleston County, South Carolina; Federal Project Number P027507

Dear Mr. Barnes:

The Federal Highway Administration (FHWA), in cooperation with the South Carolina Department of Transportation (SCDOT), is preparing an Environmental Impact Statement (EIS) for the I-526 West Lowcountry Corridor Improvements Project. The proposed project would make improvements to the I-526 corridor from Virginia Avenue to Paul Cantrell Boulevard in Charleston County, South Carolina. The purpose of the proposed project is to increase capacity and improve operations at the I-26/526 interchange and along the I-526 mainline from Virginia Avenue to Paul Cantrell Boulevard (see study area map on enclosed project information sheet). The Ashley River bridge crossing would be widened to accommodate the improvements on the I-526 mainline. Since this is a major infrastructure project that is starting after August 15, 2017, it will adhere to the One Federal Decision guidance and tracked on the federal permitting dashboard.

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Sincerely,

Emily O. Lawton Division Administrator

Enclosures

ec: Mr. Chad Long, SCDOT Environmental Division Manager Mr. David Kelly, SCDOT RPG 1 NEPA Coordinator Mr. Will McGoldrick, SCDOT Design-Build NEPA/Permitting Coordinator Ms. Joy Riley, SCDOT Program Manager



South Carolina

March 29, 2019

1835 Assembly Street, Suite 1270 Columbia, South Carolina 29201 803-765-5411 803-253-3989

> In Reply Refer To: HDA-SC

Ms. Corain Lowe-Zepeda Tribal Historic Preservation Officer Muscogee (Creek) Nation of OK 1008 East Eufaula Street Okmulgee, OK 74447

Subject: Invitation to Become a Participating Agency for the Preparation of an Environmental Impact Statement (EIS) for the Proposed I-526 West Lowcountry Corridor Improvements Project in Charleston County, South Carolina; Federal Project Number P027507

Dear Ms. Lowe-Zepeda:

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Sincerely

Emily O. Lawton Division Administrator

Enclosures

Ms. LeeAnne Wendt, Muscogee (Creek) Nation
 Mr. Chad Long, SCDOT Environmental Division Manager
 Mr. David Kelly, SCDOT RPG 1 NEPA Coordinator
 Mr. Will McGoldrick, SCDOT Design-Build NEPA/Permitting Coordinator
 Ms. Joy Riley, SCDOT Program Manager

# **APPENDIX B**

**TECHNICAL REPORTS** 

# Proposed Section 6(f) Conversion of the Highland Terrace-Liberty Park Community Center, Biological Survey

North Charleston, SC Prepared by Amanda Harris July 24, 2020

### **THREATENED AND ENDANGERED SPECIES**

Pursuant to Section 7 of the Endangered Species Act a field survey was conducted on the proposed project study area (PSA) to include the tract identified as TMS 472-110-0048 near Filbin Creek in North Charleston, SC. The following list of protected species for Charleston County was obtained from the U.S. Fish and Wildlife Service (see Appendix A). This includes endangered (E), threatened (T), proposed (P), and species protected under the Bald and Gold Eagle Protection Act (BGEPA).

## ANIMALS

Frosted flatwoods salamander - *Ambystoma cingulatum* – (T) American wood stork – *Mycteria americana* – (T) Bachman's warbler – *Vermivora bachmanii* – (E) Bald eagle – Haliaeetus leucocephalus – (BGEPA) Eastern black rail - Laterallus jamaicensis jamaicensis- (P) Piping plover - *Charadrius melodus* – (T) Red-cockaded woodpecker - Picoides borealis - (E) Red knot - *Calidris canutus rufa* – (T) Shortnose sturgeon – *Acipenser brevirostrum* – (E) Atlantic sturgeon – *Acipenser oxyrinchus* – (E) Finback whale – *Balaenoptera physalus* – (E) Humpback whale - *Megaptera novaengliae* (E) Northern long-eared bat - *Myotis septentrionalis* (T) Right whale – *Balaena glacialis* (E) <u>Sei whale - Balaenoptera borealis (E)</u> Sperm whale - *Physeter macrocephalus* (E) West Indian manatee - Trichechus manatus (T) Green sea turtle - Chelonia mydas (T) Kemp's ridley sea turtle - *Lepidochelys kempii* (E) Leatherback sea turtle - *Dermochelys coriacea* (E) Loggerhead sea turtle - Caretta caretta (T)

# PLANTS

American chaffseed - Schwalbea americana - (E) Canby's dropwort - Oxypolis canbyi - (E) Pondberry - Lindera melissifolia (E) Seabeach amaranth - Amaranthus pumilus (T)

## **METHODS**

A reconnaissance survey of the approximate 5.5-acre PSA was conducted on July 23, 2020. The project area is a residential parcel in a developed area of Charleston County, SC. Habitats surveyed were determined by the species ecological requirements. Habitat types within the study corridor include maintained herbaceous vegetation (mix of lawn grasses including *Paspalum* and *Digitaria* species). and urban pine/mixed-hardwood forests (*Liquidambar styraciflua*, *Pinus taeda*, *Ligustrun sinense*, and *Toxicodendron radicans*).

### Frosted flatwoods salamander

The frosted flatwoods salamander is a small salamander containing variable coloration, ranging from dark brown to black bodies with grayish specks or lines that resemble a frosted or lichenlike reticulated pattern. Habitat consists of wet pine flatwoods and pine savannas in the southern U.S. Traditionally, habitat consisted of sandy, seasonally wet longleaf pine communities but many of these areas have been replaced with slash pine or destroyed altogether. Adult flatwood salamanders are subterranean, living mainly underground in root channels or crayfish burrows. These salamanders are typically found under logs near small cypress ponds. There is no suitable habitat for frosted flatwoods salamander within the PSA, therefore it is anticipated that the proposed project would have no effect on this species.

Frosted flatwoods salamander Biological Conclusion: No Effect

### American Wood Stork

The American wood stork is a large wading bird that is highly colonial, usually nesting in large rookeries and feeding in flocks. The nesting season typically extends from February 15 to September 1. Wood storks are typically associated with freshwater and brackish wetlands. Most nesting colonies in the southeast are located in woody vegetation, such as bald cypress, over standing water, or on islands surrounded by open water. Foraging habitat may include freshwater marshes, flooded pastures, and flooded ditches. Foraging sites are often in areas of high fish concentrations. There is no suitable habitat for American wood stork within the PSA, therefore it is anticipated that the proposed project would have no effect on this species.

American wood stork Biological Conclusion: No Effect

## **Bachman's warbler**

The Bachman's warbler is a small bird with olive-green upperparts, yellow forehead, throat, and underparts, and a faint white eye-ring and black crown and bib. The bird was last observed in the U.S. in 1962 near Charleston, South Carolina. This species of warbler is presumed to be extinct, historically occurring in the southeastern U.S. during its breeding season. Historically, the bird inhabited seasonally flooded swamp forests, especially with cane thickets and containing variable amounts of water, but usually with some permanent water. There is no suitable habitat for Bachman's warbler within the PSA, therefore it is anticipated that the proposed project would have no effect on this species.

Bachman's warbler Biological Conclusion: No Effect

## Eastern black rail

The Eastern black rail is a small rail species that is usually grey or black-grey in color. It breeds in a wide diversity of habitats such as fresh and saline marshes, wet meadows, and savannas. Eastern black rail habitat can be tidally or non-tidally influenced, and range in salinity from salt to brackish to fresh. Its natural history is the best known in its genus due to work in temperate North America where it primarily feeds on small aquatic and terrestrial invertebrates. Suitable habitat for the black rail is not present within the PSA, therefore it is anticipated that the proposed project would have no effect on this species.

Eastern black rail Biological Conclusion: No Effect

## **Bald eagle**

The bald eagle is a large raptor with a white head and dark brown body. The breeding season begins in December or January and the typical diet includes fish and some birds. Habitat for the bald eagle primarily consists of mature forest in proximity to large bodies of open water for foraging. Large dominant trees are utilized for nesting sites, typically within 1.0 mile of open water. According to SC Department of Natural Resources (SCDNR), the closest known bald eagle nesting site (N823-Y2020) is located approximately 3.25 miles north of the PSA on the Goose Creek reservoir. Suitable habitat for the bald eagle is not present within the PSA, therefore it is anticipated that the proposed project would have no effect on this species.

Bald eagle Biological Conclusion: No Effect

## **Piping plover**

The piping plover is a small and stocky sparrow sized bird that is pale or sandy white with a black breast band and yellow bill and legs. Breeding birds have a prominent black collar and black band that runs across the forehead. The piping plover inhabits sandy beaches, mudflats and sandbars along rivers and lakes. In South Carolina, the piping plover occurs from August to April and generally overwinters in the southern United States from North Carolina to the Gulf of Mexico. There is no suitable habitat for piping plover within the PSA, therefore it is anticipated that the proposed project would have no effect on this species.

Piping plover Biological Conclusion: No Effect

# Red-cockaded woodpecker

The red-cockaded woodpecker (RCW) is approximately seven inches long with a wingspan of about 15 inches. Its black cap and nape encircle large white cheek patches. The RCW typically occupies open, mature stands of southern pines, particularly longleaf pine, for foraging and nesting/roosting habitat. The RCW excavates cavities for nesting and roosting in living pine trees, aged 60 years or older, and which are contiguous with pine stands at least 30 years of age to provide foraging habitat. The foraging range of the RCW is typically no more than 0.5 miles. No pine stands greater than 60 years of age are located within the PSA and pine species in the study corridor have high basal areas. Suitable habitat for the RCW is not present within the PSA, therefore it is anticipated that the proposed project would have no effect on this species.

Red-cockaded woodpecker Biological Conclusion: No Effect

# Red knot

The red knot is a fairly large sandpiper with a medium sized bill and rufous colored plumage in the breeding season. Red knots breed in the tundra of the high Arctic and a portion of the species spends the winter on the southeastern coast of the U.S. including South Carolina, Georgia, and Florida. South Carolina provides habitat for both migrating and wintering birds. Red knot flocks roost on inlets of barrier beaches and islands in South Carolina. Suitable habitat for red knot is not present within the PSA, therefore it is anticipated that the proposed project would have no effect on this species.

Red knot Biological Conclusion: No Effect

## Northern long-eared bat

The northern long-eared bat is a medium-sized bat that is medium to dark brown on the back and tawny to pale-brown on the underside. The species is distinguished by its long ears. During the winter months, the northern long-eared bat can be found hibernating in caves and mines. They use areas in various sized caves or mines with constant temperatures, high humidity, and no air currents. During the summer, northern long-eared bats roost underneath bark and in cavities or in crevices of both live trees and dead trees. Individuals of the species have also been found rarely roosting in structures, like barns and sheds. Habitat conducive to seasonal occupation for northern long-eared bat is located within the PSA. The PSA contains potentially suitable summer roosting and foraging habitat for this species within forested areas. The preferred winter hibernation habitat for this species does not exist within the PSA or its immediate vicinity. While the forested areas onsite could be considered suitable habitat, the developed nature and small size of these areas is a limiting factor for the suitability of this habitat. No northern long-eared bats were identified during pedestrian field surveys and there are no known populations or hibernacula within the PSA.

Northern long-eared bat Biological Conclusion: No Effect

## American chaff seed

American chaff seed is a perennial herbaceous plant with erect, densely hairy, unbranched stems up to 24 inches tall. The flowers are yellowish or purplish and grouped in a long terminal cluster. American chaffseed typically grows in open, moist pine flatwoods, fire-maintained pine savannas, ecotone areas between peaty wetlands and xeric sandy soils, and other open grass and sedge dominant areas. This plant is dependent on factors such as mowing, fire, and fluctuating water tables for survival. There is no suitable habitat for this species within the PSA.

American chaffseed Biological Conclusion: No Effect
#### **Canby's dropwort**

Canby's dropwort has been found in a variety of coastal plain habitats, including natural ponds dominated by pond cypress, grass-sedge dominated Carolina bays, wet pine savannas, shallow pineland ponds and cypress-pine swamps or sloughs. The largest populations have been found in open bays or ponds that are wet throughout most of the year but which have little or no canopy cover. There is marginal habitat available in the PSA, surrounding the small pond, however there are no open canopy areas where Canby's dropwort could occur and no specimens were documented. Surveys were conducted during the flowering period and this species was not observed.

Canby's dropwort Biological Conclusion: No Effect

#### **Pondberry**

Pondberry is a deciduous shrub that grows up to six feet tall and spreads by underground stolons. The leaves are ovately to elliptically shaped, thin, membranaceous and drooping and have a strong sassafras-like odor when brushed. The flowers are pale yellow and bloom in the spring before the appearance of leaves. Fruits are bright red and oval-shaped and mature in the fall. Pondberry generally occupies wetland habitats that are normally flooded or saturated during the dormant season, but infrequently flooded during the growing season for extended periods. The plant is typically associated with bottomland hardwoods in the inner coastal plain, and margins of sinks, ponds, and other depressions in the outer coastal plain. Marginally suitable habitat for pondberry exists along the margins of the pond located within the PSA. Surveys were conducted during the flowering period and this species was not observed.

Pondberry Biological Conclusion: No Effect

#### Seabeach amaranth

Seabeach amaranth is an annual herbaceous plant found on Atlantic barrier island beaches, where its primary habitat consists of overwash flats and the lower foredunes of beaches. The plant is intolerant of competition and does not occur in densely vegetated areas. The stems of seabeach amaranth are fleshy and reddish in color, while the leaves are small and round and approximately one inch in diameter. Flowering occurs in early summer, and fruits are produced in late summer. There is no suitable habitat for this species within the PSA.

Seabeach amaranth Biological Conclusion: No Effect

#### **RESULTS**

The only aquatic habitat observed within this site is an approximately one-half acre freshwater pond. Therefore, brackish and saltwater aquatic species were not surveyed as there is no potential habitat. These species include Atlantic sturgeon, shortnose sturgeon, finback whale, humpback whale, right whale, sei whale, sperm whale, West Indian manatee, green sea turtle, Kemp's Ridley sea turtle, leatherback sea turtle, loggerhead sea turtle.

According to the S.C. Department of Natural Resources Heritage Trust Program records, none of the federally-protected species have been documented within one mile of the proposed action (see attached report in Appendix B).

Based on the lack of suitable habitats and no observations of the listed species during the field surveys, the proposed action would not affect any threatened, endangered, or federally protected species. There is no potential to harass, harm, pursue, hunt, shoot wound, kill, trap, capture, collect, or to otherwise "Take" or attempt to "Take" any threatened or endangered species as a result of the proposed section 6(f) conversion of the Highland Terrace-Liberty Park Community Center Project.

#### APPENDICES

A: USFWS list of federally protected species for Charleston County

B: SC Department of Natural Resources - Natural Heritage Trust Program Report for Species of Concern near the PSA.

# **Appendix A:**

# **USFWS list of federally protected species for Charleston County**

## **CHARLESTON COUNTY**

CATEGORY	COMMON NAME/STATUS	SCIENTIFIC NAME	SURVEY WINDOW/ TIME PERIOD	COMMENTS		
Amphihiana	Frosted flatwoods salamander (T, CH)	Ambystoma cingulatum	January 1-April 30	Larvae present in breeding ponds		
Amphibians	Gopher frog (ARS)	Lithobates capito	Breeding: October-March	Call survey: February-April		
	American wood stork (T)	Mycteria americana	February 15-September 1	Nesting season		
	Bachman's warbler (E)	Vermivora bachmanii	May 1-June 15	Breeding		
	Bald eagle (BGEPA)	Haliaeetus leucocephalus	October 1-May 15	Nesting season		
	Black-capped petrel (ARS)	Pterodroma hasitata	April-October	Offshore water primarily		
Birds	Eastern black rail (P)	Laterallus jamaicensis jamaicensis	April-June	Minimum of five surveys/survey point		
	Piping plover (T, CH)	Charadrius melodus	July 15-May 1	Migration and wintering		
	Red-cockaded woodpecker (E)	Picoides borealis	March 1-July 31	Nesting season		
	Red knot (T)	Calidris canutus rufa	August 1-May 31	Migration and wintering		
	Saltmarsh sparrow (ARS)	Ammospiza caudacuta	Fall/winter	Fall/winter surveys		
Crustaceans	None Found					
Fichos	Atlantic sturgeon* (E)	Acipenser oxyrinchus*	February 1-April 30	Spawning migration		
FISHES	Shortnose sturgeon* (E)	Acipenser brevirostrum*	February 1-April 30	Spawning migration		
	Frosted elfin (ARS)	Callophrys irus	March - June			
Insects	Monarch butterfly (ARS)	Danaus plexippus	August-December	Overwinter population departs: March- April		
	Finback whale* (E)	Balaenoptera physalus*	November 1-April 30	Off the coast		
	Humpback whale * (E)	Megaptera novaengliae	January 1-March 31	Migration off the coast		
	Northern long-eared bat (T)	Myotis septentrionalis	Year round	Winter surveys not as successful		
	Right whale* (E)	Balaena glacialis	November 1-April 30	Off the coast		
Mammals	Sei whale* (E)	Balaenoptera borealis				
	Sperm whale* (E)	Physeter macrocephalus				
	Tri-colored bat (ARS)	Perimyotis subflavus	Year round	Found in mines and caves in the winter		
	West Indian manatee (T)	Trichechus manatus	May 1-November 15	In coastal waters		
Mollusks		None F	ound			

## **CHARLESTON COUNTY**

CATEGORY	COMMON NAME/STATUS	SCIENTIFIC NAME	SURVEY WINDOW/ TIME PERIOD	COMMENTS
	American chaffseed (E)	Schwalbea americana	May-August	1-2 months after a fire
	Boykin's lobelia (ARS)	Lobelia boykinii	May-July/August	
Dianta	Canby's dropwort (E)	Oxypolis canbyi	Mid-July-September	
Plants	Ciliate-leaf tickseed (ARS)	Coreopsis integrifolia	August-November	
	Pondberry (E)	Lindera melissifolia	February-March	
	Seabeach amaranth (T)	Amaranthus pumilus	July-October	
	Eastern diamondback rattlesnake (ARS)	Crotalus adamanteus	Most of the year	Peak: April-November
	Green sea turtle ** (T)	Chelonia mydas **	May 1-October 31	Nesting and hatching
	Kemp's ridley sea turtle ** (E)	Lepidochelys kempii**	May 1-October 31	In coastal waters
Reptiles	Leatherback sea turtle ** (E)	Dermochelys coriacea **	May 1-October 31	Nesting and hatching
	Loggerhead sea turtle ** (T, CH)	Caretta caretta **	May 1-October 31	Nesting and hatching
	Southern hognose snake (ARS)	Heterodon simus	Most of the year	
	Spotted turtle (ARS)	Clemmys guttata	February-mid April	

\* Contact National Marine Fisheries Service (NMFS) for more information on this species.

- \*\* The U.S. Fish and Wildlife Service (FWS) and NMFS share jurisdiction of this species.
- ARS Species that the FWS has been petitioned to list and for which a positive 90-day finding has been issued (listing may be warranted); information is provided only for conservation actions as no Federal protections currently exist.
- ARS\* Species that are either former Candidate Species or are emerging conservation priority species.
- BGEPA Federally protected under the Bald and Golden Eagle Protection Act
- C FWS or NMFS has on file sufficient information on biological vulnerability and threat(s) to support proposals to list these species.
- CH Critical Habitat
- E Federally Endangered
- P or P CH Proposed for listing or critical habitat in the Federal Register
- S/A Federally protected due to similarity of appearance to a listed species
- T Federally Threatened

These lists should be used only as a guideline, not as the final authority. The lists include known occurrences and areas where the species has a high possibility of occurring. Records are updated as deemed necessary and may differ from earlier lists.

For a list of State endangered, threatened, and species of concern, please visit <u>https://www.dnr.sc.gov/species/index.html</u>.

# **Appendix B:**

# SCDNR – NHTP Report for Species of Concern near PSA

# South Carolina Department of Natural Resources

PO Box 167 Columbia, SC 29202 (803) 734-1396 speciesreview@dnr.sc.gov

Requested on Wednesday, July 22, 2020 by Amanda Harris.

Re: Request for Threatened and Endangered Species Consultation SCDOT - 6f Properties associated with I-526 - Development (Commercial/Residential) Charleston County, South Carolina

The South Carolina Department of Natural Resources (SCDNR) has received your request for threatened and endangered species consultation of the above named project in Charleston County, South Carolina. The following map depicts the project area and a 2 mile buffer surrounding:





Robert H. Boyles, Jr.

Director Emily C. Cope Deputy Director for Wildlife and Freshwater Fisheries

# South Carolina Department of Natural Resources



Robert H. Boyles, Jr.

Director Emily C. Cope Deputy Director for Wildlife and Freshwater Fisheries

This report includes the following items:

- A A report for species which intersect the project area
- B A report for species which intersect the buffer around the project area
- C A list of best management practices relevant to species near to or within the project area
- D A list of best management practices relevant to the project type
- E Instructions to submit new species observation records to the SC Natural Heritage Program

The technical comments outlined in this report are submitted to speak to the general impacts of the activities as described through inquiry by parties outside the South Carolina Department of Natural Resources. These technical comments are submitted as guidance to be considered and are not submitted as final agency comments that might be related to any unspecified local, state or federal permit, certification or license applications that may be needed by any applicant or their contractors, consultants or agents presently under review or not yet made available for public review. In accordance with its policy 600.01, Comments on Projects Under Department Review, the South Carolina Department of Natural Resources, reserves the right to comment on any permit, certification or license application that may be published by any regulatory agency which may incorporate, directly or by reference, these technical comments.

Interested parties are to understand that SCDNR may provide a final agency position to regulatory agencies if any local, state or federal permit, certification or license applications may be needed by any applicant or their contractors, consultants or agents. For further information regarding comments and input from SCDNR on your project, please contact our Office of Environmental Programs by emailing environmental@dnr.sc.gov or by visiting www.dnr.sc.gov/environmental. Pursuant to Section 7 of the Endangered Species Act, requests for formal letters of concurrence with regards to federally listed species should be directed to the USFWS.

Should you have any questions or need more information, please do not hesitate to contact our office by email at speciesreview@dnr.sc.gov or by phone at 803-734-1396.

Sincerely,

Joseph Lemeris, Jr. Heritage Trust Program SC Department of Natural Resources

# A. Project Area - Species Report

There are 0 tracked species records found within the project foot print. The following table outlines occurrences found within the project footprint (if any), sorted by listing status and species name. Please keep in mind that this information is derived from existing databases and do not assume that it is complete. Areas not yet inventoried may contain significant species or communities. You can find more information about global and state rank status definitions by visiting Natureserve's web page. Please note that certain sensitive species found on site may be listed in this table but are not represented on the map. Please contact species found within the project area.



Map Credits: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community



# No records for species of concern are found within the project area

# B. Buffer Area - Species Report

The following table outlines rare, threatened or endangered species found within 2 miles of the project footprint, arranged in order of protection status and species name. Please keep in mind that this information is derived from existing databases and do not assume that it is complete. Areas not yet inventoried may contain significant species or communities. You can find more information about global and state rank status definitions by visiting Natureserve's web page. Please note that certain sensitive species found within the buffer area may be listed in this table but are not represented on the map.



Map Credits: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community



	ar <b>a</b> Nijina)						
Tiger Salamander	<u>i</u> n the second	Not Applicable	Not Applicable	G5	S2S3	Highest	1933-02-01
Least Tern	<b>#</b>	Not Applicable	ST: State Threatened	G4	S2	Highest	2000

## C. Species Best Management Practices (1 of 1)

SCDNR offers the following comments and best management practices (BMPs) regarding this project's potential impacts to species of concern which may be found on or near to the project area. Please contact speciesreview@dnr.sc.gov should you have further questions with regard to survey methods, consultation, or other species-related concerns.



Map Credits: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community



Cavity- and tree-roosting bat species including the federally threatened northern long-eared bat (Myotis septentrionalis), stateendangered Rafinesque's big-eared bat (Corynorhinus rafinesquii), and the federally at-risk tricolored bat (Perimyotis subflavus) have been known to occur in the county of the proposed site. As a conservation measure, it is recommended that any tree clearing activities be conducted during the inactive season for Northern long-eared bat (November 15th through March 31st) to avoid negative impacts to the species. If any of the above species are found on-site, please contact the USFWS and SCDNR.

Species in the above table with SWAP priorities of High, Highest or Moderate are designated as having conservation priority under the South Carolina State Wildlife Action Plan (SWAP). SWAP species are those species of greatest conservation need not traditionally covered under any federal funded programs. Species are listed in the SWAP because they are rare or designated as at-risk due to knowledge deficiencies; species common in South Carolina but listed rare or declining elsewhere; or species that serve as indicators of detrimental environmental conditions. SCDNR recommends that appropriate measures should be taken to minimize or avoid impacts to the aforementioned species of concern.

## D. Project Best Management Practices (1 of 2)

SCDNR offers the following comments and best management practices (BMPs) regarding this project's potential impacts to natural resources within or surrounding the project area. Please contact our Office of Environmental Programs at environmental@dnr.sc.gov should you have further questions with regard to best management practices related to this project



Map Credits: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community



Review of available data, National Wetlands Inventory and hydric soils, indicate that wetlands or waters of the United States are present within your project area. These areas may require a permit from the U.S. Army Corps of Engineers (USACE), as well as a compensatory mitigation plan. SCDNR advises that you consult with the USACE Regulatory to determine if jurisdictional wetlands are present and if a permit and mitigation is required for any activities impacting these areas. For more information, please visit their website at www.sac.usace.army.mil/Missions/Regulatory. Additionally, a 401 Water Quality Certification may also be required from the SC Department of Health & Environmental Control. For more information, please visit their website at https://www.scdhec.gov/environment/water-quality/certification-section-401-clean-water-act.

- All necessary measures must be taken to prevent oil, tar, trash and other pollutants from entering the adjacent offsite areas/wetlands/ water.
- Once the project is initiated, it must be carried to completion in an expeditious manner to minimize the period of disturbance to the environment.
- Upon project completion, all disturbed areas must be permanently stabilized with vegetative cover (preferable), riprap or other erosion control methods as appropriate.
- The project must be in compliance with any applicable floodplain, stormwater, land disturbance, shoreline management guidance or riparian buffer ordinances.
- Prior to beginning any land disturbing activity, appropriate erosion and siltation control measures (e.g. silt fences or barriers) must be in place and maintained in a functioning capacity until the area is permanently stabilized.
- Materials used for erosion control (e.g., hay bales or straw mulch) will be certified as weed free by the supplier.
- Inspecting and ensuring the maintenance of temporary erosion control measures at least:
  - a. on a daily basis in areas of active construction or equipment operation;
  - b. on a weekly basis in areas with no construction or equipment operation; and
  - c. within 24 hours of each 0.5 inch of rainfall.
- Ensuring the repair of all ineffective temporary erosion control measures within 24 hours of identification, or as soon as conditions allow if compliance with this time frame would result in greater environmental impacts.
- Land disturbing activities must avoid encroachment into any wetland areas (outside the permitted impact area). Wetlands that are unavoidably impacted must be appropriately mitigated.
- Your project may require a Stormwater Permit from the SC Department of Health & Environmental Control, please visit https://www.scdhec.gov/environment/water-quality/stormwater
- If clearing must occur, riparian vegetation within wetlands and waters of the U.S. must be conducted manually and low growing, woody vegetation and shrubs must be left intact to maintain bank stability and reduce erosion.
- Construction activities must avoid and minimize, to the greatest extent practicable, disturbance of woody shoreline vegetation within the project area. Removal of vegetation should be limited to only what is necessary for construction of the proposed structures.
- Where necessary to remove vegetation, supplemental plantings should be installed following completion of the project. These plantings should consist of appropriate native species for this ecoregion.

## D. Project Best Management Practices (2 of 2)

SCDNR offers the following comments and best management practices (BMPs) regarding this project's potential impacts to natural resources within or surrounding the project area. Please contact our Office of Environmental Programs at environmental@dnr.sc.gov should you have further questions

with regard to best management practices related to this project area.



Map Credits: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community



- Residential and commercial development has grown exponentially in recent years. Activities associated with these developments can have detrimental impacts on wildlife and aquatic resources such as habitat fragmentation, loss of available habitats and pollution, especially stormwater pollution. The result of these impacts causes the displacement of species and increases wildlife and human interactions. However, properly planned and sited development activities may allow for economic expansion with minimal negative impacts.
- Where appropriate, particularly adjacent to wetlands and water bodies, drainage plans and construction measures for residential and commercial development should be designed to control erosion and sedimentation, water quality degradation and other negative impacts on adjacent water and wetlands utilizing the best available design research. Developers proposing development activities should contact and work closely with local community development planning entities.
- Developments should be planned where growth is most compatible with natural resources utilizing residential and commercial cluster development methods, maximizing green spaces which can both be beneficial to protect natural resources and provide recreational opportunities for outdoor enthusiasts.
- Developments should be designed and constructed to avoid impact to wetland and stream areas whenever possible and to minimize unavoidable wetland and stream impacts to the maximum extent possible. Aquatic habitats and other sensitive natural areas should be identified in the initial planning stages of the project and incorporated in their natural state into the overall development plan.
- Developments should be designed to maintain the integrity and contiguity of wetland and stream systems and their associated riparian corridors, including the establishment of protective upland buffers around and between undisturbed aquatic systems whenever possible. Projects should be designed to minimize habitat fragmentation, including the construction of a limited number of road and utility crossings through streams and wetlands.
- Your project boundary lies within a coastal county in South Carolina which means you may also need a Coastal Zone Consistency Certification for your project from the SC Department of Health and Environmental Control. For more information, visit: https://www.scdhec.gov/environment/your-water-coast/ocean-coastal-management/beach-management/coastal-permits/coastal-zone
- If your project could affect coastal waters, tidelands, beaches and beach/dune systems, you may also need a critical area permit from the SC Department of Health and Environmental Control. For more information, visit: https://www.scdhec.gov/environment/your-water-coast/ocean-coastal-management/beach-management/coastal-permits/critical-1

# E. Instructions for Submitting Species Observations

The SC Natural Heritage Dataset relies on continuous monitoring and surveying for species of concern throughout the state. Any records of species of concern found within this project area would greatly benefit the quality and comprehensiveness of the statewide dataset for rare, threatened and endangered species. Below are instructions for how to download the SC Natural Heritage Occurrence Reporting Form through the Survey123 App.

Map Credits: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community



### Instructions for accessing the SC Natural Heritage Occurrence Reporting Form

For use in a browser (on your desktop/PC):

- 1) Follow https://bit.ly/sc-spp-obs-form.
- 2) Select 'Open in browser'
- 3) The form will open and you can begin entering data!

This method of access will also work on a browser on a mobile device, but only when connected to the internet. To use the form in the field without relying on data/internet access, follow the steps below.

For use on a smartphone or tablet using the field app:

- 1) Download the Survey123 App from the Google Play store or the Apple Store. This app is free to download. Allow the app to use your location.
- 2) No need to sign in. However, you will need to provide the app with our Heritage Trust GIS portal web address. You will only need to do this once: (this is a known bug with ESRI's software, and future releases of the form should not require the below steps. Bear with us in the meantime!).
  - a. Tap 'Sign in'
  - b. Tap the settings (gear symbol) in the upper right corner
  - c. Tap 'Add Portal'
  - d. After the 'https://', type schtportal.dnr.sc.gov/portal
  - e. Tap 'Add Portal'
  - f. Tap the back-arrow icon (upper left corner) twice to return to the main sign in page.
- 3) Use the camera app (or other QR Reader app) to scan the QR code on this page from your smartphone or tablet. Click on the 'Open in the Survey123 field app'. This will prompt a window to allow Survey123 to download the SC Natural Heritage Occurrence Reporting Form. Select 'Open.'
- 4) The form will automatically open in Survey123, and you can begin entering data! This form will stay loaded in the app on your device until you manually delete it, and you can submit as many records as you like.





July 27, 2020

Ms. Elizabeth Johnson Deputy State Historic Preservation Officer South Carolina Department of Archives and History 8301 Parklane Road Columbia, SC 29223-4905

Subject: Cultural Resources Survey for Section 6(f)(3) Partial Land Conversion (2401 Richardson Drive) on the Proposed I-526 West Lowcountry Corridor Improvements Environmental Impact Statement (EIS) in Charleston County, South Carolina; Federal Project Number P027507

Dear Ms. Johnson:

The South Carolina Department of Transportation (the Department) seeks to convert a portion of the Highland Terrace-Liberty Park Community Center, a Land and Water Conservation Fund (LWCF) Section 6(f) resource located at 2401 Richardson Drive in North Charleston, from its current recreational use to permanent right-of-way as part of the proposed I-526 Lowcountry Corridor (LCC) WEST project. The proposed replacement property, located at 5260 Deacon Street, is shown in the attached mapping.

An Environmental Assessment (EA) is being prepared to evaluate impacts associated with replacing the impacted Section 6(f) resource. The properties at Richardson Drive and Deacon Street have been surveyed for historic resources as part of the studies conducted for the proposed I-526 LCC WEST project. The I-526 LCC WEST Cultural Resources report is attached for reference. Based on the results of background research and field survey, there are no historic resources recommended eligible for listing on the National Register of Historic Places at 2401 Richardson Drive or 5260 Deacon Street. Neither the 2401 Richardson Drive nor the 5260 Deacon Street tracts warranted archaeological survey, as soils at both tracts are defined as Urban land and located within the Filbin Creek drainage. Therefore, **no historic properties or archaeological resources would be affected** by construction of the proposed replacement recreational facilities.

In accordance with the memorandum of agreement approved by the Federal Highway Administration, March 16, 1993, the Department is providing this information as agency official designee, as defined under 36 CFR 800.2, to ensure compliance with Section 106 of the National Historic Preservation Act.



AN EQUAL OPPORTUNITY AFFIRMATIVE ACTION EMPLOYER



Per the terms of the Section 106 Programmatic Agreement, the Department is providing this information on behalf of the Federal Highway Administration. It is requested that you review the enclosed material and, if appropriate, indicate your concurrence with the Department's findings, thus completing the Section 106 consultation process. Please respond within 30 days if you have any objections or if you have need of additional information.

Sincerely,

Chad C. Long Director of Environmental Services

CCL:ccl Enclosure

I (do not) concur in the above determination.

Signed:

Date:

cc: J. Shane Belcher, FHWA Environmental Coordinator
 Mr. David Kelly, SCDOT RPG 1 NEPA Coordinator
 Mr. Will McGoldrick, SCDOT Design-Build Environmental Coordinator
 Ms. Joy Riley, SCDOT Program Manager









Highland Terrace-Liberty Park Community Center Environmental Features

I-526 Lowcountry Corridor WEST Charleston County Last Updated by AK on 7/24/2020

100



I-526 Lowcountry Corridor WEST Charleston County Last Updated by AK on 7/21/2020



#### Cultural Resources Survey of the I-526 Lowcountry Corridor West Project

Charleston County, South Carolina Addendum 2 Report David Baluha and Lannie Kittrell Brockington and Associates, Inc. May 2020

The report above can be found at:

https://storage.googleapis.com/stateless-www-526lowcountrycor/wp-content/ uploads/2020/10/App-P\_Cultural-Resources-Survey.pdf

# **APPENDIX C**

**ENVIRONMENTAL SCREENING FORMS** 

A. ENVIRONMENTAL RESOURCES Indicate potential for adverse impacts. Use a separate sheet to clarify responses per instructions for Part A on page 9.	Not Applicable - Resource does not exist	<b>No/Negligible</b> Impacts - Exists but no or negligible impacts	Minor Impacts	Impacts Exceed Minor EA/EIS required	More Data Needed to Determine Degree of Impact EA/EIS required
1. Geological resources: soils, bedrock, slopes, streambeds, landforms, etc.		x			
2. Air quality		x			
3. Sound (noise impacts)		х			
4. Water quality/quantity		х			
5. Stream flow characteristics	x				
6. Marine/estuarine		х			
7. Floodplains/wetlands		x			
8. Land use/ownership patterns; property values; community livability		х			
9. Circulation, transportation		х			
10. Plant/animal/fish species of special concern and habitat; state/federal listed or proposed for listing	x				
11. Unique ecosystems, such as biosphere reserves, World Heritage sites, old growth forests, etc.	x				
12. Unique or important wildlife/ wildlife habitat	x				
13. Unique or important fish/habitat	х				
14. Introduce or promote invasive species (plant or animal)	x				
15. Recreation resources, land, parks, open space, conservation areas, rec. trails, facilities, services, opportunities, public access, etc. <i>Most conversions exceed</i> <i>minor impacts. See Step 3.B</i>	x				
16. Accessibility for populations with disabilities	x				
17. Overall aesthetics, special		х			
<ol> <li>Historical/cultural resources, including landscapes, ethnographic, archeological, structures, etc. Attach SHPO/THPO determination.</li> </ol>	x				
19. Socioeconomics, including employment, occupation, income changes, tax base, infrastructure	x				
20. Minority and low-income populations	х				
21. Energy resources (geothermal, fossil fuels, etc.)	x				
22. Other agency or tribal land use plans or policies	x				
23. Land/structures with history of contamination/hazardous materials even if remediated	x				
24. Other important environmental resources to address.	х				

B. Mandatory Criterial If your LWCF proposal is approved, would it	Yes	No	To Be Determined
1. Have significant impacts on public health or safety?		х	
<ol> <li>Have significant impacts on such natural resources and unique geographic characteristics as historic or cultural resources; park, recreation, or refuge lands, wilderness areas; wild or scenic rivers; national natural landmarks; sole or principal drinking water aquifers; prime farmlands; wetlands (E.O. 11990); floodplains (E.O 11988); and other ecologically significant or critical areas.</li> </ol>		x	
3. Have highly controversial environmental effects or involve unresolved conflicts concerning alternative uses of available resources [NEPA section 102(2)(E)]?		х	
4. Have highly uncertain and potentially significant environmental effects or involve unique or unknown environmental risks?		х	
5. Establish a precedent for future action or represent a decision in principle about future actions with potentially significant environmental effects?		х	
6. Have a direct relationship to other actions with individually insignificant, but cumulatively significant, environmental effects?		х	
7. Have significant impacts on properties listed or eligible for listing on the National Register of Historic Places, as determined by either the bureau or office. (Attach SHPO/THPO Comments)		х	
<ol> <li>Have significant impacts on species listed or proposed to be listed on the List of Endangered or Threatened Species, or have significant impacts on designated Critical Habitat for these species.</li> </ol>		х	
9. Violate a federal law, or a state, local, or tribal law or requirement imposed for the protection of the environment?		х	
10. Have a disproportionately high and adverse effect on low income or minority populations (Executive Order 12898)?		х	
11. Limit access to and ceremonial use of Indian sacred sites on federal lands by Indian religious practitioners or significantly adversely affect the physical integrity of such sacred sites (Executive Order 13007)?		x	
12. Contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species known to occur in the area, or actions that may promote the introduction, growth, or expansion of the range of		x	

#### **Environmental Reviewers**

The following individual(s) provided input in the completion of the environmental screening form. List all reviewers including name, title, agency, field of expertise. Keep all environmental review records and data on this proposal in state compliance file for any future program review and/or audit. The ESF may be completed as part of a LWCF pre-award site inspection if conducted in time to contribute to the environmental review process for the proposal.

1. Chad Long, Director of Environmental Services, SCDOT

2.

3.

#### The following individuals conducted a site inspection to verify field conditions.

List name of inspector(s), title, agency, and date(s) of inspection.

- 1. Stuart M. Saunders, Appraiser, Saunders & Associates, Inc., July 6, 2020
- 2. Amanda Harris, Civil Engineering Consulting Services, Inc., July 23, 2020
- 3.

#### State may require signature of

LWCF sub-recipient applicant here:

Date:

#### Subject Photographs



Front view of subject house.



Side view of house.



Northerly view facing subject house.



Rear view of subject house.



Side view of house.



Northerly view along property line/Filbin Creek.



Interior view.



Dilapidated shed.



Pond.



Interior view.



Interior view.

A. ENVIRONMENTAL RESOURCES Indicate potential for adverse impacts. Use a separate sheet to clarify responses per instructions for Part A on page 9.	Not Applicable - Resource does not exist	<b>No/Negligible</b> Impacts - Exists but no or negligible impacts	Minor Impacts	Impacts Exceed Minor EA/EIS required	More Data Needed to Determine Degree of Impact EA/EIS required
1. Geological resources: soils, bedrock, slopes, streambeds, landforms, etc.		x			
2. Air quality		х			
3. Sound (noise impacts)		х			
4. Water quality/quantity		x			
5. Stream flow characteristics	x				
6. Marine/estuarine	x				
7. Floodplains/wetlands		х			
8. Land use/ownership patterns; property values; community livability		х			
9. Circulation, transportation		х			
10. Plant/animal/fish species of special concern and habitat; state/federal listed or proposed for listing	x				
11. Unique ecosystems, such as biosphere reserves, World Heritage sites, old growth forests, etc.	x				
12. Unique or important wildlife/ wildlife habitat	x				
13. Unique or important fish/habitat	x				
14. Introduce or promote invasive species (plant or animal)	х				
15. Recreation resources, land, parks, open space, conservation areas, rec. trails, facilities, services, opportunities, public access, etc. <i>Most conversions exceed</i> <i>minor impacts. See Step 3.B</i>			x		
16. Accessibility for populations with disabilities	x				
17. Overall aesthetics, special characteristics/ features	x				
<ol> <li>Historical/cultural resources, including landscapes, ethnographic, archeological, structures, etc. Attach SHPO/THPO determination.</li> </ol>	x				
19. Socioeconomics, including employment, occupation, income changes, tax base, infrastructure	x				
20. Minority and low-income populations	x				
21. Energy resources (geothermal, fossil fuels, etc.)	x				
22. Other agency or tribal land use plans or policies	x				
23. Land/structures with history of contamination/hazardous materials even if remediated	x				
24. Other important environmental resources to address.	х				

B. Mandatory Criterial If your LWCF proposal is approved, would it	Yes	No	To Be Determined
1. Have significant impacts on public health or safety?		x	
<ol> <li>Have significant impacts on such natural resources and unique geographic characteristics as historic or cultural resources; park, recreation, or refuge lands, wilderness areas; wild or scenic rivers; national natural landmarks; sole or principal drinking water aquifers; prime farmlands; wetlands (E.O. 11990); floodplains (E.O 11988); and other ecologically significant or critical areas.</li> </ol>		х	
3. Have highly controversial environmental effects or involve unresolved conflicts concerning alternative uses of available resources [NEPA section 102(2)(E)]?		х	
4. Have highly uncertain and potentially significant environmental effects or involve unique or unknown environmental risks?		х	
5. Establish a precedent for future action or represent a decision in principle about future actions with potentially significant environmental effects?		х	
6. Have a direct relationship to other actions with individually insignificant, but cumulatively significant, environmental effects?		х	
7. Have significant impacts on properties listed or eligible for listing on the National Register of Historic Places, as determined by either the bureau or office. (Attach SHPO/THPO Comments)		х	
8. Have significant impacts on species listed or proposed to be listed on the List of Endangered or Threatened Species, or have significant impacts on designated Critical Habitat for these species.		х	
9. Violate a federal law, or a state, local, or tribal law or requirement imposed for the protection of the environment?		х	
10. Have a disproportionately high and adverse effect on low income or minority populations (Executive Order 12898)?		х	
11. Limit access to and ceremonial use of Indian sacred sites on federal lands by Indian religious practitioners or significantly adversely affect the physical integrity of such sacred sites (Executive Order 13007)?		x	
12. Contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species known to occur in the area, or actions that may promote the introduction, growth, or expansion of the range of		x	

#### **Environmental Reviewers**

The following individual(s) provided input in the completion of the environmental screening form. List all reviewers including name, title, agency, field of expertise. Keep all environmental review records and data on this proposal in state compliance file for any future program review and/or audit. The ESF may be completed as part of a LWCF pre-award site inspection if conducted in time to contribute to the environmental review process for the proposal.

1. Chad Long, Director of Environmental Services, SCDOT

2.

2. 3.

#### The following individuals conducted a site inspection to verify field conditions.

List name of inspector(s), title, agency, and date(s) of inspection.

- 1. Stuart M. Saunders, Appraiser, Saunders & Associates, Inc., November 5, 2019
- 2. Amanda Harris, Civil Engineering Consulting Services, Inc., July 23, 2020
- 3.

#### State may require signature of

LWCF sub-recipient applicant here:

Date:





Front view of subject from across Taylor Street.



Front view of subject building.



Basketball court.



Side view of subject building from parking lot.



Side/rear view of subject building.



Basketball court.



Playground.



Westerly view of subject's frontage on Richardson Drive.



Northerly view of subject's frontage on Taylor Street.



Easterly view of subject's frontage on Richardson Drive.



Southerly view of subject's frontage on Taylor Street.



Westerly view along rear property line.



Southerly view alongside property line.

# Attachment F I-526 West Lowcountry Corridor Biological Assessment for USFWS



# United States Department of the Interior

**FISH AND WILDLIFE SERVICE** 176 Croghan Spur Road, Suite 200 Charleston, South Carolina 29407



April 6, 2020

Mr. Will McGoldrick Design Build Environmental Coordinator S.C. Department of Transportation P.O. Box 191 Columbia, South Carolina 29202-0191

Re: S.C. Department of Transportation, I-526 Low Country Corridor West, Charleston County, FWS Log # 2016-CPA-0062

Dear Mr. McGoldrick:

The South Carolina Ecological Services Field Office for the U.S. Fish and Wildlife Service (Service) received the South Carolina Department of Transportation's (SCDOT) biological assessment (BA), and other project documentation for the I-526 Low Country Corridor West (I-526 West) in Charleston County, SC. The BA has evaluated potential impacts to threatened and endangered (T&E) species protected under the Endangered Species Act of 1973 (ESA). The SCDOT is seeking our review of the BA and its findings for inclusion into an Environmental Impact Statement (EIS) being developed for I-526 West project the pursuant to the National Environmental Policy Act of 1969.

The proposed I-526 West project extends approximately 11 miles from near Paul Cantrell Boulevard in West Ashley to Virginia Avenue in North Charleston in Charleston County, SC. Two travel lanes ae proposed to be added in each direction along I-526 as well as upgrade the current interchange between I-526 and I-26. Improvements to access I-526 from Paul Cantrell Boulevard, North Rhett Avenue, and Virginia Avenue are also proposed. Proposed improvements also include widening of the existing bridge over the Ashley River to match the upland improvements.

The BA provided a list of all T&E species known to occur in Charleston County, including species in offshore waters. A more in depth review was afforded to T&E that may occur in project area based upon habitat within the project area. The SCDOT identified eight species under the jurisdiction of the Service that may occur in the project area; the Bachman's warbler, piping plover, eastern black rail, West Indian manatee, pondberry, Canby's dropwort, northern long-eared bat, and American wood stork. Field reconnaissance by SCDOT personnel did not find any T&E species in the corridor but did find suitable habitat for the eight species.

Therefore, a determination of "may effect, not likely to adversely affect" was made for all eight T&E species that may occur in the project area.

Upon review of your information the Service concurs with SCDOT's determination. For those species in which SCDOT determined the project would have "no effect", no further consultation is required. Please note that obligations under the ESA must be reconsidered if: (1) new information reveals impacts of this identified action may affect any federally listed species or critical habitat in a manner not previously considered; (2) this action is subsequently modified in a manner, which was not considered in this assessment; or (3) a new species is listed or critical habitat is designated that may be affected by the identified action.

For SCDOT's convenience the Service has included with this letter a list of species that may occur in Charleston County and are currently protected under the Endangered Species Act of 1973 (ESA). This list also includes species that are considered At Risk Species (ARS) that are either candidates for listing or have been petitioned for listing under the ESA. Appropriate survey time frames or windows for each species are included in the list. Although there are no Federal protections afforded to ARS, please consider including them in your project efforts. Incorporating proactive measures to avoid or minimize harm to ARS may improve their status and assist with precluding the need to list these species. Additional information on ARS can be found at: <a href="http://www.fws.gov/southeast/candidateconservation">http://www.fws.gov/southeast/candidateconservation</a>.

The Service appreciates the opportunity to provide input at this early stage of the projects' development. If you have any questions regarding our comments, please do not hesitate to contact Mr. Mark Caldwell of the South Carolina Ecological Services Field Office at (843) 727-4707 ext. 215 and reference FWS Log# 2016-CPA-0062.

Sincerely, homas D. Mc Cor

Thomas D. McCoy Field Supervisor

TDM/MAC EC: Jane Ledwin, USFWS HQ



#### **BIOLOGICAL ASSESSMENT**

### FOR US FISH AND WILDLIFE SERVICE

Prepared For:



Prepared By:



Civil Engineering Consulting Services, Inc.

March 27, 2020



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# 1. Project Overview

# 1.1 Federal Nexus

The purpose of this Biological Assessment (BA) is to address the effect of the I-526 Lowcountry Corridor West project on U.S. Endangered Species Act (ESA) listed species, listed as endangered or threatened, or their designated critical habitat, under the jurisdiction of the U.S. Fish and Wildlife Service (USFWS). Those species under the jurisdiction of the National Oceanic and Atmospheric Administration-National Marine Fisheries Service (NOAA-NMFS) are addressed in a separate BA.

The South Carolina Department of Transportation (SCDOT), on behalf of the Federal Highway Administration (FHWA), is pursuing informal consultation under Section 7 of the ESA on the impacts to species that will result from the proposed I-526 West project. Section 7 of the ESA assures that, through consultation with USFWS, federal actions do not jeopardize the continued existence of any threatened, endangered, or proposed species, or result in the destruction or adverse modification of critical habitat.

# 1.2 Project Description

The proposed I-526 Lowcountry Corridor West project extends approximately 11.4 miles from near Paul Cantrell Boulevard in West Ashley to Virginia Avenue in North Charleston in Charleston County, SC. SCDOT currently ranks the segment of I-526 between I-26 and Virginia Avenue as the most congested segment of interstate highway in the state. The remainder of the I-526 LCC West project, from I-26 to Paul Cantrell Boulevard, ranks among the top ten of the state's existing most congested corridors. Traffic forecasts show that segments of that corridor will continue to be among the state's most congested in 2040. The interchange of I-526 and I-26 is the major source of the congestion.

Through various reasonable build alternatives, SCDOT proposes to add two travel lanes in each direction along I-526 and to upgrade the interchange of I-526 and I-26. Improvements to access I-526 from Paul Cantrell Boulevard, North Rhett Avenue, and Virginia Avenue are also proposed. Proposed improvements to I-526 would include providing additional travel lanes over the Ashley River, through widening the existing bridges. An Environmental Impact Statement (EIS) is being completed that outlines alternatives to satisfy the purpose and need of the project.

# 1.3 Project Area and Setting

The area surrounding the project study area (PSA) is a densely populated region to the west of the City of Charleston, South Carolina (Appendix A, Figure 1). Based on the size of this project and the density of development in greater Charleston, the land use with this vicinity varied greatly. A large portion of the land within this PSA has been developed for residential, commercial, and industrial uses. Undeveloped

land primarily consists of maintained rights of way, landscaped lawns, wooded forests, and tidal marshes. Filbin Creek and its floodplain parallel and cross through the PSA, flowing to the Cooper River; this area is largely undeveloped forested wetlands. The Ashley River flows through the PSA and is surrounded by tidal mudflats and vegetated marshes. Numerous streams and wetlands are present in the PSA, including forested wetlands, emergent wetlands, tidally influenced streams, and freshwater streams.

### 1.4 Consultation History

A Letter of Intent (LOI) was sent to the USFWS and NOAA-NMFS by SCDOT on January 27, 2016. The USFWS provided a response to the LOI on February 1, 2016 (Appendix B). A Notice of Intent was published in the Federal Register on November 11, 2019. The project has been discussed at several Agency Coordination Effort meetings with the USFWS, NOAA-NMFS, U.S. Environmental Protection Agency (EPA), FHWA, U.S. Army Corps of Engineers (USACE), South Carolina Department of Natural Resources (SCDNR), and FHWA on March 14, 2019; April 23, 2019; July 10, 2019; September 11, 2019; October 9, 2019; November 13, 2019; December 11, 2019; January 8, 2020; February 12, 2020; and March 11, 2020.

# 2. Federally Proposed & Listed Species & Designated Critical Habitat

The PSA is located within the range of twenty-four species listed under the ESA within the jurisdiction of USFWS (Table 1). One of these twenty-four species, Eastern black rail, is listed as "proposed" threatened for the ESA. Proposed species are those candidate species that were found to warrant listing as either threatened or endangered, after completion of a status review and consideration of other protective conservation measures. Two additional listed species (shortnose sturgeon and Atlantic sturgeon) fall within the jurisdiction of NOAA-NMFS. These species are being coordinated directly with NOAA – NMFS. There is no Critical Habitat within the PSA.

Species	Federal Protection Status
Flatwoods salamander (Ambystoma cingulatum)	Threatened
American wood stork (Mycteria americana)	Threatened
Bachman's warbler ( <i>Vermivora bachmanii</i> )	Endangered
Eastern Black rail (Laterallus jamaicensis)	Threatened (proposed)
Piping plover (Charadrius melodus)	Threatened

#### Table 1. Species Protected under the Federal ESA.

Species	Federal Protection Status
Red-cockaded woodpecker (Picoides borealis)	Endangered
Red knot (Calidris canutus rufa)	Threatened
Atlantic sturgeon (Acipenser oxyrinchus oxyrinchus)	Endangered
Shortnose sturgeon (Acipenser brevirostrum)	Endangered
Finback whale (Balaenoptera physalus)	Endangered
Humpback whale (Megaptera novaengliae)	Endangered
Northern long-eared bat (Myotis septentrionalis)	Threatened
Right whale (Balaena glacialis)	Endangered
Sei whale (Balaenoptera borealis)	Endangered
Sperm whale (Physeter macrocephalus)	Endangered
West Indian manatee (Trichechus manatus)	Threatened
American chaff seed (Schwalbea americana)	Endangered
Canby's dropwort (Oxypolis canbyi)	Endangered
Pondberry (Lindera melissifolia)	Endangered
Seabeach amaranth (Amaranthus pumilus)	Threatened
Green sea turtle (Chelonia mydas)	Threatened
Kemp's ridley sea turtle (Lepidochelys kempii)	Endangered
Leatherback sea turtle (Dermochelys coriacea)	Endangered
Loggerhead sea turtle (Carretta carretta)	Threatened

NOAA-NMFS has sole jurisdiction over the Atlantic sturgeon and shortnose sturgeon; these species are evaluated under a separate BA that has been provided to NOAA-NMFS. The bald eagle (*Haliaeetus leucocephalus*) is also protected under the Bald and Golden Eagle Protection Act (BGEPA) and Migratory Bird Treaty Act (MBTA). The following sections detail the eight species that were noted to have suitable

habitat within the PSA. Additional detail regarding remaining species can be found within the "I-526 Lowcountry Corridor West Natural Resources Technical Memorandum" (Appendix F).

### 2.1 American wood stork

American wood storks (*Mycteria americana*) are the largest wading bird and only stork species that breeds in the United States. These birds are large, long legged with a head to tail length of up to 45 inches and a wingspan of up to 65 inches. Adult wood storks are white except for the primary and secondary wing feathers and the tail feathers, which are black with a greenish sheen. Adults also



American wood stork foraging in the I-526 PSA.

have an unfeathered head and neck with a long, thick black bill. The breeding range of the wood stork extends down the southeastern coast of the United States, including South Carolina. American wood storks are colonial nesters with colonies ranging from less than 12 to more than 500 in size. Nesting occurs in small to large trees typically on small islands surrounded by standing water, or in extensive forested and flooded wetlands. The species generally forages in water six to ten inches deep. They feed in freshwater marshes, narrow tidal creeks, or flooded tidal pools. Suitable habitat and foraging habitat exists within the forested wetlands near open water located within the PSA including open ponds, wetlands, the Ashley River, and other smaller streams. During surveys, American wood storks were documented foraging in freshwater wetlands near Faber Place Drive and I-526. No active nesting rookeries were found during surveys. The closest known nesting population is approximately 3 miles north of the PSA.

#### 2.2 Bachman's warbler

Bachman's warbler (*Vermivora bachmanii*) is presumed to be extinct, historically occurring in the southeastern U.S. during its breeding season. Historically, the bird inhabited seasonally flooded swamp forests, especially with cane thickets and containing variable amounts of water, but usually with some permanent water. The Bachman's warbler is a small bird with olive-green upperparts, yellow forehead, throat, and underparts, and a faint white eye-ring and black crown and bib. The bird was last observed in

the United States in 1962 near Charleston, South Carolina. Suitable habitat for Bachman's warbler exists within the PSA. Small areas of cane thickets and seasonally flooded swamp forests with variable amounts of water were observed. Evidence of Bachman's warbler was not noted within the PSA.

#### 2.3 Eastern Black rail

The Eastern black rail (*Laterallus jamaicensis*) is currently proposed by USFWS for listing as a threatened species. No critical habitat is proposed for designation. In addition to proposing threatened species status for the eastern black rail, USFWS is also proposing a special rule under Section 4(d) of the ESA that would tailor protections for the bird. If finalized, this 4(d) rule would exempt certain activities such as mowing from the take prohibitions of the ESA. The Eastern black rail is a small rail species that is usually grey or black-grey in color. It breeds in a wide diversity of habitats such as fresh and saline marshes, wet meadows, and savannas. Eastern black rail habitat can be tidally or non-tidally influenced, and range in salinity from salt to brackish to fresh. Its natural history is the best known in its genus due to work in temperate North America where it primarily feeds on small aquatic and terrestrial invertebrates. Suitable habitat for Eastern black rail exists in the marshes associated with the Ashley River and with other smaller stream systems. No black rails were identified during field surveys and there are no known populations within the PSA.

#### 2.4 Piping plover

The piping plover (*Charadrius melodus*) is a small and stocky sparrow sized bird that is pale or sandy white with a black breast band and yellow bill and legs. Breeding birds have a prominent black collar and black band that runs across the forehead. The piping plover inhabits sandy beaches, mudflats and sandbars along rivers and lakes. In South Carolina, the piping plover occurs from August to April and generally overwinters in the southern United States from North Carolina to the Gulf of Mexico. Suitable foraging habitat for piping plover may exist on mudflats and sandbars associated with the Ashley and the Cooper Rivers. No piping plovers were identified during field surveys and there are no known populations within the PSA.

#### 2.5 Northern long-eared bat

The northern long-eared bat (*Myotis septentrionalis*) is a medium-sized bat that is medium to dark brown on the back and tawny to pale-brown on the underside. The species is distinguished by its long ears. During the winter months, the northern long-eared bat can be found hibernating in caves and mines. They use areas in various sized caves or mines with constant temperatures, high humidity, and no air currents. During the summer, northern long-eared bats roost underneath bark and in cavities or in crevices of both live trees and dead trees. Individuals of the species have also been found rarely roosting in structures, like barns and sheds. Habitat conducive to seasonal occupation for northern long-eared bat is located within the PSA. The PSA contains potentially suitable summer roosting and foraging habitat for this species within forested areas. The preferred winter hibernation habitat for this species does not exist within the PSA or its immediate vicinity. While the forested areas onsite could be considered suitable habitat, the narrow nature of these areas is a limiting factor for the suitability of this habitat. No northern long-eared bats were identified during pedestrian field surveys and there are no known populations or hibernacula within the PSA.

#### 2.6 West Indian Manatee

The West Indian manatee (*Trichechus manatus*) is a large gray to brown aquatic mammal, averaging about ten feet in length and 1,000 pounds in weight. This mammal has no hind limbs, and the forelimbs are modified flippers. West Indian manatees have flattened horizontal and rounded tails used for locomotion. Manatees inhabit both fresh and salt water, including canals, rivers, estuarine habitats and saltwater bays, throughout their range. West Indian manatees concentrate in areas of warm water, primarily the Florida Gulf Coast waters, from October to April. In the summer months, the West Indian manatee will migrate as far north as coastal Virginia on the east coast and coastal Louisiana on the Gulf of Mexico. Suitable habitat for the West Indian manatee exists in the PSA within the Ashley River. West Indian manatees migrate into estuarine waters off the coast of South Carolina during the warmer, summer months and early fall from May to September, typically when water temperatures exceed 70 degrees Fahrenheit. Particular care and consideration should be taken during construction in summer months or early fall as this is when the waterways provide favorable habitat. There are known occurrences of manatees within the Cooper River near the WestRock paper facility located just outside the PSA, as well as within the Ashley River.

### 2.7 Canby's Dropwort

Canby's dropwort (*Oxypolis canbyi*) is a perennial herbaceous plant with tuberous roots and pale, fleshy rhizomes and erect stems up to 39 inches tall. The flowers are small and white with five petals and grow in umbels or flat-topped clusters. Canby's dropwort grows in moist areas in the coastal plain and sandhills, including wet meadows, wet pineland savannas, ditches, sloughs, and around the edges of Cypress-pine ponds. The plant seems to be more prolific when the habitat has been burned. Suitable habitat for Canby's dropwort exists within ditches and other open wet areas (i.e., grass and sedge fields) located within the PSA. Surveys were conducted during the flowering period and this species was not observed.

### 2.8 Pondberry

Pondberry is a deciduous shrub that grows up to six feet tall and spreads by underground stolons. The leaves are ovately to elliptically shaped, thin, membranaceous and drooping and have a strong sassafraslike odor when brushed. The flowers are pale yellow and bloom in the spring before the appearance of leaves. Fruits are bright red and oval-shaped and mature in the fall. Pondberry generally occupies wetland habitats that are normally flooded or saturated during the dormant season, but infrequently flooded during the growing season for extended periods. The plant is typically associated with bottomland hardwoods in the inner coastal plain, and margins of sinks, ponds, and other depressions in the outer coastal plain. Suitable habitat for pondberry exists within freshwater depressional wetlands and along the margins of ponds located within the PSA. Surveys were conducted during the flowering period and this species was not observed.

# 3. Environmental Baseline

The majority of PSA is comprised of existing roadway. Areas which are not developed were classified based upon vegetation and land form types. Vegetative terrestrial communities within the PSA were distinguished by dominant plant species and community types, location in the landscape, past disturbances, and hydrologic characteristics. Only those habitats which were located directly within the PSA are characterized. The PSA was examined through current and historical Google Earth imagery, USDA ortho imagery, and USGS topographic maps to discern areas with similar signatures, and the data were verified and classified through on-site field review. Essential Fish Habitat (EFH) is also present within the PSA and is addressed in a separate EFH Assessment.

Specific surveys for commonly occurring wildlife species were not conducted; however, wildlife readily observed and documented during the field reviews, or those likely to occur within the PSA, are summarized below.

Common bird species either observed during field reviews or known to occur within the PSA include Carolina chickadee, northern mockingbird, blue jay, northern cardinal, brown thrasher, common grackle, American crow, American goldfinch, American robin, eastern towhee, Carolina wren, eastern bluebird, chipping sparrow, red-bellied woodpecker, barred owl, red-tailed hawk, red-shouldered hawk, turkey vulture, and osprey. Wading birds and waterfowl include Canada goose, Muscovy duck, mallard, great egret, green heron, and great blue heron. Some crayfish, common fishes, and other aquatic organisms were readily observed in the PSA in both brackish and freshwater areas. Those species, as well as others that are likely to be present in the PSA include marsh fiddler crab, periwinkle snail, eastern mudsnail, mosquito fish, channel catfish, sailfin molly, bluegill, silver perch, Atlantic menhaden, and bay anchovy.

There are many common reptile and amphibian species that could occur in the PSA including American alligator, green tree frog, various leopard frog species, skink, Carolina anole, eastern glass lizard, eastern garter snake, eastern king snake, black racer, pond sliders, eastern box turtle, snapping turtle, and American toad.

Common mammal species likely to occur in the PSA include white-tailed deer, striped skunk, river otter, raccoon, bats, cotton mouse, opossum, eastern gray squirrel, and eastern cottontail rabbit. Bottlenose dolphin are likely to occur within the Ashley River.

### 3.1 Aquatic and open water habitats:

#### 3.1.1 Ashley River:

The Ashley River is a tidally influenced river within the headwaters originating in Dorchester County. The river runs for approximately 30 miles, eventually joining the Cooper River to form the Charleston Harbor before discharging eastward into the Atlantic Ocean. The entire drainage of the Ashley River system, including its headwaters in Cypress and Wassamassaw swamps, extends approximately 60 river miles. At the project site, the width of the main deeper-water navigational channel of the Ashley River is approximately 15 feet wide. The full width of the Ashley River at the project site is approximately 1,500 feet wide. Water depths in the river range from approximately 0 to 20 feet. The Ashley River is a designated State Scenic River, largely in part to numerous historic properties located along the riverbanks. Per the NOAA Ashley River bridge station (Station ID 8665099) the mean tidal range is 5.68 feet and the diurnal range is 6.23 feet. Mean high water is approximately 3.08 feet and mean low water is -3.16 feet at the center of the channel. Salinity at the PSA ranges from 12 to 17 parts per thousand (ppt).

The South Carolina Department of Health and Environmental Control (SCDHEC) has classified the waterbodies (streams and rivers) of South Carolina based on the desired uses of each waterbody. SCDHEC has established standards for various parameters to protect all uses within each waterbody classification. The Ashley River is classified as salt water (Appendix A, Figure 2). Monitoring station MD-049 is located upstream of the PSA, along the Ashley River (Appendix A, Figure 3). Aquatic life uses are not supported at MD-049 based on pH and turbidity. The term pH is a measure of the hydrogen ion concentration of

water, and is used to indicate degree of acidity. The pH scale ranges from 0 to 14. A pH of 7 is considered neutral, with values less than 7 being acidic, and values greater than 7 being basic. Low pH values are found in natural waters rich in dissolved organic matter, especially in coastal plain swamps and black water rivers. Turbidity is an expression of the scattering and absorption of light through water. The presence of clay, silt, fine organic and inorganic matter, plankton, and other microscopic organisms increases turbidity. Increasing turbidity can be an indication of increased runoff from land. Recreation is only partially supported at this same site (MD-049), based on elevated fecal coliform levels. A fish consumption advisory due to elevated mercury levels in certain types of fish is in place for the Ashley River, including the area at the I-526/General William C. Westmoreland Bridge and northwards/upstream of the project to SC 165.

A Total Maximum Daily Load (TMDL) has been developed for the Charleston Harbor, Cooper, Ashley, and Wando Rivers and approved by the EPA to identify opportunities to increase dissolved oxygen (DO) in the watershed<sup>1</sup>. Many coastal waters in South Carolina have DO levels below the established DO criteria. Wastewater dischargers and other anthropogenic influences may contribute to low DO in coastal waters. Natural factors such as organic loading and reduced oxygen levels from wetlands and marshes and estuarine dynamics in the mixing zone where freshwater and saltwater come together can create naturally low DO conditions. The waters in and around Charleston Harbor are considered to be both naturally low in DO and further impacted by wastewater dischargers. Potential sources of oxygen demand loading that were considered include National Pollutant Discharge Elimination System (NPDES) wastewater discharges (continuous point sources), NPDES stormwater discharges (noncontinuous point sources), non-point sources.

A large portion of the PSA is within Shellfish Growing Area 10B (Appendix A, Figure 4). This area encompasses the Charleston Harbor, Ashley River, Cooper River, and their tributaries that support shellfish. Waters within this management area in the PSA have been given the classification of "prohibited" and as such, these areas are closed to all human consumption. Prohibited areas are those that are administratively closed for the harvesting of shellfish for any purposes related to human consumption. These closures are established adjacent to permitted wastewater discharges, marina facilities, or areas containing multiple point sources of pollution. This classification is not based upon violation of a bacteriological standard.

<sup>&</sup>lt;sup>1</sup> <u>https://www.scdhec.gov/sites/default/files/docs/HomeAndEnvironment/Docs/Chas\_Hbr\_DO\_TMDL.pdf</u>

There are various types of navigational activities by numerous vessel types that occur along the Ashley River. To determine the types and extents of activity in the channel, existing documentation was reviewed regarding known vessel use. This included a review of bridge opening records of a nearby moveable downstream facility, the T. Allen Legare bridges, located at mile points 2.4 and 2.5. A large portion of marine traffic in the area surrounding the proposed project constitutes recreational and commercial (fishing) boating.

#### 3.1.2 Filbin Creek

Filbin Creek is another major drainage located within the PSA. Within the PSA this tributary flows along I-526 between the Charleston International Airport and Tanger Outlets, a commercial shopping center. Filbin Creek flows southwest to northeast crossing the project corridor in several locations and terminating at the Cooper River. This feature flows along I-526 for approximately 4.5 miles of the over 11 mile project corridor. It is an urban stream that has been channelized in portions, and suffers from low water quality as a result of proximity to heavy development and runoff. An SCDHEC water quality monitoring station is located at the mouth of Filbin Creek where it flows into the Cooper River (MD-249). The latest reported data from this station notes that aquatic life uses are partially supported due to dissolved oxygen excursions. There is a significant increasing trend in pH. Recreational uses are not supported due to fecal coliform bacteria excursions.

#### 3.1.3 Other Streams

Additional named and unnamed streams traverse the PSA. Over 37,900 linear feet (7.18 miles) of streams

were identified and delineated within the project area. Additionally, 9,559.21 (1.81 miles) linear feet of tidally influenced stream were identified and delineated within the project area. Project activities such as roadway fill and culvert extension would result in impacts to a portion of these streams.



Bulls Creek

#### 3.1.4 Open Ponds

Open freshwater communities within the PSA include man-made ponds and naturalized borrow pits. These areas typically consist of open and deeper water within the central portion and vegetated, shallow water along the outer portion of the pond. Several man-made freshwater ponds exist throughout the study area and are often hydrologically connected to other wetlands, streams, and ditches. Plant species common to the shallow, vegetated portions of the ponds and borrow pits include black willow (*Salix nigra*), wax myrtle (*Morella cerifera*), duckweed (*Lemna* sp.), and various species of cattail (*Typha* sp.).

#### 3.2 Terrestrial and mixed aquatic habitats:

#### 3.2.1 Maintained Development

Maintained developments were classified as areas or regions which have altered the native state of the land for consumptive human use. Man-maintained and disturbed communities within the PSA also include roadside shoulders and utility rights of way. Most of the naturally-occurring plants associated with these maintained or disturbed communities have been eliminated and/or replaced with cultivated grasses or taken over by naturally occurring opportunistic species characteristic of disturbed areas. These areas encompassed land uses such as residential homes, commercial developments, roadway surfaces, and parking lots. Most of the disturbed roadway edges are comprised of herbaceous species and sparse shrubs, including various grasses such as common fescue (*Festuca* sp.), ryegrass (*Lolium perenne*), bahia grass (*Paspalum notatum*), and bluegrass (*Poa* sp.).

#### 3.2.2 Mixed Pine/Hardwood Forest

Mixed pine/hardwood forest is a dominant community type located throughout the majority of the PSA. Dominant vegetation consists of pine species including loblolly pine (*Pinus taeda*), long-leaf pine (*Pinus palustris*), and pond pine (*Pinus serotina*). Hardwood species observed include sweetgum (*Liquidambar styraciflua*), red maple (*Acer rubrum*), water oak (*Quercus nigra*), and tulip poplar (*Liriodendron tulipifera*). Smaller hardwood/ sapling species include eastern red cedar (*Juniperus virginiana*), American holly (*Ilex opaca*), and wax myrtle. Groundcover and vine strata include saw palmetto (*Serenoa repens*), blueberry (*Vaccinium* sp.), greenbrier (*Smilax* sp.), and partridge berry (*Michella repens*).

#### 3.2.3 Scrub/ Shrub

Scrub shrub habitat is characterized as being cleared within the past five years. These areas do not have the established species found in the mixed hardwood forest but are not frequently mowed like roadsides and lawns. Notable areas include dry drainages, areas beneath overpasses and interchanges, and spaces that have been maintained in the past but have been allowed to lie fallow. These communities often include ruderal and non-native species. These species tend to be more widespread and occupy numerous habitat types. These areas include an early diverse array of herbaceous species within the initial phases of disturbance and transition towards the climax community, replacing primary colonizers. Species observed in the PSA include sweetgum, Chinese tallow tree (*Triadica sebifera*), blackberry (*Rubus sp.*),

eastern baccharis (*Baccharis halimifolia*), Chinese privet (*Ligustrum sinense*), Autumn olive (*Eleagnus umbellata*), honey suckle (*Lonicera japonica*), and broomsedge (*Andropogon sp.*).

#### 3.2.4 Bottomland Hardwood Forest

Bottomland hardwood forest habitat is present in small locations within the limits of the PSA. These areas are confined to the floodplain zones of creeks and perennial tributaries where out of bank flooding seasonally inundates benches and terraces. These areas are typically mapped within flood zones of waterways. This community type within the PSA is comprised of dominant vegetation of hardwood tree species that includes red maple, tulip poplar, sweetgum, and water oak. Mid canopy species comprise a low-density layer of younger individuals where gaps within the upper canopy allow for sunlight to penetrate. Shrub components within the community may be comprised of Chinese privet and giant cane (*Arundinaria gigantea*). Herbaceous ground cover is sparse to bare, with a dense duff layer holding moisture within the soil column for extended periods.

#### 3.2.5 Tidal Wetlands

The tidal wetland communities are characterized by being periodically inundated in correlation with ocean tides. Soils consist of soft organics and alluvial deposits and support a variety of herbaceous vegetation. Species observed include smooth cordgrass (*Spartina alterniflora*), black needlerush (*Juncus roemerianus*), and saltmeadow cordgrass (*Spartina patens*), occurring in tidally flooded areas. Along the banks, Eastern baccharis and wax myrtle were observed.

#### 3.2.6 Brackish Marsh

Brackish marshes are representative of an estuarine transition zone where a mixture of fresh and saltwater occurs, resulting in brackish water with lower salinity levels, and thereby allowing the presence of both fresh and saltwater plant species. Other species that may be found in the brackish marsh community include big cordgrass (*Spartina cynosuroides*), narrow-leaf cattail (*Typha angustifolia*), saltmeadow cordgrass, bulrush (*Scirpus spp.*), salt grass (*Distichlis spicata*), annual wildrice (*Zizania aquatica*), and Jamaica sawgrass (*Cladium mariscus*).

#### 3.2.7 Freshwater Herbaceous Wetlands

This habitat type does not support woody vegetation but is characterized by a mix of herbaceous species often growing in standing or perennially moist soils. These areas are not tidally influenced and within the project area were commonly noted along margins of larger water bodies or as stormwater retention areas. Cattail, wool grass (*Scirpu s*), sedges (*Carex* sp.), rushes (*Juncus* sp., *Eleocharis* sp.) were common in these

areas. Margins of these open areas are often lined with sapling woody species such as alder (*Alnus serrulata*), birch (*Betula nigra*), and black willow.

#### 3.2.8 Forested Wetlands

This is the most common wetland type throughout the site. These features have hydric soils and may or may not have evidence of periodic standing surface water. Canopy species are mixed hardwood with a sapling and shrub stratum. Ground cover may or may not be present. Notable species include: sweet gum, red maple and southern magnolia (*Magnolia grandiflora*) as canopy species with water oak, yaupon (*Ilex vomitoria*) and cabbage palmetto (*Sabal palmetto*) composing a sampling stratum. Shrubs include Chinese privet, fetterbush (*Lyonia lucida*), and giant cane. Herbaceous species include rushes, and a mix of sedges. Vines such as greenbrier and honey suckle were often observed in this habitat type.

#### 3.2.9 Cypress-tupelo Wetlands

This is a mature forested habitat type characterized by an overstory of bald cypress (*Taxodium distichum*) and water tupelo (*Nyssa aquatica*). Other species present include swamp tupelo (*Nyssa biflora*), red maple, swamp cottonwood (*Populus eterophylla*), and Carolina ash (*Fraxinus caroliniana*). Shrub and herbaceous layers are less diverse or absent. This habitat type is open and may have standing water for all or part of the year.

# 4. Project Details

#### 4.1 Construction

This project is expected to be delivered either via the design build or bid build process and final construction and design plans would be determined by the contractor and/or SCDOT. To maintain competitiveness during the bid process, means and methods of construction may not be final, giving contractors the ability to propose specific methods and equipment. The following is an outline of the likely construction activities and project designs. This may vary slightly depending on the selected contractor and bid process. Any modifications from those proposed in this document that could impact effects to listed species would require additional coordination with SCDOT and federal agencies.

#### 4.1.1 Roadway Construction

Road construction generally entails the addition of two 12-foot lanes of paved roadway and additional right-of-way. Improvements to local connecting streets, interstate on and off ramps, and roadway drainage would also be constructed. In many areas these impacts would occur to upland maintained habitat that is already disturbed. In some areas, such as bridge approaches, additional habitat would be converted to road right of way.

### 4.1.2 Ashley River Bridge Construction

The widened bridge structures would each be approximately 32 feet, 5.5 inches wide (Appendix B, Conceptual Design Plans). During construction of the widened bridge, traffic would be maintained on the existing facility. Maintenance and improvements would be made to the existing Westmoreland bridges and the structure would be retained at its existing height and length.

The proposed minimum horizontal clearance for the main navigational opening would be 60 feet between fenders. This configuration will be similar to the existing bridge, or would be less restrictive. The vertical clearance of the proposed fixed span bridge would be a minimum of 35 feet from the MHW datum to meet the needs of mariners in the area.

Generally, the project improvements would consist of the following components:

- Widening of the northbound and southbound roadway approaches to the Westmoreland Bridges.
- Construction of temporary access areas to include matting, barges, and work trestles.
- Construction of a new structure to the south, or downstream side, of the existing Westmoreland Bridges on a mix of concrete prestressed piles and drilled shafts with poured concrete support.
- Construction of a new structure within the center of the existing northbound and southbound Westmoreland Bridges on a mix of concrete prestressed piles and drilled shafts.
- Extension of the existing fender system to the south of the existing Westmoreland Bridge.
- Painting existing and new bridge structures.
- Lighting to be installed for navigation and to meet SCDOT urban interstate lighting requirements ("Roadway Lighting on Interstate Routes in South Carolina").

#### 4.1.2.1 Temporary Bridge Access

Temporary work trestles would be placed in marsh and wetland areas for construction access outside of the existing eastbound bridge (Appendix B, Conceptual Design Plans). Temporary trestle would be approximately 30 feet wide and would be supported by steel pipe piles. The steel piles would be approximately 24-inches in diameter and would be installed using a vibratory hammer. It is estimated that 240 24-inch steel pipe piles would be needed for temporary work trestle. With one work crew performing installation, approximately 4 piles would be driven per day with an average of 350 impact hammer strikes per pile. If additional crews are utilized, more piles would be driven per day. For access over marsh areas between the existing bridges either trestle or a combination of barge, barge mats, and timber mats would be needed due to the limited space between the structures. Deeper water and the main channel of the Ashley River would be accessed via barges for construction. Barges may be delivered and moved via water and transport vessels or via land on flatbed trucks with cranes and other heavy equipment. At no point would barges in the Ashley River block more than 50% of the channel.

#### 4.1.2.2 Prestressed Concrete Pile Installation

Prestressed concrete piles will be installed outside of the main channel of the Ashley River. These piles would have an H-pile steel "stinger" at the end of the concrete pile to prevent damage to the pile as it is driven into hard subsurface materials. Piles would be installed with a hammer or vibratory hammer. Within the Ashely River, Bents 72 through 79 would be supported by prestressed concrete piles. Additional concrete piles would be installed in the adjacent marshes, outside of the boundaries of the Ashley River. It is estimated that 580 24-inch prestressed concrete piles would be needed for bridge widening. With one work crew performing installation, approximately 6 piles would be driven per day with an average of 300 impact hammer strikes per pile. If additional crews are utilized, more piles would be driven per day.

#### 4.1.2.3 Drilled Shaft Installation

At the approaches to, and over the main channel of the Ashley River, drilled shafts are proposed to support the new bridge structures. Each shaft would be approximately 7 feet in diameter. To install, steel casing would be installed at each location using a vibratory or pile driving hammer. Inside of that casing would be drilled so that rebar cage can be installed. Concrete would then be poured into the casing to create a large support structure in the water. Approximately 120 drilled shafts would be needed for the bridge widening. One shaft per day would be constructed by one work crew, but multiple crews could install supports concurrently. Within the Ashley River, these drilled shafts would be installed at bents 48 through 71, and at bents A, B, C, and D. Bents 48 through 59 are located at the southerly or westerly (West Ashley) approach to the Ashley River. Bents A through D are at the deepest portion of the main channel of the Ashley River. Bents 60 through 71 are located at the northerly or easterly (North Charleston) approach to the Ashley River. Bents 59 through 79 and bents A through D are located within the Ashley River and are the focus of this analysis.

#### 4.1.2.4 Fender System

The existing fender system will be extended with a system that can accommodate all required uses of the waterway. The proposed fender system will be designed for both recreational watercraft, as well as larger vessels such as commercial fishing boats and tug boats. The fender elements would likely consist of

rubber fenders, with a steel panel and polyethylene facing. Additional prestressed concrete piles will be required to support the new fender systems. These piles would not be load bearing and would not require extensive pile strikes such as those on the permanent bridge system.

#### *4.1.2.5 Drainage*

Drainage of stormwater from surface runoff from the newly constructed bridges is proposed to be discharged via open scuppers.

#### 4.1.3 Project Timeline

Construction is expected to begin in 2022. Construction of the bridge phase over the Ashley River would last approximately three years, with road construction extending beyond this three-year period. Within that three-year period, in-water work of an estimated 5 months would be needed for prestressed pile bents and 16 months would be needed for drilled shaft bents. This project is expected to be delivered via the design build process and final construction sequencing will be determined by the contractor. The following is an outline of the likely construction sequence. This sequence may vary slightly depending on the selected contractor. Any modifications from this proposed by the contractor that could impact effects to listed species would require additional coordination with SCDOT and federal agencies.

#### 4.1.4 Site Preparation

After additional right-of-way is acquired, surveys are conducted, and utility location work will begin. Site clearing and grubbing will be necessary for some areas outside of the already maintained right-of-way. These specific areas are not known until a Preferred Alternative is selected and the roadway design is finalized. Grading of slopes will be required and will follow the established Stormwater Pollution Prevention Plan (SWPPP).

#### 4.1.5 Construction Access and Staging

Areas for staging, laydown and equipment would primarily be sited outside of aquatic habitats. Best management practices (BMPs), along with other proven procedures would be implemented to mitigate potential temporary impacts from construction. In addition, detailed engineering and construction plans would be developed for the Preferred Alternative, which would specify procedures to mitigate potentially adverse impacts.

#### 4.1.5 Potential Impacts on Water Quality

Ashley River and Filbin Creek may see a temporary increase in turbidity as a result of the in-water work such as driving piles and staging materials from barges. Outside of small repairs no major demolition is planned. BMPs should be followed to avoid paint, solvents and other chemicals from entering the

waterway. Steel girders would be used in the construction of the new bridge spans over the main channel of the Ashley River and would need to be surface prepped and painted to withstand impacts from weather and the marine environment. The contractor would be required to submit a painting operation plan to include timing, methodologies to prohibit overspray into waters or adjacent vegetation, and weather and wind thresholds for painting operations.

Migration of fill material in stormwater runoff would be minimized by following the SWPPP and utilizing BMPs such as double rows of silt fence, sediment basins, turbidity curtains, immediate seeding and matting of slopes, and check dams.

#### 4.2 Operations and Maintenance

Once construction is complete, much of the operations and maintenance of the roadway will take place in upland, maintained roadside habitat. Tasks such as routine mowing, guard rail repairs, road surface repairs, and stormwater infrastructure maintenance would be needed. Routine maintenance is expected on the existing and proposed new bridges including sanding/painting, deck resurfacing, concrete patching, lighting replacement, and periodic fender and dolphin repair from exposure and/or vessel strikes. SCDOT Maintenance would utilize best management practices to limit sediment and non-point source runoff resulting from maintenance activities.

# 5. Project Action Area

#### 5.1 Project Action Area

The action area, as defined under 50 CFR §402.02, includes all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action. The project roadway action area includes approximately 1,600 acres, as shown in Appendix A, Figure 1. The action area at the Ashley River bridge, as it relates to potential West Indian manatee impacts, extends 500 meters (1,650 feet) upstream and downstream of the proposed project. The basis for the selection of the 1,650 feet upstream and downstream of the proposed project was due to the limits of the proposed action and potential turbidity effects in the Ashley River. Although sedimentation is not expected to be long lasting or severe based on the velocity of currents in the area, the effects from sedimentation are expected to be wider ranging than noise effects.

#### 5.2 Limits of an Action Area

The limits of the action area are within the PSA. The PSA would likely be refined once a Preferred Alternative is selected. The action area may be slightly modified again as the design team begins final

road, bridge, and drainage design. Any activities that could potentially impact protected species, other than those already outlined in this document may require additional Section 7 coordination.

# 6. Effects Analysis

#### 6.1 Direct and Indirect Effects

Direct and indirect effects to species will be avoided and minimized to maximum extent practicable. There are no known populations of threatened or endangered species residing in the project area. In the case of the wildlife species, the anticipated direct impacts are to potential foraging habitat, as opposed to known nesting, roosting, or spawning habitat. Generally, secondary or indirect impacts are induced by the initial action. They may be comprised of a variety of effects such as changes in land use, development patterns, water quality, wildlife habitat, and other natural systems. Transportation projects may influence development in localized areas and have environmental impacts resulting from land use changes. Risk factors include being struck by construction equipment or materials (piles, barges, trestles, heavy equipment), construction-associated noise and turbidity, temporary or permanent loss of habitat, and temporary disruption of spawning/migratory behaviors. In the case of the plant species, surveys were conducted within the survey window and no protected species were identified. Activities associated with the widening of I-526 West would cause temporary impacts to the natural environment in the form of noise, habitat conversion, shading, and potential temporary sedimentation. These activities would be avoided and minimized to the maximum extent possible. Potential impacts are as listed:

<u>American wood stork</u>: Three American wood storks were observed feeding within the PSA. There are no known wood stork rookeries within the PSA. The proposed project would affect wood stork foraging habitat. While impacts would be minimized, areas of open waters and wetlands would be filled with widened bridge approaches and widened roadways. Foraging wood storks would likely avoid the construction area when activity and noise increases. The project area contains a system of wetlands, tidal creeks, and marshes, which provide alternative feeding habitats nearby. **Therefore, the proposed project may affect, but is not likely to adversely affect American wood stork**.

<u>Bachman's warbler</u>: Suitable habitat for Bachman's warbler exists within the PSA. Small areas of cane thickets and seasonally flooded swamp forests with variable amounts of water were observed. Evidence of Bachman's warbler was not noted within the PSA. The bird was last observed in the U.S. in 1962 near Charleston, South Carolina. Therefore, the proposed project may affect, but is not likely to adversely affect Bachman's warbler.

<u>Eastern black rail</u>: Suitable habitat for Eastern black rail exists in the marshes associated with the Ashley River and other streams within the PSA. No black rails were identified during field surveys and there are no known populations within the PSA. **Therefore, the proposed project may affect, but is not likely to adversely affect Eastern black rail.** 

<u>Piping plover</u>: Suitable foraging habitat for piping plover may exist on mudflats and sandbars associated with the Ashley and the Cooper Rivers. No piping plovers were identified during field surveys and there are no known populations within the PSA. **Therefore, the proposed project may affect, but is not likely to adversely affect piping plover.** 

Northern long-eared bat: Habitat conducive to seasonal occupation for northern long-eared bat is located within the PSA. The PSA contains potentially suitable summer roosting and foraging habitat for this species within forested areas. The preferred winter hibernation habitat for this species does not exist within the PSA or its immediate vicinity. In addition, the narrow range of forested woodlands within the PSA is a limiting factor to its suitability for this species. No northern long-eared bats were identified during pedestrian field surveys and there are no known populations or hibernacula within the PSA. Federal agencies often utilize the "Northern Long-Eared Bat 4(d) Rule Streamlined Consultation Form" regarding potential impacts to this species. This framework allows federal agencies to rely upon the USFWS January 5, 2016, intra-Service Programmatic Biological Opinion on the final 4(d) rule for section 7(a)(2) compliance. According to the 4(d) rule, the proposed project may affect the northern long-eared bat, but any resulting incidental take of the species is not prohibited by the final 4(d) rule. A draft version of this form is included in Appendix D. Therefore, the proposed project may affect, but is not likely to adversely affect this species and incidental take is not prohibited by the 4(d) rule.

<u>West Indian manatee</u>: Suitable habitat for the West Indian manatee exists in the PSA within the Ashley River. West Indian manatees migrate into estuarine water off the coast of South Carolina during the warmer, summer months and early fall from May to September. There are known occurrences of manatees within the Cooper River near the WestRock paper facility located just outside the PSA, as well as within the Ashley River. Vessel strikes pose a serious threat to the slow-moving manatee (USFWS 2001b). Care and consideration should be taken during construction in summer months or early fall as this is when the waterways would likely support increasing numbers of manatee. The USFWS North Florida Field Office has created Manatee Protection Guidelines (Appendix E) which, if incorporated into construction activities, could reduce the potential of vessel strikes. A trained spotter would be needed from May to October for in-water work in the Ashley River. Other conditions, such as operating vessels as slow speeds and halting in-water work if a manatee is spotted would reduce the potential to animal strikes.

An additional risk to manatees is created through the generation of in-water construction noise. Manatee's functional hearing range and responsiveness to noise has been disputed in recent studies (Gerstein et al. 2008; Gerstein et al. 1999). Impact thresholds for manatees have not been developed at this time. Bridge construction activities such as impact pile driving and drilled shaft installation could harm manatees if individuals are close to the noise source for prolonged periods. Differing types of installation of support structures could reduce impacts to manatees. Fewer impacts are seen from vibratory installation of casing for drilled shafts as opposed to higher impact pile driving. Vibratory driving of new piles or bridge support structures generates a continuous but low-level noise that is unlikely to cause more than non-injurious, insignificant behavioral effects to the species. During construction, the potential effect of underwater noise impacts would also be minimized through the use of "slow starts", where pile driving ramps up slowly in an effort to deter manatees from the work area. In accordance with Manatee Protection Guidelines, if manatees are observed within 50 feet of active construction equipment, that equipment would be shut down. Utilizing these guidelines would minimize potential adverse effects of underwater construction noise on manatees in the project area.

A minor threat to manatees may be created through increased turbidity during construction. This may come as the result of the placement of bridge pilings and would be temporary. Best management practices would be implemented to minimize turbidity. The indirect effect on manatees would be minimal because manatees often inhabit areas with turbid conditions (FWC 2007). In accordance with Manatee Protection Guidelines, if siltation or turbidity barriers are used, they would be made of material in which manatees cannot become entangled, would be properly secured, and would be regularly monitored to avoid manatee entanglement or entrapment.

Adverse effects on manatees are not expected to occur within the project area because construction operations would follow the Manatee Protection Guidelines. Furthermore, manatees would likely avoid the construction area given the increased vessel traffic and noise. **Therefore, the proposed project may affect, but is not likely to adversely affect West Indian manatee.** 

<u>Canby's dropwort</u>: This plant grows in moist areas in the coastal plain and sandhills, including wet meadows, wet pineland savannas, ditches, sloughs, and around the edges of Cypress-pine ponds. Canby's dropwort seems to be more prolific when the habitat has been burned. Suitable habitat for Canby's

dropwort exists within ditches and other open wet areas (i.e., grass and sedge fields) located within the PSA. Surveys were conducted during the flowering period and this species was not observed. Therefore, the proposed project may affect, but is not likely to adversely affect Canby's dropwort.

<u>Pondberry</u>: This plant is typically associated with bottomland hardwoods in the inner coastal plain, and margins of sinks, ponds, and other depressions in the outer coastal plain. Suitable habitat for pondberry exists within freshwater depressional wetlands and along the margins of ponds located within the PSA. Surveys were conducted during the flowering period and this species was not observed. **Therefore, the proposed project may affect, but is not likely to adversely affect pondberry**.

# 6.2 Interrelated and Interdependent Actions and Activities

Interrelated and interdependent actions are those that are part of a larger action and depend on the larger action for their justification. There are no related or dependent actions to the I-526 West project.

# 7. Effect Determinations

This section includes effect determinations to listed species (Table 2). There are no candidate species, or critical habitat within or near the PSA. There is one proposed threatened species, the Eastern black rail. Proposed threatened species are not protected by the take prohibitions of Section 7, consistent with any protective regulations finalized under section 4(d) of the ESA, until the rule to list is finalized. Under section 7(a)(4) of the ESA, federal agencies must confer with the USFWS if their action will jeopardize the continued existence of a proposed species.

Species	<b>Protection Status</b>	<b>Biological Conclusion</b>
Flatwoods salamander (Ambystoma cingulatum)	Threatened	No effect
American wood stork (Mycteria americana)	Threatened	May affect, not likely to adversely affect
Bachman's warbler (Vermivora bachmanii)	Endangered	May affect, not likely to adversely affect
Eastern Black rail (Laterallus jamaicensis)	Threatened (proposed)	May affect, not likely to adversely affect
Piping plover (Charadrius melodus)	Threatened	May affect, not likely to adversely affect
Red-cockaded woodpecker (Picoides borealis)	Endangered	No effect
Red knot (Calidris canutus rufa)	Threatened	No effect
Atlantic sturgeon (Acipenser oxyrinchus oxyrinchus)	Endangered	May affect, not likely to adversely affect

#### Table 2. Protected Species Effect Determinations

Species	Protection Status	<b>Biological Conclusion</b>
Shortnose sturgeon (Acipenser brevirostrum)	Endongorod	May affect, not likely to
	Endangered	adversely affect
Finback whale (Balaenoptera physalus)	Endangered	No effect
Humpback whale (Megaptera novaengliae)	Endangered	No effect
Northern long-eared bat (Myotis septentrionalis)		May affect, but any
	Threatened	resulting incidental take
	Infeateneu	is not prohibited by the
		final 4(d) rule
Right whale (Balaena glacialis)	Endangered	No effect
Sei whale (Balaenoptera borealis)	Endangered	No effect
Sperm whale (Physeter macrocephalus)	Endangered	No effect
West Indian manatee (Trichechus manatus)	Threatened	May affect, not likely to
	Infeateneu	adversely affect
American chaff seed (Schwalbea americana)	Endangered	No effect
Canby's dropwort (Oxypolis canbyi)	Endangorod	May affect, not likely to
	Endangered	adversely affect
Pondberry (Lindera melissifolia)	Endangorod	May affect, not likely to
	Endangered	adversely affect
Seabeach amaranth (Amaranthus pumilus)	Threatened	No effect
Green sea turtle (Chelonia mydas)	Threatened	No effect
Kemp's ridley sea turtle (Lepidochelys kempii)	Endangered	No effect
Leatherback sea turtle (Dermochelys coriacea)	Endangered	No effect
Loggerhead sea turtle (Carretta carretta)	Threatened	No effect

An ESA Section 7 project affect determination on bald eagle is not necessary as the species is no longer protected by the ESA and does not require Section 7 consultation. As proposed, there would be no impacts to bald eagle.

# 8. Conservation Measures and Environmental Commitments

Steps should be taken to avoid impacts to wetlands and aquatic areas to minimize the potential to impact West Indian manatee and American wood stork. The aforementioned species rely on wetland and open water areas for habitat and as such habitat degradation and elimination should be minimized.

Drilled shafts should be used in place of driven piles where possible. Equipment and materials used during the construction of the bridge would not obstruct or impede passage through more than 50 percent of the channel. Underwater noise impacts would also be minimized through the use of "slow starts", where pile-driving ramps up slowly in an effort to deter marine species from the work area.

The SCDOT commits to implementing the following conservation measures, or actions, to minimize or compensate for effects to each species:

- Follow SCDOT Best Management Practices during construction
- Obtain NPDES permit and prepare a Stormwater Pollution Prevention Plan
- Ensure equipment does not obstruct or impede passage through more than 50 percent of the Ashley River.
- Use of "slow starts" for pile driving, barge movement, and other vessel movement where activity ramps up slowly in an effort to deter marine species from the work area.
- Avoid demolition of existing in-water structures.
- Obligations under Section 7 of the Endangered Species Act must be considered if (1) new information reveals impacts associated with this project may affect listed species or critical habitat in a manner not previously considered, (2) the project is subsequently modified in a manner which was not considered in this assessment, or (3) a new species is listed or critical habitat is determined that may be affected by the proposed improvements."
- All contractors involved in the construction will be required to comply with the USFWS Manatee Protection Guidelines (Appendix E) for in-water work.
  - Conservation measures would be undertaken to minimize the three predominate risks to manatees including vessel strikes, noise, and turbidity. The contractor would adhere to the USFWS Manatee Protection Guidelines during project construction to eliminate the possibility of construction related manatee injury or death. To avoid striking manatees, construction vessels would operate at low speeds (no-wake or idle) within the project area and when operating with less than a 4-foot clearance from the bottom. The use of a designated spotter between May 15 and October 15 would provide reasonable assurance against impacts resulting from in-water work. In-water moving equipment would be halted if a manatee is spotted within 50 feet of the in-water construction area. Any collision or injury to manatees will be reported immediately to the USFWS South Carolina Field Office.
  - The project manager and/or contractor would inform all project personnel that manatees may be present in the project area. The project manager would ensure that all construction personnel know the general appearance of the species and their habit of moving about completely or partially submerged in shallow water.

# 9. References

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# Attachment G I-526 West Lowcountry Corridor Biological Assessment for NOAA-NMFS



April 1, 2020

Mr. Andrew Herndon Atlantic and Shortnose Sturgeon Recovery Coordinator Protected Resources Division NOAA Fisheries - Southeast Regional Office 263 13th Avenue South St. Petersburg, FL 33701

### **RE** Section 7 NOAA-NMFS Consultation Request for I-526 Lowcountry Corridor, Charleston County, South Carolina; SCDOT PIN P027507

Dear Mr. Herndon:

The South Carolina Department of Transportation (SCDOT) on behalf of the Federal Highway Administration (FHWA), is requesting consultation with NOAA-NMFS for species under their jurisdiction in compliance with Section 7 of the Endangered Species Act (ESA) for the above referenced project. The project's Environmental Impact Statement (EIS) is being developed under the One Federal Decision/FAST Act 41 guidance.

This submittal is being provided directly to you for your review and comment. Another package is being submitted via the online web link for official tracking and documentation per our coordination earlier. Attached you should find a copy of a Biological Assessment and accompanying Appendix describing construction activities with effects determinations based upon the described activities, a copy of the EIS's Natural Resource Technical Memorandum (NRTM) documenting all federal and state threatened or endangered species, and a completed Section 7 checklist for quick reference.

As noted above, this request is being provided per the One Federal Decision guidance under which this project falls. Per the schedule agreement with NOAA, this request is being submitted to your agency for a timely and complete review. Please contact myself or Shane Belcher with FHWA with any questions or comments.

Sincerely,

Chris Borkham

Chris Beckham Environmental Permits Coordinator

CB/wm

enclosures

Biological Assessment with Appendix NOAA-NMFS S7 Checklist Copy of EIS Natural Resource Technical Memorandum



Mr. Andrew Herndon I-526 S7 Consultation April 1, 2020 Page 2 of 2

ec: Shane Belcher, FHWA Mary Wunderlich, NOAA Chad Long, SCDOT Joy Riley, SCDOT Kally McCormick, CECS, Heather Robbins, Three Oaks Engineering Rick Day, Stantec

File: Env/DesignBuild



# **BIOLOGICAL ASSESSMENT**

# FOR NATIONAL OCEANIC AND ATMOSTPHERIC ADMINISTRATION,

# NATIONAL MARINE FISHERIES SERVICE

Prepared For:



Prepared By:



Civil Engineering Consulting Services, Inc.

November 16, 2020



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# **Appendices**

#### Appendix A

Figure 1	Project Location Map
Figure 2	SC DHEC Waters Classification
Figure 3	HUC Boundary and Water Quality Monitoring Stations
Figure 4	Shellfish Harvest Classifications

#### Appendix **B**

I-526 Ashley River Conceptual Design Plans and Impact Areas

#### Appendix C

I-526 Lowcountry Corridor West Natural Resources Technical Memorandum

#### Appendix D

SCDOT Best Management Practices (Section 815 Erosion Control Specifications)

# 1. Project Overview

### 1.1 Federal Nexus

The purpose of this Biological Assessment (BA) is to address the effect of the I-526 Lowcountry Corridor West project on U.S. Endangered Species Act (ESA) listed species, listed as endangered or threatened, or their designated critical habitat, under the jurisdiction of the National Oceanic and Atmospheric Administration-National Marine Fisheries Service (NOAA-NMFS). Those species under the jurisdiction of the U.S. Fish and Wildlife Service (USFWS) are addressed in a separate BA.

The South Carolina Department of Transportation (SCDOT), on behalf of the Federal Highway Administration (FHWA), is pursuing informal consultation under Section 7 of the ESA on the impacts to species that will result from the proposed I-526 West project. Section 7 of the ESA assures that, through consultation with NOAA-NMFS and/or the USFWS, federal actions do not jeopardize the continued existence of any threatened, endangered, or proposed species, or result in the destruction or adverse modification of critical habitat.

### 1.2 Project Description

The proposed I-526 Lowcountry Corridor West project extends approximately 11.4 miles from near Paul Cantrell Boulevard in West Ashley to Virginia Avenue in North Charleston in Charleston County, SC. SCDOT currently ranks the segment of I-526 between I-26 and Virginia Avenue as the most congested segment of interstate highway in the state. The remainder of the I-526 LCC West project, from I-26 to Paul Cantrell Boulevard, ranks among the top ten of the state's existing most congested corridors. Traffic forecasts show that segments of that corridor will continue to be among the state's most congested in 2040. The interchange of I-526 and I-26 is the major source of the congestion.

Through various reasonable build alternatives, SCDOT proposes to add two travel lanes in each direction along I-526 (for a total of four lanes in each direction) and to upgrade the interchange of I-526 and I-26. Improvements to access I-526 from Paul Cantrell Boulevard, North Rhett Avenue, and Virginia Avenue are also proposed. Proposed improvements to I-526 would include providing additional travel lanes over the Ashley River, through widening the existing bridges. An EIS is being completed that outlines potential alternatives to satisfy the purpose and need of the project.

# 1.3 Project Area and Setting

The area surrounding the project study area (PSA) is a densely populated region to the west of the City of Charleston, South Carolina (Figure 1). Based on the size of this project and the density of development in greater Charleston, the land use with this vicinity varies greatly. A large portion of the land within this

PSA has been developed for residential, commercial, and industrial uses. Undeveloped land primarily consists of maintained rights of way, landscaped lawns, wooded forests, and tidal marshes. Filbin Creek and its floodplain parallel and cross through the PSA, flowing to the Cooper River; this area is largely undeveloped forested wetlands. The Ashley River flows through the PSA and is surrounded by tidal mudflats and vegetated marshes. Within the PSA, the Ashley River Watershed extends approximately 1,800 feet (0.3 mile) north of Paul Cantrell Boulevard, north across the Ashley River, to 2,500 feet (0.5 mile) north of International Boulevard. It includes portions of two named water bodies including the Ashley River and Bulls Creek. Numerous streams and wetlands are present in the PSA in the Ashley River Watershed, including forested wetlands, emergent wetlands, tidally influenced streams, and freshwater streams.

The General William C. Westmoreland Bridge (Westmoreland Bridge) is located along I-526 and connects the City of North Charleston with the West Ashley area of Charleston. The twin span bridge carries two lanes of I-526 in each direction across the Ashley River and the surrounding tidal marshes and creeks. The 3,908-foot long bridge was constructed in 1980 and each bridge is approximately 43 feet wide. The existing bridge deck consists of two 12-foot travel lanes, two in each direction; a 5-foot, 6-inch inside left shoulder; and a 10-foot outside right shoulder. Additionally, there are barriers on each side of the bridge (2 total) that are 1-foot, 8-inches wide each. The Westmoreland Bridge spans the Ashley River with a horizontal clearance of 60 feet and a vertical clearance of 35 feet when measured from mean high water (MHW). This is a twin span fixed bridge with four main spans. The longest span is approximately 120 feet. The concrete deck is approximately 43 feet wide.



General William C. Westmoreland Bridge over the Ashley River.

# 1.4 Consultation History

A Letter of Intent was sent to the USFWS and NOAA-NMFS by SCDOT on January 27, 2016. A Notice of Intent was published in the Federal Register on November 11, 2019. The project has been discussed at several Agency Coordination Effort meetings with the USFWS, NOAA-NMFS, U.S. Environmental Protection Agency, FHWA, U.S. Army Corps of Engineers, South Carolina Department of Natural Resources (SCDNR), and FHWA on March 14, 2019; July 10, 2019; July 25, 2019; August 14, 2019; September 11, 2019; October 9, 2019; November 13, 2019; December 11, 2019; January 8, 2020; February 12, 2020; and March 11, 2020. The project was also discussed via telephone with Andrew Herndon, NOAA-NMFS and SCDOT and via email with Bill Post, SCNDR (March 23 and April 9, 2020).

# 2. Federally Proposed & Listed Species & Designated Critical Habitat

The project is located within the range of two species listed under the ESA within the jurisdiction of NOAA-NMFS. There are no proposed or candidate species and no Critical Habitat in or near the PSA. Additional species information is available in the I-526 West Lowcountry Corridor Natural Resources Technical Memorandum (Appendix C).

#### Fish

Shortnose sturgeon (*Acipenser brevirostrum*) (32 Federal Register (FR) 4001; Recovery plan: NMFS 1998) Atlantic sturgeon (*Acipenser oxyrinchus oxyrinchus*) (77 FR 5880 and 77 FR 5914)

# 2.1 Shortnose Sturgeon

The shortnose sturgeon is an anadromous fish species which spends most of the year in brackish or salt water and moves into fresh water only to spawn. The shortnose sturgeon was listed as endangered in 1967 and remained on the list with enactment of the ESA in 1974 when NOAA-NMFS assumed its jurisdiction. There are 19 Distinct Population Segments (DPS) rangewide with 11 DPS occurring in the southeastern U.S. A recovery plan exists for this species and was issued in 1998. Spawning season for the shortnose sturgeon occurs from late winter to early spring. The shortnose sturgeon is dark-colored on its dorsal side and light on the ventral side. This species of sturgeon has a wide mouth pointed downward beneath a short snout and can grow up to three feet long. The shortnose sturgeon inhabits the lower portions of large rivers and coastal rivers along the Atlantic Coast. Shortnose sturgeon feed on invertebrates and the stems and leaves of macrophytes. Adults forage at night in shallows immediately adjacent to deep-water areas occupied during the day. Juveniles generally remain in deep-water areas throughout the day. In South Carolina shortnose sturgeon have been found in the Great Pee Dee,

Waccamaw, Edisto, Cooper, Santee, and Savannah Rivers. They may also be found in the Black, Sampit, and Ashley Rivers. Suitable freshwater spawning habitat for this species is not present within the PSA however, suitable foraging habitat for the shortnose sturgeon exists within the Ashley River within the PSA. The shortnose sturgeon may use Filbin Creek up to Virginia Avenue for foraging by way of the Cooper River but would not likely not use it for spawning. Additionally, water quality in Filbin Creek is impaired due to elevated levels of *Enterococcus* bacteria and is listed on the Section 303(d) list. This is a State list of waters that are not meeting water quality standards or have impaired uses

#### 2.2 Atlantic Sturgeon

The Atlantic sturgeon is an anadromous fish species, similar in habitat requirements and appearance to the shortnose sturgeon. In 2007, NOAA-NMFS conducted a status review for the Atlantic sturgeon and determined at least three of the distinct population segments (DPS) warranted listing under the ESA. In 2012, NOAA-NMFS issued the final rule to list the Carolina DPS and South Atlantic DPS as endangered. The Atlantic sturgeon can be distinguished by their large size, snout shape, and bony plates called scutes. They can grow up to 14 feet in length and weigh up to 800 pounds. The Atlantic sturgeon is bluish-black or olive brown dorsally with paler sides and a white belly. The sides of its body also contain five rows of scutes. Adults are commonly found in brackish and estuarine waters along the coastline. The adult Atlantic sturgeon will migrate upstream to fresh water to spawn in the spring, and can go as far inland as the fall line in South Carolina, as long the stream is unobstructed. Following spawning, Atlantic sturgeon typically inhabit coastal estuarine waters with gravel or sand substrate. Adult sturgeon typically feed on benthic invertebrates such as mussels, worms, and shrimp. In South Carolina, Atlantic sturgeon have been captured in the Great Pee Dee, Waccamaw, Santee, Cooper, Edisto, Combahee, and Savannah Rivers. Atlantic sturgeon have been tagged in the Ashley River (W. Post, personal communication, April 9, 2020). Suitable freshwater spawning habitat for this species is not present within the PSA however, suitable foraging habitat for the Atlantic sturgeon exists within the Ashley River within the PSA. The Atlantic sturgeon may use Filbin Creek up to Virginia Avenue for foraging by way of the Cooper River but would not likely not use it for spawning. Use of Filbin Creek would also be limited due to the previously noted Section 303(d) listing for impairments. The Cooper River contains designated Critical Habitat for the Atlantic sturgeon. The area near the Cooper River is included in the PSA, however there is no proposed in-water work and there are no effects expected to the Cooper River.
# 3. Environmental Baseline

The Ashley River is a tidally influenced river with the headwaters originating in Dorchester County. The river eventually joins the Cooper River to form the Charleston Harbor before discharging eastward into the Atlantic Ocean. The entire drainage of the Ashley River system, including its headwaters in Cypress and Wassamassaw swamps, extends approximately 60 river miles. At the project site, the width of the main navigational channel of the Ashley River is approximately 60 feet wide. The full width of the Ashley River at the project site is approximately 1,500 feet wide. Water depths in the river range from approximately 0 to 20 feet. The Ashley River is a designated State Scenic River, largely in part to numerous historic properties located along the riverbanks. Per the NOAA Ashley River bridge station (Station ID 8665099) the mean tidal range is 5.68 feet and the diurnal range is 6.23 feet. Mean high water is approximately 3.08 feet and mean low water is -3.16 feet at the center of the channel. Salinity at the PSA ranges from 12 to 17 parts per thousand (ppt).

SCDHEC has classified the waterbodies (streams and rivers) of South Carolina based on the desired uses of each waterbody. SCDHEC has established standards for various parameters to protect all uses within each waterbody classification. The Ashley River is classified as salt water (Figure 2). Monitoring station MD-049 is located approximately 4 miles upstream of the PSA, along the Ashley River (Figure 3). Aquatic life uses are not supported at MD-049 based on pH and turbidity. The term pH is a measure of the hydrogen ion concentration of water, and is used to indicate degree of acidity. The pH scale ranges from 0 to 14. A pH of 7 is considered neutral, with values less than 7 being acidic, and values greater than 7 being basic. Low pH values are found in natural waters rich in dissolved organic matter, especially in coastal plain swamps and black water rivers. Turbidity is an expression of the scattering and absorption of light through water. The presence of clay, silt, fine organic and inorganic matter, plankton, and other microscopic organisms increases turbidity. Increasing turbidity can be an indication of increased runoff from land. Recreation is only partially supported at this same site (MD-049), based on elevated fecal coliform levels. A fish consumption advisory due to elevated mercury levels in certain types of fish is in place for the Ashley River, including the area at the I-526/General William C. Westmoreland Bridge and northwards/upstream of the project to SC 165.

A Total Maximum Daily Load (TMDL) has been developed for the Charleston Harbor, Cooper, Ashley, and Wando Rivers and approved by the Environmental Protection Agency to identify opportunities to increase

dissolved oxygen (DO) in the watershed<sup>1</sup>. Many coastal waters in South Carolina have DO levels below the established DO criteria. Wastewater discharges and other anthropogenic influences may contribute to low DO in coastal waters. Natural factors such as organic loading and reduced oxygen levels from wetlands and marshes and estuarine dynamics in the mixing zone where freshwater and saltwater come together can create naturally low DO conditions. The waters in and around Charleston Harbor are considered to be both naturally low in DO and further impacted by wastewater dischargers. Potential sources of oxygen demand loading that were considered include National Pollutant Discharge Elimination System (NPDES) wastewater discharges (continuous point sources), NPDES stormwater discharges (noncontinuous point sources), non-point sources, and natural background sources.

A large portion of the PSA is within Shellfish Growing Area 10B (Figure 4) as designated by SCDHEC. This area encompasses the Charleston Harbor, Ashley River, Cooper River, and their tributaries that support shellfish. Waters within this management area in the PSA have been given the classification of "prohibited" and as such, these areas are closed to all human consumption. Prohibited areas are those that are administratively closed for the harvesting of shellfish for any purposes related to human consumption. These closures are established adjacent to permitted wastewater discharges, marina facilities, or areas containing multiple point sources of pollution. This classification is not based upon violation of a bacteriological standard.

There are various types of navigational activities by numerous vessel types that occur along the Ashley River. To determine the types and extents of activity in the channel, existing documentation was reviewed regarding known vessel use. This included a review of bridge opening records of a nearby moveable downstream facility, the T. Allen Legare Bridges, located at milepoints 2.4 and 2.5. A large portion of marine traffic in the area surrounding the proposed project constitutes recreational and commercial (fishing) boating. The W.O. Thomas Jr. Boat Landing is a public boat ramp managed by the Charleston County Park and Recreation Commission. This facility is located approximately 500 feet southeast or downstream of the proposed project. The landing is used by private recreational and commercial boats. There is a private marina located adjacent to the proposed project (Rivers Edge Marina Sales). The marina is used to launch, store, maintain and fuel private, recreational boats. Emergency operations are conducted by the U.S. Coast Guard (USCG), SCDNR, Charleston County, and the City of Charleston Fire

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https://www.scdhec.gov/sites/default/files/docs/HomeAndEnvironment/Docs/Chas\_Hbr\_DO\_TMDL.pdf Last Accessed May 15, 2020.

Department Marine Units in the Ashley River. The Charleston County Volunteer Rescue Squad responds to waterway incidents with a variety of light, medium and heavy rescue vehicles. This includes a variety of boats including an air boat and vessels equipped with specialty equipment such as side scan sonar. The Charleston Fire Department operates one Fireboat, Marine 101. The responding vessel features a 980horsepower engine, is 40 feet long, and has the capacity to pump 3,800 gallons of water a minute.

# 4. Project Details

#### 4.1 Construction

#### 4.1.1 Construction Overview

This project is expected to be delivered either via the design build or bid build process and final construction and design plans would be determined by the contractor and/or SCDOT. To maintain competitiveness during the bid process, means and methods of construction may not be final, giving contractors the ability to propose specific methods and equipment. The following is an outline of the likely construction activities and project designs. This may vary slightly depending on the selected contractor and bid process. Any modifications from those proposed in this document that could impact effects to listed species would require additional coordination with SCDOT and federal agencies.

The proposed bridges would be widened to include two additional travel lanes in each direction that are 12 feet wide, and shoulders in each direction of travel that are 12 feet wide (Appendix B, Conceptual Design Plans). Additionally, a 14-foot shared use path (SUP) to accommodate pedestrians and cyclists would be added to the upstream side of the bridge. The westbound bridge would be widened with two additional vehicle lanes plus a 12-foot shoulder, and the SUP would be outside of those lanes. The SUP would be located on the north side of the bridges, adjacent to the westbound travel lanes. The 14-foot path would be separated from the motorized travel lanes with a raised barrier separating the path from the outside 12-foot paved shoulder. Barriers for safety would be provided along both sides of the SUP which would also prevent fishing or casting from the path. Providing pedestrian and cyclist paths to connect to the bridge path would be planned and permitted by others, likely local municipalities and/or Charleston County. Due to the geography of the area, it is not likely that the future path connections would be located in suitable habitat for Atlantic or shortnose sturgeon. During construction of the widened bridge, traffic would be maintained on the existing facility. Maintenance and improvements would be made to the existing Westmoreland Bridges and the structure would be retained at its existing height and length.

The proposed minimum horizontal clearance for the main navigational opening would be 60 feet between fenders. This configuration will be similar to the existing bridge, or would be less restrictive. The vertical clearance of the proposed fixed span bridge would be a minimum of 35 feet from the MHW datum to meet the needs of mariners in the area.

Generally, the project improvements would consist of the following components:

- Widening of the westbound and eastbound roadway approaches to the Westmoreland Bridges.
- Construction of temporary access areas to include matting, barges, and work trestles.
- Widen existing eastbound structure to the north, or upstream side, of the existing bridge (between the current bridges) on a mix of prestressed concrete piles and drilled shafts.
- Widen existing westbound structure to the north, or upstream side of the existing bridge on a mix of prestressed concrete piles and drilled shafts.
- Extension of the existing fender system to the south of the existing Westmoreland Bridge.
- Paint the existing and new steel beams over the Ashley River main navigational channel and over Bulls Creek.
- Lighting to be installed for navigation and to meet SCDOT urban interstate lighting requirements ("Roadway Lighting on Interstate Routes in South Carolina").

# 4.1.2 Temporary Access

Temporary work trestles would be placed in marsh and wetland areas for construction access outside of the existing eastbound bridge (Appendix B, Conceptual Design Plans). Temporary trestle would be approximately 40 feet wide and would be supported by steel pipe piles. The steel piles would be approximately 24-inches in diameter and would be installed using an impact hammer. It is estimated that 240 24-inch steel pipe piles would be needed for temporary work trestle. With one work crew performing installation, approximately 4 piles would be driven per day with an average of 350 impact hammer strikes per pile. If additional crews are utilized, more piles would be driven per day, however it is estimated that the contractor would have one crew working on the trestle at a time, given space limitations. A second crew could work on the drilled shafts in the Ashley River.

For access over marsh areas between the existing bridges either trestle or a combination of barge, barge mats, and timber mats would be needed due to the limited space between the structures. Deeper water

and the main channel of the Ashley River would be accessed via barges for construction. Barges may be delivered and moved via water and transport vessels or via land on flatbed trucks with cranes and other heavy equipment. At no point would barges in the Ashley River block more than 50% of the channel.

#### 4.1.3 Prestressed Concrete Pile Installation

Prestressed concrete piles will be installed outside of the main channel of the Ashley River. These piles would have an H-pile steel "stinger" at the end of the concrete pile to prevent damage to the pile as it is driven into hard subsurface materials. Piles would be installed with a hammer or vibratory hammer. Within the Ashely River, Bents 72 through 79 would be supported by prestressed concrete piles. Additional concrete piles would be installed in the adjacent marshes, outside of the boundaries of the Ashley River. It is estimated that 649 24-inch prestressed concrete piles would be needed for bridge widening (Table 1).

Tabl	e 1.	Estimated	numl	ber of	permanent	piles need	led fo	or b	oridge	constructi	on.
------	------	-----------	------	--------	-----------	------------	--------	------	--------	------------	-----

Pile Location along I-526	Number of Bents	New Piles per Bent	<b>Total Piles</b>			
Westbound (single row of piles per bent)	51	6	306			
Westbound (double row of piles per bent)	4	12	48			
Eastbound (single row of piles per bent)	51	5	255			
Eastbound (double row of piles per bent)	4	10	40			
Total number of permanent concrete prestressed piles for bridge bents:						
Fender piles	n/a	n/a	60			
Total number of permanent concrete prestressed piles:						

With one work crew performing installation, approximately 2 to 3 piles would be driven per day with an average of 300 impact hammer strikes per pile. If additional crews are utilized, more piles would be driven per day, however it is expected that one crew would work on the trestle at a time.

# 4.1.4 Drilled Shaft Installation

At the approaches to, and over the main channel of the Ashley River, drilled shafts are proposed to support the new bridge structures. Each shaft would be approximately 7 feet in diameter. To install, steel casing (approximately 7 feet in diameter) would be installed at each location using a vibratory method. Inside of that casing would be drilled so that rebar cage can be installed. Concrete would then be poured into the casing to create a large support structure in the water. Approximately 150 drilled shafts would be needed for the bridge widening (Table 2).

Drilled Shaft	Number of	New Drilled	Total Drilled			
Location	Bents	Shafts per Bent	Shafts			
Westbound I-526	30	3	90			
Eastbound I-526	30	2	60			
· · · ·						
	150					

Table 2.	Estimated number of	permanent drilled shafts needed for bridge construction.

One shaft per day would be constructed by one work crew, but multiple crews could install supports concurrently. At this point in the project development process, one work crew for the drilled shafts is estimated. Within the Ashley River, these drilled shafts would be installed at bents 48 through 71, and at bents A, B, C, and D (see Appendix C Bridge Plan and Profile design sheets). Bents 48 through 59 are located at the southerly or westerly (West Ashley) approach to the Ashley River. Bents A through D are at the deepest portion of the main channel of the Ashley River. Bents 60 through 71 are located at the northerly or easterly (North Charleston) approach to the Ashley River. Bents 59 through 79 and bents A through D are located within the Ashley River and are the focus of this analysis.

# 4.1.5 Fender System

The existing fender system will be extended with a system that can accommodate all required uses of the waterway and that meets USCG requirements. The proposed fender system will be designed for both recreational watercraft, as well as larger vessels such as commercial fishing boats and tug boats. The fender elements would likely consist of rubber fenders, with a steel panel and polyethylene facing. Additional prestressed concrete piles will be required to support the new fender systems. These piles would not be load bearing and would not require extensive pile strikes such as those on the permanent bridge system. It is estimated that 60 piles (24-inch) would be impact driven (approximately 150 strikes per pile) to support the fender extension.

# 4.1.6 Drainage

Drainage of stormwater from surface runoff from the newly constructed bridges is proposed to be discharged via open scuppers.

# 4.1.7 Painting

Steel girders would be used in the construction of the new bridge spans over the main channel of the Ashley River and would need to be surface prepped and painted to withstand impacts from weather and the marine environment. The contractor would be required to submit a painting operation plan to include

timing, methodologies to prohibit overspray into waters or adjacent vegetation, and weather and wind thresholds for painting operations.

#### 4.1.8 Project Timeline

Construction is expected to begin in 2027. Construction of the bridge phase over the Ashley River would last approximately 3 years. Within that 3-year period, in-water work of an estimated 6 months would be needed for prestressed pile bents and 17 months would be needed for drilled shaft bents. This project is expected to be delivered via the design build process and final construction sequencing will be determined by the contractor. The following is an outline of the likely construction sequence. This sequence may vary slightly depending on the selected contractor. Any modifications from this proposed by the contractor that could impact effects to listed species would require additional coordination with SCDOT and federal agencies.

# 4.2 Operations and Maintenance

Routine maintenance is expected on the existing and proposed new bridges including sanding/painting, deck resurfacing, concrete patching, lighting replacement, and periodic fender and dolphin repair from exposure and/or vessel strikes.

# 5. Project Action Area

#### 5.1 Project Action Area

The action area, as defined under 50 CFR §402.02, includes all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action. The nearshore action area, as currently proposed, extends 500 meters (1,650 feet) upstream and downstream of the proposed project. The basis for the selection of the 1,650 feet upstream and downstream of the proposed project was due to the limits of the proposed action and potential turbidity effects in the Ashley River. Although sedimentation is not expected to be long lasting or severe based on the velocity of currents in the area, the effects from sedimentation are expected to be wider ranging than noise effects.

The area near the Cooper River is included in the PSA, however there is no proposed in-water work and there are no effects expected to the Cooper River.

# 6. Effects Analysis

# 6.1 Direct and Indirect Effects

# 6.1.1 Hydroacoustic Noise

A temporary increase in underwater noise from construction could cause behavioral changes in sturgeon. Loud levels of intermittent or continuous construction noise from drilled shaft installation and work trestle pile driving could harm sturgeon if they were close to the noise source for prolonged periods. Depending on the duration and intensity of sound produced during construction, aquatic organisms could suffer hearing loss, ranging from temporary to permanent. Other potential percussion injuries include interference with migration, bruising, damage to internal organs, or death.

Typical metrics used to evaluate construction noise impacts for impulsive or non-impulsive activities include peak sound pressure level (dB<sub>peak</sub>), root mean square (RMS), and sound exposure level (SEL). SEL can be expressed as a value for a single strike and for multiple strikes. SEL is commonly referred to as the cumulative SEL or SEL<sub>CUMULATIVE</sub>.

The Greater Atlantic Regional Fisheries Office (GARFO) Acoustic Tool (2019) and Appendix I (Compendium of Pile Driving Sound Data) from the California Department of Transportation (Caltrans) Technical Guidance for Assessment and Mitigation of the Hydroacoustic Effects of Pile Driving on Fish (2015) were used to estimate underwater sound pressure levels caused by in-water pile driving during construction. These references include data from major and minor projects that used un-attenuated pile driving with varying pile size, pile type, and water depths. Noise levels are generally higher if impact pile driving is used, as compared to vibratory hammer driving or extraction. Impact pile driving creates an impulsive sound, while vibratory hammers generate a continuous, low-level noise that is generally considered non-impulsive.

Table 3 provides a summary of the potential un-attenuated sound pressure levels that may occur during the proposed bridge construction sound pressure levels caused by in-water pile driving during construction. The expected pile sizes for the I-526 West project do not exactly correlate with the guidance documents; therefore, the data was best fit or overestimated. The assumed pile sizes that were used to estimate the potential average sound pressure levels are noted in Table 3.

Duideo Flomont	Diamatar	Assumed	Average Sound Pressure Level (dB)				
Bridge Element	Diameter	Method	dB (peak)	RMS	SEL		
Concrete Drilled Shafts <sup>1</sup>	7 feet	Vibratory Hammer	195	180	180		
Concrete Piles <sup>2</sup>	24 inches	Impact Hammer	185	170	160		
Temporary Trestle Steel Pipe Piles <sup>3</sup>	24 inches	Impact Hammer	203	189	178		
		Sturgeon Thr	esholds:				
			206	150	183 (Fish<2g) 187 (Fish>2g)		

Table 3.	Potential	Average	Sound	Pressure	Levels (	dB) in	the	Ashley	River	during	Construc	tion
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Source: NOAA Greater Atlantic Regional Fisheries Office Acoustics Tool (Updated 9/23/2019) and Caltrans, 2015.

<sup>1</sup> Based on 6-foot steel pipe piles (loudest measurement) at an average of 5-meters relative water depth.

<sup>2</sup> Based on 24-inch concrete piles at an average of 5-meters relative water depth.

<sup>3</sup> Based on 24-inch steel pipe piles at an average of 5-meters relative water depth.

Construction noise can cause behavioral changes for sturgeon. NOAA-NMFS generally uses 150 dB RMS as the threshold for behavioral effects to listed fish species (Caltrans 2015). Use of the vibratory hammer to install the bridge columns and temporary work trestle may exceed 150 dB and cause a behavioral disturbance or stress. Noise from the vibratory hammer would be intermittent. Permanent piles would require a total of 236 days for installation in open waters and nearby tidal marsh and temporary trestle piles would require additional auditory strikes. It is reasonable to assume that a sturgeon, upon detecting underwater levels of noise would modify its behavior such that it redirects its course of movement away from the ensonified area. These movements would not amount to substantial changes to essential sturgeon foraging behaviors.

In 2008, the Fisheries Habitat Working Group (FHWG) developed the *Agreement in Principal for Interim Criteria for Injury to Fish from Pile Driving Activities*, which identifies the following thresholds for onset of physical injury to fish: 206 decibels (dB) peak; 187 dB cumulative SEL for fish 2 grams or greater; and 183 dB cumulative SEL for fish of less than 2 grams (FHWG 2008). As shown in Table 1, the SEL thresholds are not expected to be exceeded by the project activities.

# 6.1.2 Construction Material Strikes or Vessel Strikes

If sturgeon were present within the project area, potential impacts to sturgeon could result from direct strikes by construction equipment (piles, casings, etc) or by construction vessels (work boats or barges).

The factors relevant to determining the risk to fish from vessel strikes vary but may be related to the size and speed of the vessels, navigational clearance (i.e., depth of water and draft of the vessel) in the area where the vessel is operating, and the behavior of individuals in the area. No evidence of ship strike interactions with sturgeon on the Ashley River is available. The use of construction vessels during the construction period will not meaningfully increase the risk of interactions between listed species and vessels in the action area when added to baseline conditions. As such, any increased risk of a vessel strike caused by the project would be too small to be meaningfully measured or detected. As a result, the increased risk of a vessel strike on listed species in the action area is not expected to be substantial.

#### 6.1.3 Water Quality

Turbidity associated with construction may be increased through the placement of fill for bridge approaches and pile driving or construction of drilled shafts. Turbidity from pile driving may temporarily decrease water quality. Pouring concrete into the drilled shaft casings would require a sequencing plan from the contractor to ensure that no spills of material into nearby waters would occur. Temporary formwork for the bent construction and superstructure would need to be removed over the water. The contractor would provide a staged plan for removing the formwork, and would utilize Best Management Practices (BMPs) such as netting, floating barges, and/or other containment measures. The contractor would be required to submit a painting operation plan to include timing, methodologies to prohibit overspray into waters or adjacent vegetation, and weather and wind thresholds for painting operations. Temporary clearing within the salt marsh adjacent to the Ashley River may occur to install erosion and sediment control measures. The contractor would utilize SCDOT BMPs for soil and erosion control, which may include seeding of slopes, silt fences, standard height (5 feet) turbidity curtains, and sediment basins as appropriate, and prepare a spill prevention and pollution control plan to minimize the potential impact on adjacent wetlands. Timber mats and/or barges may cause temporary impacts to salt marsh grasses during construction. However, the SCDOT would minimize these temporary impacts by regularly moving mats and barges to limit compaction of marsh soils and shading of marsh grasses.

#### 6.3 Interrelated and Interdependent Actions and Activities

Interrelated and interdependent actions are those that are part of a larger action and depend on the larger action for their justification. There are no related or dependent actions to the I-526 West project.

# 7. Effect Determinations

This section includes effect determinations to listed species. There are no proposed species, candidate species, or critical habitat within or near the PSA. **The proposed project may affect, but is not likely to** 

adversely affect, shortnose sturgeon or Atlantic sturgeon. This biological assessment analyzes the proposed action to determine the potential adverse effects to these species as a result of bridge construction. Risk factors include being struck by construction equipment (piles, barges, trestles), construction-associated noise and turbidity, temporary or permanent loss of habitat, and temporary disruption of spawning/migratory behaviors.

# 8. Environmental Commitments and Conservation Measures

The SCDOT commits to implementing the following conservation measures, or actions, to minimize or compensate for effects to each species:

- Follow SCDOT Best Management Practices during construction (Appendix D)
- Obtain NPDES permit and prepare a Stormwater Pollution Prevention Plan
- Ensure equipment does not obstruct or impede passage through more than 50 percent of the Ashley River.
- Use of "slow starts" for pile driving, barge movement, and other vessel movement where activity ramps up slowly in an effort to deter marine species from the work area.
- Avoid demolition of existing in-water structures.

# 9. References

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# Attachment H Essential Fish Habitat Assessment, I-526 Lowcountry Corridor WEST



# **Essential Fish Habitat**

# Assessment

# I-526 Lowcountry Corridor WEST



May 8, 2020

Prepared for:





Project ID: P027507

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# **1. Introduction**

The South Carolina Department of Transportation (SCDOT), in cooperation with the Federal Highway Administration (FHWA), is preparing an Environmental Impact Statement (EIS) for the proposed I-526 Lowcountry Corridor WEST Project (I-526 LCC WEST) to address the existing and future transportation demands on the I-526 corridor from Paul Cantrell Boulevard to Virginia Avenue in North Charleston, South Carolina. The purpose of the project is to increase capacity and improve operations at the I-26/I-526 interchange and along the I-526 mainline from Paul Cantrell Boulevard to Virginia Avenue.

The project is subject to regulations protecting essential fish habitat (EFH) pursuant to the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) of 1976 (as amended 1996). EFH is defined as those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity (16 USC 1802, 50 CFR 600.10). Waters designated as EFH by the South Atlantic Fisheries Management Council (SAFMC) and the Mid-Atlantic Fisheries Management Council (MAFMC) occur within the boundaries of the project. SCDOT is coordinating with the National Marine Fisheries Service (NMFS) to ensure proper assessment of EFH and to communicate efforts to minimize and mitigate EFH impacts.

This document describes the existing conditions of EFH within the project area and the potential impacts to EFH by the proposed action.



Figure 1-1. I-526 LCC WEST Project Study Area



# 2. Proposed Action

The proposed project consists of 3.5 miles and 9.2 miles of improvements to 1-26 and I-526 respectively for a total of 12.7 miles. The boundaries of the project study area (PSA), shown in Figure 1, generally follow the section of I-526 from Paul Cantrell Boulevard to Virginia Avenue including the I-26/I-526 interchange. The I-526 LCC WEST project also proposes upgrades/changes to five interchanges along I-526; the I-526 at Paul Cantrell Boulevard interchange; the I-26/I-526 system- to-system interchange; the I-526 at Rivers Avenue; the I-526 at N Rhett Avenue and the I-526 at Virginia Avenue interchange. These project limits were selected as the rational end points for the transportation improvements and the environmental review, also referred to as logical termini. The western terminus of Paul Cantrell and the eastern terminus of Virginia Avenue are major points of congestion based on traffic analyses for the project. Construction activities are scheduled to begin in 2023.

The proposed project occurs within the Cooper River watershed [8-digit Hydrologic Unit Code (HUC) 03050201] and may impact EFH associated with two main waterbodies, the Ashley River of the Ashley River Watershed [10-digit HUC 03050201-06] and Filbin Creek of the Cooper River Watershed [10-digit HUC 03050201-07]. I-526 crosses the Ashley River between North Charleston and West Ashley. This portion of the project occurs between the coordinates 32.837486°, -80.022572° and 32.828582°, -80.029641°. I-526 passes through the Filbin Creek floodplain from Attaway Street to its confluence with the Cooper River. This portion of the project occurs between the coordinates 32.893394°, -80.000548° and 32.891651°, -79.967041°. Figure 2 depicts the two areas of the project where EFH is present.

Components of the proposed action that will result in impacts to EFH include construction of additional bridge structures over the Ashley River to accommodate the proposed widening of I-526, construction of new structures for collector distributor (C-D) roads over portions of Filbin Creek and its associated floodplain, and construction of improved interchange access for the I-526 connections at North Rhett Avenue and Virginia Avenue.

# 3. Existing Environment

The project area was assessed for the presence of EFH and two main areas were identified; the portion that crosses the Ashley River and the portion that crosses Filbin Creek near North Rhett Avenue to its junction with the Cooper River. These two areas are described in this section as two separate EFH evaluation areas, as shown in Figure 3-1. The total area of EFH within the project area is summarized at the end of this section.







Figure 3-1. Project Study Area and EFH Evaluation Areas

Each essential fish habitat type provides ecosystem services necessary for a variety of species. Differences between habitat types pertain to vegetative cover, flood regime, salinity, and sediment. Six different types of EFH were identified within the project boundary: estuarine emergent wetlands, estuarine tidal creeks, intertidal non-vegetated flats, palustrine emergent wetlands, riverine tidal creeks, unconsolidated bottom, and oysters. Maps of the different types of EFH existing in the Ashley River evaluation area and Filbin Creek evaluation area are displayed in Figure 3-2 and Figure 3-3, respectively.



Using GIS software and recent aerial imagery (2019), GIS shapefiles were produced of all predicted habitat type boundaries within the EFH evaluation areas based on their photographic signatures. These shapefiles were uploaded to a Trimble Geo7x GPS unit and printed maps were generated to ground truth the predicted habitat boundaries in the field from December 9<sup>th</sup> to December 12th, 2019. Field assessments were conducted during low tide to allow for all potential habitat types to be evaluated. During the ground truthing process, qualitative and quantitative data was collected at sample sites to either confirm predicted habitat sor indicate a needed change of the predicted habitat in that area. Data collected include habitat type, vegetation composition, current tidal conditions, and salinity. The extent of the EFH habitat boundaries was recorded using the GPS unit. The location of these data collection sites was collected using the GPS unit. The shapefiles of the predicted habitat boundaries were then refined using the GPS locations and data collected in the field.

# 3.1. Ashley River EFH

The Ashley River evaluation area occurs between Paul Cantrell Boulevard and Leeds Avenue and extends 300 feet from both sides of the existing I-526 centerline. This section of the project occurs within the Ashley River Watershed (HUC 03050201-06). Within this evaluation area is the Ashley River, Bulls Creek, and their respective wetlands and tributaries. There are two water quality monitoring stations within the Ashley River watershed, including Station MD-049 upstream of the EFH evaluation area and Station MD-135 downstream of the evaluation area. Station MD-049 is listed on SCDHEC's Section 303(d) list due to impairments related to elevated levels of Enterococcus bacteria, turbidity, and pH. Station MD-135 is not listed as impaired on the 2016 and draft 2018 303(d) lists.

Table 3-1 provides a summary of the EFH types and approximate acreage identified within the Ashley River evaluation area based on aerial photography review and ground truthing efforts. Figure 3-2 provides an overview of the different EFH types associated with the Ashley River and Bulls Creek. Figure 3-3 displays the qualitative determination of EFH within the evaluation area.

EFH Type	Quality	Acres
Estuarine Emergent Wetland	High	48.3
Estuarine Tidal Creek	High	4.1
Intertidal Non-Vegetated Flat	High	0.6
Unconsolidated Bottom	High	21.1
Oyster Reef	High	0.5
Total		74.6

# Table 3-1: Ashley River EFH Evaluation Area







Figure 3-2. Ashley River Evaluation Area – EFH Types





Figure 3-3 Ashley River Evaluation Area - EFH Quality

#### **Estuarine Emergent Wetland**



Estuarine emergent wetland. Taken next to I-526 near Bulls Creek, facing southwest. (Photo by Three Oaks Engineering)

Estuarine emergent wetlands are salt or brackish marshlands that are intertidal, or regularly inundated by the tide cycle. The vegetation of these wetlands is typically dominated by one or two plant species that remain standing at least until the beginning of the next growing season (USFWS, 1979). This habitat serves as a nursery for many fish and other aquatic organisms. The high primary productivity of estuarine emergent wetlands provides abundant food stores for prey species and larval fish in the form of detritus. The shallow water column of these wetlands during high tides provides both a low-energy environment away from wave action and currents as well as a refuge for these organisms to avoid predation by larger predators. Other ecosystem services provided by estuarine emergent wetlands are the trapping of pollutants, storing of sediment, and the attenuation of floodwaters (SAFMC, 2016a).

This habitat makes up the majority of EFH within the Ashley River evaluation area, covering 48.3 acres.

These estuarine emergent wetlands are saltmarsh, mostly dominated by smooth cordgrass (*Sporobolus alterniflora*). In areas of slightly higher elevation that receive less saltwater flooding during the tide cycle, the vegetation is dominated by black needlerush (*Juncus roemerianus*). These estuarine emergent wetlands are fully functional in that all ecosystem services essential to fisheries are present. Existing disturbances, such as the existing I-526 structures, have not significantly altered functions of this habitat. The estuarine emergent wetlands surrounding Bulls Creek and the Ashley River are functioning as high quality EFH.

#### **Intertidal Non-Vegetated Flat**

An intertidal area is a subsystem of an estuarine environment that lies between the high and low tide lines (USFWS, 1979). Intertidal nonvegetated flats are sediment deposits that occur across areas of gentle slope within the intertidal zone. These are dynamic habitats because of the drastic changes in salinity and temperature that occur each tide cycle (SAFMC, 2020c). Despite being called "non-vegetated", these flats can have extensive communities of microalgae that benefit macroinvertebrates and other benthic feeders.



Intertidal non-vegetated flat. Taken from mouth of Filbin Creek, facing south. (Photo by Three Oaks Engineering)

Along the South Atlantic coast, these flats typically have very fine sediments, which are inhabitable by benthic organisms such as nematodes, copepods, annelids, bivalves, etc. High tide brings food and predators onto the flat while low tide provides residents a temporal refuge from the mobile predators (SAFMC, 2020c). Therefore, intertidal non-vegetated flats are important foraging habitat for managed species. Intertidal non-vegetated flats cover a combined 0.6 acres of the Ashley River evaluation area. These intertidal non-vegetated flats are fully functional in that all ecosystem services essential to fisheries are present. Existing disturbances, such as the existing I-526 structures, have not significantly altered functions of this habitat. The intertidal flats located within the project area are functioning as high quality EFH.

#### **Estuarine Tidal Creek**



Estuarine tidal creek. Taken from within Bulls Creek, facing east. (Photo by Three Oaks Engineering)

Estuarine tidal creeks are sinuous drainage channels that are subject to the ebb and flow of each tide cycle. As the tide rises, tidal waters flow upstream filling the channel before spilling into the surrounding marshlands. The depths of tidal creeks vary depending on tide range, land use, and distance upstream from coastal inlet channels. Shallow depths of tidal creeks serve as nurseries for fish, crustaceans, and mollusks because they are inaccessible to larger predators (SAFMC, 2016a). Tidal creeks also have soft-bottom substrate that provides benefits like those provided by intertidal flats.

The only named estuarine tidal creek system

identified within the Ashley River EFH evaluation area is Bulls Creek. Bulls Creek varies in width from approximately 80 feet near the confluence with the Ashley River to less than 2 feet in its uppermost extents. Bull Creek and its tributaries are estuarine tidal creeks, with an observed salinity range of 4-20 parts per thousand. There is 4.1 acres of estuarine tidal creek habitat identified within the Ashley River evaluation area. Bulls Creek and its tributaries are fully functional in that all ecosystem services essential to fisheries are present. Existing disturbances, such as the existing I-526 structures, have not significantly altered functions of this habitat. The sections of Bulls Creek that are within and adjacent to the project area are functioning as high quality EFH.

#### **Unconsolidated Bottom**

Unconsolidated bottom includes all wetland and deep-water habitats with at least 25% cover of particles smaller than stones, less than 30% vegetative cover, and subtidal, permanently flooded, intermittently exposed, or semi-permanently flooded water regimes (USFWS, 1979). This designation was chosen to describe the group of habitats that are permanently to semi-permanently beneath tidal waters. Within the Ashley River evaluation area, unconsolidated bottom habitat is associated with the main channel of the Ashley River.



The Ashley River drains to the Charleston Harbor and receives seawaters from the Atlantic Ocean during high tides. The channel of the Ashley River within the project area ranges from 3-20 feet deep (NOAA, 2020b). The depth of the water level fluctuates with the range of the tide. The Ashley River has a soft-bottom substrate and a stable water column that provides spawning and foraging habitat for benthic and pelagic organisms. Unconsolidated bottom accounts for 21.1 acres within the Ashley River Evaluation area. This habitat is fully functional in that all ecosystem services essential to fisheries are Unconsolidated bottom. Taken from western bank of Ashley present. Existing disturbances, such as the existing I-526 structures, have not significantly



River, facing southeast. (Photo by Three Oaks Engineering)

altered functions of this habitat. The unconsolidated bottom located within the project area is functioning as high quality EFH.

#### Oysters



*Oysters on existing bridge structures in the Ashley River.* (Photo by Three Oaks Engineering)

The Eastern oyster (Crassostrea virginica) is harvested along the coast of South Carolina. Oysters primarily settle and develop in intertidal habitats creating beds, reefs, or banks. These reefs contain live oysters as well as remaining shells from previous generations (NOAA, 2020d). The waters of the Ashley River are classified as Shellfish Management Growing Areas (SMGA) by the South Carolina Department of Health and Environmental Control (SCDHEC) and is within SCDHEC Shellfish Management Growing Area 10B. Shellfish harvesting is prohibited throughout the waters of Charleston Harbor including the portion of the Ashley River in the project area.

No commercial culture, grant, or mariculture permits, or recreational shellfish grounds are located within the evaluation area (SCDHEC, 2019). Furthermore, SCDNR does not have any managed state or recreational shellfish grounds within the Ashley River evaluation area (SCDNR, 2019). Spatial data from 2015 of intertidal oyster reefs and shell deposits located by SCDNR did not depict any occurrences within the Ashley River evaluation area.

During field investigations clusters of oysters were found occupying a variety of surfaces (bridge piles, riprap, culverts, and natural surfaces) within the Ashley River evaluation area. Oysters that were present along riprap or other horizontal surfaces were captured with point data and logged on a GPS. Oysters attached to existing bridge structures were observed around the entire circumference or perimeter of the structures. It was estimated oysters were on average three feet



in height and generally two to three oysters in thickness. Using the data logged with GPS points and accounting for oysters present on existing bridge structure sizes at an average height of three feet an estimated 0.5 acres of oysters are present in the Ashley River EFH evaluation area. The oysters in the Ashley River EFH evaluation area are high quality EFH.

# **3.2.** Filbin Creek Evaluation Area

The boundaries of the Filbin Creek evaluation area are more variable than the Ashley River evaluation area due to proposed interchange improvements at North Rhett Avenue and Virginia Avenue. Beginning at Attaway Street, this evaluation area has a width of 300 feet from both sides of the existing I-526 centerline. From Attaway Street to North Rhett Avenue, the evaluation area expands to approximately 1,200 feet from the existing I-526 centerline. This section of the project occurs within the Cooper River Watershed (HUC 03050201-07). Within this evaluation area is the main channel of Filbin Creek, surrounding wetlands and tributaries of Filbin Creek, and the confluence of Filbin Creek and the Cooper River. There is one water quality monitoring station found within the Filbin Creek evaluation area. Station MD-249 is located along Filbin Creek and is listed on SCDHEC's 2016 and draft 2018 Section 303(d) lists due to impairments related to elevated levels of *Enterococcus* bacteria. Two other water quality monitoring stations are found nearby within the Cooper River. Station MD-044 and Station MD-248 are located upstream and downstream of the project, respectively. Neither MD-248 nor MD-044 are listed on the 303(d) list.

Table 3-2 provides a summary of the EFH types and acreage identified within the Filbin Creek evaluation area based on aerial photography review and ground truthing efforts. Figure 3-4 provides an overview of the different EFH types associated with Filbin Creek. Figure 3-5 displays the qualitative differences in EFH throughout the evaluation area.

ЕҒН Туре	Quality	Acres
Estuarine Emergent Wetland	High	24.1
	Low	35.2
Estuarine Tidal Creek	High	7.5
	Low	7.8
Intertidal Non-Vegetated Flats	High	2.4
Palustrine Emergent Wetland	Low	59.8
Riverine Tidal Creek	Low	1.3
Unconsolidated Bottom	High	3.9
Oyster Reef	High	0.3
Total		142.3

# Table 3-2: Filbin Creek Evaluation Area



Figure 3-4. Filbin Creek Evaluation Area – EFH Types





Figure 3-5. Filbin Creek EFH Quality



#### **Estuarine Emergent Wetland**

Estuarine emergent wetland habitat makes a large portion of EFH within the Filbin Creek Evaluation Area, covering 59.3 acres in total. Estuarine emergent wetlands within the Filbin Creek evaluation area can be qualitatively separated into two different plant communities with respect to tidal regime: east of Virginia Avenue and west of Virginia Avenue. The section of Filbin Creek east of Virginia Avenue to the Cooper River, is similar in guality and function to the estuarine emergent wetlands described in the Ashley River evaluation area. These wetlands receive an uninhibited tidal regime and the vegetative community is dominated by smooth cordgrass (Sporobolus alterniflora) and black needlerush (Juncus roemerianus). Sea oxeye daisy (Borrichia frutescens) and saltgrass (Sporobolus pumilus) are found along the fringes of this habitat. These estuarine emergent Estuarine emergent wetland. wetlands are fully functional in that all ecosystem services essential to fisheries are present. Existing



(Photo by Three Oaks Engineering)

disturbances, such as the existing I-526 structures, have not significantly altered functions of this habitat. The estuarine emergent wetlands to the east of Virginia Avenue are high quality EFH.

Upstream of the tidal gate, west of Virginia Avenue and east of the CSX railroad causeway, is also classified as estuarine emergent wetland. The estuarine emergent wetlands in this section of the evaluation area are dominated by giant cordgrass (Sporobolus cynosuroides) and common reed (Phragmites australis) in areas that appear to receive regular tidal influence. In areas of slightly higher elevation that receive even less saltwater during the tidal flooding events, the vegetation is dominated by marsh alder (Iva frutescens), groundsel bush (Baccharis halimifolia), and rattlebox (Sesbania punicea). This change in vegetative community can be attributed to the altering of saltwater flood regime by the tidal gate at Virginia Avenue. Salinity measurements taken from waters in this section of the evaluation area ranged between 3-12 parts per thousand. The presence of saline waters and the vegetation indicate that some tidal connectivity remains despite the tidal gate. However, there appears to be a natural transition from highly salt tolerant vegetation to a more brackish and less salt tolerant vegetation. This likely a function of limited connectivity to tidal flows because of the functional tide gate at Virginia Avenue. This section of estuarine emergent wetlands is considered partially impaired in that some ecosystem services essential to fisheries have been diminished. Specifically, regular tidal exchange is effectively limited by the tidal gate. It is expected the tidal gate will remain in place and thus, the ecosystem services provided by the estuarine emergent wetland habitat type are not expected to function at a high level and will likely continue to see a transition to a more brackish vegetative community. Access to this habitat by managed fishery species is considered restricted due to the tidal gate limiting tidal exchange. While salinity levels remain high, this habitat is still considered partially impaired. Due to partial impairment and the obvious vegetative succession, the area west of Virginia Avenue and east of the CSX railroad causeway is considered low quality estuarine emergent wetland EFH.



#### **Estuarine Tidal Creek**



Riverine tidal creek adjacent to Filbin Creek. (Photo by Three Oaks Engineering).

Filbin Creek and its tributaries are largely a system of estuarine (saltwater) tidal creeks that drain to the Cooper River. A total of 15.3 acres of estuarine tidal creeks are present in the Filbin Creek evaluation area. The Filbin Creek estuarine system is complicated by the tidal gate at Virginia Avenue and two railroad causeways west of Virginia Avenue. However, from the east of Virginia Avenue to the Cooper River is a fully functional estuarine tidal creek. The width of Filbin Creek varies from 70-90 feet and the observed salinity in this section ranged from 4-15 parts per thousand. This section of

Filbin Creek is fully functional in that all ecosystem services essential to fisheries are present. Existing disturbances, such as the existing I-526 structures, have not significantly altered functions of this habitat. The estuarine tidal creeks east of Virginia Avenue are considered high quality EFH.

West of Virginia Avenue, Filbin Creek flow is considerably altered by the tidal gate which limits the amount of tidal exchange upstream during normal tidal cycles. West of Virginia Avenue and east of the CSX railroad causeway, salinity measurements taken from Filbin Creek and its tributaries ranged from 4-8 parts per thousand. Because these measurements exceed 0.5 parts per thousand, these waters are still considered estuarine tidal creeks (USFWS, 1979). The estuarine tidal



Tidal gate at Virginia Avenue. (Photo by Three Oaks Engineering)

creeks, including the main channel of Filbin Creek, in this section of the evaluation area are partially impaired because of the restricted connectivity to downstream EFH and the limited access by managed fishery species. However, this impairment does not result a complete degradation of the quality of EFH in the context of estuarine tidal creek habitat. Enough tidal influence is still present that the main channel of Filbin Creek west of Virginia Avenue to the CSX railroad causeway is still considered high quality EFH.

#### **Essential Fish Habitat Assessment**





West of the CSX railroad causeway to the western-most limits of EFH in the Filbin Creek evaluation area the main channel of Filbin Creek remains an estuarine tidal creek because of its direct connection to the tidal gate and obvious tidal influence. Salinity measurements at the surface of Filbin Creek in this segment of the evaluation area were consistently documented as 0 parts per thousand despite visual evidence of tidal influence. This

can likely be attributed to stormwater runoff having a more regular influence than saline waters infiltrating the tidal gate this far upstream. Samples taken from the bottom of the channel contained salinity in quantities more than the 0.5 parts per thousand required to maintain estuarine tidal creek designation. The main channel of Filbin Creek in this section west of the CSX railroad causeway is considered impaired because some ecosystem services essential to fisheries have been diminished or lost. The presence of the tidal gate at Virginia Ave restricts tidal flow and access to this habitat by managed fishery species is therefore more restricted. Additionally, stormwater runoff having a more regular influence than saline waters would suggest that this portion of Filbin Creek, while tidally influenced, receives more influence from stormwater runoff and freshwater flows from headwaters further upstream than through tidal exchanges. Although some tidal action still reaches this area, the ecological integrity is impaired. Therefore, estuarine tidal creek areas west of the CSX railroad causeway are considered low-quality EFH.

#### **Intertidal Non-Vegetated Flat**

An intertidal area is a subsystem of an estuarine environment that lies between the high and low tide lines non-(USFWS, 1979). Intertidal vegetated flats are sediment deposits that occur across areas of gentle slope within the intertidal zone. These are dynamic habitats because of the drastic changes in salinity and temperature that occur each tide cycle (SAFMC, 2020c). being called "non-Despite vegetated", these flats can have



Intertidal non-vegetated flat. Taken from mouth of Filbin Creek, facing south. (Photo by Three Oaks Engineering)

extensive communities of microalgae that benefit macroinvertebrates and other benthic feeders. Along the South Atlantic coast, these flats typically have very fine sediments, which are inhabitable by benthic organisms such as nematodes, copepods, annelids, bivalves, etc. High tide brings food and predators onto the flat while low tide provides residents a temporal refuge from the mobile predators (SAFMC, 2020c). Therefore, intertidal non-vegetated flats are important foraging habitat



for managed species. Intertidal non-vegetated flats cover 2.4 acres of the Filbin Creek portion of the project area. These intertidal non-vegetated flats are fully functional in that all ecosystem services essential to fisheries are present. Existing disturbances, such as the existing I-526 structures, have not significantly altered functions of this habitat. The intertidal non-vegetated flats in the Filbin Creek EFH evaluation area are high quality EFH.

# **Palustrine Emergent Wetland**

Palustrine emergent wetlands are like estuarine emergent wetlands in that their vegetative community is dominated by one or more annual plant species. However, these freshwater marshlands have a salinity of less than 0.5 parts per thousand (USFWS, 1979). These wetlands, where present, occur upstream of the estuarine emergent wetlands and receive less tidal influence. Although the low salinity of these waters limits its use by several managed fish species, tidal freshwater plays an important role as the transition zone between freshwater habitats upstream and the tidal saltwater habitats downstream. Palustrine emergent wetlands provide nursery habitat for managed species as well as the prey of managed species (SAFMC, 2016a). Like other wetland habitats, palustrine emergent wetlands provide important ecosystem services of absorbing pollutants, storing sediments, and attenuating floodwaters.



Palustrine emergent wetland. (Photo by Three Oaks Engineering)

Palustrine emergent wetland habitat was only found within the Filbin Creek Evaluation Area, occurring west of the CSX railroad causeway and east of the Norfolk Southern railroad causeway. There are 59.8 acres of palustrine emergent wetlands in the Filbin Creek evaluation area. These wetlands are a monoculture plant community dominated by the non-native common reed (Phragmites australis). All salinity recordings of waters in

this area were 0 parts per thousand. These characteristics can be attributed to the restricted connectivity to other EFH waters caused by the existing causeway associated with North Rhett Avenue, CSX railroad causeway and the tidal gate at Virginia Avenue. Additionally, multiple outfall pipes that appear to carry local stormwater to Filbin Creek are present in this section of the evaluation area. The regular influx of freshwater runoff further weakens the tidal exchange received by these wetlands.

The palustrine emergent wetlands in the Filbin Creek evaluation area are impaired because multiple ecosystem services essential to fisheries have been diminished or lost. The monoculture of the invasive common reed, the restricted flows resulting from the tidal gate and CSX railroad causeway, and regular flushing of freshwater stormwater runoff all contribute to impairment of this section of Filbin Creek. Although some tidal action still reaches this area in the main channel of Filbin Creek,



the ecological integrity of the adjacent wetlands is ultimately impaired in the context of EFH. Therefore, the palustrine emergent wetlands associated with Filbin Creek are considered lowquality EFH.

# **Riverine Tidal Creek**

Riverine tidal creeks are sinuous drainage channels that are subject to the ebb and flow of each tide cycle. However, these tidal creeks have a salinity of less than 0.5 parts per thousand (USFWS, 1979). As the tide rises, tidal waters flow upstream filling the channel before spilling into the surrounding wetlands. The depths of tidal creeks vary depending on tide range, land use, and distance upstream from coastal inlet channels. Shallow depths of tidal creeks serve as nurseries for fish, crustaceans, and mollusks because they are inaccessible to larger predators (SAFMC, 2016a).



Riverine tidal creek adjacent to Filbin Creek (Photo by Three Oaks Engineering)

Riverine tidal creeks account for 1.3 acres in the Filbin Creek evaluation area. Located west of the CSX railroad causeway are multiple small tributaries that feed into the main channel of Filbin Creek. Salinity measurements of these tributaries were consistently documented as 0 parts per thousand despite visual evidence of tidal influence. This can be attributed to stormwater runoff having a more regular

influence than saline waters infiltrating from the main channel of Filbin Creek. These tributaries are therefore designated as riverine tidal creeks based on the lack of salinity but obvious tidal influence. The riverine tidal creeks are impaired because some ecosystem services essential to managed fisheries have been diminished or lost. No salt tolerant species were observed in these waters during field surveys. The presence of the tidal gate at Virginia Ave restricts tidal flow and access to this habitat by managed fishery species is therefore more restricted. Additionally, stormwater runoff having a more prevalent influence than saline waters serves as an impairment for some managed fishery species. Therefore, the riverine tidal creeks within the Filbin Creek evaluation area are considered low quality EFH.

# **Unconsolidated Bottom**

Unconsolidated bottom includes all wetland and deep-water habitats with at least 25% cover of particles smaller than stones, less than 30% vegetative cover, and subtidal, permanently flooded, intermittently exposed, or semi-permanently flooded water regimes (USFWS, 1979). This



designation was chosen to describe the group of habitats that are permanently to semi-permanently beneath tidal waters.

The Cooper River is a coastal river that drains to Charleston Harbor and receives seawater from the Atlantic Ocean during tidal exchange. Channel depth of the Cooper River at the mouth of Filbin Creek ranges from 2-30 feet (NOAA, 2020b). The depth of the water level fluctuates (Photo by Three Oaks Engineering)



Unconsolidated bottom. Taken from mouth of Filbin Creek

with the range of the tide. This habitat has a soft-bottom substrate and a stable water column that provides spawning and foraging habitat for benthic and pelagic organisms. Unconsolidated bottom habitat accounts for 24.2 acres within the Filbin Creek Evaluation Area. This habitat is fully functional in that all ecosystem services essential to fisheries are present. Existing disturbances, such as the existing I-526 structures, have not significantly altered functions of this habitat. The unconsolidated bottom in the Filbin Creek evaluation area is functioning as high quality EFH.

#### Oysters



Oyster reef in Filbin Creek at low tide. (Photo by Three Oaks Engineering)

The Eastern oyster is harvested along the coast of South Carolina. Oysters primarily settle and develop in intertidal habitats creating beds, reefs, or banks. These reefs contain live oysters as well as remaining shells from generations (NOAA, previous 2020d). The waters of the Ashley River and Filbin Creek are within an area classified as Shellfish Management Growing Areas (SMGA) by the South Carolina

Department of Health and Environmental Control (SCDHEC). Both evaluation areas are within SCDHEC Shellfish Management Growing Area 10B. Shellfish harvesting is prohibited throughout the waters of Charleston Harbor. No commercial culture, grant, or mariculture permits, or recreational shellfish grounds are located within the evaluation area (SCDHEC, 2019). SCDNR does not have any managed state or recreational shellfish grounds within the Filbin Creek evaluation area (SCDNR, 2019). Spatial data from 2015 of intertidal oyster reefs and shell deposits previously located by SCDNR does not show any occurrences within either evaluation area.

During field investigations clusters of oysters were found occupying a variety of surfaces (bridge piles, riprap, tidal gate, natural surfaces) within the Filbin Creek evaluation area east of Virginia Avenue. Oysters that were present along riprap or other horizontal surfaces were captured with



point data and logged on a GPS. Oysters attached to existing bridge structures were observed around the entire circumference of the structures. It was estimated oysters were three feet in height and generally two to three oysters in thickness. Using the data logged with GPS points and accounting for oysters present on existing bridge shaft diameters at an average height of three feet an estimated 0.3 acres of oysters are present in this section in the Filbin Creek EFH evaluation area. The oysters in the Filbin Creek EFH evaluation area are high quality EFH.

# **3.3.** Existing EFH Summary

EFH within the project area is found in both the Ashley River and Filbin Creek Evaluation Areas. Both systems are tidally influenced and have similar habitats. Table 3-3 provides a total acreage for each EFH type and quality found within the project area.

EFH Type	Quality	Acres
Estuaring Emergent Wotland	High	72.4
	Low	35.2
Estuaring Tidal Crook	High	11.6
Estuarine ridal Creek	Low	7.8
Intertidal Non-Vegetated Flats	High	3
Palustrine Emergent Wetland	Low	59.8
Riverine Tidal Creek	Low	1.3
Unconsolidated Bottom	High	25
Oysters	High	0.8
TOTAL EFH Area		216.9

# Table 3-3: EFH Habitat Acreage

# 4. Essential Fish Habitat Species

As mandated by the Magnuson-Stevens Act, the eight regional councils are tasked with identifying, describing, mapping and protecting EFH in their respective jurisdictions. The SAFMC is tasked with conserving and managing fisheries for the South Atlantic region, which includes the coast of South Carolina (SAFMC, 2020a). Some fisheries managed by the MAFMC also have designated EFH along the coast of South Carolina. Species habitat descriptions provided by SAFMC and MAFMC and geospatial data from the NOAA EFH Mapper were used to assist in the identification of which managed fisheries may be affected by any potential impacts to either of the habitat types listed in the previous section as a result of the proposed project. The following species or groups of species have designated EFH present within the project area.

# 4.1. Habitat Areas of Particular Concern

Habitat areas of particular concern (HAPC) are discreet subsets of EFH that are considered high priority areas for conservation, management, or research. HAPCs receive such designation because they are rare, sensitive, stressed by development, or important to overall ecosystem function (SAFMC, 2020b). HAPC for a given fishery can include intertidal habitats, estuarine habitats, and deep-water habitats used for migration, spawning, and rearing of fish or other managed organisms. "At the interface of NOAA trust resources and SCDOT projects, oyster reefs are the most common



HAPC in South Carolina. Coastal inlets and other designated HAPCs are present in the state but will rarely be encountered by SCDOT (SCDOT SCREENING FORM CITATION)." HAPCs present within the project area include all oysters found within the Ashley River and Filbin Creek evaluation areas.

# 4.2. Federally Managed Species

# Penaeid Shrimp

Essential habitat for white shrimp (Litopenaeus setiferus) and brown shrimp (Farfantepenaeus aztecas) is present within the project area. These penaeid shrimp species are managed by the SAFMC because of their economic and ecological significance (SAFMC, 2020d). These shrimp species, like all penaeid shrimp, have an annual life cycle. Penaeid shrimp spawn year-round in deepwater habitats offshore, larval shrimp move to estuarine areas, and new adults return to offshore areas to spawn. White shrimp begin to migrate to estuarine waters in April and May, whereas brown shrimp migrate to estuarine waters from February to April (NOAA). Juvenile shrimp forage and mature in tidally influenced nursery areas where the mud-silt substrate and salinity range provide a suitable feeding environment. Once maturity is reached, Brown shrimp egress to offshore areas between May and August. White shrimp egress from August to December (NOAA). Some smaller adult individuals may remain in the estuary over the winter (SAFMC). According to the fishery management plan (FMP) for shrimp, essential habitat for White and Brown shrimp includes estuarine emergent wetlands, palustrine emergent wetlands, intertidal non-vegetated flats, riverine tidal creeks, estuarine tidal creeks, and coastal inlets (SAFMC, 1993). HAPC for these shrimp species is identified as all coastal inlets, which is not present within the project area (SAFMC, 2016c).

# **Snapper-Grouper Complex**

The snapper-grouper complex managed by the SAFMC is made up of 59 species across ten families: sea basses and groupers (*Serranidae*), wreckfish (*Polyprionidae*), snappers (*Lutjanidae*), porgies (*Sparidae*) grunts (*Haemulidae*), jacks (*Carangidae*), tilefishes (*Malacanthidae*), triggerfishes (*Balistidae*), wrasses, (*Labridae*), and spadefishes (*Eppiphidae*) (SAFMC). Species in the complex spawn offshore in hard-bottom areas (SAFMC, 2016d). Snapper-grouper larvae are transported to estuarine areas by tides and currents where they grow to maturity. The nursery areas of estuarine waters and wetlands provide shelter from predation as well as an abundance of food. Snapper-grouper species are predatory, feeding on smaller fish and invertebrates. Adult snapper-groupers can be found feeding in estuarine environments (SAFMC, 2016c). Several species within the complex, such as the gray snapper (*Lutjanus griseus*), are known to use tidal freshwaters as well. According to the FMP for the snapper-grouper complex, EFH for all life stages includes estuarine emergent wetlands, riverine tidal creeks, estuarine tidal creeks, and coastal inlets. HAPC for the snapper-grouper complex is identified as all coastal inlets and oyster beds (SAFMC, 2016b). All oysters present within the project area are considered HAPC for the snapper-grouper complex.

# Bluefish

Bluefish (*Pomatomus saltatrix*) is a fish species managed the MAFMC (MAFMC, 1989). Bluefish live up to 12 years, reaching maturity at 2 years of age. Spawning occurs multiple times a year in the offshore waters of the South Atlantic and Mid-Atlantic Bights. Juvenile bluefish are known to occur in estuarine environments where they feed on smaller fish and avoid predation by larger fish in the


offshore waters (MAFMC, 2020). According to the EFH spatial data from NOAA, EFH for the juvenile life stage of bluefish includes estuarine tidal creeks and coastal inlets (NOAA, 2019). No HAPC are designated for Bluefish.

#### **Summer Flounder**

Summer flounder (*Paralichthys dentatus*) is a fish species managed by summer flounder, scup, and black seabass FMP of the MAFMC. Summer flounder live up to 14 years, reaching maturity between 2-3 years of age. Spawning occurs several times during the fall and early winter in offshore waters of the continental shelf (NOAA, 2020a). Larval summer flounder are transported by tides and currents from offshore areas to estuarine areas where they grow to maturity. Summer flounder stay along the bottom of the water column where they hide against the substrate to hunt and ambush their prey. Larval summer flounder feed on zooplankton and small invertebrates while juveniles and adults feed on invertebrates and fish. Larvae, juvenile, and adult summer flounder are known to commonly occur in estuarine environments, venturing into offshore waters during spawning season. According to the FMP for summer flounder, intertidal non-vegetated flats, estuarine tidal creeks, and coastal inlets are designated as EFH for the larval, juvenile, and adult life stages of summer flounder. HAPC for summer flounder includes submerged aquatic vegetation, which is not present within the project area (MAFMC, 1987).

#### **Other Fishes**

The waters of the Ashley River and Filbin Creek evaluation areas also serve as nursery and forage habitat for other species including red drum (*Sciaenops ocellatus*). Red drum is an important statemanaged fishery and estuarine environments within the project area provide habitat necessary for the development and survival of several life stages of red drum. Highly migratory pelagic species such as Atlantic blacktip shark (*Carcharhinus limbatus*) are managed by NOAA Fisheries. Spatial data from the EFH mapper indicates the presence of EFH for highly migratory pelagic species within the project boundary (NOAA, 2019). Estuarine environments within the project area may also be of importance to the Atlantic blacktip shark.



# 5. Alternatives Analysis

The sections below discuss the No-Build Alternative and the potential impacts from the Recommended Preferred Alternative on EFH for recreational and commercial fisheries and federally managed species. Adverse effects analyzed of the Proposed Project Alternative include direct and indirect physical, chemical, or biological alterations resulting in the reduction to quality and quantity of EFH and managed species.

## 5.1. No Build Alternative

Under the No Build Alternative, EFH would remain as described in Section 3. The existing roadway and bridges would remain in place with no additional structures being placed in EFH. No long-term effects are expected from the No Build Alternative.

# 5.2. Recommended Preferred Alternative

Under the Recommend Preferred Alternative there are two additional bridge structures to be constructed over the Ashley River to accommodate the widening of I-526, construction of new structures C-D roads over portions of Filbin Creek and its associated floodplain, and construction of improved interchange access for the I-526 connections at North Rhett Avenue and Virginia Avenue.

Most of the EFH within the project area is proposed to be spanned with bridges. Due to the project being in the early stages of design, the exact methods used to construct the proposed bridges have not been determined. Additionally, since the construction of the project will be awarded as a design- build contract, the specific construction methods and extent and duration of impacts would ultimately be determined by the design-build contractor based on guidelines and conditions established by SCDOT, FHWA, and state and federal regulatory agencies including SCDHEC-OCRM, USACE, USFWS, and NOAA-NMFS.

# 5.3. Construction Methods

Choosing which bridge construction method to use can be a complicated endeavor dependent on several factors. Construction schedule, bridge layout and complexity, material costs, soil conditions, and contracting methods must be compared against wetland impacts, mitigation requirements, benefits, and costs.

Due to the wetland and stream crossings that function as EFH and the corresponding challenges these crossings present to bridge construction, a range of construction methods will be evaluated. From a construction standpoint, the soft soils encountered in EFH environments do not support construction equipment, material delivery trucks, or material storage and can settle significantly under load. Therefore, the soils generally require very deep foundations to support bridge loads. These types of foundations require larger equipment and extra effort to install as compared to similar size bridges in firmer soil conditions. Construction access points will likely also be limited, complicating the logistics of equipment usage, material storage, and delivery potentially resulting in longer construction times.



Building bridges over EFH environments as found in the project area can be accomplished with multiple methods. Some methods are more cost effective by maximizing construction efficiency, while other methods sacrifice some level of building efficiency to provide a lesser impact on the environment. The duration of temporary impacts associated with the potential construction access methods noted below will ultimately be determined by the final design established by the design-build contractor in coordination with SCDOT and will also be dependent upon uncontrollable variables including weather and other unanticipated environmental conditions. In South Carolina, four different methods, or a combination thereof, are typically used to build bridges over sensitive environments such EFH. These methods include causeway on temporary fill, causeway on barges and/or timber mats, temporary bridge or trestle, and top-down construction. A brief explanation of these construction methods and temporary impacts associated with each are discussed below.

#### **Causeway on Temporary Fill**

This construction method would involve placing a geotextile mat topped with dirt or stone fill on the marsh to create a temporary embankment causeway or access road alongside the proposed bridge alignment. The fill causeway provides access for material delivery and support for cranes and other construction equipment, typically extending from the nearest adjacent upland or haul road. Once construction of the bridge is complete, the fill is removed, and the marsh is allowed to restore itself naturally. Prior to the placement of fill, a geotextile fabric is typically placed over the marsh/wetland surface thus allowing all or most of the discharged fill material to be removed from the area and limiting the disruption of the native soils and vegetative root mass. Silt fencing would be installed along the toe of the fill slopes to prevent runoff and displacement of fill material into adjacent waters.

Impacts to EFH associated with a fill causeway would be temporary and may include the smothering of aquatic organisms, subsidence/compaction of the marsh ground surface, and the disruption/inhibition of hydrology and tidal flows on either side of the fill causeway. Depending on the size of the bridge being constructed, temporary fill causeways would likely need to be in place for six to 24 months.

Causeways on temporary fill will not be utilized as the sole method of construction access for the proposed project. This construction method may be utilized adjacent to existing fill or to establish access to other construction methods discussed below. The preliminary design and identified construction access areas minimize the use of causeway on temporary fill. The design-build contractor will coordinate with SCDOT to determine where causeways on temporary fill are allowable.

#### **Causeway on Barges and/or Timber Mats**

This construction method would involve placing floating barges and/or portable timber mats over the waterway or marsh alongside/adjacent the proposed bridge alignment. These type barges are designed to link together and would be placed side by side to produce a temporary access causeway. This method provides similar benefits as a fill causeway; however, once construction is completed, the barges or timber mats are more easily removed from the site. Temporary impacts to the marsh caused by floatable barges or timber mats would be similar to placing temporary fill



but is generally considered less damaging to the environment due to the potential displacement or runoff of sediment associated with fill dirt.

Impacts to the tidal salt marsh environment associated with the placement of barges and/or timber mats would be temporary and may include the smothering of aquatic organisms, subsidence/compaction of the marsh ground surface, and the disruption/inhibition of hydrology and tidal flows on either side of the barge or mat. Depending on the size of the bridge being constructed, the barges and/or timber mats would likely need to be in place for six to 24 months. This construction method may be utilized adjacent to existing fill or to establish access to other construction methods discussed below.

#### **Temporary Bridge/Trestles**

This construction method involves the utilization of a temporary bridge or pile supported trestles constructed alongside the proposed bridge alignment. Once construction is completed on the new permanent bridge, the temporary bridge/trestles are removed. Typically, the piles are either pulled out of the ground or cut or snapped off below ground level. Impacts to the marsh environment from temporary trestle bridges are less than the previous two methods (causeway on barges/timber mats or causeway on temporary fill), since the only point of contact between the temporary bridge/working area and the marsh is at the pile locations. However, this method generally includes longer construction times, and subsequently more project costs, due to the construction of temporary bridge structures.

Impacts to the tidal salt marsh environment associated with the construction of a temporary bridge or pile supported trestle would be temporary and may include an increase in noise levels during pile driving activities, scouring or deposition of sediment around the piles, shading of marsh vegetation, and localized mortality of aquatic organisms. Movements of aquatic species within the tidal salt marsh and feeder creeks would be less affected by this construction method than the other methods discussed. Depending on the size of the bridge being constructed, the temporary bridge or trestle structures would likely need to be in place for six to 24 months.

## **Top-Down Construction**

This construction method involves utilizing completed portions of the new bridge structure to construct the bridge. The ends (outer bents) of the new bridge are constructed from existing adjacent upland areas, if available, or from the roadway approach fills. The remainder of the bridge is then constructed from the completed end portions. The top-down construction method would result in little to no temporary impacts to the marsh environment; however, the duration of construction is generally longer as the contractor is restricted to working from the nearest upland embankment or from the ends of the finished bridge structure rather than at multiple points along the proposed alignment. Due to these restrictions, top-down construction is not considered as a practicable sole alternative for building long bridge structures.

Top-down methods may not be particularly suitable for all construction access for this project due to the multiple bridges and the need to set up and break down the construction system at each site. Due to proposed project interchanges also being built on bridge structure, top-down construction methods would not be practical in these situations due to the variations in deck geometry and the



multiple bridge alignments. Top-down may be utilized during construction but will not be the sole method used by the contractor.

#### Selection of a Construction Method

The project construction schedule will largely affect which construction method is the most advantageous. For instance, a tight construction schedule will favor the use of barge/timber mat causeways as these can be disassembled and mobilized to multiple sites relatively rapidly. A longer construction schedule would favor the use of temporary construction bridges since these structures require extra time to put in place. The proposed project necessitates cost effectiveness, flexibility with multiple bridge sites, alignment curvature, intersections on structure and minimization of EFH impacts. Based on the consideration of all these variables, the proposed construction of the bridges over the main channel of the Ashley River and associated EFH would most likely involve the utilization of timber mats, trestles, and barges for construction access, although existing approaches may also be used as construction access areas for top-down construction if determined by the contractor to be feasible. Additionally, due to the intricate network of tidal creek feeder channels located within the tidal salt marsh wetlands, pile supported trestles would likely be used to minimize impacts and maintain the movement of tidal waters and aquatic organisms to the upper reaches of the marsh.

#### **Construction Sequencing**

The following describes the general sequence of events that are anticipated to take place during construction based on the conceptual design of the two proposed Ashley River bridges, new structures for C-D roads over portions of Filbin Creek and its associated floodplain, and new interchange access for the I-526 connections at North Rhett Avenue and Virginia Avenue. Site preparation would begin with the installation of perimeter BMPs and then clearing of vegetation from the approach embankments for equipment access. The embankments would then be graded as necessary for the roadway approaches and abutments and used for the placement of cranes and other construction equipment. Piles would likely be installed at the end bents and drilled shafts (approximately six-foot in diameter) installed at all interior bents within the waterway and adjacent tidal salt marsh wetlands. End bent piles would likely not be installed in the waterway or wetlands but rather within the upland embankments. Bridge construction access areas for the end bents would be located within existing upland areas to the maximum extent practicable.

Within the marsh, the bridge foundations would be installed from either temporary pile supported trestles, ballasted/floating barges, timber mats, or a combination of these methods. Floatable barge or temporary trestle sections would also likely be used as "fingers" to access the interior bent locations and construct the drilled shafts, bent columns, and caps and to erect the prestressed concrete beams. These sections will be moved from bent to bent as construction progresses.

The drilled shafts for the interior bents would likely be installed using a wet-construction method utilizing steel casings to protect the integrity of the shaft, as well as, to contain spoils during excavation of the shafts. The casing would also be used to contain slurry used to stabilize the excavation. The slurry would be captured and contained during placement of the shaft and reinforcing concrete columns. During this operation, permanent fixtures, including the drilled shafts and associated columns, would be placed. Once the drilled shafts are installed, column and cap construction would be performed from the barges or temporary trestles to complete the interior



bents. After completion of the bents, cranes operating from the barges or temporary trestles would be utilized to construct the superstructure of the bridges, which entails placement of the beams, deck, and railings. All timber mats, barges, and trestles and associated piles would be removed in their entirety upon completion of the bridges.

# 6. Potential Impacts to Essential Fish Habitat

Construction and demolition are expected to begin in 2023. Construction methods cannot be finalized because the project is still in the conceptual design phase. Final design and construction will occur once SCDOT has selected a Design Build team to complete the project. However, under the Recommended Preferred Alternative there are two additional bridge structures to be constructed over the Ashley River to accommodate the widening of I-526, construction of new structures for C-D roads over portions of Filbin Creek and its associated floodplain, and construction of improved interchange access for the I-526 connections at North Rhett Avenue and Virginia Avenue. Figures 6-1 and 6-2 depict a typical section of the proposed structures over the Ashley River and the C-D roads over Filbin Creek, respectively.

Most of the EFH within the project area is proposed to be spanned with bridges. Due to the project being in the early stages of design, the exact methods used to construct the proposed bridges have not been determined. Additionally, since the construction of the project will be awarded as a design- build contract, the specific construction methods and extent and duration of impacts would ultimately be determined by the design-build contractor based on guidelines and conditions established by SCDOT, FHWA, and state and federal regulatory agencies including SCDHEC-OCRM, USACE, USFWS, and NOAA-NMFS.



Figure 6-1. Typical Section of Improvements over Ashley River

Construction of the proposed bridge structures will likely include a combination of drilled shafts and pile driving for the bridge support structures. Bridge construction access will be in upland areas to the maximum extent practicable. Work in deep water habitats will likely occur from barges. Temporary work trestles may be installed over the tidal marsh using pile driving. Timber mats and/or barges may be used over salt marsh areas also.





Figure 6-2. Typical Section of Improvements and New Viaduct Over Filbin Creek

SCDOT has assumed the contractor will utilize temporary trestle to the greatest extent practical to avoid impacts to EFH and tidal wetlands. Utilization of temporary fill causeways were not considered practicable alternatives due to extremely high impacts to EFH. This scenario is based on conceptual plans and represents a worst-case scenario established for threatened and endangered species and was applied to this EFH evaluation. The conceptual plan includes a conservative combination of pile driving techniques to install bridge support structures and a temporary trestle to be used during construction and drilled shafts for bridge support structures in the main channel of the Ashley River. During final design and permitting, the Design-Build contractor would be responsible for coordinating with SCDOT and NOAA-NMFS regarding design changes that would alter the effects on EFH.

This analysis is based on the conceptual design of the preferred alternative. The preferred alternative is depicted in relation to Ashley River evaluation area EFH in Figure 6-3 and in relation to Filbin Creek evaluation area EFH in Figure 6-4. Due to the conceptual level of design the final construction limits and final bridge span arrangements are not known at this time. The proposed impacts discussed in subsequent sub-sections are the best attempt to quantify potential impacts to EFH based on the conceptual design. Additionally, the potential impact to managed species will vary based on life stage, habitat use, distribution, and abundance. Table 6-1 summarizes possible temporary and permanent impacts to EFH in the project area.





Figure 6-3. Preferred Alternative Over Ashley River EFH





Figure 6-4. Preferred Alternative Over Filbin Creek EFH



	Permane	nt Impacts	Temporary Impacts		
Habitat Type	Direct	Indirect	Direct	Indirect	
Estuarine Emergent Wetlands	Fill <i>,</i> Columns	Shading	Temporary Trestle Pilings, Barges, Timber Mats*	Shading, Siltation	
Estuarine Tidal Creek	dal None None		Temporary Trestle Pilings, Barges, Timber Mats*	Siltation	
Intertidal Non- Vegetated Flats	Fill, Columns	None	Temporary Trestle Pilings, Barges, Timber Mats*	Siltation	
Palustrine Emergent Wetlands	Fill, Columns, Removal of Fill	Shading	Temporary Trestle Pilings, Barges, Timber Mats*	Shading, Siltation	
Riverine Tidal Creek	None	None	Temporary Trestle Pilings, Barges, Timber Mats*	Siltation	
Unconsolidated Bottom	Fill, Columns	None	Temporary Trestle Pilings, Barges, Timber Mats*	Siltation	
Oysters	Fill, Columns	Additional Surface Area for Oysters	Temporary Trestle Pilings, Barges, Timber Mats*	Siltation	

#### Table 6-1. Potential Impacts to EFH

\* Impacts are estimated based on a conceptual design. The final design, location, and use of temporary trestle piles or barges is unknown at this time of this report.

## 6.1. Permanent Impacts - Direct

Direct impacts to EFH will result from the placement of permanent fill for bridge approaches or bridge structures and sub-structures, such as concrete bridge pilings or shafts. Bridge approaches and existing causeways will generally align with existing roadway alignments but may be required to expand to accommodate additional lanes and shoulders of the proposed widening. Bridge structure and sub-structure will consist of prestressed concrete piles and shafts that are drilled and poured in place. The prestressed piles would have an H-pile steel "stinger" at the end of the concrete pile to prevent damage to the pile as it is driven into hard subsurface materials. Piles would be installed with a hammer or vibratory hammer. Bridge shafts or columns would be installed shaft construction, which typically includes the following process: install steel casing using vibratory hammer, drill inside casing to remove material, install rebar cage, pour concrete inside casing. Bridge piles and drilled shafts will impact EFH as permanent fill.

All EFH types identified within the project study boundary may be impacted with the placement of permanent fill in some form during construction of the project. Final construction limits and final bridge span arrangements are not finalized at this stage in the conceptual design. Therefore, the following potential impacts represent an estimation of the worst-case scenario for the placement of new fill for bridge approaches, bridge structure, and bridge sub-structure.



#### Ashley River Evaluation Area

SCDOT proposes to widen the existing two bridges over the Ashley River to the east of the existing structures. The additional structure will be tied into the existing to accommodate the proposed 8-lane widening. The permanent direct impacts to EFH associated with the Ashley River bridges will impact high quality estuarine emergent wetlands, high quality intertidal non-vegetated flats, oysters, and high quality unconsolidated bottom EFH.

It is estimated that 580 24-inch prestressed concrete piles would be needed for the bridge widening over the Ashley River. With one work crew performing installation, approximately 6 piles would be driven per day with an average of 300 impact hammer strikes per pile. If additional crews are utilized, more piles would be driven per day. The placement of the 580 24-inch concrete piles may result in permanent impacts to  $\leq 0.1$  acres to high quality estuarine emergent wetlands,  $\leq 0.1$  acres to high quality intertidal non-vegetated flats,  $\leq 0.1$  acres to high quality unconsolidated bottom, and  $\leq 0.1$  acres to high quality oysters.

At the approaches to, and over the main channel of the Ashley River, drilled shafts are proposed to support the new bridge structures. Each shaft would be approximately 7 feet in diameter. Approximately 120 drilled shafts would be needed for the bridge widening. One shaft per day would be constructed by one work crew, but multiple crews could install supports concurrently. The placement of 120 7-foot concrete shafts will result in approximately  $\leq 0.1$  acres to high quality estuarine emergent wetlands,  $\leq 0.1$  acres to high quality estuarine tidal creek,  $\leq 0.1$  acres to high quality intertidal non-vegetated flats,  $\leq 0.1$  acres to high quality unconsolidated bottom, and  $\leq 0.1$  acres to high quality oysters.

Expansion of existing bridge approaches and the possible widening of existing causeway adjacent to EFH may occur as part of the widening of I-526 LCC WEST. The proposed widening will utilize the existing median and shoulders to the greatest extent practicable and attempt to limit permanent direct impacts to EFH. Based on EFH types adjacent to existing bridge approaches and causeways in the Ashley River evaluation area it can be assumed that some impacts to estuarine emergent wetlands, estuarine tidal creeks, and intertidal non-vegetated flats may occur. If the existing toe of fill is extended by approximately 20 feet an estimated impact to approximately 0.8 acres of high quality estuarine emergent wetlands,  $\leq 0.1$  acres to high quality oysters may occur.

Table 6-2 summarizes the potential permanent direct impacts to EFH within the Ashley River evaluation area. The total impacts represent an estimation of the worst-case scenario for the placement of new fill for bridge approaches, bridge structure, and bridge sub-structure associated with the preferred alternative. Quality areas impacted are designated as HQ for high quality and LQ for low quality.



#### Table 6-2. Estimated Permanent Direct Impacts to Ashley River EFH.

		EFH Type									
Impact Type	Estuarine Emergent Wetlands	Estuarine Tidal Creek	Intertidal Non- Vegetated Flats	Unconsolidated Bottom	Oyster						
Concrete Piles	≤0.1 acres (HQ)	≤0.1 acres (HQ)	≤0.1 acres (HQ)	≤ 0.1 acres (HQ)	≤0.1 acres (HQ)						
Drilled Shafts	≤0.1 acres (HQ)	≤0.1 acres (HQ)	≤0.1 acres (HQ)	≤ 0.1 acres (HQ)	≤0.1 acres (HQ)						
Approach/Causeway Fill	0.8 acres (HQ)	≤0.1 acres (HQ)	0.2 acres (HQ)	0 acres	≤0.1 acres (HQ)						
Total	1 acre	0.3 acres	0.4 acres	0.2 acres	0.3 acres						

#### Filbin Creek Evaluation Area

SCDOT proposes to construct multiple new viaduct bridges to provide access to new C-D routes and to modify interchanges at I-526 and North Rhett Avenue and at I-526 and Virginia Avenue. The permanent direct impacts to EFH associated with these new structures will permanently impact high and low quality estuarine emergent wetlands, high and low quality estuarine tidal creeks, high quality intertidal non-vegetated flats, low quality palustrine emergent wetlands, high quality riverine tidal creeks, and high quality oysters.

It is estimated that 35 24-inch prestressed concrete piles would be placed in EFH for the new bridges for C-D routes and modified interchanges adjacent to Filbin Creek EFH. With one work crew performing installation, approximately 10 piles could be driven per day with an average of 400 impact hammer strikes per pile. If additional crews are utilized, more piles would be driven per day. The placement of the 35 24-inch concrete piles would result in permanent impacts to  $\leq 0.1$  acres of high quality estuarine tidal creek,  $\leq 0.1$  acres of low quality palustrine emergent wetland, and  $\leq 0.1$ acres of low quality riverine tidal creek EFH.

The conceptual design also calls for a total of 112 concrete shafts to be placed in EFH for the construction of the new bridges for C-D routes and modified interchanges adjacent to Filbin Creek. There will be multiple sized drilled shafts ranging from 6-foot in diameter to 10-foot in diameter. A maximum of 2 shafts could be installed per day by one crew, but multiple crews could install supports concurrently. The placement of the 13 of the 112 drilled shafts are located east of Virginia Avenue and may result in the permanent impact to  $\leq 0.1$  acres of high quality estuarine emergent wetlands,  $\leq 0.1$  acres of high quality estuarine tidal creek,  $\leq 0.1$  acres of high quality intertidal nonvegetated flats, and  $\leq 0.1$  acres of high quality oysters. The placement of the 99 of the 112 drilled shafts in EFH will be located to the west of the CSX railroad causeway. The placement of these 99 shafts will result in permanent impacts to  $\leq 0.1$  acres of low quality estuarine tidal creek,  $\leq 0.1$  acres of low quality riverine tidal creek EFH.

Alteration of existing approaches and addition of new ramps associated with the I-526 and North Rhett Avenue interchange may require expanding existing causeway adjacent to EFH as part of the



project. The proposed alteration of the interchange will utilize upland areas to the greatest extent practicable and attempt to limit permanent direct impacts to EFH. However, based on EFH types adjacent to existing interchange it can be assumed that some impacts to low quality estuarine tidal creeks, low quality palustrine emergent wetlands, and low quality riverine tidal creeks may occur. There is a proposed ramp connection to the east of the existing North Rhett Avenue causeway that allows for access to I-526 East from Virginia Avenue that is required for the preferred alternative. If this connection is assumed to be on causeway to match the existing grades of the adjacent roadways and to meet vertical height requirements of the existing I-526 mainline bridges. Additionally, if the existing toe of fill along the North Rhett Avenue causeway is extended by approximately 20 feet, this would represent the worst-case scenario of placement of permanent roadway fill in EFH. The placement of fill for the ramp connection to I-526 East and additional fill added to the North Rhett Avenue causeway would result in permanent impacts to  $\leq 0.1$  acres of low quality estuarine tidal creeks, approximately 1.2 acres of low quality palustrine emergent wetlands, and  $\leq 0.1$  acres of low quality riverine tidal creeks EFH.

The conceptual plans call also for the existing ramps associated with the existing North Rhett Avenue interchange to be removed at the completion of construction. The footprint for this proposed removal of material from EFH is approximately 2 acres. This may allow for the reestablishment of EFH in these previously impacted areas. However, this is part of the conceptual design and may be altered by the Design-Build contractor once a final design is established.

Table 6-3 summarizes the potential permanent direct impacts to EFH within the Filbin Creek evaluation area. The total impacts represent an estimation of the worst-case scenario for the placement of new fill for interchange improvements and bridge structure and sub-structure associated with the preferred alternative. Quality of areas impacted are designated as HQ for high quality and LQ for low quality.

				EFH Type	9		
Impact Type	Estuarine Emergent Wetlands	Estuarine Tidal Creek	Intertidal Non- Vegetated Flats	Palustrine Emergent Wetlands	Riverine Tidal Creek	Unconsolidated Bottom	Oysters
Concrete Piles	0 acres	≤0.1 acres (HQ) ≤0.1 acres (LQ)	0 acres	≤0.1 acres (LQ)	≤0.1 acres (LQ)	0 acres	≤0.1 acres (HQ)
Drilled Shafts	≤0.1 acres (HQ)	≤0.1 acres (HQ) ≤0.1 acres (LQ)	≤0.1 acres (HQ)	≤0.1 acres (LQ)	≤0.1 acres (LQ)	0 acres	≤0.1 acres (HQ)
Approach/Causeway Fill	0 acres	≤0.1 acres (LQ)	0 acres	1.2 acres (LQ)	≤0.1 acres (LQ)	0 acres	0 acres
Potential Existing Material Removal	0 acres	1 acre	0 acres	2 acres (LQ)	0 acres	0 acres	0 acres
Total	0.1 acres	1.5 acres	0.1 acres	3.4 acres	0.3 acres	0 acres	0.2 acres

Table	6-3	Estimated	Permanent	Direct	Impacts	Filbin	Creek	EFH
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## 6.2. Permanent Impacts - Indirect

Permanent indirect impacts to EFH include the possible conversion of EFH due to loss of vegetation from shading. The proposed project would indirectly impact EFH by shading salt marsh grasses and freshwater wetland vegetation underneath the proposed bridges. The shading effects could potentially result in areas of sparse vegetation or the existing vegetation dying off. The extent of adverse indirect impact is dependent on several factors, including the proposed bridge orientation and height to width ratio. Impacts to salt marsh vegetation generally occur when the bridge height to bridge width ratio is less than 0.70 (Broome et al, 2005). No permanent loss of EFH is anticipated, but rather an anticipated loss of functions associated with vegetated EFH. These impacts were estimated under the assumption that only estuarine emergent wetlands and palustrine emergent wetlands would be impacted by shading.

A second indirect impact associated from the placement of new bridge structure and sub-structure in tidally influenced waters is the creation of suitable habitat for oyster propagation. The creation of oyster habitat may provide a net improvement to EFH as oysters are considered HAPC. While the new structures may provide similar surface areas for oysters to attach, it is not guaranteed they will attach to the new structures. However, based on existing conditions observed in the field the likelihood of oysters attaching and colonizing on new bridge structures and sub-structures is high. Therefore, creation of oyster habitat is evaluated as a permanent indirect impact for the project. It is assumed that oysters are the only habitat that will potentially benefit from the placement of new or additional bridge structures in EFH.

#### **Ashley River Evaluation Area**

Based on field assessments of EFH in the Ashley River evaluation area vegetation occurs from the western bank of the Ashley River and continues westward to the causeway adjacent to Bulls Creek. No vegetation was noted on the eastern banks of the Ashley River within the project area. Areas below the existing structures were observed as being shaded by the existing bridges and it is assumed that the new structure will also shade out vegetation and therefore impact EFH. Shading impacts are only assumed to occur to vegetated EFH which is limited to only estuarine emergent wetlands in the Ashley River evaluation area.

The existing bridge structures are approximately 1,700 feet long and 42 feet 10 inches wide over vegetated areas from the western bank of the Ashley River to the existing I-526 causeway. An additional structure that is 32 feet 5.5 inches wide will be constructed and attached to each existing bridge. The final bridge widths at the end of construction will be 75 feet 3.5 inches and will match existing bridge lengths. Based on the 0.7 bridge height to bridge width ratio (Broome et al, 2005), indirect impacts to vegetated salt marsh may occur in areas where the bridge height is approximately 53 feet or lower. The conceptual plans depict the bridge height above existing ground elevations staying below this 53-foot threshold for the entire length of the bridges. Therefore, it is assumed the entire footprint of the bridges will result in permanent impacts from shading. This equates to approximately 5.9 acres of shade impacts. However, the existing bridges already shade approximately 3.3 acres of EFH. Therefore, a total of 2.6 acres of permanent shade impacts to estuarine emergent wetlands are anticipated from the project.



The placement of new bridge structure within the main channel of the Ashley River are anticipated to have a positive impact on oyster beds. The existing structures within the Ashley River currently serve as hard structure for oysters to attach and colonize. An estimated 14,000 square feet (0.3 acres) of surface area of existing bridge structure was observed with oysters present in the Ashley River Since the existing structures will be maintained, no loss of oyster habitat is anticipated. A net increase in oyster habitat is anticipated from the placement of bridge structures within the Ashley River. While the new structures may provide similar surface areas for oysters to attach, it is not guaranteed they will attach to the new structures. Assuming an average height of three feet of oyster growth on each new bridge structure it is anticipated approximately 22,000 square feet (0.5 acres) of new surface area will be available for oysters to colonize once construction is completed.

Table 6-4 summarizes the potential permanent indirect impacts to EFH within the Ashley River evaluation area. The total impacts represent an estimation of the worst-case scenario for the permanent shading and new oyster habitat associated with the preferred alternative. Quality of areas impacted are designated as HQ for high quality and LQ for low quality.

	ЕҒН Туре							
Impact Type	Estuarine Emergent Wetlands	Estuarine Tidal Creek	Intertidal Non- Vegetated Flats	Unconsolidated Bottom	Oyster			
Shading Impact	2.6 acres (HQ)	0 acres	0 acres	0 acres	0 acres			
Total	2.6 acres	0 acres	0 acres	0 acres	0 acres			
	•	•		•				
Potential Benefit	Estuarine Emergent Wetlands	Estuarine Tidal Creek	Intertidal Non- Vegetated Flats	Unconsolidated Bottom	Oyster			
Potential New Oyster Habitat	0 acres	0 acres	0 acres	0 acres	0.5 acres (HQ)			
Total	0 acres	0 acres	0 acres	0 acres	0.5 acres			

Table 6-	-4. Estimated	Permanent	Indirect Ir	npacts	Ashlev	River	EFH
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#### **Filbin Creek Evaluation Area**

The proposed bridge widths vary throughout Filbin Creek EFH due to the construction of new interchange ramps and connections to the proposed C-D routes. While bridge heights are not currently established for all structures during this conceptual design phase it is assumed that bridges located to the east of Virginia Avenue will match existing bridge heights. No existing shading effects were observed in the field for this section of the Filbin Creek evaluation area. Therefore, no shading impacts to high quality estuarine emergent wetlands in the Filbin Creek evaluation area are anticipated.

From the west of the CSX railroad causeway the proposed interchange ramp bridges are approximately 36-50 feet wide and split in multiple locations to create connections to the proposed C-D routes. Shading impacts were quantified based on an average bridge of width of 42 feet. Based on the 0.7 bridge height to bridge width ratio (Broome et al, 2005), indirect impacts to vegetated EFH may occur in areas where the bridge height is 30 feet or lower. Since bridge heights are not currently established for all structures during this conceptual design phase it was assumed that all bridges over vegetated EFH in the Filbin Creek evaluation area are 30 feet or less to evaluate a worst- case scenario for shading impacts to EFH. The proposed bridges west of the CSX railroad causeway would result in permanent shading impacts to approximately 10.3 acres of low quality palustrine emergent wetlands.

A second indirect impact associated from the placement of new bridge structure and substructure in tidally influenced waters is the creation of suitable habitat for oyster propagation. The placement of new bridge structure in EFH to the east of Virginia Ave are may have a positive impact on oyster beds. The existing structures within EFH to the east of Virginia Avenue currently serve as hard structure for oysters to attach and colonize. Since the existing structures will be maintained, no loss of oyster habitat is anticipated. A net increase in oyster habitat is anticipated from the placement of bridge structures east of Virginia Avenue. While the new structures may not result in exactly the same surface area for oysters to attach, assuming an average height of three feet of oyster growth on each new bridge structure it is anticipated <0.1 acres of new surface area will be available for oysters to colonize once construction is completed. No oyster presence was observed in Filbin Creek west of Virginia Avenue.

Table 6-5 summarizes the potential permanent indirect impacts to EFH within the Filbin Creek evaluation area. The total impacts represent an estimation of the worst-case scenario for the permanent shading and new oyster habitat associated with the preferred alternative. Quality of areas impacted are designated as HQ for high quality and LQ for low quality.



		EFH Type								
Impact Type	Estuarine Emergent Wetlands	Estuarine Tidal Creek	Intertidal Non- Vegetated Flats	Palustrine Emergent Wetlands	Riverine Tidal Creek	Unconsolidated Bottom	Oysters			
Shading Impact	0 acres	0 acres	0 acres	10.3 acres (LQ)	0 acres	0 acres	0 acres			
Total	0 acres	0 acres	0 acres	10.3 acres	0 acres	0 acres	0 acres			
	•				•		•			
Potential Benefit	Estuarine Emergent Wetlands	Estuarine Tidal Creek	Intertidal Non- Vegetated Flats	Palustrine Emergent Wetlands	Riverine Tidal Creek	Unconsolidated Bottom	Oysters			
Potential New Oyster Habitat	0 acres	0 acres	0 acres	0 acres	0 acres	0 acres	<0.1 acres (HQ)			
Total	0 acres	0 acres	0 acres	0 acres	0 acres	0 acres	<0.1 acres			

#### Table 6-5. Estimated Permanent Indirect Impacts to Filbin Creek EFH.

## 6.3. Temporary Impacts - Direct

Temporary direct impacts to EFH will result from the placement of temporary fill for construction access for the project. Bridge construction access would be in upland areas to the maximum extent practicable. However, for access over marsh areas between the existing bridges either trestle or a combination of barge, barge mats, and timber mats would be needed due to the limited space between the structures. Deeper water and the main channel of the Ashley River and Filbin Creek will likely be accessed via barges for construction. Barges may be delivered and moved via water and transport vessels or via land on flatbed trucks with cranes and other heavy equipment. The piles required to construct the temporary trestle would act as temporary fill to EFH.

#### Ashley River Evaluation Area

Temporary trestle would be approximately 30 feet wide and would be supported by steel pipe piles. The steel piles would be approximately 24-inches in diameter and would be installed using a vibratory hammer. It is estimated that 240 24-inch steel pipe piles would be needed for temporary work trestle. With one work crew performing installation, approximately 4 piles would be driven per day with an average of 350 impact hammer strikes per pile. If additional crews are utilized, more piles would be driven per day.

The placement of temporary piles will act as fill and will result in a temporary loss of EFH. The use of temporary trestles in the EFH associated with the Ashley River will result in temporary fill impacts to approximately  $\leq 0.1$  acres of high quality estuarine emergent wetlands,  $\leq 0.1$  acres of high quality estuarine tidal creek,  $\leq 0.1$  acres of high quality intertidal non-vegetated flats,  $\leq 0.1$  acres of high quality unconsolidated bottom, and  $\leq 0.1$  acres of high quality oysters EFH.

Table 6-6 summarizes the potential temporary direct impacts to EFH within the Ashley River evaluation area. The total impacts represent an estimation of the worst-case scenario for the temporary fill associated with placement of temporary trestle piles to construct the preferred



alternative. Quality of areas impacted are designated as HQ for high quality and LQ for low quality.

	EFH Type						
Impact Type	Estuarine Emergent Wetlands	Estuarine Tidal Creek	Intertidal Non- Vegetated Flats	Unconsolidated Bottom	Oyster		
Temporary Trestle Piles	≤0.1 acres (HQ)	≤0.1 acres (HQ)	≤0.1 acres (HQ)	≤0.1 acres (HQ)	≤0.1 acres (HQ)		
Total	0.1 acres	0.1 acres	0.1 acres	0.1 acres	0.1 acres		

#### Table 6-6. Estimated Temporary Direct Impacts to Ashley River EFH.

#### Filbin Creek Evaluation Area

Since the design for the temporary work trestle will not be completed until the project is awarded to a Design-Build contractor, these impacts represent an estimated worst-case scenario. Temporary trestle would be approximately 36 feet wide and would be supported by steel pipe piles. The steel piles would be approximately 24-inches in diameter and would be installed using a vibratory hammer. It is estimated that 650 24-inch steel pipe piles would be needed for temporary work trestle. With one work crew performing installation, approximately 10 piles would be driven per day with an average of 400 impact hammer strikes per pile. If additional crews are utilized, more piles would be driven per day.

The placement of temporary piles will act as fill and will result in a temporary loss of EFH. It is anticipated that the use of temporary trestles of temporary trestles will result in temporary fill impacts to  $\leq 0.1$  acres of high quality estuarine emergent wetland, to  $\leq 0.1$  acres of low quality estuarine emergent wetland,  $\leq 0.1$  acres of high quality estuarine tidal creek,  $\leq 0.1$  acres of low quality intertidal non-vegetated flats,  $\leq 0.1$  acres low quality palustrine emergent wetlands,  $\leq 0.1$  acres of low quality riverine tidal creek,  $\leq 0.1$  acres of high quality acres of low quality rivers tidal creek.

Table 6-7 summarizes the potential temporary direct impacts to EFH within the Filbin Creek evaluation area. The total impacts represent an estimation of the worst-case scenario for the temporary fill associated with placement of temporary trestle piles to construct the preferred alternative. Quality of areas impacted are designated as HQ for high quality and LQ for low quality.



		ЕҒН Туре							
Impact Type	Estuarine Emergent Wetlands	Estuarine Tidal Creek	Intertidal Non- Vegetated Flats	Palustrine Emergent Wetlands	Riverine Tidal Creek	Unconsolidated Bottom	Oysters		
Temporary Trestle Piles	≤0.1 acres (HQ) ≤0.1 acres (LQ)	≤0.1 acres (HQ) ≤0.1 acres (LQ)	≤0.1 acres (HQ)	≤0.1 acres (LQ)	≤0.1 acres (LQ)	≤0.1 acres (HQ)	≤0.1 acres (HQ)		
Total	0.2 acres	0.2 acres	0.1 acres	0.1 acres	0.1 acres	0.1 acres	0.1 acres		

#### Table 6-7. Estimated Temporary Direct Impacts to Filbin Creek EFH.

# 6.4. Temporary Impacts – Indirect

During construction activities and demolition of the existing bridge, temporary indirect impacts such siltation may occur along the margins of the estuarine emergent wetland, estuarine tidal creek, intertidal non-vegetated flats, palustrine emergent wetland, riverine tidal creek, unconsolidated bottom, and oyster reef habitats. Temporary siltation may cause indirect impacts by affecting thermal loading in the environment as well as temporarily increasing turbidity. Alterations in light attenuation in the water column can cause decreased visibility for organisms, affecting feeding, movement, and predator avoidance. Redistribution of sediments can alter nutrient distribution, dissolved oxygen levels, and primary productivity locally and throughout the estuarine waters. When suspended sediments begin to settle on the floor of the estuary, this can cause indirect impacts to benthic communities by smothering and burying organisms (Berry et al., 2003). Since turbidity is a natural condition along South Carolina's coast, impacts from the proposed project are expected to be relatively minor. Impacts should be minimal and would be limited to the immediate area of the construction.

Timber mats and/or barges may cause temporary impacts to vegetation during construction. Vegetation will likely die while covered by mats or barges. These areas are expected to regenerate vegetation once construction is completed, but there may be a lag due to compaction of the marsh from the weight of construction equipment. Additionally, possible conversion of EFH due to loss of vegetation from shading of vegetation from construction access. The proposed project would indirectly impact EFH by shading salt marsh grasses and freshwater wetland vegetation underneath the proposed temporary trestles. Due to the conceptual design it is difficult to quantify an area of EFH that may be impacted by temporary placement of timber mats and barges. During final design and permitting, the Design-Build contractor would be responsible for coordinating with NOAA- NMFS regarding design changes that would alter the effects on EFH.



#### **Ashley River Evaluation Area**

Temporary trestle would be approximately 30 feet wide, approximately 2000 feet long and would be supported by steel pipe piles. Based on the 0.7 bridge height to bridge width ratio (Broome et al, 2005), indirect impacts to vegetated EFH may occur in areas where the bridge height is 21 feet or lower Trestle heights are anticipated to be below 20 feet for the length of the structure which would result in shading impacts to the high quality estuarine emergent wetland vegetation. Two trestles would be required, one for construction of each bridge over the Ashley River. Additionally, fingers of additional trestle or combination of barges or mats will be utilized to construct each bent of the new bridge. The proposed temporary trestle would result in the temporary shading impact to approximately 2.5 acres of high quality estuarine emergent wetlands.

Table 6-8 summarizes the potential temporary indirect impacts to EFH within the Ashley River evaluation area. The total impacts represent an estimation of the worst-case scenario for the temporary shading associated with placement of temporary trestle, barges, or timber mats to construct the preferred alternative. Quality of areas impacted are designated as HQ for high quality and LQ for low quality.

		EFH Type								
Impact Type	Estuarine Emergent Wetlands	Estuarine Tidal Creek	Intertidal Non- Vegetated Flats	Unconsolidated Bottom	Oyster					
Temporary Trestle, Barge, or Timber Mat Shading	≤0.1 acres (HQ)	≤0.1 acres (HQ)	≤0.1 acres (HQ)	≤0.1 acres (HQ)	≤0.1 acres (HQ)					
Total	0.1 acres	0.1 acres	0.1 acres	0.1 acres	0.1 acres					

#### Table 6-8. Estimated Temporary Indirect Impacts to Ashley River EFH



#### Filbin Creek Evaluation Area

Temporary trestle would be approximately 36 feet wide and would be supported by steel pipe piles. Trestle heights are anticipated to be below 20 feet for the length of the structure which would result in shading impacts to the palustrine emergent vegetation and estuarine emergent wetlands associated with Filbin Creek. Multiple trestles will be required during construction with the estimated need for to be 12,000 feet of temporary structure. The proposed temporary trestle would shade approximately 2.9 acres of high quality estuarine emergent wetlands and approximately 7 acres of low quality palustrine emergent wetlands EFH.

Table 6-9 summarizes the potential temporary indirect impacts to EFH within the Filbin Creek evaluation area. The total impacts represent an estimation of the worst-case scenario for the temporary shading and siltation associated with the placement and removal of temporary trestles, barges, or timber mats to construct the preferred alternative. Quality of areas impacted are designated as HQ for high quality and LQ for low quality.

		EFH Type							
Impact Type	Estuarine Emergent Wetlands	Estuarine Tidal Creek	Intertidal Non- Vegetated Flats	Palustrine Emergent Wetlands	Riverine Tidal Creek	Unconsolidated Bottom	Oysters		
Temporary Trestle, Barge, or Timber Mat Shading	≤0.1 acres (HQ)	≤0.1 acres (HQ)	≤0.1 acres	≤0.1 acres	≤0.1 acres	<0.1 acros (HO)	≤0.1		
	≤0.1 acres (LQ)	≤0.1 acres (LQ)	(HQ)	(LQ)	(LQ)		(HQ)		
Total	0.2 acres	0.2 acres	0.1 acres	0.1 acres	0.1 acres	0.1 acres	0.1 acres		

#### Table 6-9. Estimated Temporary Indirect Impacts to Filbin Creek EFH



## 6.5. EFH Impacts Summary

Permanent direct impacts to EFH will result from the placement of permanent fill for bridge approaches or bridge structures and sub-structures, such as concrete bridge pilings or shafts. The permanent direct impacts to EFH associated with the Ashley River bridges will impact high quality estuarine emergent wetlands, high quality intertidal non-vegetated flats, oysters, and high quality unconsolidated bottom EFH. The permanent direct impacts to EFH associated with Filbin Creek will permanently impact high quality and low quality estuarine emergent wetlands, high quality and low quality estuarine tidal creeks, high quality intertidal non-vegetated flats, low quality palustrine emergent wetlands, low quality riverine tidal creeks, and high quality oysters.

Permanent indirect impacts to EFH include the possible conversion of EFH due to loss of vegetation from shading. Permanent shading impacts are expected to occur to high quality estuarine emergent wetlands in the Ashley River evaluation area and low quality palustrine emergent wetlands in the Filbin Creek evaluation area. A second indirect impact associated from the placement of new bridge structure and sub-structure in tidally influenced waters is the creation of suitable habitat for oyster propagation. This may result in a net benefit to oysters in both evaluation areas within the project limits.

Temporary direct impacts to EFH will result from the placement of temporary fill for construction access for the project. The piles required to construct the temporary trestle would act as temporary fill to EFH. The use of temporary trestles in the EFH associated with the Ashley River will result in temporary direct impacts to high quality estuarine emergent wetlands, high quality estuarine tidal creek, high quality intertidal non-vegetated flats, high quality unconsolidated bottom, and high quality oysters. The use of temporary trestles in Filbin Creek EFH will temporarily impact high quality and low quality estuarine emergent wetlands, high quality estuarine tidal creeks, high quality intertidal non-vegetated flats, low quality and low quality estuarine emergent wetlands, high quality estuarine tidal creeks, high quality intertidal non-vegetated flats, low quality palustrine emergent wetlands, low quality riverine tidal creeks, and high quality oysters.

During construction activities and demolition of the existing bridge, temporary indirect impacts such siltation may occur in EFH. Additionally, the proposed project would result in temporary indirect impacts to EFH from shading or loss of vegetation associated with construction access. The proposed temporary trestle would shade approximately high quality estuarine emergent wetlands and low quality palustrine emergent wetlands EFH.

Table 6-10 summarizes all impacts to EFH within the project limits. The total impacts represent an estimation of the worst-case scenario for the respective impact types discussed in previous sections. Quality of areas impacted are designated as HQ for high quality and LQ for low quality.



## Table 6-10. Estimated Temporary Indirect Impacts to Filbin Creek EFH

		EFH Type									
Impact Type	Estuarine Emergent Wetlands	Estuarine Tidal Creek	Intertidal Non- Vegetated Flats	Palustrine Emergent Wetlands	Riverine Tidal Creek	Unconsolidated Bottom	Oysters				
Permanent Direct (Concrete Piles, Drilled Shafts,	1.1 acres	0.5 acres (HQ)	0.5 acres	0.5 acres (HQ) 3.4 acres (LQ) (	0.2 acros (1.0)		0.5 acres				
Approach/Causeway Fill, Potential Existing Material Removal)	(HQ)	1.3 acres (HQ) (LQ)	(HQ)				(HQ)				
Permanent Indirect (Shading, Additional Surface Area for Oysters)	2.6 acres (HQ)	0 acres	0 acres	10.3 acres (LQ)	0 acres	0 acres	0.6 acres (HQ)				
Temporary Direct	0.2 acres (HQ)	0.2 acres (HQ)	0.2 acres	0.2 acres	0.1 acros (1.0)	0.1 acros (10)		0.2 acres			
Pilings, Barges, Timber Mats)	0.1 acres (LQ)	0.1 acres (LQ)	(HQ)				(HQ)				
Temporary Indirect (Shading, Siltation)	0.2 acres (HQ)	0.2 acres (HQ)	0.1 acres	0.1 acres (LQ)	0.1 acres (LQ)	0.2 acres (HQ)	0.2 acres				
	0.1 acres (LQ)	0.1 acres (LQ)	(1102)				(1102)				
Total	4.3 acres	2.4 acres	0.8 acres	13.9 acres	0.5 acres	0.6 acres	1.5 acres				



# 7. Avoidance and Minimization

Impacts to EFH would be minimized to the maximum extent practicable. As the project design progresses, the actual construction limits will be refined, and further avoidance and minimization measures taken to reduce the amount of impact to EFH. The concepts for bridges over both estuarine and riverine tidal creeks have been designed to span the entire creek channels and avoid any roadway fill impacts to the channels where practicable. In addition, maximizing the length of spans and the distance between bents and columns where practicable will minimize the amount of fill being placed in EFH.

Through coordination efforts with NOAA-NMFS, the SCDOT and NOAA-NMFS have developed the following EFH-specific list of general best management practices (BMPs) to minimize construction-related impacts to EFH and water quality within the project watershed. It is anticipated that many of these BMPs will be incorporated as conditions/commitments to the Section 404/401 permit. In accordance with the permit, the project plans and/or Environmental Compliance Plan will clearly state all environmental commitments and BMPs to be implemented during and following project construction. The following avoidance and minimization methods and BMPs will be implemented to the greatest extent practicable during the construction of the project:

- During construction or post-construction, the impairment of the hydrologic flow of any creek system would be minimized to the maximum extent practicable.
- Construction BMPs must include measures to avoid or minimize temporary impacts including turbidity and sedimentation. For example, temporary sediment and runoff control fences (e.g., a silt fence consisting of geotextile fabric installed between supporting posts) would be installed along approaches adjacent to EFH; floating turbidity barriers would also be used when activities may result in increased turbidity downstream of the work site.
- To the maximum extent practicable, construction activities impacting EFH would be conducted during low biological use periods (during the winter from November 1 to February 28).
- To the maximum extent practicable, plan the stages of development so that only the areas that are actively being developed are exposed. All other areas should have a good cover of either temporary or permanent vegetation.
- No work would be conducted in a manner that results in permanent bank erosion or decreased stabilization to the maximum extent practicable. Sediment entering the waterway due to equipment presence and operation must be avoided to the maximum extent practicable. Doublerow silt fencing will be installed along the toe of fill slopes and the limits of clearing to capture sediment runoff and avoid sediment form entering wetlands or channels.
- Grading should be completed as soon as possible after it has begun.
- Runoff velocities would be kept low and retained on-site using sediment and erosion control BMPs to the maximum extent practicable.
- No excavated material would be disposed of in adjacent waterways or sidecast into adjacent marsh.
- To the maximum extent practicable, project areas that are excavated adjacent to the marsh would be graded down to adjacent marsh levels.



- Where necessary, banks should be stabilized with bioengineering material (e.g., biologs, fiber matting, etc.).
- Raw or live concrete, which is toxic to aquatic life, may not come in contact with wetlands or open water until the concrete has cured.
- At the end of the workday, remove any debris that may enter EFH by wind, tides, etc.
- The area of temporary impacts associated with work mats will be minimized/avoided to the maximum extent practicable.
- Riprap would be minimized to the least amount practicable. Riprap placed within tidal wetlands should consist of clean rock or masonry clean of pollutants and debris.
- Material (e.g., riprap, pilings) would not be placed in large waterways/tidal rivers such that it impairs the hydrologic flow at mean low tide unless the riprap is needed to support the integrity of the bridge abutment or roadway that is susceptible to scour. Regarding smaller tidal creek channels, bridge pilings will be located outside of the outer (normal high tide) limits to the maximum extent feasible to avoid potential hydrological and scour impacts.
- Any impact pile driving would be conducted out-of-water wholly or during low tide where practicable.
- Appropriate soil erosion and sediment controls would be used and maintained in effective
  operating condition during construction, and all exposed soil and other fills, as well as any work
  below the ordinary high water mark or high tide line, must be permanently stabilized at the earliest
  practicable date. Work within waters of the United States would be performed during periods of
  low-flow or no- flow when practicable.
- All steps necessary would be taken to prevent oil, tar, trash, debris and other pollutants from entering adjacent wetlands and/or waterways.
- Once initiated, construction activities would be carried to completion in an expeditious manner in
  order to minimize the period of disturbance and upon completion, all disturbed areas would be
  permanently stabilized with vegetative cover and/or riprap, as appropriate. Native vegetation
  and/or native seed mixtures would be utilized.
- Construction access areas would be clearly identified in the permit application. Construction access would consist of minimal clearing for the installation of elevated working platform(s), timber mat(s), or barge(s). Impacts would be temporary and minor in nature.
- No mechanized equipment would operate within jurisdictional areas unless clearly identified and authorized in the approved plans.



# 8. Conclusions

The proposed project is a design-build project that will require further evaluation and analysis as the project design develops. As such, SCDOT will be responsible for coordinating with NOAA-NMFS regarding design changes that would alter the effects on EFH.

The project will result in unavoidable impacts to EFH. The placement of fill for the widening of I-526 LCC WEST, bridge approaches, and new bridge structure and sub-structure will result in permanent direct impacts to EFH. Shading associated with permanent bridge structures will result in the permanent indirect impacts to EFH. Temporary impacts associated with construction access will result in temporary direct and indirect impacts. The permanent loss of EFH and the temporal lag for restoration to existing conditions from temporary impacts may take months or years. Therefore, it is the determination of SCDOT that the proposed project would adversely impact the EFH in the project area.

Since there will be impacts to the EFH and possibly aquatic species managed by the SAFMC, an EFH Mitigation Plan will be established. This mitigation plan will be established as part of the Section 404 permitting phase of the project. The EFH Mitigation Plan may include mitigation measures such purchasing mitigation credits from an approved mitigation bank or Permittee Responsible Mitigation (PRM) methods such as causeway removal, living shorelines, oyster bed restoration, and/or other methods of mitigating for EFH impacts. SCDOT/FHWA will develop the mitigation plan in coordination with the appropriate resource agencies.



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# Attachment I Section 106 Correspondence



April 2, 2020

Mr. Shane Belcher Federal Highways Administration 1835 Assembly Street, Suite 1270 Columbia, SC 29201

> Subject: Proposed I-526 West Lowcountry Corridor Improvements, Alternatives for Environmental Impact Statement (EIS) Charleston County, South Carolina SHPO Project No.:19-JW0014 Federal Project Number P027507

Dear Shane Belcher:

We received your letter of March 12 requesting concurrence with the proposed alternatives to be carried forward for detailed evaluation in the Environmental Impact Statement (EIS) for the Proposed I-526 West Lowcountry Corridor Improvements. Thank you for providing a time extension for a response. We previously received a cultural resources survey as supporting documentation for this undertaking, as well as participated in regular agency coordination efforts over the past year. The State Historic Preservation Office (SHPO) is providing comments to the Federal Highways Administration pursuant to Section 106 of the National Historic Preservation Act and its implementing regulations, 36 CFR 800. Consultation with the SHPO is not a substitution for consultation with Tribal Historic Preservation Offices, other Native American tribes, local governments, or the public.

The proposed project as described in your letter "would make improvements to the I-526 corridor from Virginia Avenue to Paul Cantrell Boulevard in Charleston County, South Carolina. The purpose of the proposed project is to increase capacity and improve operations at the I-26/526 interchange and along the I-526 mainline from Virginia Avenue to Paul Cantrell Boulevard. The Ashley River bridge crossing would be widened to accommodate the improvements on the I-526 mainline."

We concur with the proposed alternatives to be carried forward in the EIS for this project.

Thank you for the opportunity to provide comments. Please refer to SHPO Project No. 19-JW0014 in future correspondence regarding this project. If you have any questions about our comments please contact me at <u>ejohnson@scdah.sc.gov</u>, 803-896-6168.

Sincerely,

Elizabeth M. Johnson

Elizabeth M. Johnson Director, Historical Services, D-SHPO State Historic Preservation Office



August 21, 2019

J. Shane Belcher U.S. Department of Transportation Federal Highway Administration 1835 Assembly Street, Suite 1270 Columbia, South Carolina 29201

> Re: Request for Concurrence on Permitting Timetable/Agency Milestones for the Proposed I-526 West Lowcountry Corridor Improvements Environmental Impact Statement (EIS) in Charleston County, South Carolina; Federal Project Number P027507; SHPO Project No. 19-JW0014

Dear Mr. Belcher:

Our Office has received the documentation dated August 19<sup>th</sup>, that you submitted for review by our office for the project referenced above, including the Permitting Timetable and the Agency Milestones Table. Thank you for involving us in this process as a Participating Agency.

We have reviewed the Permitting Timetable and the Agency Milestones Table. Our official role within this process is the review of identified historic resources, their recommended eligibility status for the National Register of Historic Places, and effects of this project on those resources. The Permitting Timetable and the Agency Milestones Table are agreeable to us per our involvement, and we concur with both.

We are aware of documented historic properties that are eligible for listing in the National Register of Historic Places adjacent to the proposed project area, and have appreciated the continued coordination with the SCDOT per our review of these resources. We look forward to further coordination as to potential effects of this project on these resources as this project progresses per the proposed timetable.

We appreciate being included in this process and look forward to further consultation regarding historic resources. Please refer to SHPO Project Number 19-JW0014 in any future correspondence regarding this project. If you have any questions, please contact me at (803) 896-6184 or at jwilkinson@scdah.sc.gov.

Sincerely,

Joseph E. W. Alkinson

Joseph E. Wilkinson Review Coordinator for Transportation Projects State Historic Preservation Office



#### July 16, 2019

Joseph E. Wilkinson Review Coordinator for Transportation Projects State Historic Preservation Office South Carolina Department of Archives & History 8301 Parklane Road Columbia, South Carolina 29223-4905

#### Re: Brockington and Associates' 1.) Cultural Resource Survey of the I-526 Corridor Improvements Project & 2.) Cultural Resource Survey of the I-526 Lowcountry Corridor West Project—Addendum Report, Charleston County, SCDOT PIN P027507

Dear Mr. Wilkinson:

The SCDOT proposes to improve I-526 from SC Route (SC-) 461 (Paul Cantrell Boulevard) to the SC-61 Spur (Glenn McConnell Parkway). Improvements along I-26 extend from West Montague Avenue west to Remount Road. The project may include adding a travel lane in each direction along I-526; interchange improvements at Leeds Avenue, SC-642 (Dorchester Road), West Montague Avenue, International Boulevard, and Paul Cantrell Boulevard; and the system-to-system connections at Glenn McConnell Parkway, I-26, and Rivers Avenue. Interchange improvements along I-26 may include West Montague Avenue. Improvements are also to be evaluated along Paul Cantrell Boulevard from S- 10-1373 (Tobias Gadson Boulevard) to Charlie Hall Boulevard. This segment of Paul Cantrell Boulevard includes the intersection of S-10-1863 (Magwood Drive), which will be evaluated for a grade separation to accommodate future traffic volumes.

The two cultural resources reports referenced above cover the full Area of Potential Effect (APE) for the proposed project. This correspondence addresses the combined results of those two reports and therefore the entirety of the project APE. The purpose of this correspondence is only to establish National Register of Historic Places (NRHP) eligibility for cultural resources documented as part of the subject surveys. Additional Section 106 coordination to determine project effects upon cultural resources will be initiated when a preferred alignment for the project is developed.

Archaeological investigations for the project revisited one (1) previously identified archaeological site (38CH17) and identified one new site (38CH2523). Neither of these sites is recommended eligible for the NRHP. Underwater archaeological survey was also conducted within the project APE, and two anomalies (006-1 and 010-1) were identified. Anomaly 006-1 is recommended for further analysis to determine eligibility if it is located within a refined APE generated later in the project design process. Anomaly 010-1 is recommended as not eligible for the NRHP.

The historic architectural survey identified several survey-eligible neighborhoods, individual resources, and landscape features within the APE (refer to attached reports for specifics). Only one (1) aboveground resource identified in the studies (site 7806, Bethune Elementary) is recommended eligible for the NRHP.



www.scdot.org An Equal Opportunity Affirmative Action Employer 855-GO-SCDOT (855-467-2368) Site 7916.01 (hand excavated mines), site 7916.02 (mechanically excavated mines), and site 38CH2468 are recommended as not eligible for individual listing in the NRHP and as non-contributing to the eligibility of site 7916. These are the elements of eligible resource 7916 that fall within the I-526 West APE.

#### Please provide your concurrence with or comment on the eligibility findings of the two subject reports.

In accordance the memorandum of agreement approved by the Federal Highway Administration (FHWA), November 29, 2011, SCDOT is providing this information as agency official designee, as defined under 36 CFR 800.2, to ensure compliance with Section 106 of the National Historic Preservation Act.

It is requested that you review the enclosed material and, if appropriate, indicate your concurrence with SCDOT findings. Please respond within 30 days if you have any objections or if you have need of additional information.

Sincerely,

NEPA Coordinator, RPG 4

DPK:dk

Enclosures: Cultural resources reports, aboveground survey forms, photographs

I (do not) concur in the above determinations.

Alkinson Signed: Date:

- ec: Shane Belcher, FHWA LeeAnne Wendt, Muscogee (Creek) Nation Brett Barnes, Eastern Shawnee
- cc: Wenonah G. Haire, Catawba Nation THPO Keith Derting, SCIAA

Page 2-Brockington and Associates' 1.) Cultural Resource Survey of the I-526 Corridor Improvements Project & 2.) Cultural Resource Survey of the I-526 Lowcountry Corridor West Project—Addendum Report, Charleston County, SCDOT PIN P027507



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From:	<u>Kelly, David P.</u>
To:	Heather Robbins
Subject:	FW: Agency Concurrence Points on I-526 West Project SCDAH
Date:	Tuesday, June 4, 2019 2:35:01 PM
Attachments:	image001.png
	SHPO Purpose and Need Concurrence Reponse.pdf

#### FYI

From: Wilkinson, Joseph E. [mailto:JWilkinson@scdah.sc.gov]
Sent: Tuesday, June 04, 2019 2:23 PM
To: Herrell, Michelle
Cc: Belcher, Jeffery - FHWA; Long, Chad C.; Riley, Joy S.; McGoldrick, Will; Kelly, David P.
Subject: RE: Agency Concurrence Points on I-526 West Project SCDAH

# \*\*\* This is an EXTERNAL email. Please do not click on a link or open any attachments unless you are confident it is from a trusted source. \*\*\*

Ms. Herrell,

Please see attached our agency's letter response.

Thanks,



Joseph E. Wilkinson Review Coordinator for Transportation Projects State Historic Preservation Office SC Department of Archives & History 8301 Parklane Road Columbia, SC 29223 Ph: 803.896.6184 Fax: 803.896.6167 <u>https://scdah.sc.gov/historic-preservation</u> jwilkinson@scdah.sc.gov

From: Herrell, Michelle (FHWA) [mailto:michelle.herrell@dot.gov]
Sent: Thursday, May 30, 2019 10:55 AM
To: Wilkinson, Joseph E. <JWilkinson@scdah.sc.gov>
Cc: Belcher, Jeffrey (FHWA) <Jeffrey.Belcher@dot.gov>; Long, Chad C. <LongCC@scdot.org>; Riley, Joy S. <RileyJ@scdot.org>; McGoldrick, Will <McGoldriWR@scdot.org>; Kelly, David P.
<KellyDP@scdot.org>
Subject: Agency Concurrence Points on I-526 West Project SCDAH

Hi Joseph,

Attached is a letter requesting agency concurrence on the I-526 Lowcountry Corridor West project on the agency coordination plan, permitting timetable, and the purpose and need statement. The most updated agency coordination plan (with dispute resolution process) and permitting timetable are attached for your review. The purpose statement has stayed the same

that is in the attached I-526 ACE meeting handout:

The purpose of this project is to increase capacity and improve operations at the I-26/I-526 interchange and along the I-526 mainline from Virginia Avenue to Paul Cantrell Boulevard. The need for this project was identified in several different documents. The I-526/I-26 interchange is listed as the #2 project in the 2035 CHATS Long Range Transportation Plan Ranked List of Candidate Transportation Projects, the #6 project on SCDOT's ACT 114 Interstate Capacity List, and it is listed in SCDOT's State Transportation Improvement Plan 2017-2022. Congestion was detailed in SCDOT's Corridor Analysis for I-526 Between North Charleston and West Ashley, and in the Interstate Plan portion of SCDOT's 2014 Multimodal Transportation Plan, where four segments within this project corridor are listed in the top 20 most congested Interstate segments.

If you are a participating agency, concurrence is not required, but we would like concurrence from the participating agencies so that we know everyone is comfortable with the information we have developed thus far and due to our compressed time schedule for this project. We understand based on previous email (5/2/2019) that your agency will be providing a customized response with regards to the concurrence points. If you have any questions about this information or concurrence, please feel free to contact me, Shane Belcher, Chad Long, or David Kelly.

Note, if we don't receive any comments/concerns by June 7 from the agencies, we will be canceling the June 12<sup>th</sup> monthly agency call for this project.

Thanks,

Michelle Herrell Environmental Protection Specialist Federal Highway Administration |South Carolina Division Office 1835 Assembly Street, Suite 1270|Columbia, SC 29201 P: (803) 765-5460 | F: (803) 253-3787 michelle.herrell@dot.gov


June 4, 2019

Michelle L. Herrell U.S. Department of Transportation Federal Highway Administration 1835 Assembly Street, Suite 1270 Columbia, South Carolina 29201

> Re: Request for Concurrence on Agency Coordination Plan, Purpose & Need Statement, and Permitting Timetable for the Proposed I-526 West Lowcountry Corridor Improvements Environmental Impact Statement (EIS) in Charleston County, South Carolina; Federal Project Number P027507; SHPO Project No. 19-JW0014

Dear Ms. Herrell:

Our Office has received the documentation dated May 30<sup>th</sup>, that you submitted for review by our office for the project referenced above, including the Agency Coordination Plan, the Purpose & Need Statement, and the Permitting Timetable. Thank you for involving us in this process as a Participating Agency.

We have reviewed the Agency Coordination Plan, the Purpose & Need Statement, and the Permitting Timetable. Our official role within this process is the review of identified historic resources, their recommended eligibility status for the National Register of Historic Places, and effects of this project on those resources. While we do not have the expertise to evaluate the data supporting, or arguments within, the Purpose and Need statement, we believe the agencies that do have this expertise will sufficiently review and concur with the Purpose and Need. The Agency Coordination Plan and the Permitting Timetable are agreeable to us per our involvement, and we concur with both.

We are aware of documented historic properties that are eligible for listing in the National Register of Historic Places adjacent to the proposed project area, and have appreciated the continued coordination with the SCDOT per our review of these resources. We look forward to further coordination as to potential effects of this project on these resources as this project progresses per the proposed timetable.

We appreciate being included in this process and look forward to further consultation regarding historic resources. Please refer to SHPO Project Number 19-JW0014 in any future correspondence regarding this project. If you have any questions, please contact me at (803) 896-6184 or at jwilkinson@scdah.sc.gov.

Sincerely,

Joseph C. WAlkinson

Joseph E. Wilkinson Review Coordinator for Transportation Projects State Historic Preservation Office



April 9, 2019

Emily O. Lawton Division Administrator Federal Highway Administration 1835 Assembly Street, Suite 1270 Columbia, SC 29201 SENT VIA EMAIL

#### Re: Invitation to Become a Participating Agency for the Preparation of an Environmental Impact Statement (EIS) for the Proposed I-526 West Lowcountry Corridor Improvements Project in Charleston County, South Carolina; Federal Project Number P027507 (SHPO Project No. 19-JW0014)

Dear Ms. Lawton:

Thank you for your letter of March 29, which we received on April 4, regarding the invitation to become a participating agency for the preparation of an Environmental Impact Statement (EIS) for the proposed I-526 West Lowcountry Corridor Improvements Project. We also received a copy of the ACE meeting handout with project details.

We accept the invitation to become a participating agency during the preparation of the Environmental Impact Statement for the above referenced project. Our agencies responsibility will be to review compliance with section 106 of the National Historic Preservation Act, as codified at 36 CFR 800.2(c), and provide federal agencies with advice and assistance to ensure historic properties are taken into consideration at all levels of planning and development.

For future coordination with our office regarding this project, we request that I, Joseph Wilkinson, be considered the primary contact.

If you have any questions about our participation, please contact me at (803) 896-6184, or by email at jwilkinson@scdah.sc.gov.

Sincerely,

Joseph E. WAlkinson

Joseph E. Wilkinson Review Coordinator for Transportation Projects State Historic Preservation Office

cc. Mr. J. Shane Belcher, FHWA

U.S. Department of Homeland Security

United States Coast Guard



Commander United States Coast Guard Seventh District 909 SE 1st Avenue Miami, Florida 33131 Staff Symbol: (dpb) Phone: (305) 415-6736 Fax: (305) 415-6763 Email: randall.d.overton@uscg.mil

16591/164 October 28, 2020

# PUBLIC NOTICE (07-20)

All interested parties are notified that the Commander, Seventh Coast Guard District has received an application from the State of South Carolina Department of Transportation (SCDOT), requesting approval of the location and plans for the modification of a bridge structure over navigable waterways of the United States.

**WATERWAYS AND LOCATIONS:** Both waterways are located between North Charleston and Charleston in Charleston County, SC.

Ashley River, mile 10.6, Lat/Long: 32.835645, -80.024364 (32°50'08.3"N 80°01'27.7"W) and Bulls Creek, mile 1.4, Lat/Long: 32.828982, -80.029511 (32°49'44.3"N 80°01'46.2"W).

CHARACTER OF WORK: SCDOT proposes to widen the existing I-526 (General William C. Westmoreland) Bridges over the Ashley River and Bulls Creek. The bridge project is being widened as part of a larger roadway improvement project known as the I-526 Lowcountry Corridor (LCC) West project. The I-526 (LCC) project is approximately 11.4 miles long and includes upgrades to interstate interchanges and roadway widening to reduce extreme traffic congestion along the I-526 corridor. The existing bridge project consists of two structures each approximately 42.8 feet wide separated by approximately 45.7 feet. Each existing structure currently consists of: two 12-foot travel lanes; a 5.5-foot inside shoulder; a 10-foot outside shoulder; and two 1.7-foot wide barriers. Upgrading I-526 requires each bridge be widened to accommodate two additional travel lanes. The proposed bridge modification would result in two structures each with: four 12-foot travel lanes (2 additional lanes each); 12-foot outside shoulders; 12-foot inside shoulders; and two 1.6-foot barriers. A 14-foot wide shared use path (SUP) to accommodate pedestrians and cyclists would be added to the upstream side of the westbound bridge. The 14-foot path would be separated from the motorized travel lanes with a raised barrier (refer to the attached conceptual bridge plans, widening schematic). The out-to-out width of the existing bridge structure is approximately 131.4 feet. The out-to-out width of the proposed, widened bridge structure will be approximately 178.3 feet. The overall length of the existing and proposed modified bridge structure is approximately 3,907.5 feet.

# MINIMUM NAVIGATIONAL CLEARANCES:

## **Ashley River Clearances**

Existing <u>Horizontal:</u> 60.0 ft. between face of fenders

Vertical: 35.0 ft. above Mean High Water 41.0 ft. above Mean Low Water Proposed <u>Horizontal:</u> 60.0 ft. between face of fenders

Vertical: 35.0 ft. above Mean High Water 41.0 ft. above Mean Low Water

# MINIMUM NAVIGATIONAL CLEARANCES (continued):

#### **Bulls Creek Clearances**

Existing <u>Horizontal:</u> 40.0 ft. navigation channel

<u>Vertical:</u> 11.0 ft. above Mean High Water

16.0 ft. above Mean Low Water

Proposed <u>Horizontal:</u> 40.0 ft. navigation channel

Vertical: 11.0 ft. above Mean High Water 16.0 ft. above Mean Low Water

## **ENVIRONMENTAL CONSIDERATIONS:**

The Federal Highway Administration (FHWA) is the lead federal agency for satisfying the requirements of the National Environmental Policy Act (NEPA). The FHWA, as the lead federal agency will act on behalf of the USCG for all environmental control laws. FHWA is currently preparing an Environmental Impact Statement (EIS), which is expected to be available late 2020. The Coast Guard is a cooperating agency for the proposed project and associated EIS. The Coast Guard intends to adopt the portions of the EIS related to the bridges and approaches for the proposed modification of the bridge structure crossing the Ashley River and Bulls Creek. The environmental documents associated with the project will be available upon publication at <a href="https://www.526lowcountrycorridor.com/west/nepa">https://www.526lowcountrycorridor.com/west/nepa</a> and at the above address, Monday through Friday, 8:00 a.m. to 4:00 p.m.

The bridge is located in the floodplain. The 100-year flood elevation is approximately 14.0 ft. at the Ashley River and 13 ft. at Bulls Creek. The bridge low member elevation over the navigational channel is 38 ft. for the Ashley River and 14.5 ft. for Bulls Creek. Elevations are referenced to NAVD 88 datum.

The South Carolina Department of Health and Environmental Control (SC DHEC) Bureau of Water is the certifying agency, as defined in 40 CFR § 121.1(e), for issuance of Water Quality Certification (WQC) pursuant to Section 401, Public Law 92-500, 33 U.S.C. Section 1341. WQC application was submitted to and received by SC DHEC on August 31, 2020.

#### Anticipated Impacts to Navigation during Construction:

Mariners will be notified of the details of in-water construction activities, which will impact the navigation channels at and around the bridge site. Details of navigation restrictions will be disseminated to mariners via the Coast Guard's Local Notice to Mariners (LNM). To subscribe to the Coast Guard LNM and other free Coast Guard navigation notification services, please visit <u>http://www.navcen.uscg.gov/</u> under "Subscribe / Report (free)" select the notifications you wish to receive. Note--this project is located in the Seventh Coast Guard District area.

## **SOLICITATION OF COMMENTS:**

Mariners are requested to comment on the proposed vertical and horizontal navigational clearances and other navigational safety issues including, but not limited to, the extent of nighttime navigation, need for bridge fendering, and impacts due to construction activities.

Interested parties are requested to express their views, in writing, on the proposed bridge project, giving sufficient detail to establish a clear understanding of their reasons for support of, or opposition to, the proposed work. Comments will be received for the record at the office of: Commander (dpb), Seventh Coast Guard District, 909 SE 1st Ave., Ste 432, Miami, Florida 33131-3028, for a 30-day period from the date of this public notice. The Coast Guard project manager for this application is Mr. Randall Overton. He can be contacted by telephone at (305) 415-6736, by mail at the above address, or e-mail at randall.d.overton@uscg.mil. Comments received will be made part of the case record.

We will forward comments of an environmental nature such as those regarding wildlife or water fowl refuges, public parks, historic sites, wetlands, floodplain issues, air, water quality, environmental justice, etc. to the Federal Highway Administration for appropriate handling.

It is requested that this information be brought to the attention of any person having an interest in this who may not have received a copy of this public notice.

Map of location and plans attached.