



South Carolina
Department of Transportation

September 30, 2016

U.S. Army Corps of Engineers
Charleston District, Regulatory Branch
Attn: Ms. Elizabeth Williams
69A Hagood Avenue
Charleston, SC 29403-5107

Re: Request for Nationwide Permit 14 Authorization/SAC 2015-00155-DS
Interstate 77 Widening and Rehabilitation (from MM 15 – MM 27), Richland County, South Carolina
Total Impacts: 0.049 acres of jurisdictional freshwater wetlands; 151 linear feet of stream
USACE SAC 2015-00155-DS. SCDOT P027002

Dear Ms. Williams:

The South Carolina Department of Transportation (SCDOT) is requesting authorization under Nationwide Permit No. 14 for unavoidable impacts to a jurisdictional freshwater wetlands and streams associated with the above referenced project. Enclosed please find a permit request package that includes: a permit checklist; a completed Joint Federal and State Application Form; a SCDOT Permit Assessment / Notification Form; Permit Figures; a Jurisdictional Determination (SAC 2015-00155-DS); and the NEPA document.

The SCDOT understands our responsibility for providing all required information to constitute a complete notification, and any compensatory mitigation necessary to comply with the Charleston District Compensatory Mitigation SOP. Furthermore, the SCDOT will ensure compliance with Nationwide Permit No. 14 terms and conditions. Impacts identified herein include those associated with the installation and/or relocation of utilities.

If necessary, the SCDOT will obtain and provide the Corps with a copy of all appropriate state certifications and/or authorizations (i.e. 401 Water Quality Certification) prior to commencement of work. In addition, the SCDOT agrees to submit a signed compliance certification to the Corps within 30 days following completion of the authorized work.

The SCDOT hereby requests that this project be authorized under Nationwide Permit No. 14. As the SCDOT agrees to meet all terms and conditions of the Nationwide Permit, we respectfully request your concurrence that the proposed work qualifies for authorization. If you require further information please do not hesitate to contact me at 803-737-1337. Thank you for your assistance with this project.

Sincerely,

Stobhan O. Gordon

Environmental Permits Manager, Midlands Region

JC:sog

Enclosures

cc: Charles Hightower, SCDHEC

ec: M. Sean Connolly, SCDOT, w/o enclosures
John Collum, JMT

File: Env/RPG3



Interstate 77 Widening and Rehabilitation (from MM 15 – MM 27)
Richland County, South Carolina
SCDOT PIN P027002
SAC No. 2015-00155-DS (July 28, 2015)

Joint Federal and State Permit Application

List of Contents

1. Permit Checklist
2. Joint Federal and State Application Form
3. Attachment A – SCDOT Permit Assessment/Notification Form
4. Attachment B – Permit Figures
5. Attachment C – USACE JD Confirmation and Maps, Resurfacing Delineation
6. Attachment D – Mitigation Information
7. Attachment E – Categorical Exclusion – Type C

Includes:

- a. SHPO/THPO Concurrence Letters
- b. USACE JD Confirmation
- c. USFWS Concurrence Letter

The CE-C Appendices A-K are provided in their entirety on a CD.

8. Attachment F – No-Rise Certifications
9. Attachment G – Site Photographs
10. Attachment H – SCDHEC 401 Water Quality Certification (general info., 401 WQC pending)

Permit Checklist

Action	SCDOT Confirmation		Consultant Confirmation	
1. Completed Corps application- signed by Consultant and SCDOT? Page after cover letter	Y	N	Y	N
2. Project Name, location, site assessment, description, and area maps? Section I.1-4 & App A	Y	N	Y	N
3. Copy of the approved National Environmental Policy Act (NEPA) document (if one exists). Section I.5 & App B	Y	N	Y	N
4. Is the project an expansion, modification, or improvement to a existing linear transportation project? Section I.6-7	Y	N	Y	N
5. Jurisdictional Determination (JD): SAC approval letter and map? Section I.9 & App C	Y	N	Y	N
6. Does the project involve impacts to ≤3ac freshwater, ≤0.5 acre tidal, or ≤300lf of jurisdictional areas? Section II	Y	N	Y	N
7. If the project involves bridge demolition, does the application provide a description of the demolition plan? Section II	Y	N or NA	Y	N or NA
8. Proposed Project Plans (11x17 black & white, cross sections at all impact areas, bankfull, plan view, etc.). Section II.1 & App G	Y	N or NA	Y	N or NA
a. Do the plans show the entire project area from beginning to end?	Y	N	Y	N
b. Do the plans show every wetland as identified on the JD- impacted OR avoided?	Y	N	Y	N
c. Are there adequate cross sectional diagrams for each typical fill? (to include pipes, etc.) If bridge replacement, is a profile of the bridge included?	Y	N	Y	N
d. Do the project impacts depicted on the plans equal the total impacts in the application and on the mitigation worksheets?	Y	N	Y	N
9. Wetland and Stream Impact Assessment Worksheet? Section II.2 & App D	Y	N	Y	N
10. Does the application describe the construction methods AND do the drawings depict temporary construction impacts? Sections II and IV & App G	Y	N	Y	N
13. Was there consideration of alternatives? Section III	Y	N or NA	Y	N or NA
11. Description of Avoidance and Minimization of waters of the Unites States: To include all on-site measures used to avoid and minimize impacts to wetlands, i.e. reduced side slopes, minimized widths of bike and pedestrian lanes through wetlands, shifts in alignment, reduced medians, etc. ? Section IV	Y	N	Y	N
12. Mitigation Plan to comply with the 2008 Mitigation Rule and the 2010 SAC Guidelines for Preparing a Mitigation Plan? Section V & App E	Y	N	Y	N
a. If proposing mitigation waiver, has functional assessment been completed? Section V.1	Y	N or NA	Y	N or NA
b. If proposing to utilize an existing Mitigation Bank, are worksheets included for credits required? Section V.2	Y	N or NA	Y	N or NA
c. If proposing permittee-responsible, is a complete mitigation plan included (addressing the 12 fundamental components) along with worksheets? Section V.3	Y	N or NA	Y	N or NA
d. If proposing escrow plan, has escrow plan template been completed? Section V.4	Y	N or NA	Y	N or NA
14. Information pertaining to the presence and/or the projects' potential affects to historic properties (to assist in complying with Section 106 of the National Historic Preservation Act of 1966)? Section VII & App F	Y	N or NA	Y	N or NA
15. Biological Assessment Report: Federal and State Threatened and Endangered Species, Habitat Survey? Section VIII & App F	Y	N	Y	N
a. If "May effect determination", is FWS concurrence included?	Y	N or NA	Y	N or NA
16. Essential Fish Habitat (EFH) Assessment and copies of all coordination with NMFS (as appropriate, when there are impacts to EFH)? Section IX & App F	Y	N or NA	Y	N or NA

SCDOT Concurrence _____

Consultant Concurrence _____

Joint Federal and State Application Form For Activities Affecting Waters of the United States Or Critical Areas of the State of South Carolina		This Space for Official Use Only Application No. _____ Date Received _____ Project Manager _____ Watershed # _____	
<p><i>Authorities:</i> 33 USC 401, 33 USC 403, 33 USC 407, 33 USC 408, 33 USC 1341, 33 USC 1344, 33 USC 1413 and Section 48-39-10 et. Seq of the South Carolina Code of Laws. These laws require permits for activities in, or affecting, navigable waters of the United States, the discharge of dredged or fill material into waters of the United States, and the transportation of dredged material for the purpose of dumping it into ocean waters. The Corps of Engineers and the State of South Carolina have established a joint application process for activities requiring both Federal and State review or approval. Under this joint process, you may use this form, together with the required drawings and supporting information, to apply for both the Federal and/or State permit(s).</p> <p><i>Drawings and Supplemental Information Requirements:</i> In addition to the information on this form, you must submit a set of drawings and, in some cases, additional information. A completed application form together with all required drawings and supplemental information is required before an application can be considered complete. See the attached instruction sheets for details regarding these requirements. You may attach additional sheets if necessary to provide complete information.</p>			
1. Applicant Last Name: Gordon		11. Agent Last Name (agent is not required): Collum	
2. Applicant First Name: Siobhan		12. Agent First Name: John	
3. Applicant Company Name: South Carolina Department of Transportation		13. Agent Company Name: Tidewater, A JMT Division	
4. Applicant Mailing Address: P.O. Box 191		14. Agent Mailing Address: P.O. Box 8902	
5. Applicant City: Columbia		15. Agent City: Columbia	
6. Applicant State: SC	7. Applicant Zip: 29202-0191	16. Agent State: SC	17. Agent Zip: 29202
8. Applicant Area Code and Phone No.: (803) 737-1337		18. Agent Area Code and Phone No.: (803) 765-0070	
9. Applicant Fax No.: (803) 737-1394		19. Agent Fax No.: (843) 556-4329	
10. Applicant E-mail: GordonSO@scdot.org		20. Agent E-mail: jcollum@jmt.com	
21. Project Name: Interstate 77 Widening and Rehabilitation (from MM 15 - MM 27)		22. Project Street Address: I-77 (MM 14.9-27)	
23. Project City: Columbia, Blythewood	24. Project County: Richland	25. Project Zip Code: 29223, 29203	26. Nearest Waterbody: see attached
27. Tax Parcel ID: SCDOT Right of Way		28. Property Size (acres): 169.5	
29. Latitude: 34.054575 to 34.209469		30. Longitude: -80.922825 to -80.984175	
31. Directions to Project Site (Include Street Numbers, Street Names, and Landmarks and attach additional sheet if necessary): See attached location map. Please contact John Collum if you need assistance locating the project area (mobile # 803-960-3633).			
32. Description of the Overall Project and of Each Activity in or Affecting U.S. Waters or State Critical Areas (attach additional sheets if needed) See Attachment A			
33. Overall Project Purpose and the Basic Purpose of Each Activity In or Affecting U.S. Waters (attach additional sheets if needed): See Attachment A			
34. Type and quantity of Materials to Be Discharged Dirt or Topsoil: 3 <input checked="" type="checkbox"/> cubic yards Clean Sand: _____ <input type="checkbox"/> cubic yards Mud: _____ <input type="checkbox"/> cubic yards Clay: _____ <input type="checkbox"/> cubic yards Gravel, Rock, or Stone: 269 <input checked="" type="checkbox"/> cubic yards Concrete: _____ <input type="checkbox"/> cubic yards Other (describe): _____ <input type="checkbox"/> cubic yards TOTAL: 272 cubic yards		35. Type and Quantity of Impacts to U.S. Waters (including wetlands). Filling: 0.165 <input checked="" type="checkbox"/> acres <input type="checkbox"/> sq.ft. 269 <input checked="" type="checkbox"/> cubic yards Backfill & Bedding: 0.001 <input checked="" type="checkbox"/> acres <input type="checkbox"/> sq.ft. 3 <input type="checkbox"/> cubic yards Landclearing: _____ <input type="checkbox"/> acres <input type="checkbox"/> sq.ft. _____ <input type="checkbox"/> cubic yards Dredging: _____ <input type="checkbox"/> acres <input type="checkbox"/> sq.ft. _____ <input type="checkbox"/> cubic yards Flooding: _____ <input type="checkbox"/> acres <input type="checkbox"/> sq.ft. _____ <input type="checkbox"/> cubic yards Draining/Excavation: _____ <input type="checkbox"/> acres <input type="checkbox"/> sq.ft. _____ <input type="checkbox"/> cubic yards Shading: _____ <input type="checkbox"/> acres <input type="checkbox"/> sq.ft. _____ <input type="checkbox"/> cubic yards TOTALS: 0.166 acres _____ sq.ft. 272 cubic yards	

36. Individually list wetland impacts including mechanized clearing, fill, excavation, flooding, draining, shading, etc. and attach a site map with location of each impact (attach additional sheets if needed).

Impact No.	Wetland Type	Distance to Receiving Water body (LF)	Purpose of Impact (road crossing, impoundment, flooding, etc)	Impact Size (acres)
See Attachment A				
Total Wetland Impacts (acres)				

37. Individually list all seasonal and perennial stream impacts and attach a site map with location of each impact (attach additional sheets)

Impact No.	Seasonal or Perennial Flow	Average Stream Width (LF)	Impact Type (road crossing, impoundment, flooding, etc)	Impact Length (LF)
See Attachment A				
Total Stream Impacts (Linear Feet)				

38. Have you commenced work on the project site? ☒ YES ☐ NO If yes, describe all work that has occurred and provide dates.

Portions of the rehabilitation (in uplands) have commenced. No work in Waters of the US has begun.

39. Describe measures taken to avoid and minimize impacts to Waters of the United States:

See Attachments A and E.

40. Provide a brief description of the proposed mitigation plan to compensate for impacts to aquatic resources or provide justification as to why mitigation should not be required (Attach a copy of the proposed mitigation plan for review).

See Attachments A and D.

41. See the attached sheet to list the names and addresses of adjacent property owners.

N/A

42. List all Corps Permit Authorizations and other Federal , State, or Local Certifications, Approvals, Denials received for work described in this application.

The USACE issued a jurisdictional determination (SAC# 2015-00155-DS) on July 28, 2015 (See Attachment C). A Categorical Exclusion (Type C) was developed by the SCDOT to address potential impacts upon cultural resources and protected species (See Attachment E).

43. Authorization of Agent. I hereby authorize the agent whose name is given on page one of this application to act in my behalf in the processing of this application and to furnish supplemental information in support of this application.¹

Applicant's Signature

Date

44. Certification. Application is hereby made for a permit or permits to authorize the work and uses of the work as described in this application. I certify that the information in this application is complete and accurate. I further certify that I possess the authority to undertake the work described herein or am acting as the duly authorized agent for the applicant.¹

Applicant's Signature

Date

Agent's Signature

Date

¹The application must be signed by the person who desires to undertake the proposed activity or it may be signed by a duly authorized agent if the authorization statement in blocks 11 and 43 have been completed and signed. 18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department of the United States knowingly and willfully falsifies, conceals, or covers up any trick, scheme, or disguises a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statements or entry, shall be fined not more than \$10,000 or imprisoned not more than five years or both.

Attachment A

SCDOT Permit Assessment / Notification Form

SCDOT Permit Assessment / Notification Form for Nationwide Permit 14

SAC #2015-00155-DS

Note: This document was developed to include the content of the SCDOT GPIA Form and the format of the 2016 GP Pre-Construction Notification Form

I. Project Information

1. Name of project: Interstate 77 Widening and Rehabilitation (from MM 15 – MM27)
2. Location: Richland County, Columbia & Blythewood, SC; 34.054575 to 34.209469, - 80.922825 to 80.984175; Jackson Creek/Windsor Lake, Little Jackson Creek, Crane Creek, and Cumbess Creek.

Location and project area map are found in Attachment B.

3. SCDOT/ NEPA Purpose and Need:

The purpose of the proposed project is to improve operational efficiency and accommodate future traffic volumes along the interstate corridor by increasing I-77's capacity. The existing project limits do not provide enough travel lanes for the traffic through the area, resulting in traffic congestion starting as early as year 2017 when the segment of I-77 between SC 277 and Killian Road is projected to operate at level of service (LOS) E (See NEPA Categorical Exclusion Type C, Attachment E disc for traffic data). The proposed widening project will provide the required number of lanes to operate at LOS D or better for the entire project corridor through design year 2037. The goals and objectives of the proposed project are to promote economic benefit, while avoiding and minimizing environmental impacts and mitigating unavoidable impacts.

4. See Attachment C for a copy of the approved JD:
SAC-2015-00155-DS Issued July 28, 2015.

The project includes rehabilitating approximately five miles of pavement on the existing I-77 southbound lanes from Killian Road (mile marker 22) to Blythewood Road/SC-59 (mile marker 27) in Richland County. During final design, it was discovered that it was necessary to construct slightly outside of the project boundary established in the JD. This required a small amount of fill on the existing I-77 shoulder and side slope for cross-slope correction associated with the additional layer of pavement. JMT personnel conducted a wetlands delineation around this area in accordance with the standards currently employed by the USACE (the Atlantic and Gulf Coastal Plain Regional Supplement). The jurisdictional aquatic feature boundaries were sequentially flagged and located with a sub-meter GPS. Project designers avoided these aquatic features and incorporated stormwater Best Management Practices (BMPs) outside of the jurisdictional areas. Representative graphics of the delineation are included in Attachment C.

5. Federal Highway Administration has completed a NEPA document entitled I-77 Roadway Widening and Improvements and dated June 2, 2015. A copy of the NEPA document is included in Attachment E.
6. Site Assessment:

The proposed project is located in the City of Columbia and unincorporated areas of Richland County, South Carolina. The project area consists of the I-77 corridor. I-77 is a six lane divided highway from Percival Road/SC-12 (mile marker 15) to the I-20 interchange (mile marker 16). I-77 is a four lane divided highway from the I-20 interchange to Farrow Road/SC-277 (mile marker 18). I-77 is a six lane divided highway from Farrow Road/SC-277 to Wilson Road/US 21 (mile marker 24). I-77 is a four lane divided highway from Wilson Road/US 21 to Blythewood Road/SC-59 (mile marker 27). The I-77 widening project area includes the existing roadway and existing bridges: Percival Road/SC-12 interchange, Faraway Drive overpass, I-77/I-20 interchange, Windsor Lake Boulevard overpass, Windsor Lake Bridge, Trenholm Road overpass, Two Notch Road interchange, Edgewater Drive/Little Jackson Creek overpass/bridge, Farrow Road/SC-277 interchange, Hard Scrabble Road overpass, and Killian Road interchange. The roadway drains into roadside ditches and/or directly into either Jackson Creek/Windsor Lake, Little Jackson Creek, Cumbess Creek, or Crane Creek. Land use in the surrounding areas consists of commercial and residential development with various golf courses, cemeteries, churches, hospitals, and hotels and wooded areas immediately adjacent to the roadway. Residential and mixed-use developments are planned near Blythewood Road and Killian Road and the roadway improvements would provide economic benefit. The proposed project is not expected to modify existing land use or change the timing or density of development in the area. The project is not in conflict with any plan, existing land use, or zoning regulation. Site Photographs can be found in Attachment G.

The jurisdictional determination issued by the United States Army Corps of Engineers under SAC-2015-00155-DS on July 28, 2015 is attached (Attachment C). The Preliminary Jurisdictional Determination is for the 566-acre project area, located on and along an approximately 12-mile long segment of I-77 from mile marker 15 to mile marker 27 in Richland County, South Carolina. The project area contains approximately 5,577 linear feet of tributaries, 4,506 acres of federally defined freshwater wetlands, and 2,077 acres of other waters. Tributaries consist of Crane Creek, Cumbess Creek, Little Jackson Creek and unnamed tributaries. Other waters associated with this determination include Windsor Lake and ponds associated with unnamed tributaries. Twenty-three wetlands totaling 4,506 acres range from emergent to palustrine forested and include such species as red maple (*Acer rubrum*), loblolly pine (*Pinus taeda*), swamp tupelo (*Nyssa biflora*), tulip poplar (*Liriodendron tulipifera*), and sweetgum (*Liquidambar styraciflua*). No tributaries were considered navigable water by the United States Coast Guard or the South Carolina Department of Health and Environmental Control.

7. Project Description:

SCDOT proposes to widen approximately seven miles of I-77, in both directions, from Percival Road/SC-12 (mile marker 14.9) on the southern terminus to Killian Road (mile marker 22) on the northern terminus and rehabilitate the pavement surface along the existing lanes from Two Notch Road (mile marker 17) to Killian Road. The project also includes

rehabilitating approximately five miles of pavement on the existing I-77 southbound lanes from Killian Road (mile marker 22) to Blythewood Road/SC-59 (mile marker 27) in Richland County, South Carolina. From Percival Road (SC-12) to I-20 and from SC-277 to approximately mile marker 25, the existing segments of I-77 within the project limits consist of three southbound travel lanes and three northbound travel lanes. From I-20 to SC-277 and from mile marker 25 to Blythewood Road (S-59), the existing segments of I-77 consist of two travel lanes in each direction. The widening includes adding a single travel lane to the existing median in each direction, improving various exit ramps, and widening ten mainline bridges along I-77. The rehabilitation includes removing the pavement surface along the existing lanes and replacing it with new pavement. Although no new right-of-way will be acquired, the existing project corridor is close to various commercial buildings, including one gas station, residential areas, uplands, streams and wetlands. The project would not result in the relocation/displacement of any commercial or residential establishments.

8. Does this project have independent utility?

Yes. The Interstate 77 Widening and Rehabilitation (from MM 15 – MM 27) project does not depend on any other projects to be built by SCDOT, and would still be constructed in the absence of any other projects.

9. Does the project include expansion, modification, and/or improvement to an **existing** linear transportation project?

Yes. The proposed The Interstate 77 Widening and Rehabilitation (from MM 15 – MM 27) project is along the existing I-77 roadway.

10. Waters of the U.S.:

Crane Creek, Cumbess Creek, Jackson Creek (Windsor Lake), Little Jackson Creek and associated unnamed tributaries to these and other tributaries; freshwater wetlands associated with named and unnamed tributaries.

II. Proposed Impacts to Waters of the United States

Individually listed impacts for the project are provided in an impact summary table below:

Impact Summary Tables

Wetland Impacts including fill, excavation, flooding, draining, shading, etc.					
Wetland Impact Site Number (location)	Type of Impact	Area of Impact (acres)	Distance to Receiving Waterbody (LF)	Purpose of Impact (pipe, road crossing, etc.)	Wetland Type
Wetland 19 (Sheet 9)	Fill	0.018	0	Inlet scour protection	palustrine scrub shrub/palustrine forested
Wetland 20 (Sheet 10)	Fill	0.002	140	Outlet protection	palustrine forested/palustrine scrub shrub
Wetland 20 (Sheet 10)	Backfill	0.001	140	Pipe replacement	palustrine forested/palustrine scrub shrub
Wetland 20 (Sheet 11)	Fill	0.003	5	Outlet protection & Pipe replacement	palustrine forested/palustrine scrub shrub
Wetland 21 (Sheet 12)	Fill	0.002	210	Outlet protection	palustrine scrub shrub
Wetland 22 (Sheet 13)	Fill	0.022	0	Inlet scour protection	palustrine forested
Wetland 23 (Sheet 15)	Fill	0.001	3250	Outlet protection	palustrine emergent and palustrine forested

Seasonal and Perennial Stream Impacts					
Stream Site ID (location)	Impact Type (pipe, road fill, etc.)	Impact Length (LF)	Average Stream Width (LF)	Purpose of Impact (pipe, road crossing, etc.)	Seasonal or Perennial Flow
Stream 2 (Sheet 4)	Armor	5	8	Outlet protection	Perennial
Stream 15 (Sheet 5)	Armor	33	6	Outlet protection	Perennial
Stream 18 (Sheet 6)	Armor	15	20-40	Outlet protection	Perennial
Stream 19 (Sheet 7)	Armor	15	6	Outlet protection	Perennial
Stream 19 (Sheet 8)	Armor	27	6	Outlet protection	Perennial
Stream 23 (Sheet 9)	Armor	15	10-12	Inlet scour protection	Perennial
Stream 26 (Sheet 13)	Armor	23	12-20	Inlet scour protection	Perennial
Stream 29 (Sheet 14)	Armor	18	4	Outlet protection	Perennial

1. Stream assessment worksheets can be found in Attachment E.
2. Proposed project plans can be found in Attachment B.

Safety/Clear Zone Clearing will be conducted throughout the project corridor. Outside of streams and wetlands, this area will be cleared of all trees and shrubs and ground down to a depth of 6" (0.5 feet) below grade. In streams and wetlands, trees and shrubs will be cut flush with the ground.

Outfall Ditch Cleanout activities will be conducted as needed in select jurisdictional features and nonjurisdictional areas. All required OFD maintenance will be performed in accordance with USACE RGL 07-02. In jurisdictional areas, maintenance of the existing ditches may include excavations of accumulated sediments back to original contours, reshaping of side slopes, where the original function is not changed and the capacity is not increased. This activity is considered an exempt activity under Section 404(f)(1)(C) of the Clean Water Act so long as the activity is consistent with Section 404(f)(2) and 33 CFR.3234 and 40 CFR 232.3. There will be no discharges into a water of the US that is:

- Part of an activity whose purpose is to convert an area of waters of the US into a use to which it was not previously subject;
- Where the flow or circulation of waters of the US may be impaired;
- The reach of such waters is reduced;
- Where the proposed discharge will result in significant discernible alterations to flow or circulation (the presumption is that flow or circulation may be impaired by such alteration).

Construction access in jurisdictional wetland areas will be obtained by clearing to the ground level only. The use of rubber-tired equipment, timber mats, barges or elevated work platforms (i.e. trestles) or other BMPs will be allowed in the wetland areas as necessary; no fill, grubbing, or double-handling of material will be associated with the construction access in wetlands unless identified and quantified in the permitted plans.

As information, Outfall Ditch Cleanout activities are at the following locations:

Sheet	Stream/Wetland		Length	Drainage Sheet No.
3	2	NA	250 LF	D7
5	13	N/A	50 LF	D13
5	15	N/A	110 LF	D14
7	19	N/A	26 LF	D19
9	24	N/A	47 LF	D22
10	N/A	20	180 LF	D23
11	25	20	70 LF	D23
12	N/A	21	90 LF	D26
14	29	N/A	150 LF	D27
15	N/A	23	110 LF	D29

Construction access for the cranes and other necessary equipment at Windsor Lake and Little Jackson Creek for northbound and southbound I-77 bridge widening will require barges or mats. Windsor Lake was damaged during the flooding associated with the passing of Hurricane Joaquin and has been drained. In order to establish a level enough ground surface to properly place the barges or mats, minor amounts of excavation will be required within Windsor Lake. This excavation will be conducted with an excavator from the upland banks of the lake, and barges or mats will be placed on top of a geotextile fabric; sheet-pile may be necessary. The bank of the lake will need to be ‘notched’ to allow equipment into the lower areas. The excavator will move out onto the mats and continue excavating material necessary to establish a level surface. Barges or mats will continue to be placed in front of the excavator as it moves across the lake. Excavated material will be placed directly into trucks and properly disposed. For both Windsor Lake and Little Jackson Creek, no fill, grubbing, or double-handling of material will be associated with the construction access. Upon completion of the construction activities, disturbed areas will be stabilized with BMPs.

III. Alternatives Analysis

Preferred Alternative – Widening Inside to the Median

This alternative would widen I-77 from Percival Road to Killian Road by adding a single travel lane in each direction to the existing median and repaving existing lanes.

Alternatives Analysis

Three alternatives, including the Preferred and No-Build were considered. The No-Build alternative was carried forward for a baseline comparison of impacts. Only two alternatives (Alternative 1 – Widening Inside to the Median and Alternative 2- Widening to the Outside of Existing Roadway) met the purpose and need for the project.

Alternative 1 (Preferred/Proposed Activity) – Widening Inside to the Median

This alternative consists of widening the interstate from Percival Road to Killian Road by adding a single travel lane in each direction to the inside (within existing median), improving various exit ramps, and widening ten mainline bridges along I-77. This alternative provides an additional travel lane and improves operational efficiency and LOS along the corridor with minimal environmental and community impacts. By widening to the inside, the project would have no effect to cultural resources, and require no new right-of-way. This alternative would impact freshwater wetlands and streams and require a Section 404 Nationwide Permit.

Alternative 2 – Widening to the Outside of Existing Roadway

This alternative consists of widening the interstate from Percival Road to Killian Road by adding a single travel lane in each direction to the outside of the existing roadway. This alternative provides an additional travel lane and would improve operational efficiency and LOS along the corridor with minimal community impacts. By widening to the outside, the project would likely result in utility impacts and require new right-of-way. In addition, this alternative would have potential effects to cultural resources within previously undisturbed areas of the project corridor and impact greater than 0.30 acre of freshwater wetlands and greater than 300 linear feet of streams, which would require a Section 404 Individual Permit. This alternative would have greater wetland and stream impacts than Alternative 1 and due to the increased stream and wetland impacts, would result in increased costs for mitigation.

Alternative 3 – No-Build

This alternative would propose no new design changes and would maintain the existing lane configuration. The LOS, operational efficiency, and interstate capacity would not be improved and accommodation would not be made for future traffic volumes; therefore, the No-Build alternative would not meet the purpose and need of the project and was therefore, eliminated from further consideration.

Comparison of Alternatives

The NEPA Document in Attachment E summarizes the impacts associated with each alternative. The analysis shows that Alternative 1 (the Preferred Alternative) would result in less overall project costs, taking into account wetland and stream mitigation costs, and right-of-way acquisition. Alternative 1 would result in less impact to streams and wetlands than Alternative 2. Alternative 1 best meets the purpose of the project while minimizing costs and impacts to the human and natural environment.

IV. Avoidance & Minimization

To protect wetlands to the maximum extent possible, wetland mitigation sequencing (as outlined in 40 CFR 1508.20) have been followed. Wetlands were first avoided to prevent impacts. Where avoidance was not possible, minimization has been implemented to limit the degree or magnitude of the action.

A table depicting the difference in impacts between the initial project planning / NEPA phase of the project and the final impacts proposed is depicted as follows:

Wetland Type	Estimated Impact in NEPA Phase	Proposed Impact	Difference
Freshwater Wetlands	0.02 ac.	0.049 ac.	+0.029 ac.
Open Water	0.07 ac.	0 ac.	-0.07 ac.
Jurisdictional Streams	317 LF	151 LF	-166 LF

In summary, the final design phase resulted in an overall reduction in impacts. Impacts to jurisdictional streams and open water were reduced by acceptable design changes of location of pipe placement (such as pulling a pipe and outfall placement away from the stream) and changes in the location of toe-of-fill at bridge and roadway activities. Although it was anticipated during the NEPA phase that additional avoidance could be accomplished during final design, this resulted in a significant (52%) reduction of stream impact. Freshwater wetland impacts were initially estimated to be insignificant and very small. Project hydrology designers identified many linear features (jurisdictional and non-jurisdictional) which needed maintenance to prevent roadway flooding during storm events. Increases in impervious surface required additional stabilization of these features and Turf Reinforcement Matting was initially recommended along the lengths of the maintained areas. This type of stabilization was removed as it was determined to be a regulated activity, and rock outlet protection was preferred to slow velocities due to the reduced linear feet of regulated impact. This adjustment required additional rock, in only a few areas to dissipate flow velocities and resulted in the slightly increased amount of wetland impact. This increase in total wetlands impact is still considered insignificant and is below 0.1 acre. Please note that wetlands impacts anticipated in the NEPA phase, such as at Wetlands 6, 11, and 12, were avoided by reducing side slopes.

During construction activities, there is the potential for erosion from exposed areas and temporary siltation. Impacts to waters of the United States will also be minimized through the utilization of SCDOT Stormwater BMPs. Erosion and sediment control measures will be implemented in accordance with Section 107.26 of the SCDOT's Standards Specifications complying with all federal, state, and local laws and regulations controlling pollution of the environment. Necessary precautions will be taken to prevent pollution of streams, lakes, ponds, and reservoirs with soil sedimentation or other harmful materials. Any excavated material (if any) will be disposed of on high ground.

Overall, impacts to the natural environment have been minimized by adding the additional lane of traffic to the median, a previously impacted area. Adding an additional lane of traffic on the outside would have result in increased adverse impacts to the human and natural environment.

V. Section 106 of the National Historic Preservation Act / Historic Properties

There are no Section 106 Properties that will be affected by the proposed project (no potential to cause effects). In accordance with Title 36 Code of Federal Regulations (CFR), Part 800.4 (36 CFR 800.4), background research and an intensive architectural survey of the project's Area of Potential Effects (APE) was conducted in September 2014 to determine if previous cultural resources investigations and previously identified archaeological sites are located in the project limits. The APE extends 300 feet on either side of the road centerlines and is at least 600 feet wide. The architectural survey investigations identified five historic architectural resources within the APE, recommended not eligible for the National Register of Historic

Places (NRHP). Three previously identified archeological sites are located within one-quarter mile of the project area. No previously identified historic architectural resources are located within one-quarter mile of the project area. Construction will take place within the existing right-of-way and the majority of construction will occur within previously disturbed areas of the project corridor; therefore, no archaeological investigations are required because the APE was previously disturbed. On March 6, 2015, the State Historic Preservation Office (SHPO) concurred with the findings that no historic properties will be affected by the proposed undertaking. On March 17, 2015 the Catawba Indian Nation-Tribal Historic Preservation Office concurred with the findings. Attachment E includes supporting documentation and copy of correspondence and/or coordination letters.

VI. Threatened and Endangered Species

A field survey of the project area, consisting of the project corridor within the existing SCDOT right-of-way (approximately 120 feet from the centerline of the northbound and southbound lanes and ramps) was conducted pursuant to Section 7 of the Endangered Species Act. A survey of bird species nesting under bridges within the proposed project corridor was conducted in August 2014 in compliance with the Migratory Bird Treaty Act. During the survey, barn swallow nests were found under bridges at the following locations: I-20, Two notch Road, State Route 227 Ramp, Farrow Road, and Hard Scrabble Road (S-40-83). In accordance with the Migratory Bird Treaty Act, a full survey of these nests and coordination with the USFWS is being performed prior to construction. The project area was surveyed in the field in August 2014 for endangered and threatened species. Habitats surveyed were determined by each species' ecological requirements.

Based on the literature and field visits it was determined that rough-leaved loosestrife and smooth coneflower are the only species which may be affected by the proposed project. For the rough-leaved loosestrife, although no individuals were identified during the survey, this plant was past its seasonal flowering stage (spring); thus identification may have proved difficult. Additionally, South Carolina Department of Natural Resources data indicates that an area of potential habitat does exist in the southern portion of the proposed project boundary. Therefore, the proposed project may affect, but is not likely to adversely affect this species. For the smooth coneflower, although no individuals were identified during the survey, this plant was past its seasonal flowering stage (May through July); thus identification may have proved difficult. Additionally, one of its preferred habitats is along roadsides; therefore, this project may affect, but is not likely to adversely affect this species. A copy of the Biological Assessment as well as the USFWS concurrence letter (dated February 20, 2015) can be found in Attachment E.

VII. Essential Fish Habitat (EFH)

There will be no impacts to EFH.

VIII. Hydrology & Hydraulics / Floodplain Management Statement

The stream crossings at Crane Creek, Cumbess Creek, Jackson Creek, and Little Jackson Creek are located in Special flood hazard area Zone AE, areas of high risk for flooding subject to inundation by the 1 percent annual-chance flood where base flood elevations are shown. Each of these crossings has been designed to achieve a "No-Rise" certification (Attachment F) since

there will be no anticipated change in the 100-year flood elevations. The remainder of the proposed project is located within Zone X, an area of minimal flood hazard outside of the 0.1 percent and 0.2 percent annual-chance (500-year) flood area, as defined by the Federal Emergency Management Agency (FEMA). FEMA Flood Insurance Rate Maps (FIRMs) for the project are located in Attachment E (note preliminary mapping dated 4/30/15 was utilized for hydrology design). All major bridge and culvert crossings contain the floods with no overtopping of the roadway. Based on the hydraulic analysis of the preconstruction and post construction discharges, the planned roadway improvements will have no significant impact on either flood elevations or flood widths.

The Interstate 77 Widening and Rehabilitation (from MM 15 – MM 27) project has been designed to meet all requirements set forth by SCDOT, AASHTO, FHWA and FEMA. All design criteria for storm drainage, culverts, and bridges were based on SCDOT's "Requirements for Hydraulic Design Studies" dated May 26, 2009. The SCDOT Requirements met or exceeded all recommendations by AASHTO, FHWA and FEMA. The SCDOT "Requirements for Hydraulic Design Studies" dated May 26, 2009 meet or exceed all recommendations by AASHTO, FHWA, and FEMA. A verification memo stamped by the hydraulic design engineer will be provided after all hydraulic studies for this project have been completed.

X. 401 Water Quality and Ocean and Coastal Resources

South Carolina Department of Health and Environmental Control (SCDHEC) administers the Water Quality Certification program pursuant to Section 401 of the Clean Water Act (CWA). Section 401 requires that the state issue certification for any activity which requires a USACE Section 404 permit and may result in a discharge to State waters. All activities requiring a Section 404 permit result in a discharge to waters or wetlands. Therefore, SCDHEC must take certification action on all Section 404 permit applications. The Section 404 permit is not valid until Section 401 certification is approved. This project is outside of the Coastal Zone of South Carolina. SCDHEC has Certified Nationwide Permit 14 with conditions (Attachment H, 401 Certification of this project is pending USACE authorization).

XI. Wild and Scenic Rivers

No designated wild and scenic rivers are present within the project limits.

XII. Secondary and/or Cumulative Impacts

The project will not cause secondary or cumulative impacts. The project will accommodate an additional travel lane, but the additional lane is not expected to promote additional development in the surrounding area.

IX. Mitigation

The project area crosses an ecoregion Level III boundary and necessitates purchase of credits from 2 separate banks. Ecoregion maps with the project boundary and jurisdictional features are included in Attachment D. Credits will be purchased or debited from Sandy Fork and Mill Creek Mitigation Banks based the Charleston District USACE Mitigation SOP. The mitigation calculation worksheets are included in Attachment D. 90.85 credits will be purchased or debited from the Sandy Fork Mitigation Bank to mitigate for 41 linear feet of stream impacts (Streams 26 & 29). 262.75 credits will be purchased or debited from the Mill Creek Mitigation Bank to mitigate for 110 linear feet of stream impacts (Streams 2, 15, 18, 19, and 23). At least ½ of the mitigation credits will be restoration credits.

Mitigation for unavoidable impacts to wetlands should not be required as wetland losses are below 0.1 acre. As further consideration, the wetland impacts at Wetland 19 and 22 are required for stabilization immediately upstream of existing culverts. Impacts to Wetland 20, 21 and 23 are associated with existing pipe outlets and for stabilization of flow velocities. These areas represent already impaired areas of the systems and the riprap will prevent any erosion of the wetlands into downstream aquatic areas. These small areas are part of larger systems (which continue offsite) and the impacts in the immediate vicinity of the culverts/pipes will not result in the loss of the functions and values of the systems.



SCDOT Authorized Agent's Signature

9/28/2016

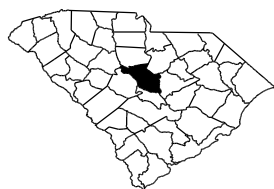
Date

Attachment B

Permit Figures

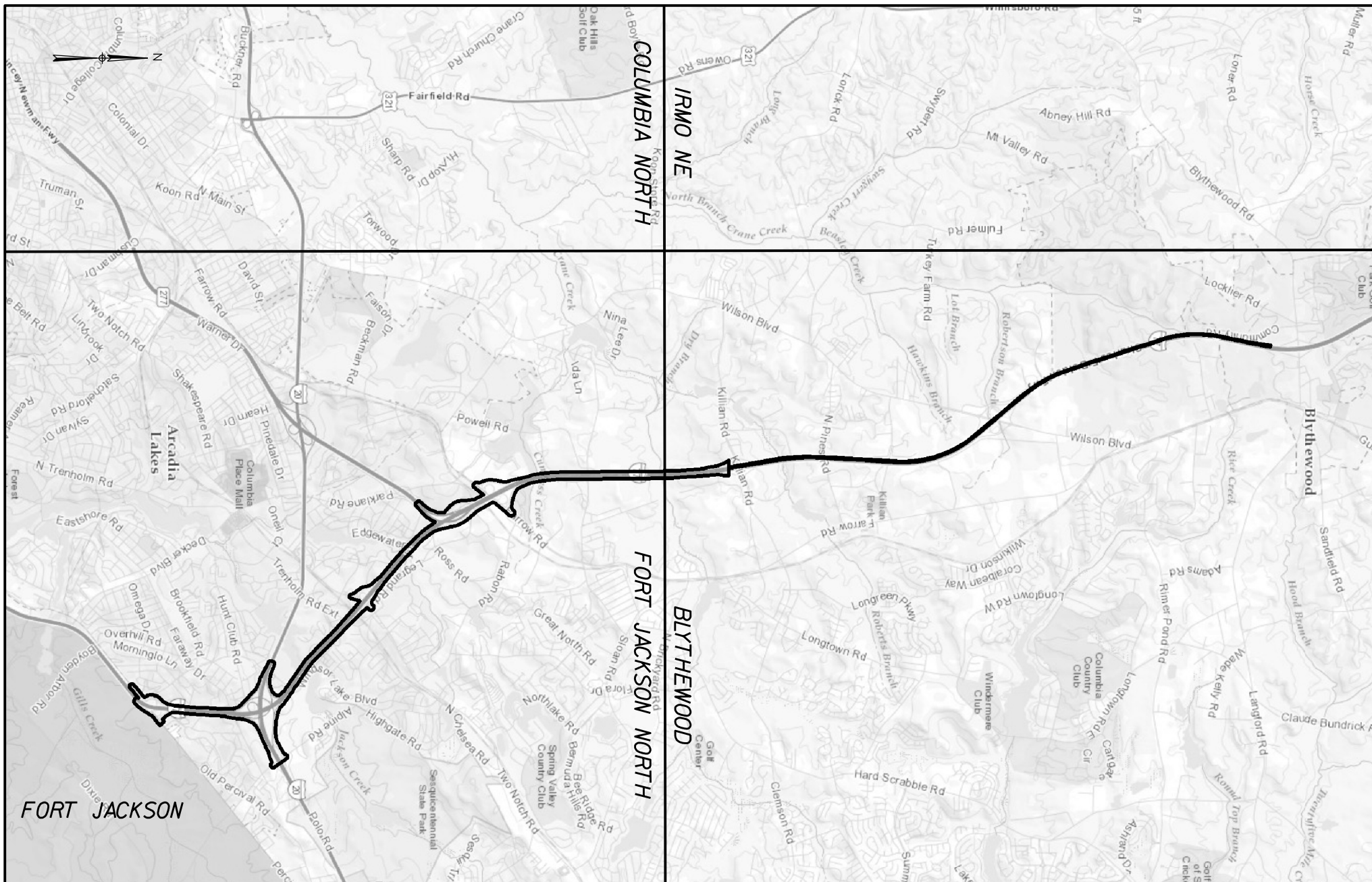


FORT JACKSON



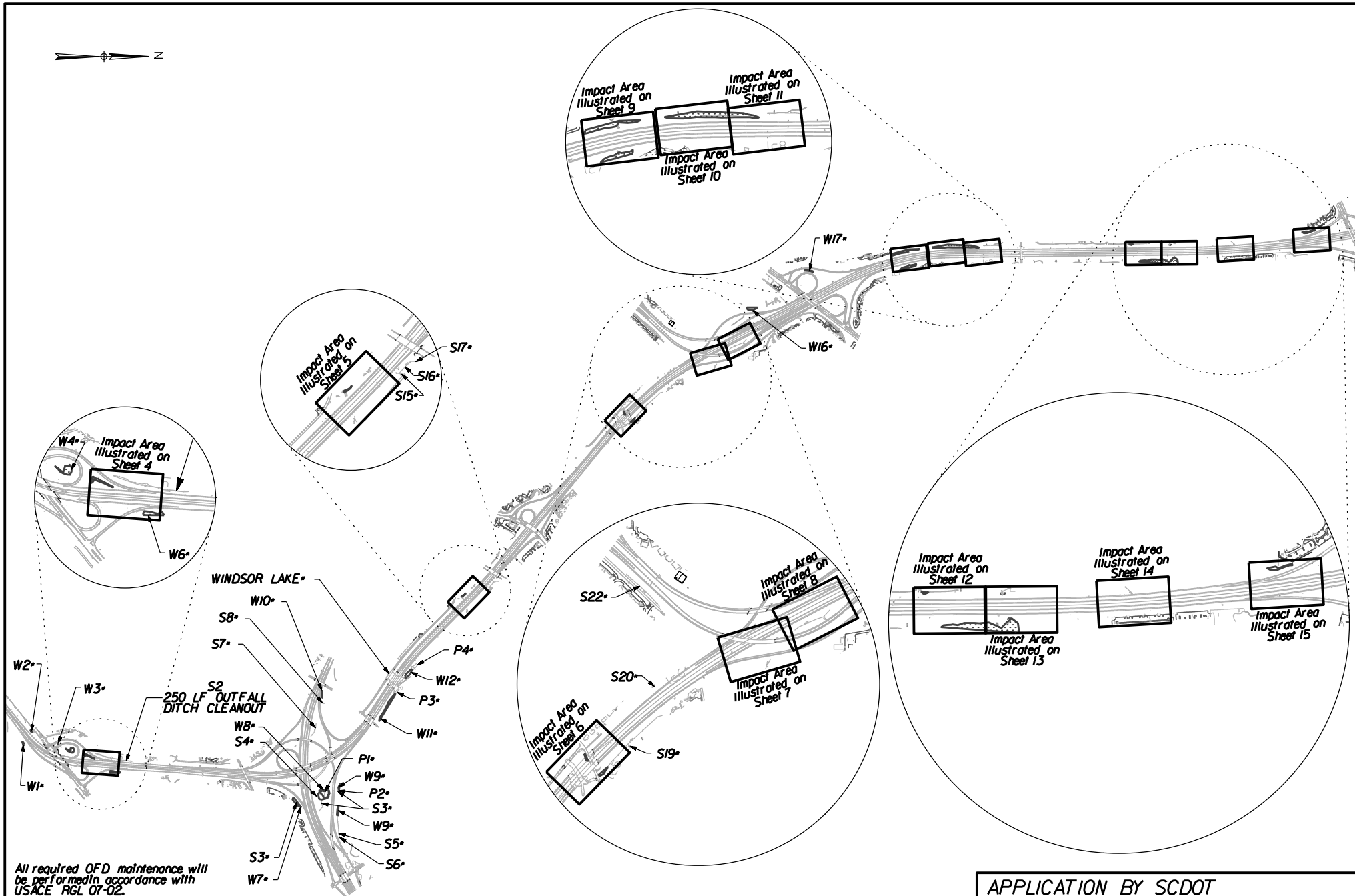
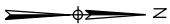
SITE LOCATION MAP

APPLICATION BY SCDOT
 PROJECT ID P027002: I-77 WIDENING
 AND REHABILITATION (MM15-MM27)
 RICHLAND COUNTY, SC
 DATE: 8/2016
 SHEET: 1 OF 31
 REVISION DATE:



USGS TOPOGRAPHY MAP

APPLICATION BY SCDOT
PROJECT ID P027002: I-77 WIDENING
AND REHABILITATION (MM15-MM27)
RICHLAND COUNTY, SC
DATE: 8/2016
SHEET: 2 OF 31
REVISION DATE:

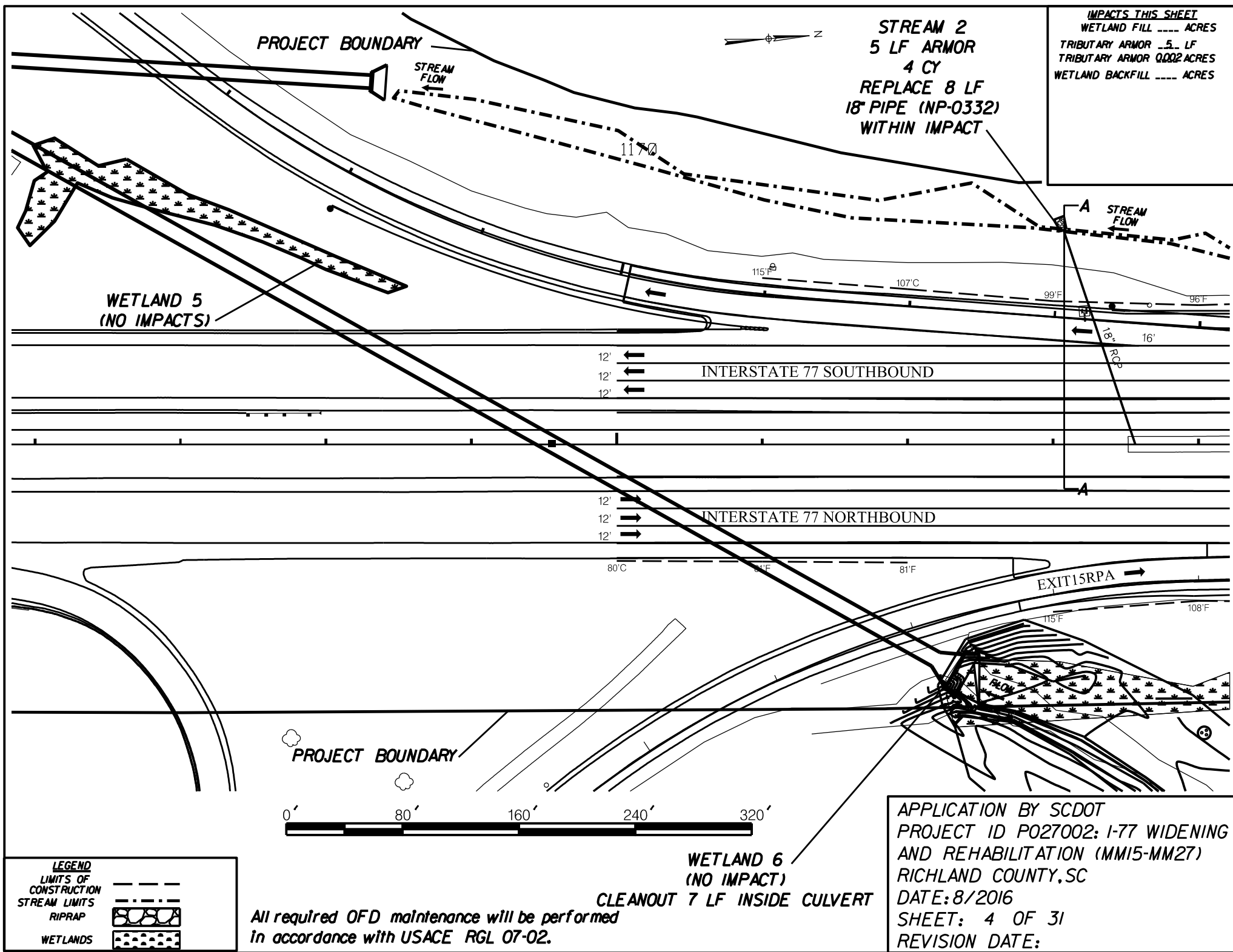


All required OFD maintenance will be performed in accordance with USACE RGL 07-02.

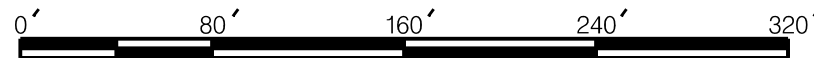
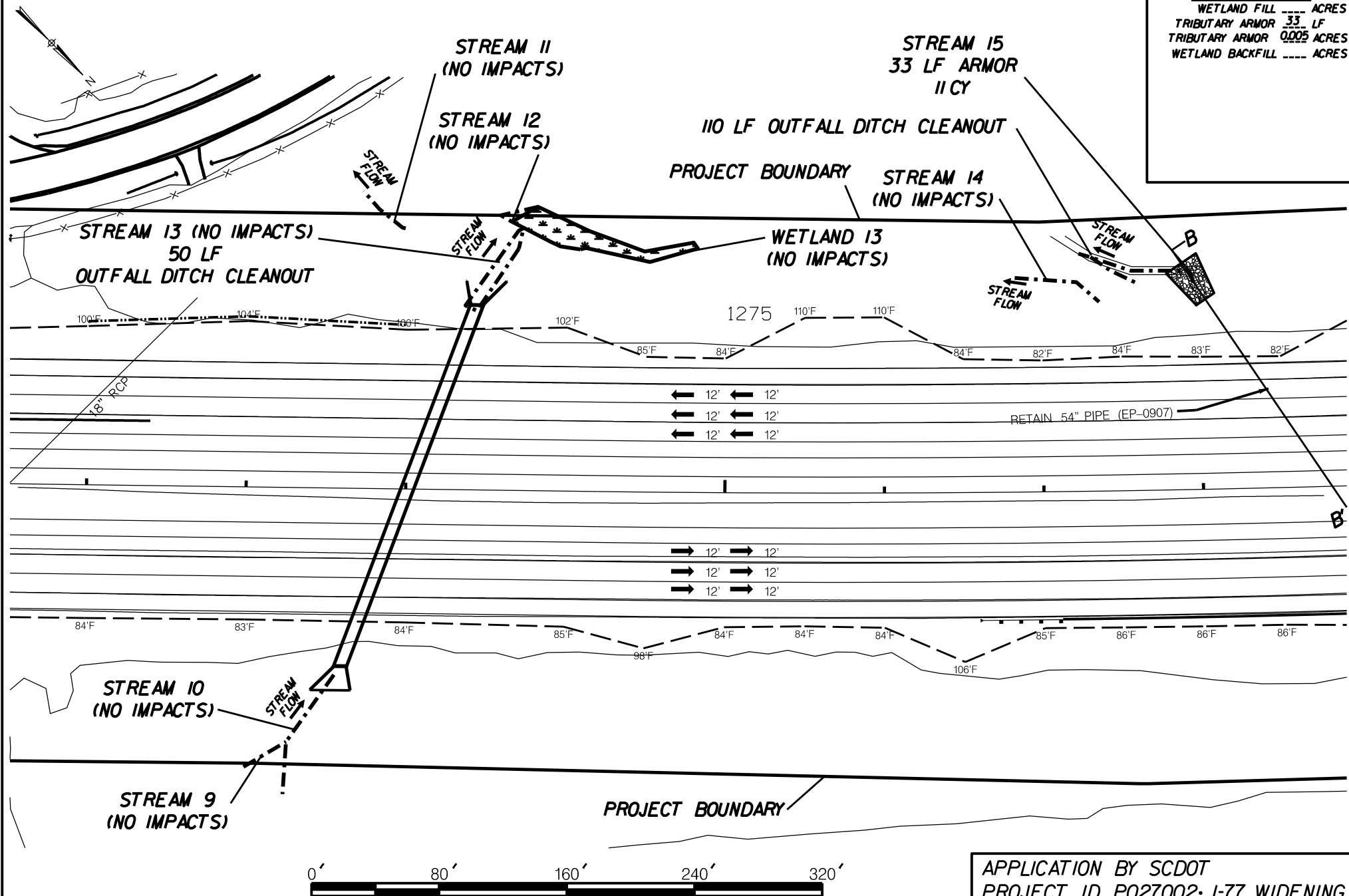
• DENOTES NO IMPACT

SHEET LAYOUT

APPLICATION BY SCDOT
PROJECT ID P027002: I-77 WIDENING
AND REHABILITATION (MM15-MM27)
RICHLAND COUNTY, SC
DATE: 8/2016
SHEET: 3 OF 31
REVISION DATE:



IMPACTS THIS SHEET
 WETLAND FILL ----- ACRES
 TRIBUTARY ARMOR 33 LF
 TRIBUTARY ARMOR 0.005 ACRES
 WETLAND BACKFILL ----- ACRES



LEGEND

LIMITS OF CONSTRUCTION -----

STREAM LIMITS -----

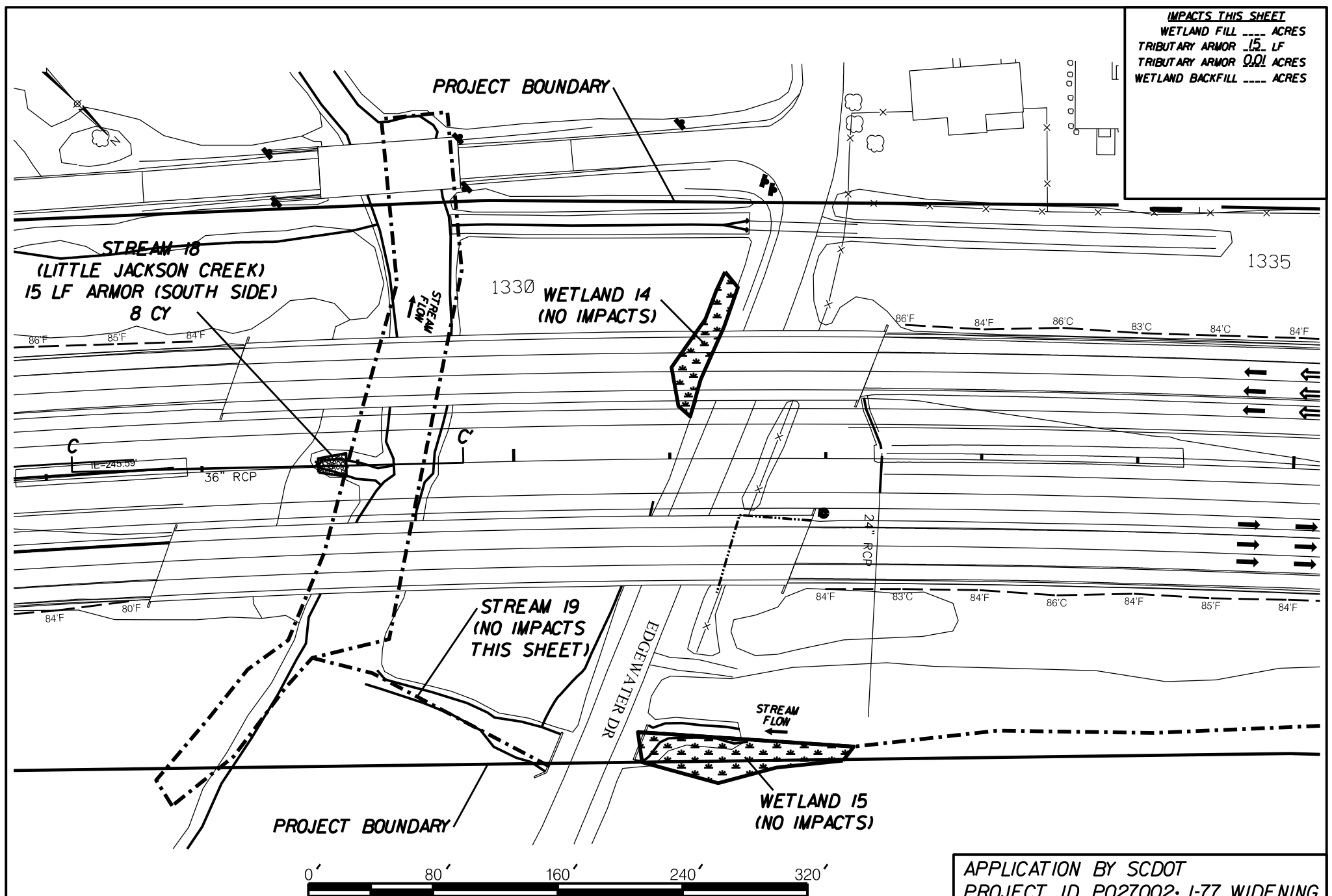
RIPRAP [Pattern]

WETLANDS [Pattern]

All required OFD maintenance will be performed
 in accordance with USACE RGL 07-02.

APPLICATION BY SCDOT
 PROJECT ID P027002: I-77 WIDENING
 AND REHABILITATION (MM15-MM27)
 RICHLAND COUNTY, SC
 DATE: 8/2016
 SHEET: 5 OF 31
 REVISION DATE:

IMPACTS THIS SHEET	
WETLAND FILL	----- ACRES
TRIBUTARY ARMOR	<u>15</u> LF
TRIBUTARY ARMOR	<u>0.01</u> ACRES
WETLAND BACKFILL	----- ACRES



LEGEND

LIMITS OF CONSTRUCTION: - - - - -

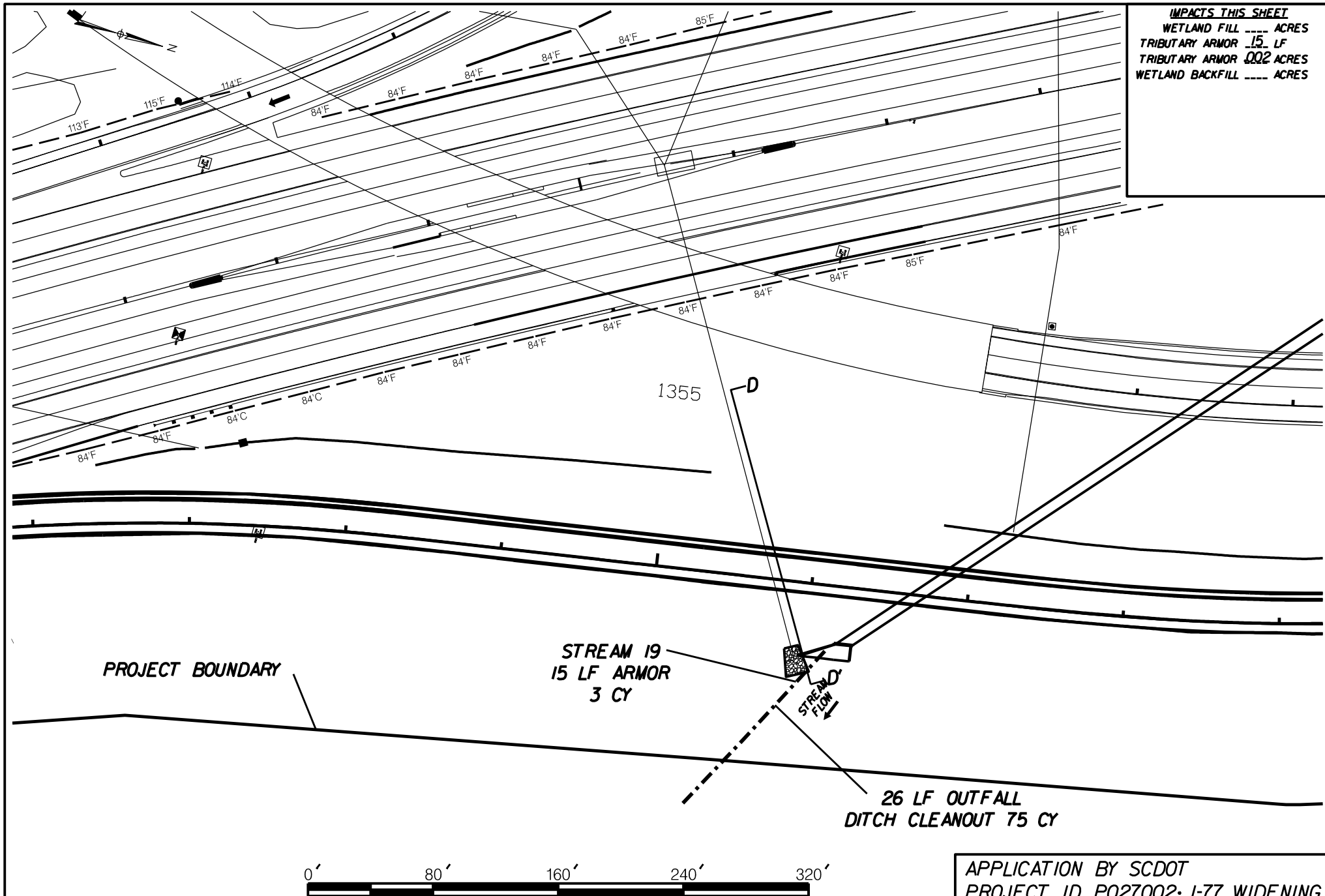
STREAM LIMITS: - - - - -

RIPRAP: [Symbol]

WETLANDS: [Symbol]

APPLICATION BY SCDOT
 PROJECT ID P027002: I-77 WIDENING
 AND REHABILITATION (MM15-MM27)
 RICHLAND COUNTY, SC
 DATE: 8/2016
 SHEET: 6 OF 31
 REVISION DATE:

IMPACTS THIS SHEET
 WETLAND FILL ---- ACRES
 TRIBUTARY ARMOR 15 LF
 TRIBUTARY ARMOR 002 ACRES
 WETLAND BACKFILL ---- ACRES



LEGEND

LIMITS OF CONSTRUCTION ---

STREAM LIMITS - - -

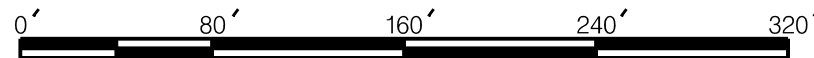
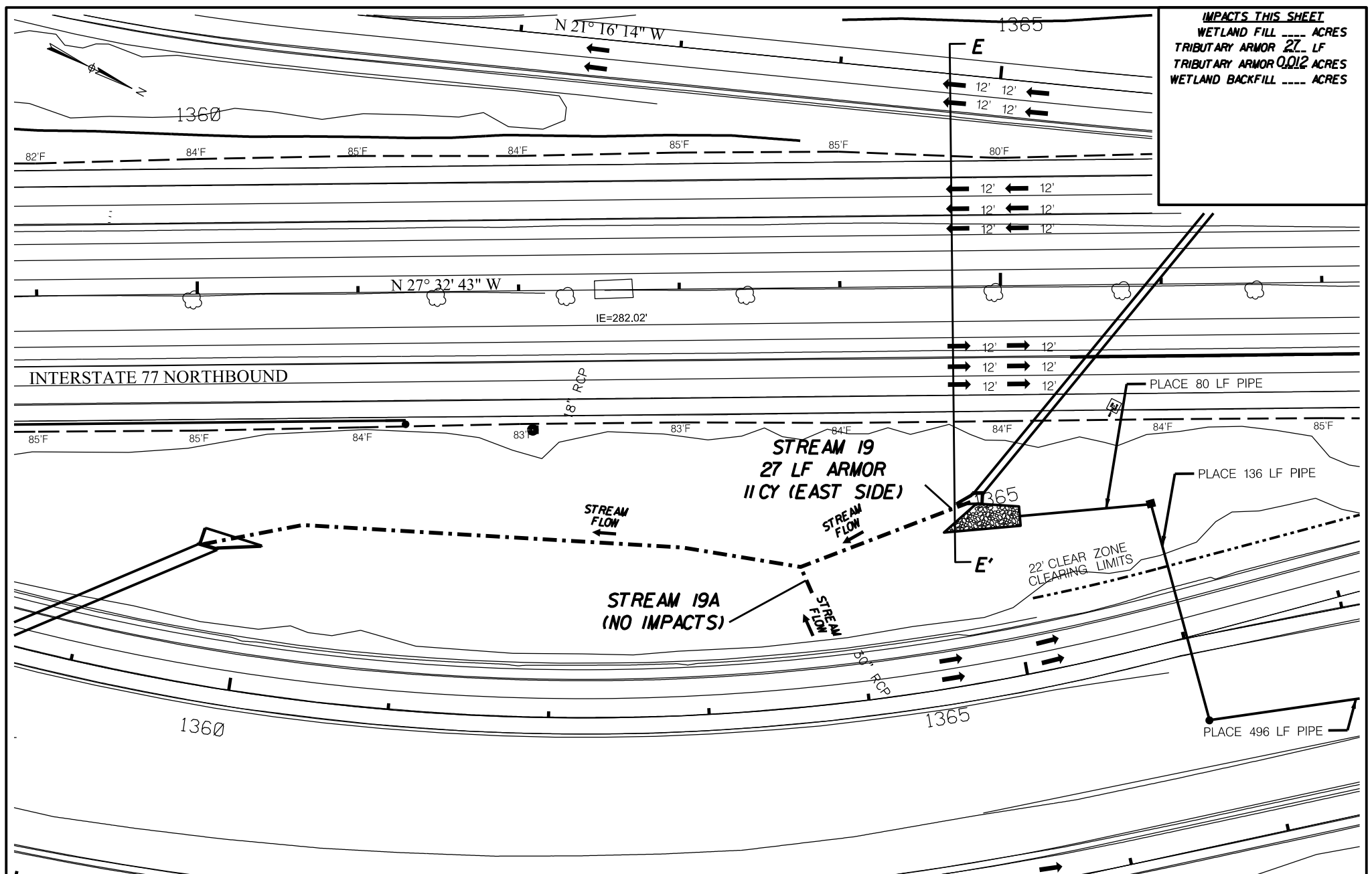
RIPRAP [Symbol: Stippled pattern]

WETLANDS [Symbol: Dotted pattern]

*All required OFD maintenance will be performed
 in accordance with USACE RGL 07-02.*

APPLICATION BY SCDOT
 PROJECT ID P027002: I-77 WIDENING
 AND REHABILITATION (MM15-MM27)
 RICHLAND COUNTY, SC
 DATE: 8/2016
 SHEET: 7 OF 31
 REVISION DATE:

IMPACTS THIS SHEET
 WETLAND FILL ----- ACRES
 TRIBUTARY ARMOR 27 LF
 TRIBUTARY ARMOR 0.012 ACRES
 WETLAND BACKFILL ----- ACRES



LEGEND

LIMITS OF CONSTRUCTION -----

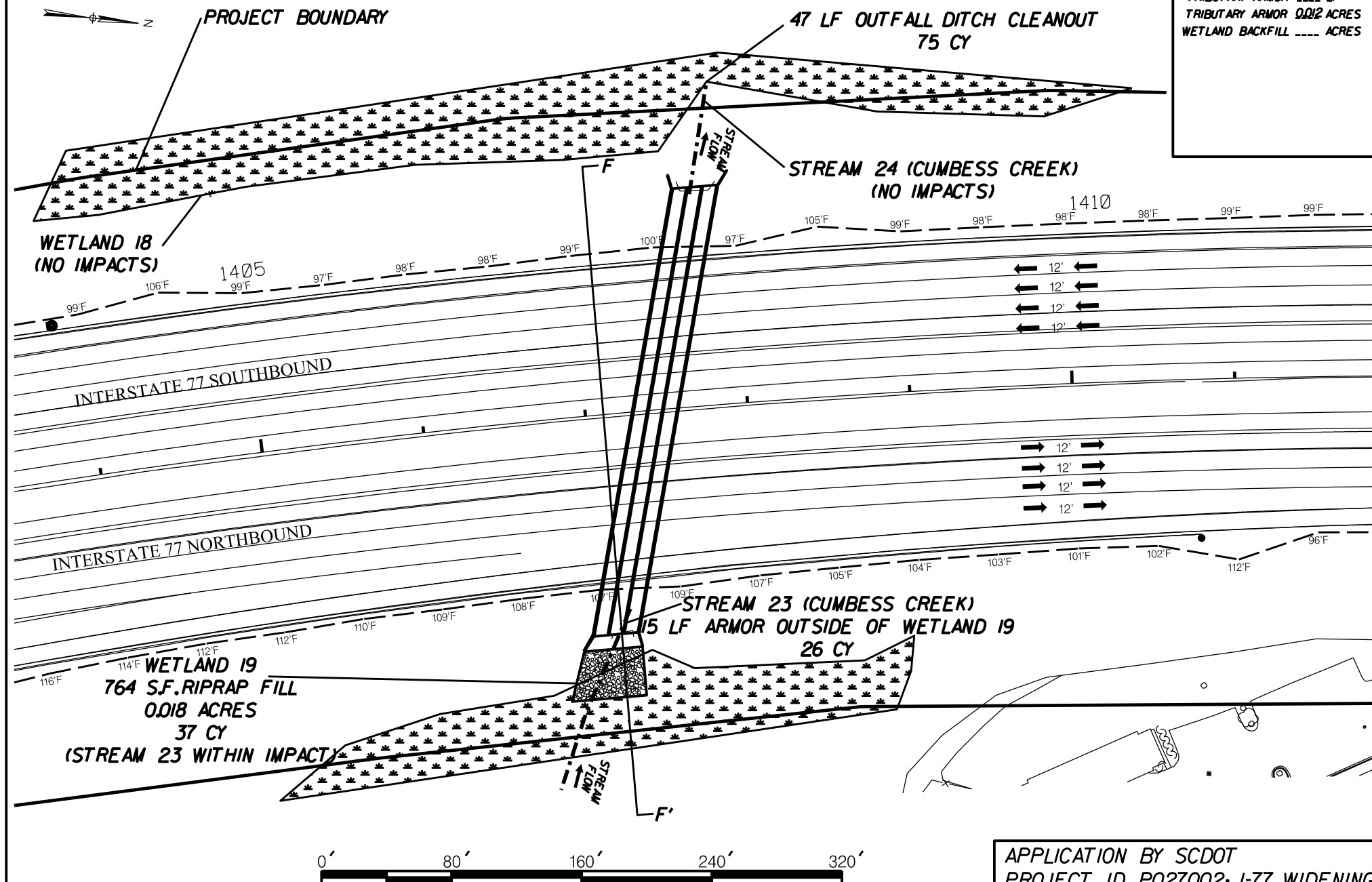
STREAM LIMITS -----

RIPRAP [Symbol]

WETLANDS [Symbol]

APPLICATION BY SCDOT
 PROJECT ID P027002: I-77 WIDENING
 AND REHABILITATION (MM15-MM27)
 RICHLAND COUNTY, SC
 DATE: 8/2016
 SHEET: 8 OF 31
 REVISION DATE:

IMPACTS THIS SHEET
 WETLAND FILL 0.018 ACRES
 TRIBUTARY ARMOR 15 LF
 TRIBUTARY ARMOR 0.012 ACRES
 WETLAND BACKFILL ----- ACRES



LEGEND

LIMITS OF CONSTRUCTION -----

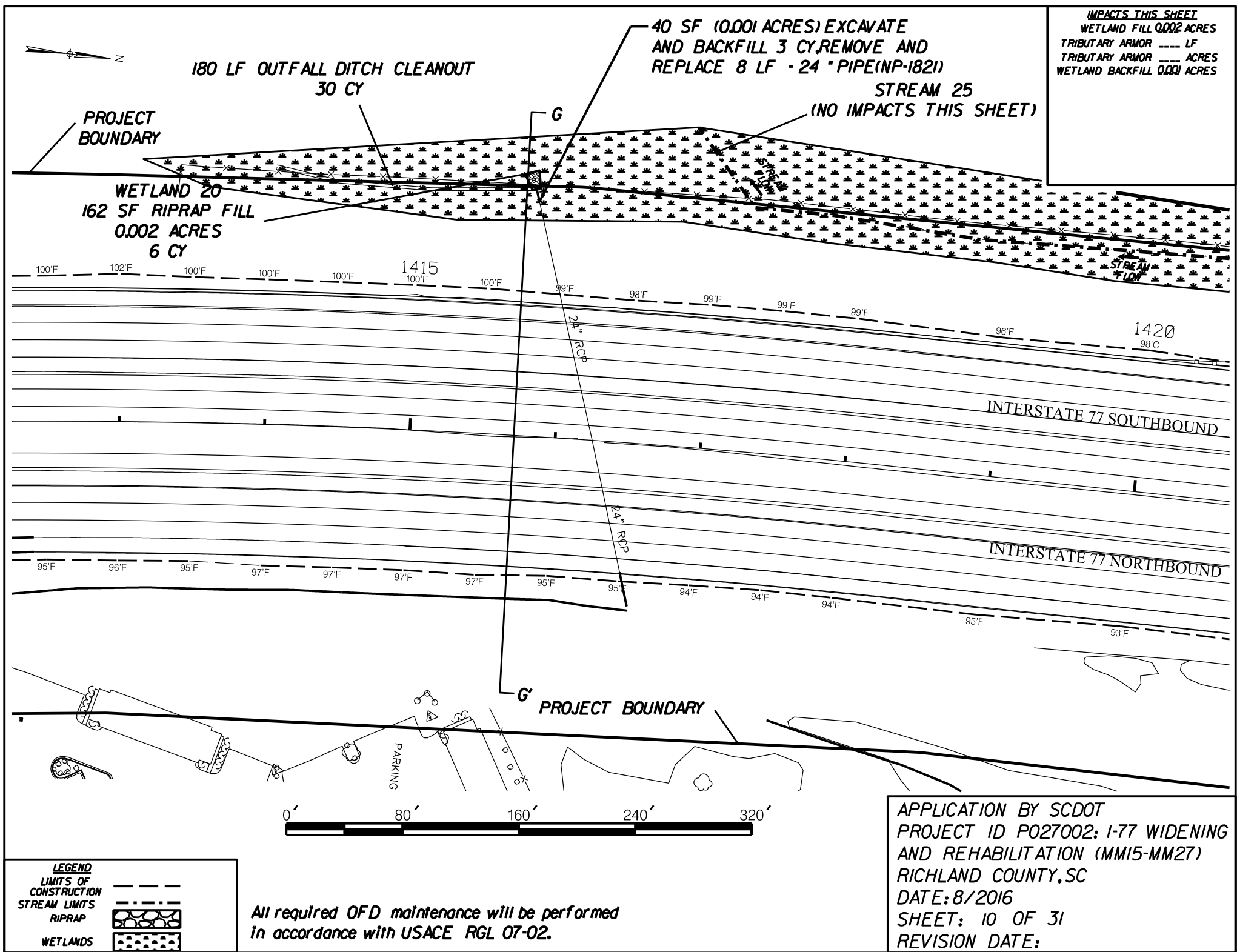
STREAM LIMITS - - - - -

RIPRAP [Symbol]

WETLANDS [Symbol]

All required OFD maintenance will be performed
 in accordance with USACE RGL 07-02.

APPLICATION BY SCDOT
 PROJECT ID P027002: I-77 WIDENING
 AND REHABILITATION (MM15-MM27)
 RICHLAND COUNTY, SC
 DATE: 8/2016
 SHEET: 9 OF 31
 REVISION DATE:



IMPACTS THIS SHEET
 WETLAND FILL 0.003 ACRES
 TRIBUTARY ARMOR ---- LF
 TRIBUTARY ARMOR ---- ACRES
 WETLAND BACKFILL ---- ACRES

70 LF OUTFALL DITCH CLEANOUT
 EST.EXC.25 CY

WETLAND 20
 150 SF RIPRAP FILL
 0.003 ACRES
 7 CY
 (STREAM 25 WITHIN IMPACT)

PROJECT BOUNDARY

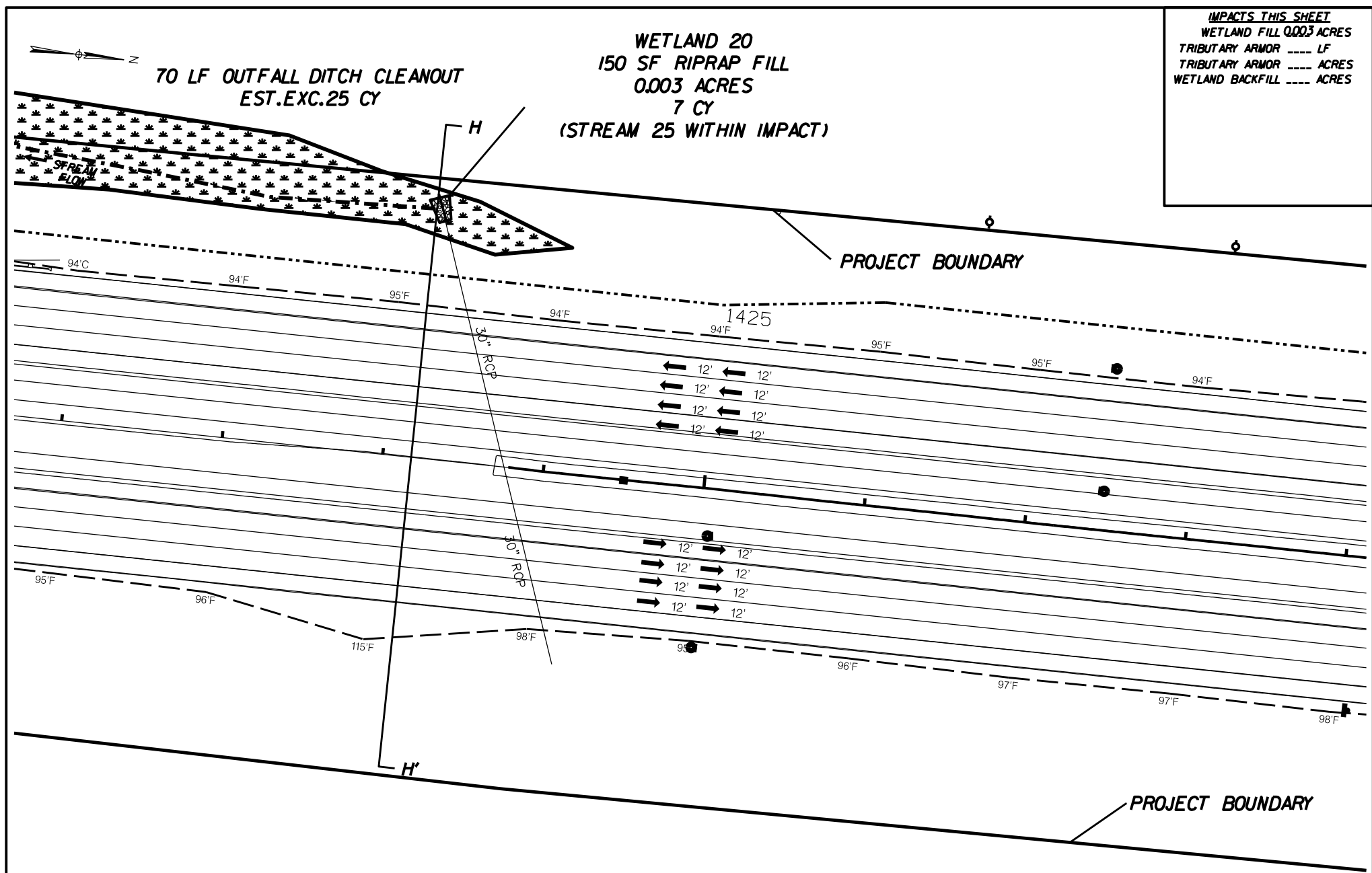
PROJECT BOUNDARY

0' 80' 160' 240' 320'

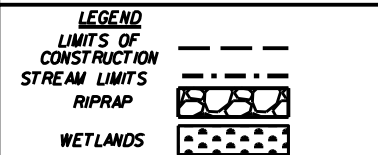
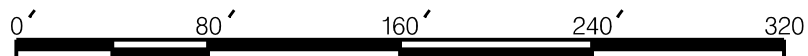
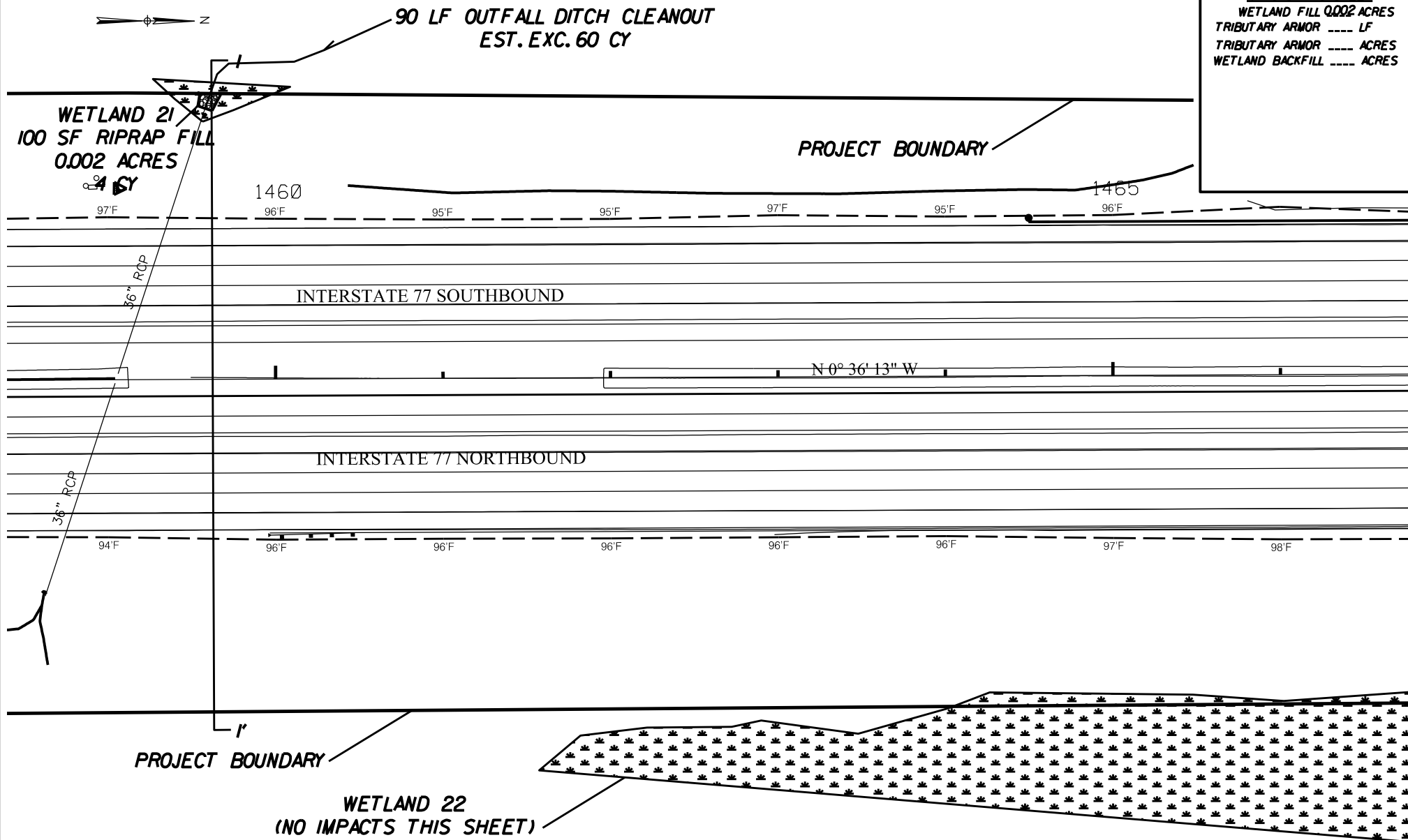
All required OFD maintenance will be performed
 in accordance with USACE RGL 07-02.

APPLICATION BY SCDOT
 PROJECT ID P027002: I-77 WIDENING
 AND REHABILITATION (MM15-MM27)
 RICHLAND COUNTY, SC
 DATE: 8/2016
 SHEET: 11 OF 31
 REVISION DATE:

LEGEND
 LIMITS OF CONSTRUCTION ----
 STREAM LIMITS - - - - -
 RIPRAP [Symbol]
 WETLANDS [Symbol]

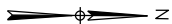


IMPACTS THIS SHEET
 WETLAND FILL 0.002 ACRES
 TRIBUTARY ARMOR ---- LF
 TRIBUTARY ARMOR ---- ACRES
 WETLAND BACKFILL ---- ACRES



All required OFD maintenance will be performed
 in accordance with USACE RGL 07-02.

APPLICATION BY SCDOT
 PROJECT ID P027002: I-77 WIDENING
 AND REHABILITATION (MM15-MM27)
 RICHLAND COUNTY, SC
 DATE: 8/2016
 SHEET: 12 OF 31
 REVISION DATE:



PROJECT BOUNDARY

IMPACTS THIS SHEET
WETLAND FILL 0.022 ACRES
TRIBUTARY ARMOR 23 LF
TRIBUTARY ARMOR 0.008 ACRES
WETLAND BACKFILL ---- ACRES

STREAM 28
CRANE CREEK
(NO IMPACTS)

1470

96°F

97°F

96°F

95°F

96°F

96°F

96°F

97°F

97°F

← 12' ←
← 12' ←
← 12' ←
← 12' ←

→ 12' →
→ 12' →
→ 12' →
→ 12' →

98°F

97°F

96°F

97°F

97°F

97°C

94°F

96°F

96°F

97°F

97°F

96°F

STREAM 26
(CRANE CREEK)

23 LF ARMOR OUTSIDE WETLAND 22
106 CY

WETLAND 22
942 SF RIPRAP FILL
0.022 ACRES
35 CY

PROJECT BOUNDARY

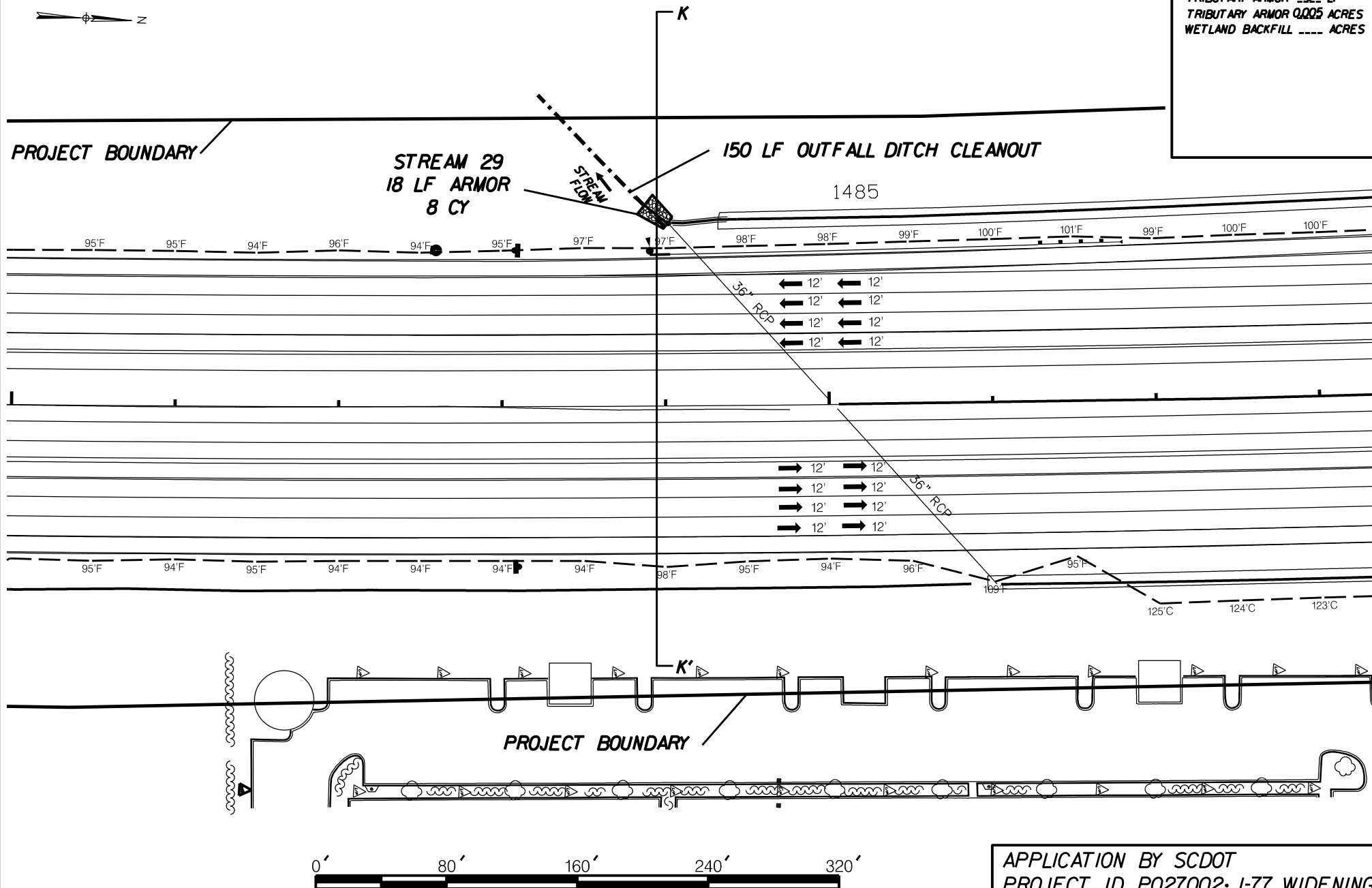
(STREAM 26 WITHIN IMPACT)

0' 80' 160' 240' 320'

LEGEND
LIMITS OF
CONSTRUCTION ---
STREAM LIMITS - - -
RIPRAP [Pattern]
WETLANDS [Pattern]

APPLICATION BY SCDOT
PROJECT ID P027002: I-77 WIDENING
AND REHABILITATION (MM15-MM27)
RICHLAND COUNTY, SC
DATE: 8/2016
SHEET: 13 OF 31
REVISION DATE:

IMPACTS THIS SHEET
 WETLAND FILL ----- ACRES
 TRIBUTARY ARMOR 18 LF
 TRIBUTARY ARMOR 0.005 ACRES
 WETLAND BACKFILL ----- ACRES



LEGEND

LIMITS OF CONSTRUCTION -----

STREAM LIMITS -----

RIPRAP [Pattern]

WETLANDS [Pattern]

All required OFD maintenance will be performed
 in accordance with USACE RGL 07-02.

APPLICATION BY SCDOT
 PROJECT ID P027002: I-77 WIDENING
 AND REHABILITATION (MM15-MM27)
 RICHLAND COUNTY, SC
 DATE: 8/2016
 SHEET: 14 OF 31
 REVISION DATE:



110 LF OUTFALL DITCH CLEANOUT

WETLAND 23
50 SF RIPRAP FILL
0.001 AC
3 CY

IMPACTS THIS SHEET
WETLAND FILL 0.001 ACRES
TRIBUTARY ARMOR ---- LF
TRIBUTARY ARMOR ---- ACRES
WETLAND BACKFILL ---- ACRES

PROJECT
BOUNDARY

EXIT22RPC

1505

1500
129°F 137°F 141°F 144°F
10' 4' 85°F 86°F 87°F 88°F 89°F 90°F 91°F 92°F 94°F 94°F 96°F 97°F

12' 12' 12' 12'

72'

12' 12' 12' 12'

EXIT22RPD

16' 16'

PROJECT
BOUNDARY

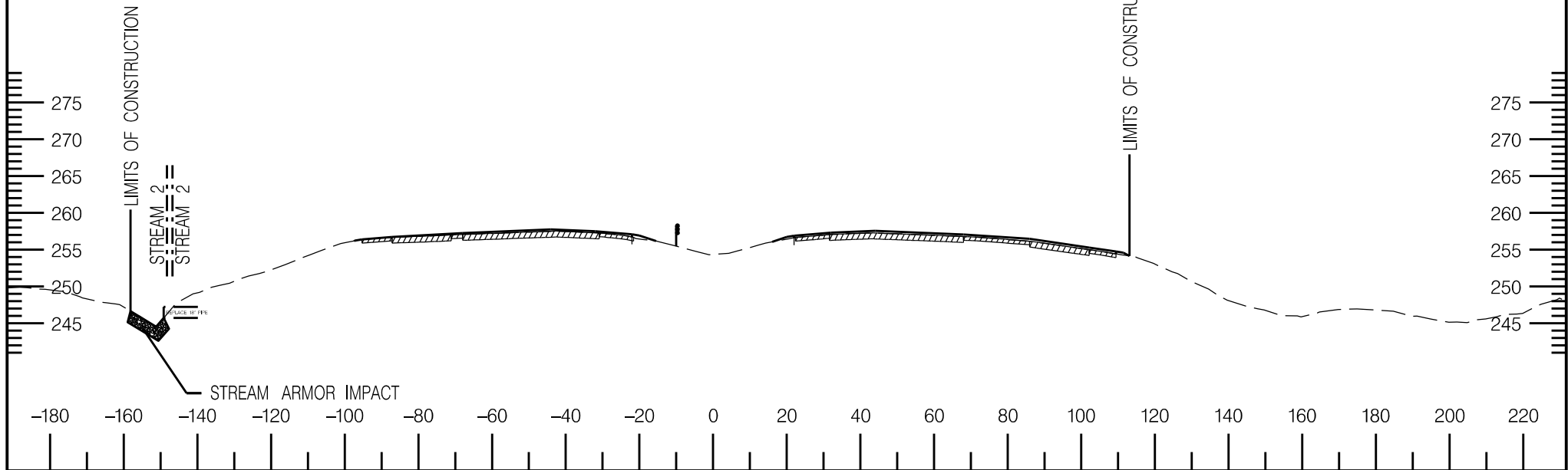
0' 80' 160' 240' 320'

All required OFD maintenance will be performed
in accordance with USACE RGL 07-02.

LEGEND
LIMITS OF
CONSTRUCTION
STREAM LIMITS
RIPRAP
WETLANDS

APPLICATION BY SCDOT
PROJECT ID P027002: I-77 WIDENING
AND REHABILITATION (MM15-MM27)
RICHLAND COUNTY, SC
DATE: 8/2016
SHEET: 15 OF 31
REVISION DATE:

I-77
STA. 1173+07.66



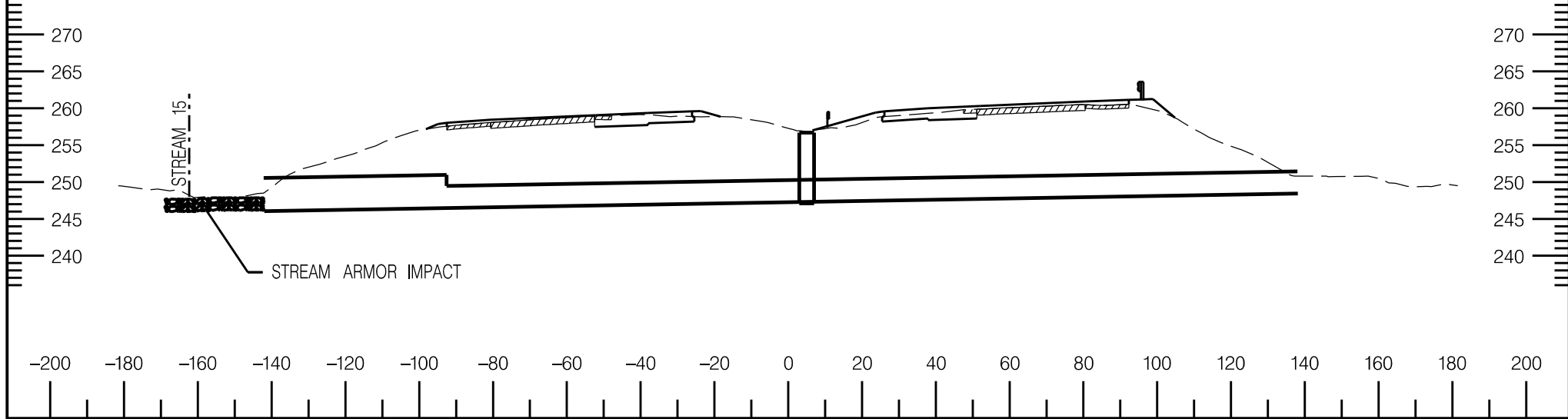
LEGEND

LIMITS OF
CONSTRUCTION ---
STREAM LIMITS ---
RIPRAP

SECTION A-A'

APPLICATION BY SCDOT
PROJECT ID P027002: I-77 WIDENING
AND REHABILITATION (MM15-MM27)
RICHLAND COUNTY, SC
DATE: 8/2016
SHEET: 16 OF 31
REVISION DATE:

I-77
STA. 1278+80.13



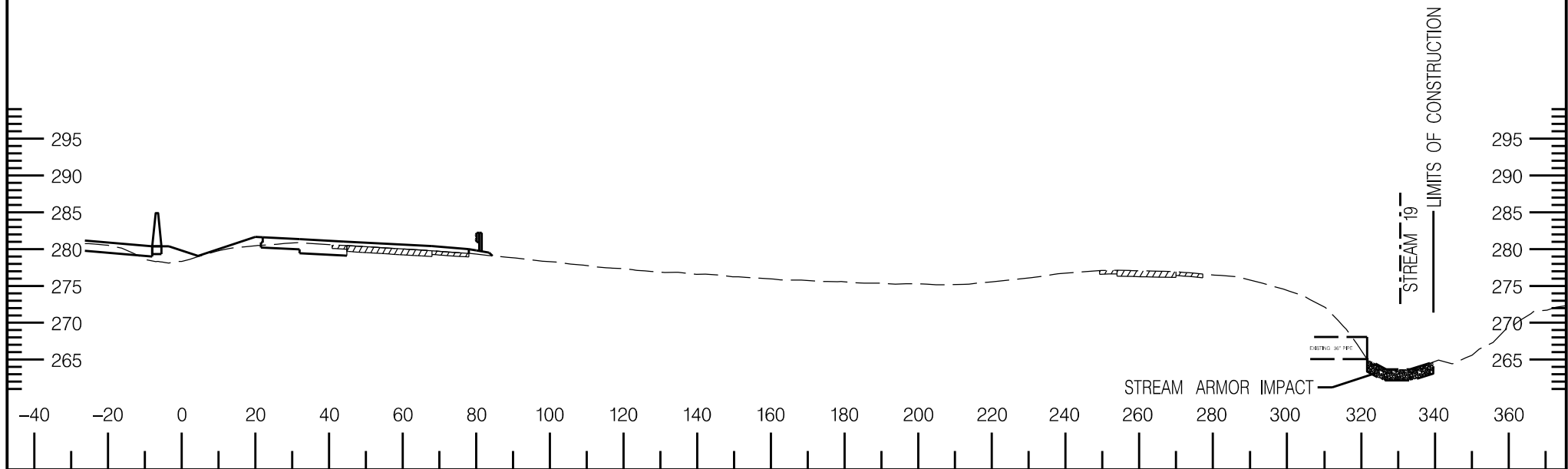
LEGEND
LIMITS OF
CONSTRUCTION
STREAM LIMITS
RIPRAP



SECTION B-B'

APPLICATION BY SCDOT
PROJECT ID P027002: I-77 WIDENING
AND REHABILITATION (MM15-MM27)
RICHLAND COUNTY, SC
DATE: 8/2016
SHEET: 17 OF 31
REVISION DATE:

I-77
STA. 1355+69.44



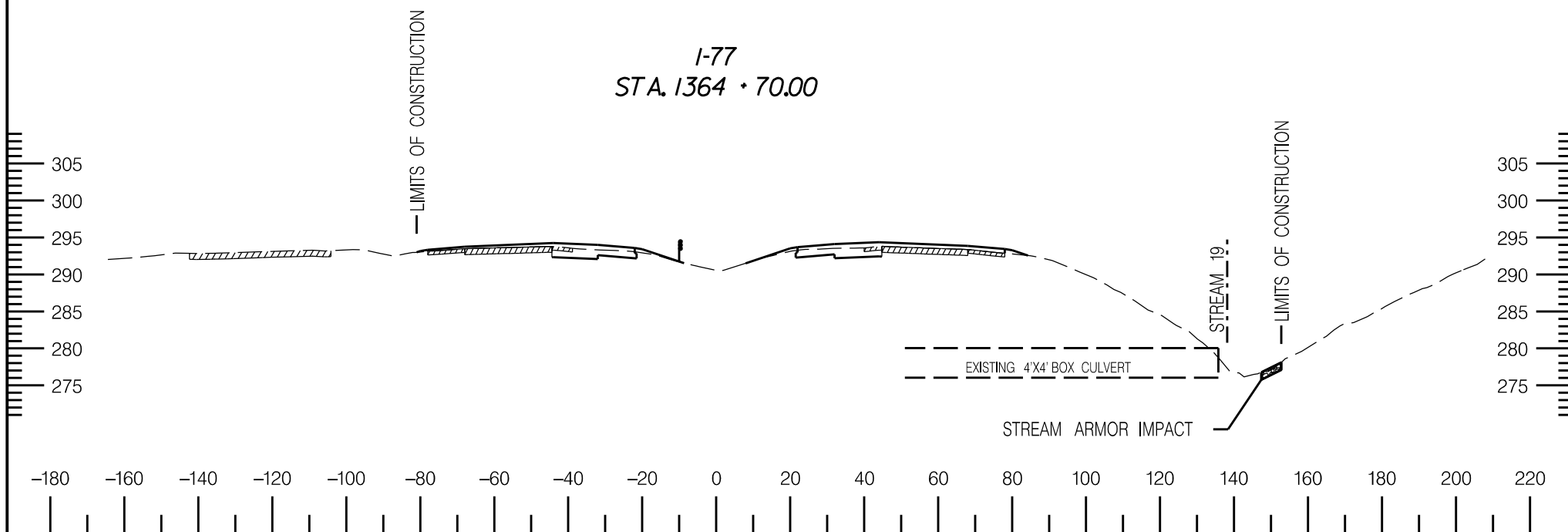
SECTION D-D'

LEGEND

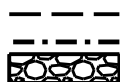
LIMITS OF
CONSTRUCTION ---
STREAM LIMITS ---
RIPRAP [hatched pattern]

APPLICATION BY SCDOT
PROJECT ID P027002: I-77 WIDENING
AND REHABILITATION (MM15-MM27)
RICHLAND COUNTY, SC
DATE: 8/2016
SHEET: 19 OF 31
REVISION DATE:

I-77
STA. 1364 + 70.00



LEGEND
LIMITS OF CONSTRUCTION
STREAM LIMITS
RIPRAP



SECTION E-E'

APPLICATION BY SCDOT
PROJECT ID P027002: I-77 WIDENING
AND REHABILITATION (MM15-MM27)
RICHLAND COUNTY, SC
DATE: 8/2016
SHEET: 20 OF 31
REVISION DATE:

I-77
STA. 1407 + 20.00

LIMITS OF CONSTRUCTION

LIMITS OF CONSTRUCTION

WETLAND 19

WETLAND 19

EXISTING 3'X8'X6' BOX CULVERT

WETLAND RIPRAP FILL IMPACT

-160 -140 -120 -100 -80 -60 -40 -20 0 20 40 60 80 100 120 140 160 180 200 220 240

315
310
305
300
295
290
285

315
310
305
300
295
290
285

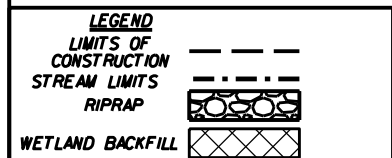
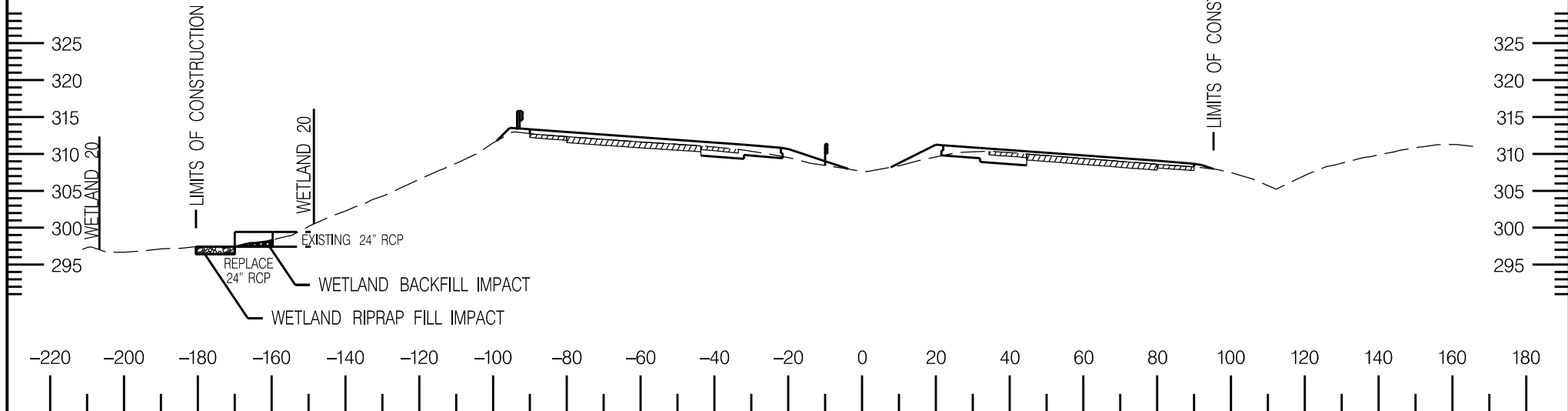
LEGEND
LIMITS OF CONSTRUCTION
STREAM LIMITS
RIPRAP



SECTION F-F'

APPLICATION BY SCDOT
PROJECT ID P027002: I-77 WIDENING
AND REHABILITATION (MM15-MM27)
RICHLAND COUNTY, SC
DATE: 8/2016
SHEET: 21 OF 31
REVISION DATE:

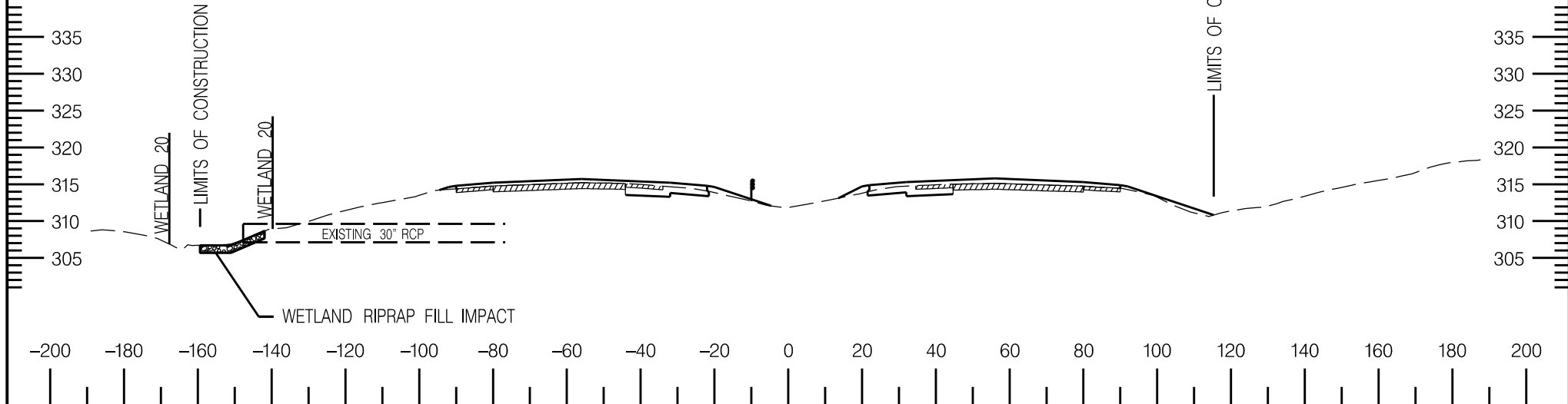
I-77
STA. 1415 + 80.00



SECTION G-G'

APPLICATION BY SCDOT
PROJECT ID P027002: I-77 WIDENING
AND REHABILITATION (MM15-MM27)
RICHLAND COUNTY, SC
DATE: 8/2016
SHEET: 22 OF 31
REVISION DATE:

I-77
STA. 1423 + 15.00



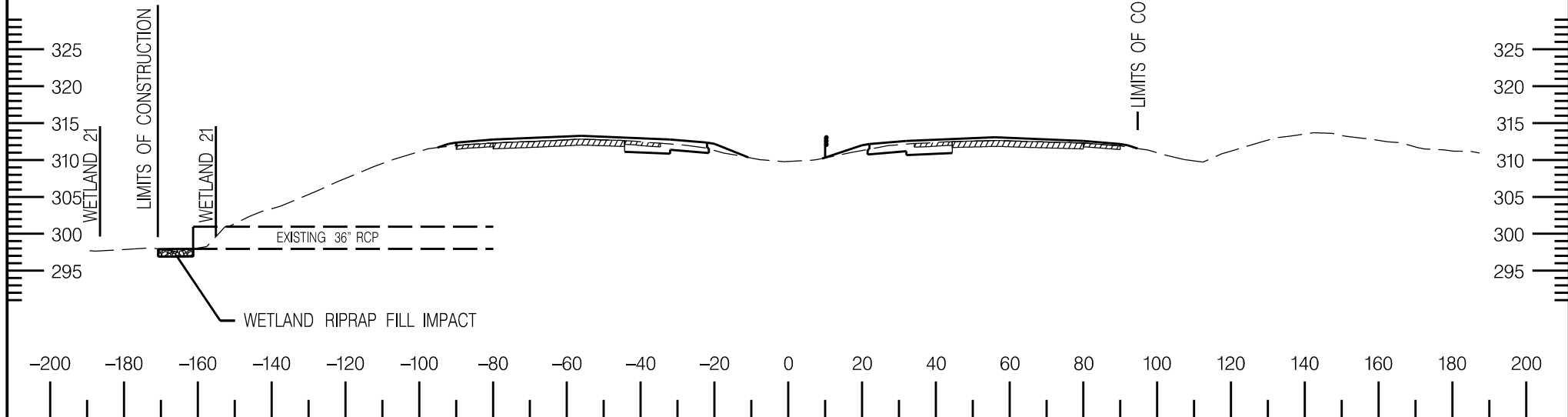
LEGEND
LIMITS OF CONSTRUCTION
STREAM LIMITS
RIPRAP



SECTION H-H'

APPLICATION BY SCDOT
PROJECT ID P027002: I-77 WIDENING
AND REHABILITATION (MM15-MM27)
RICHLAND COUNTY, SC
DATE: 8/2016
SHEET: 23 OF 31
REVISION DATE:

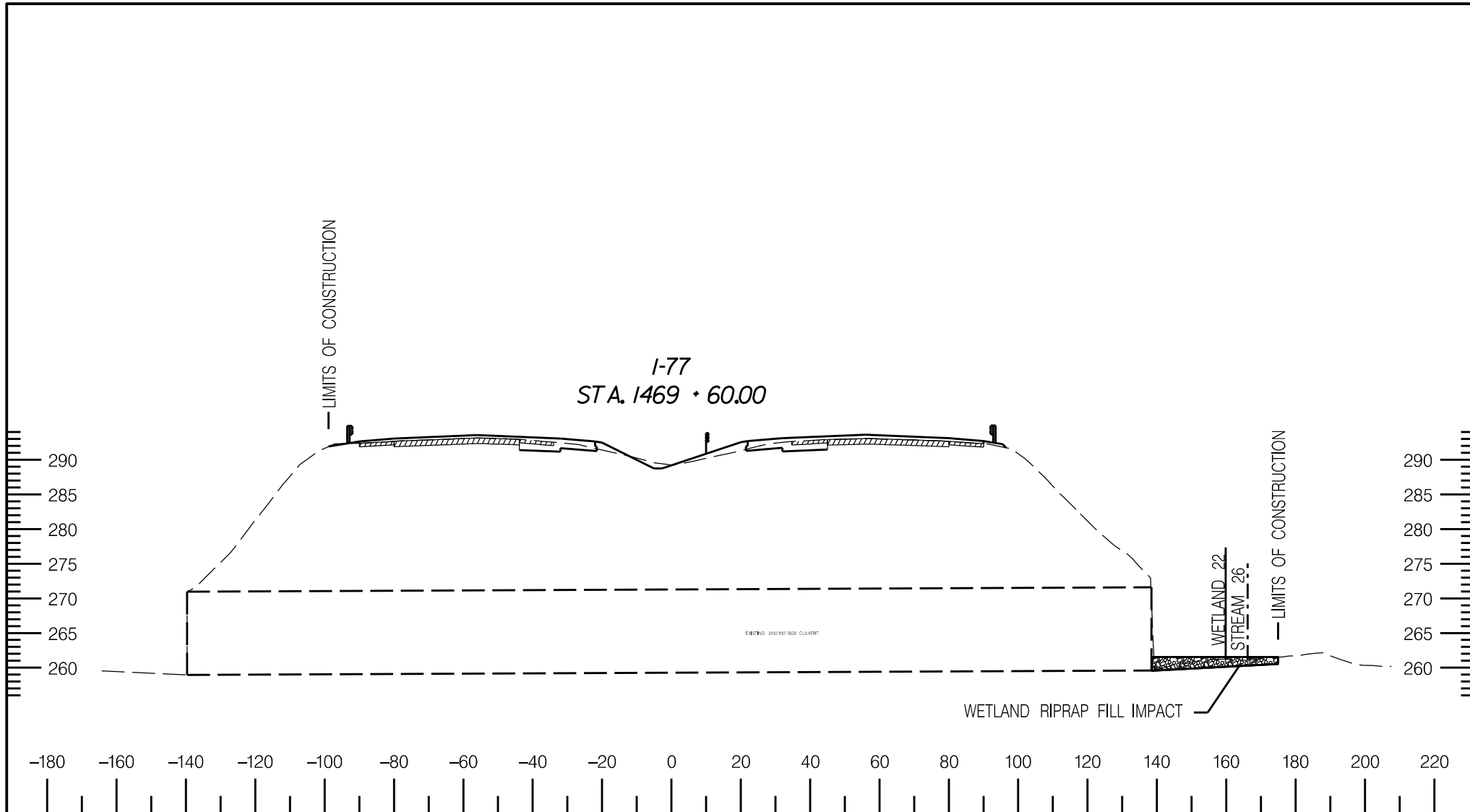
I-77
STA. 1459 + 60.00



LEGEND
LIMITS OF CONSTRUCTION ———
STREAM LIMITS - - - - -
RIPRAP [Hatched Pattern]

SECTION 1-1'

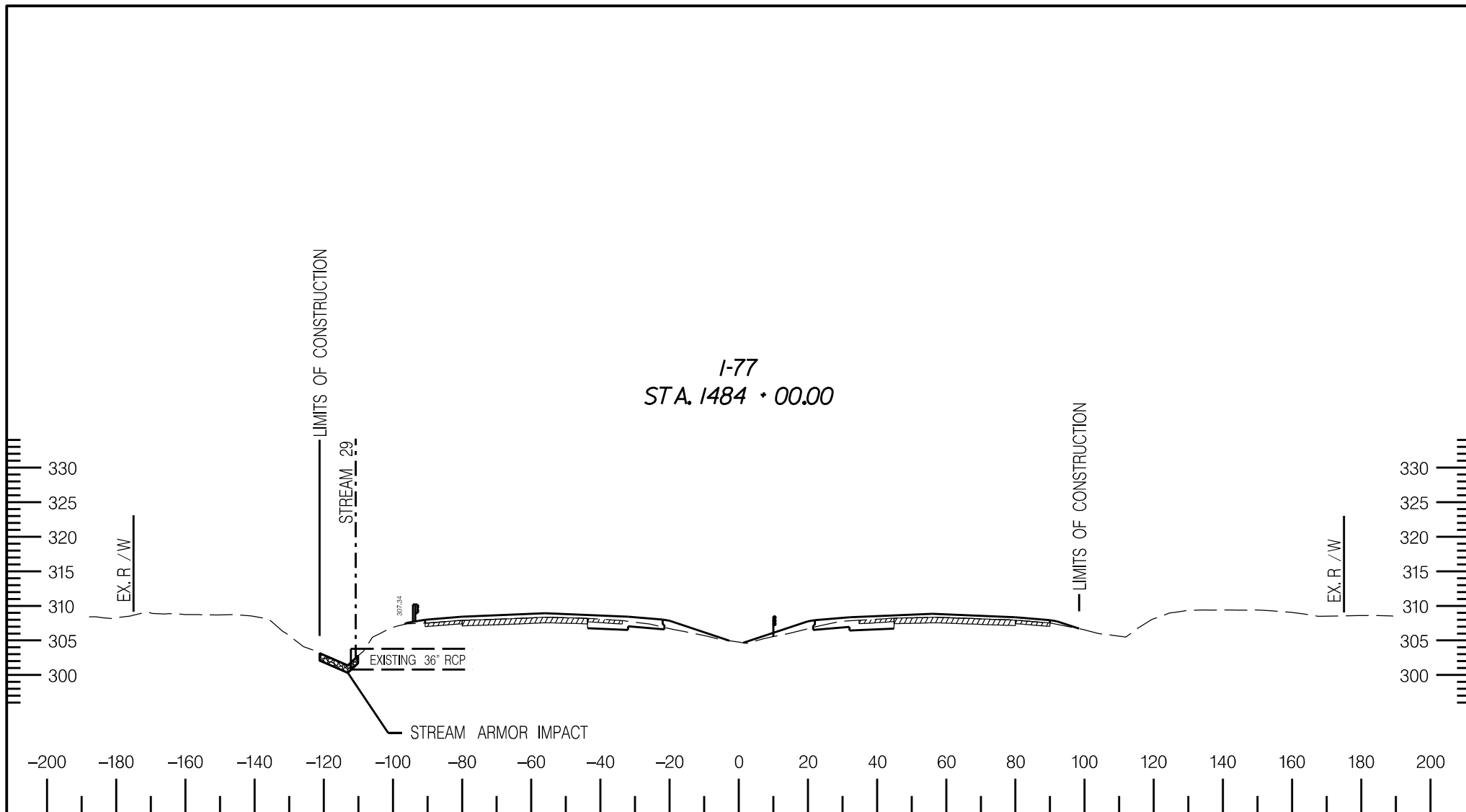
APPLICATION BY SCDOT
PROJECT ID P027002: I-77 WIDENING
AND REHABILITATION (MM15-MM27)
RICHLAND COUNTY, SC
DATE: 8/2016
SHEET: 24 OF 31
REVISION DATE:



LEGEND
 LIMITS OF CONSTRUCTION
 STREAM LIMITS
 RIPRAP

SECTION J-J'

APPLICATION BY SCDOT
 PROJECT ID P027002: I-77 WIDENING
 AND REHABILITATION (MM15-MM27)
 RICHLAND COUNTY, SC
 DATE: 8/2016
 SHEET: 25 OF 31
 REVISION DATE:



LEGEND
 LIMITS OF CONSTRUCTION ———
 STREAM LIMITS - - - - -
 RIPRAP [Hatched Pattern]

SECTION K-K'

APPLICATION BY SCDOT
 PROJECT ID P027002: I-77 WIDENING
 AND REHABILITATION (MM15-MM27)
 RICHLAND COUNTY, SC
 DATE: 8/2016
 SHEET: 26 OF 31
 REVISION DATE:

I-77
STA. 1503+18.61

LIMITS OF CONSTRUCTION
WETLAND 23

WETLAND 23

PERMANENT FILL

WETLAND RIPRAP FILL IMPACT

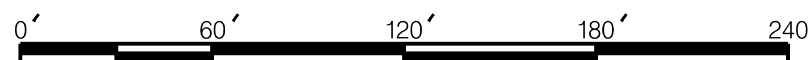
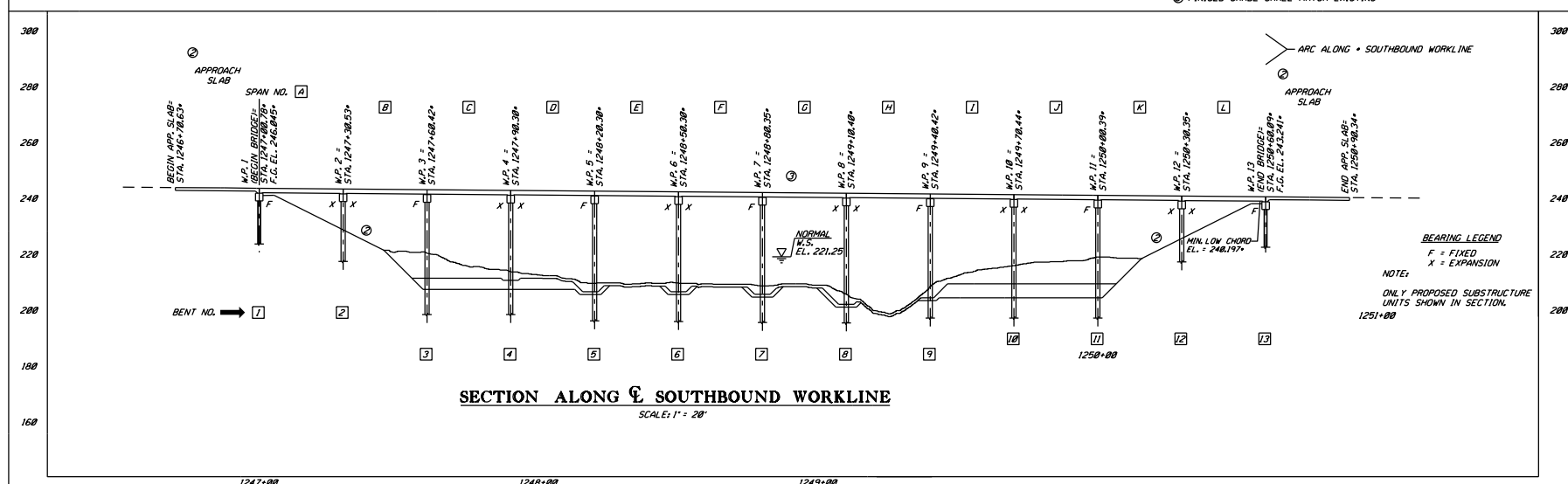
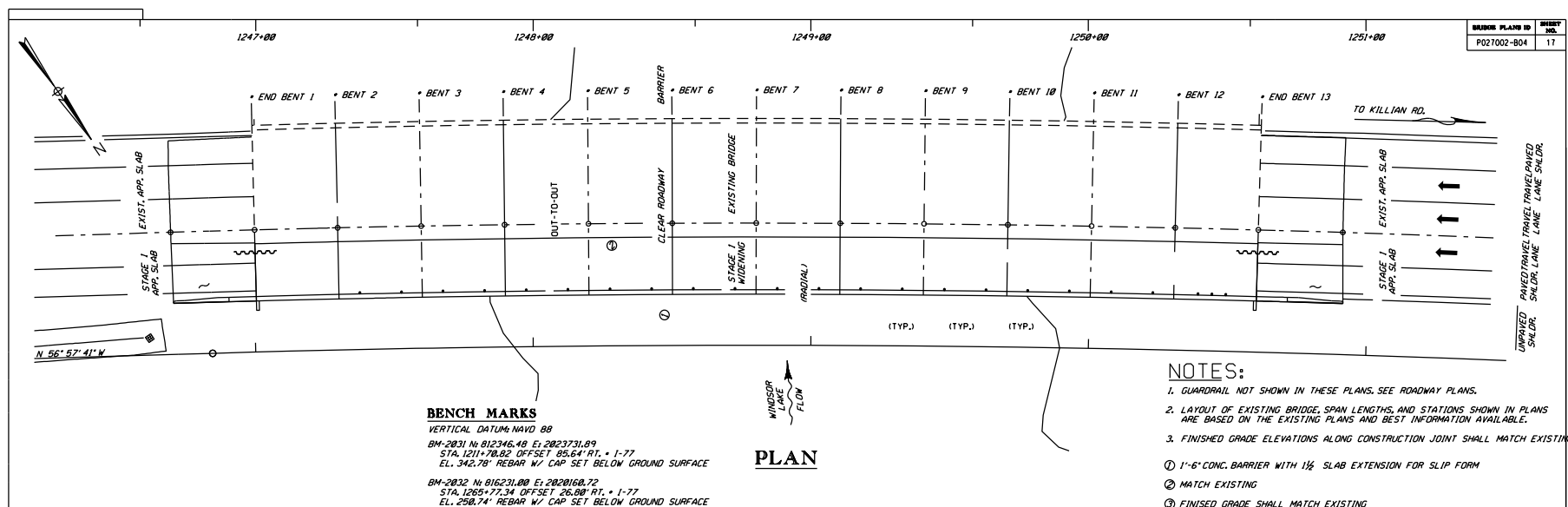
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SECTION L-L'

LEGEND

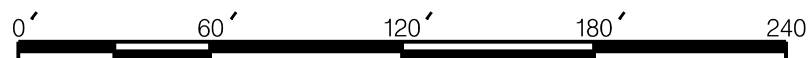
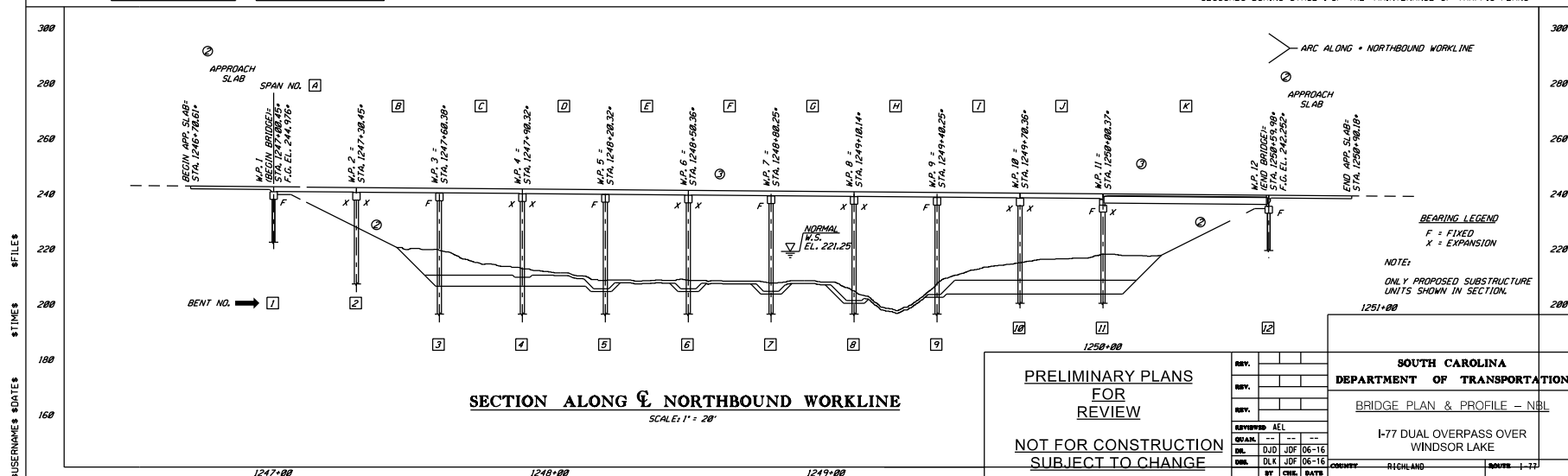
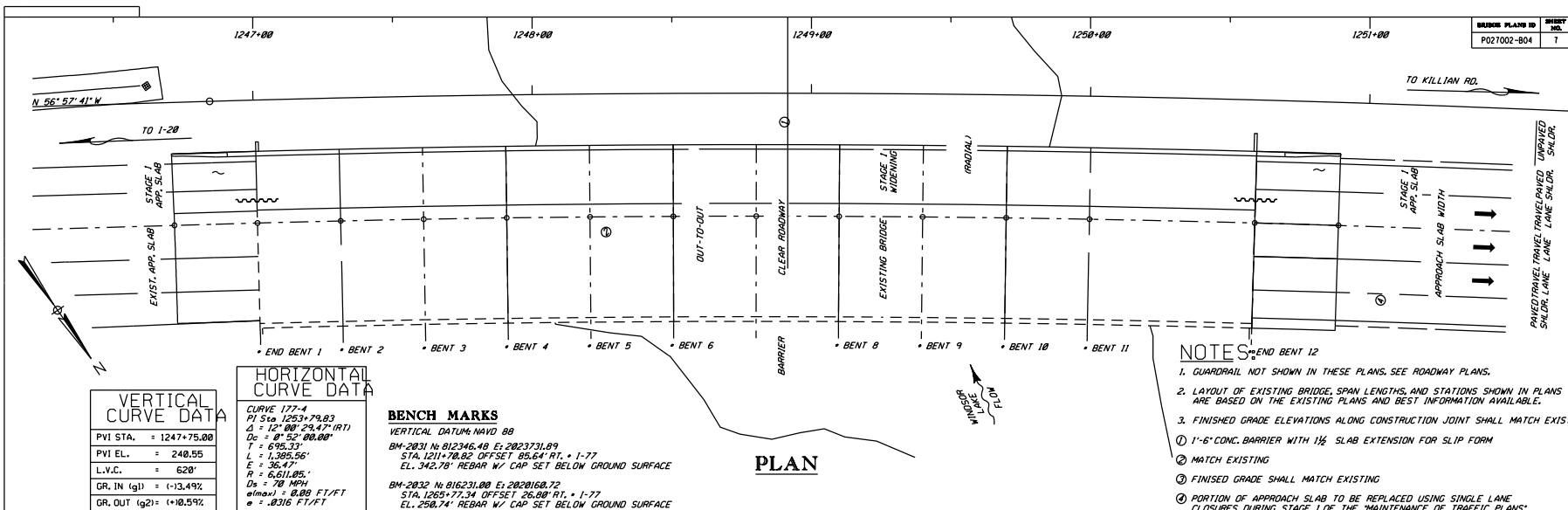
LIMITS OF CONSTRUCTION ---
STREAM LIMITS - - -
RIPRAP [Hatched Pattern]

APPLICATION BY SCDOT
PROJECT ID P027002: I-77 WIDENING
AND REHABILITATION (MM15-MM27)
RICHLAND COUNTY, SC
DATE: 8/2016
SHEET: 27 OF 31
REVISION DATE:



**BRIDGE PLAN AND PROFILE
 INTERSTATE 77 SB OVER WINDSOR LAKE**

APPLICATION BY SCDOT
 PROJECT ID P027002: I-77 WIDENING
 AND REHABILITATION (MM15-MM27)
 RICHLAND COUNTY, SC
 DATE: 8/2016
 SHEET: 28 OF 31
 REVISION DATE:



BRIDGE PLAN AND PROFILE INTERSTATE 77 NB OVER WINDSOR LAKE

APPLICATION BY SCDOT
 PROJECT ID P027002: I-77 WIDENING
 AND REHABILITATION (MM15-MM27)
 RICHLAND COUNTY, SC
 DATE: 8/2016
 SHEET: 29 OF 31
 REVISION DATE:

Attachment C

USACE Jurisdictional Determination Confirmation and Maps

Resurfacing Delineation



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
CHARLESTON DISTRICT, CORPS OF ENGINEERS
69A HAGOOD AVENUE
CHARLESTON, SOUTH CAROLINA 29403-5107

July 28, 2015

Regulatory Division

Mr. Sean Connolly
South Carolina Department of Transportation
P.O. Box 191
Columbia, South Carolina 29202-0191

RECEIVED
AUG - 5 2015
Environmental Management
SCDOT

Dear Mr. Connolly:

This is in response to your letter of January 23, 2015, requesting a Preliminary Jurisdictional Determination (Preliminary) for a 566 acre project area, located on and along an approximately 12 mile long segment of Interstate 77 (I-77) from mile marker 15 (just south of Percival Road Interchange) to mile marker 27 (just south of the Blythewood Road Interchange) in Richland County, South Carolina (SCDOT P027002). The project area is depicted on the enclosed Figures (Figure 5, Sheets 1-18 of 18) entitled "I-77 Roadway Widening and Improvements, Delineated Streams and Wetlands, Figure 5". Sheets 1-13 of 13 are dated May 2015 and Sheets 14-18 are dated April 2015. A preliminary jurisdictional determination is used to indicate that this office has identified wetlands or other waters on the property and believes these waters may be jurisdictional waters of the United States. Since the Preliminary does not verify the actual jurisdictional status of wetlands and/or waters of the United States on the property, it relies on the presumption of jurisdiction for the purpose of expediting the request for a Preliminary.

Based on an on-site inspection, a review of aerial photography, topographic maps, National Wetland Inventory maps and soil survey information, it has been concluded that the boundaries shown on the referenced figures are a reasonable approximation of the location and boundaries of the waters found on this site. The area in question contains approximately 5,577 linear feet of tributaries, 4.506 acres of federally defined freshwater wetlands, and 2.077 acres of other waters. You are cautioned that this delineation is approximate, subject to change, and should be used for planning purposes. This office should be contacted prior to performing any work in or around these wetlands or other waters. In order for a definitive determination to be provided, these areas should be located and marked on-site, sketched or surveyed, platted on a map, and should be accompanied by a request for an Approved Jurisdictional Determination. Upon receipt of such a request, this office can then issue an approved determination as to jurisdiction (rather than the presumption of jurisdiction). You should also be aware that the areas identified as wetlands or other waters may be subject to restrictions or requirements of other state or local government entities.

Please note that since this jurisdictional determination is a Preliminary, it is subject to change and therefore is not an appealable action under the Corps of Engineers administrative appeal procedures defined at 33 CFR 331. If a permit application is forthcoming as a result of this Preliminary, a copy of this letter, as well as the attached sketch or plat should be submitted as part of the application. Otherwise, a delay could occur in confirming that a preliminary jurisdictional determination was performed for the permit project area.

This preliminary jurisdictional determination is a non-binding action and as such has no expiration until it is superseded by an Approved Jurisdictional Determination. If you intend to request an Approved Jurisdictional Determination in the future, you are advised not to commence work in these wetlands and/or waters prior to receiving the Approved Jurisdictional Determination.

In future correspondence concerning this matter, please refer to SAC 2015-00155-DS. You may still need state or local assent. Prior to performing any work, you should contact the South Carolina Department of Health and Environmental Control.

Enclosed are two copies of the Preliminary Jurisdictional Determination Form signed by our office. Please sign both copies, retain one copy for your records and return one signed copy to this office in the enclosed self-addressed envelope.

If you have any questions concerning this matter, please contact Stephen Brumagin at 803-253-3445.

Sincerely,

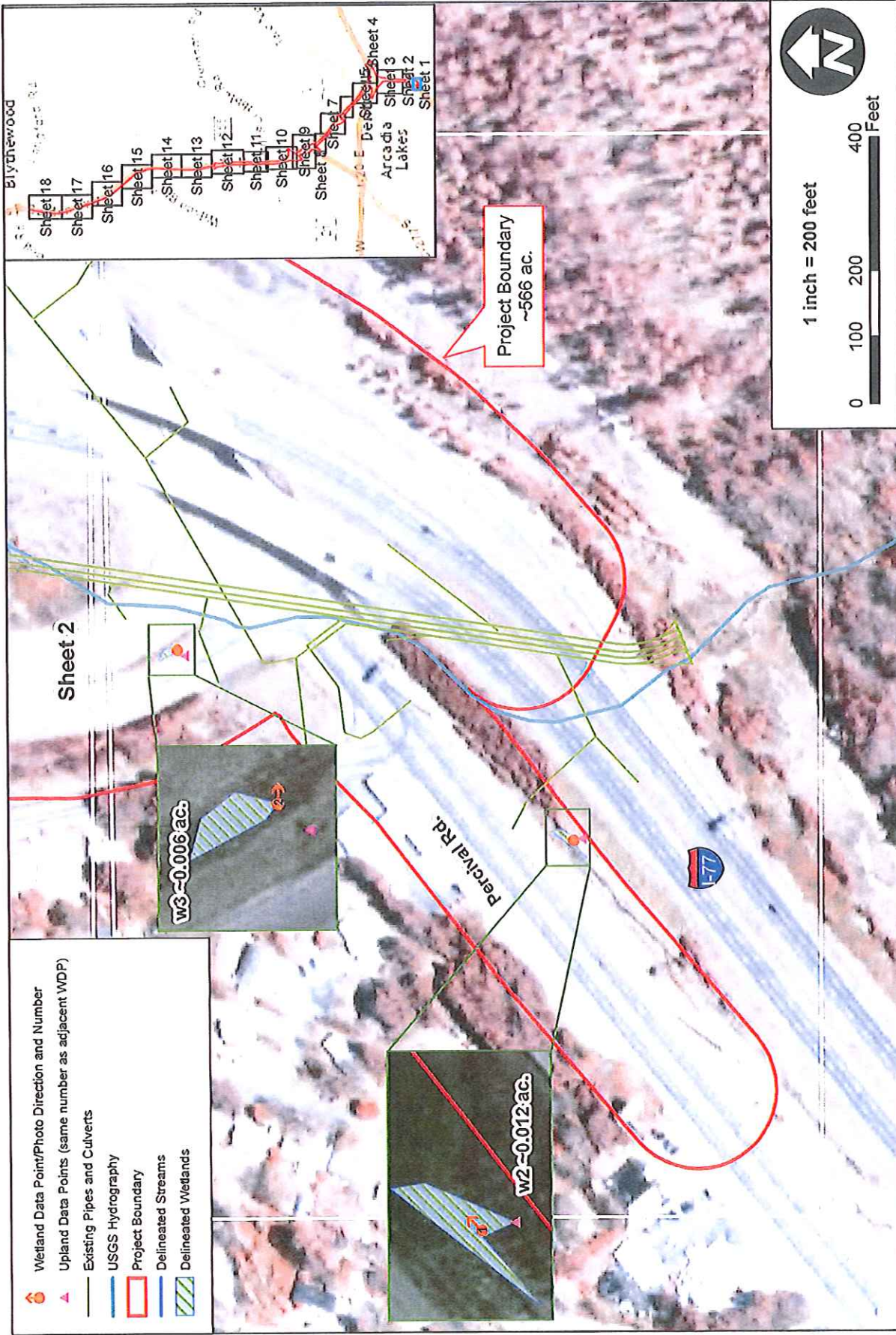
A handwritten signature in black ink, appearing to read "Travis G. Hughes", with a long horizontal line extending to the right.

Travis G. Hughes
Chief, Special Projects Branch

Enclosures:
Figure 5, sheets 1-18 of 18
Preliminary Jurisdictional Determination Form

Copy Furnished:

HDR
Ms. Renee Mulholland
3955 Faber Place Drive, Suite 300
North Charleston, South Carolina 29405



I-77 Roadway Widening and Improvements

Delineated Streams & Wetlands

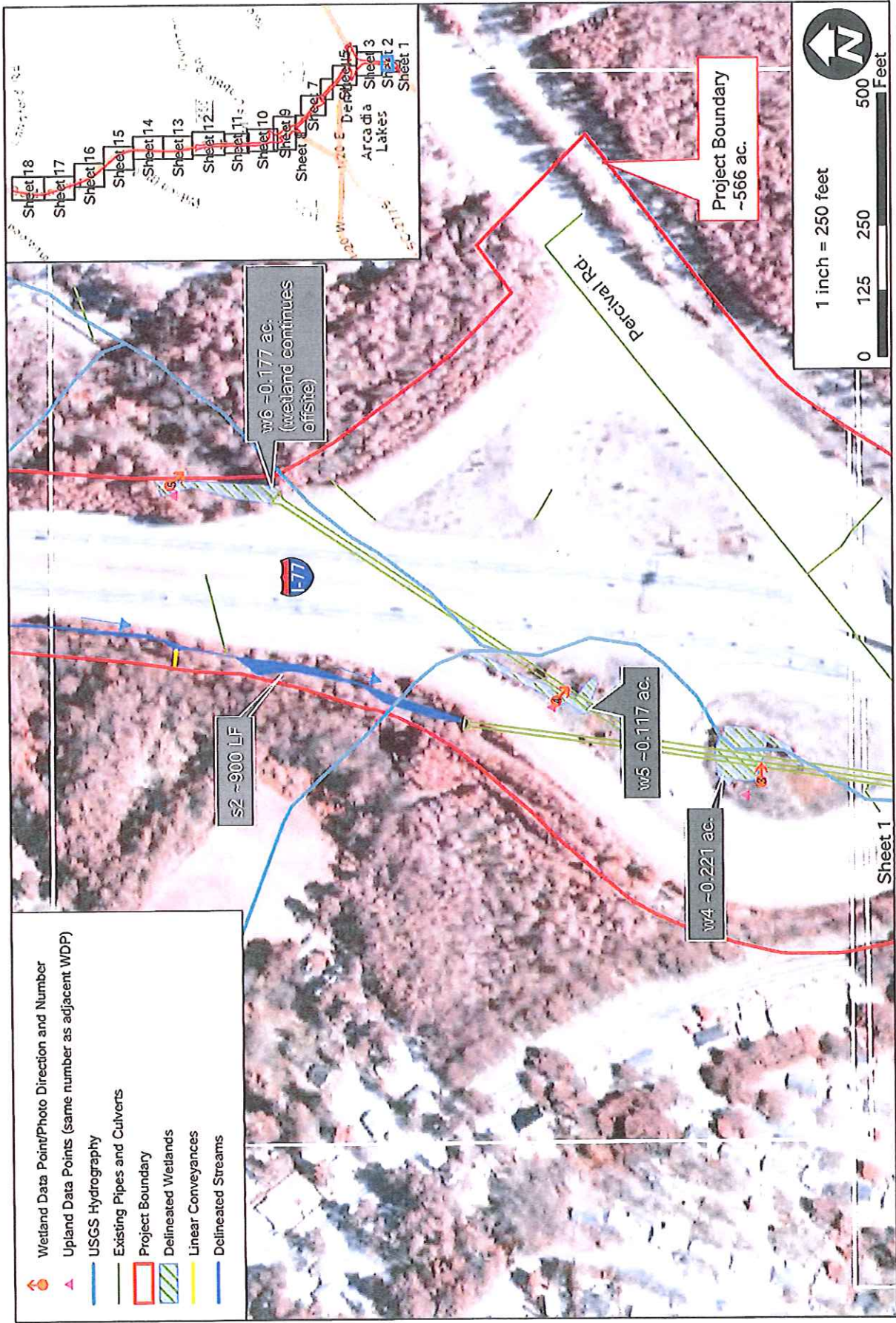
Figure 5 (Sheet 1 of 18)

May 2015

South Carolina Department of Transportation | Richland County, SC | Jurisdictional Determination

scdot

South Carolina
Department of Transportation



I-77 Roadway Widening and Improvements

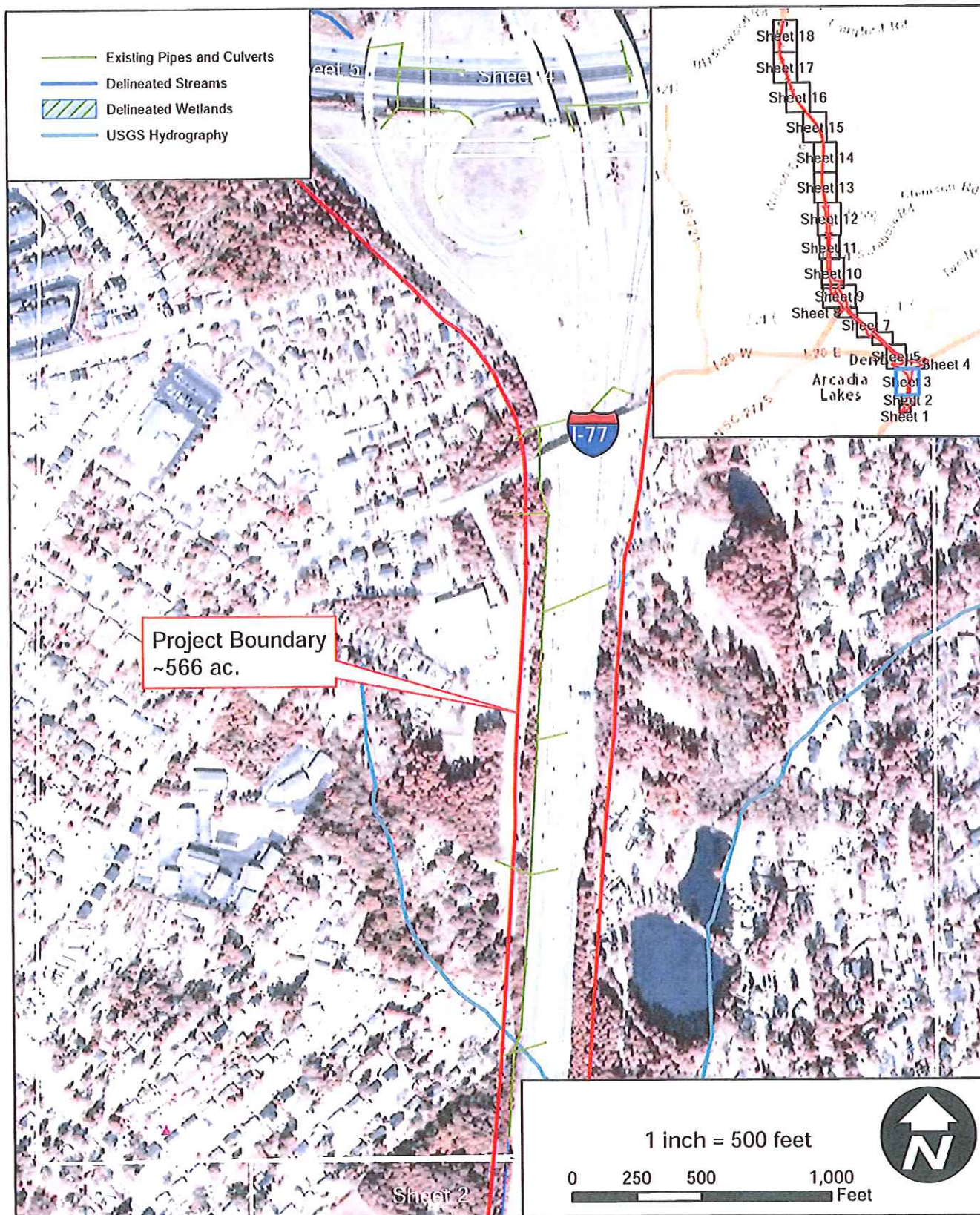
Delineated Wetlands

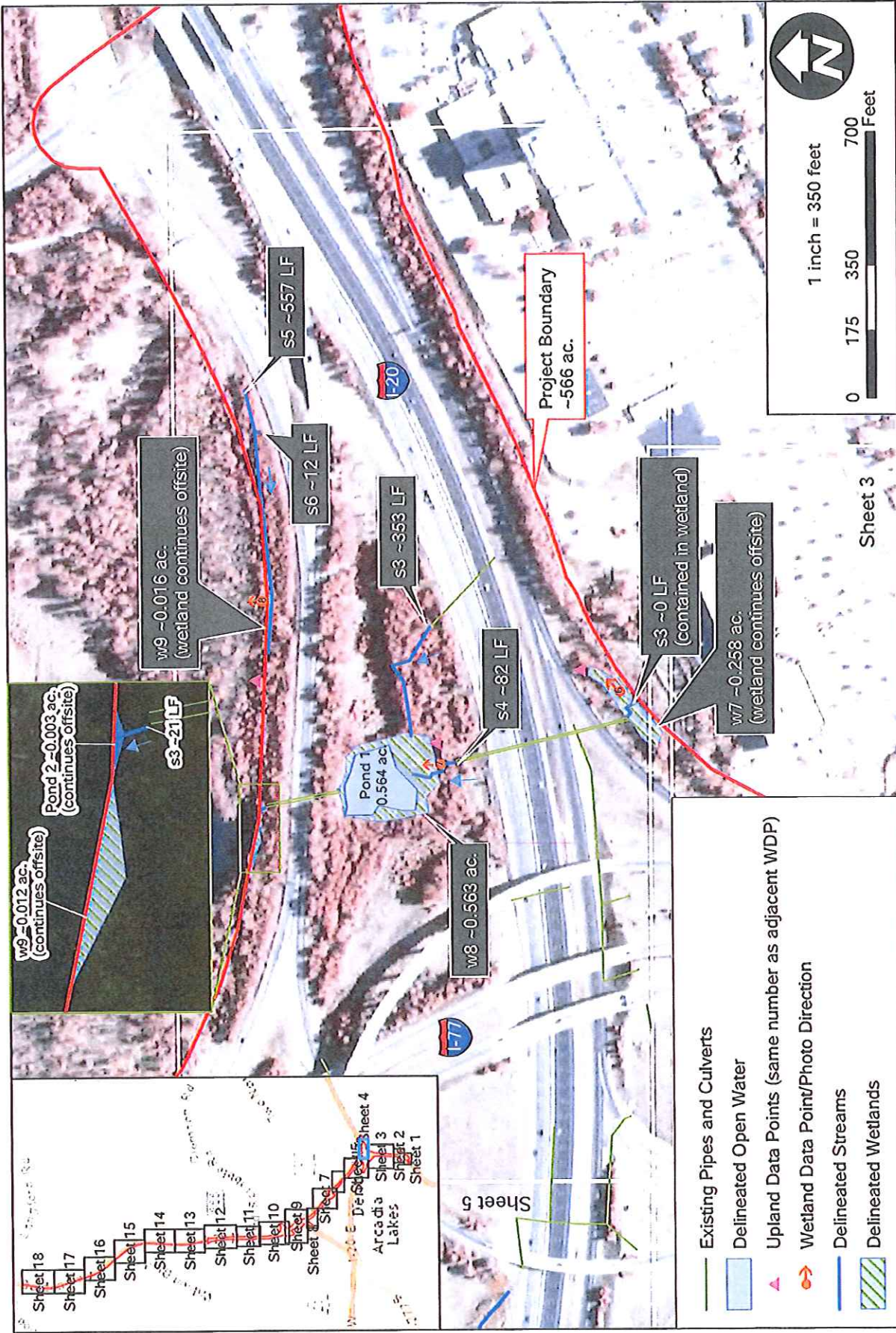
Sheet 2 of 18

May 2015

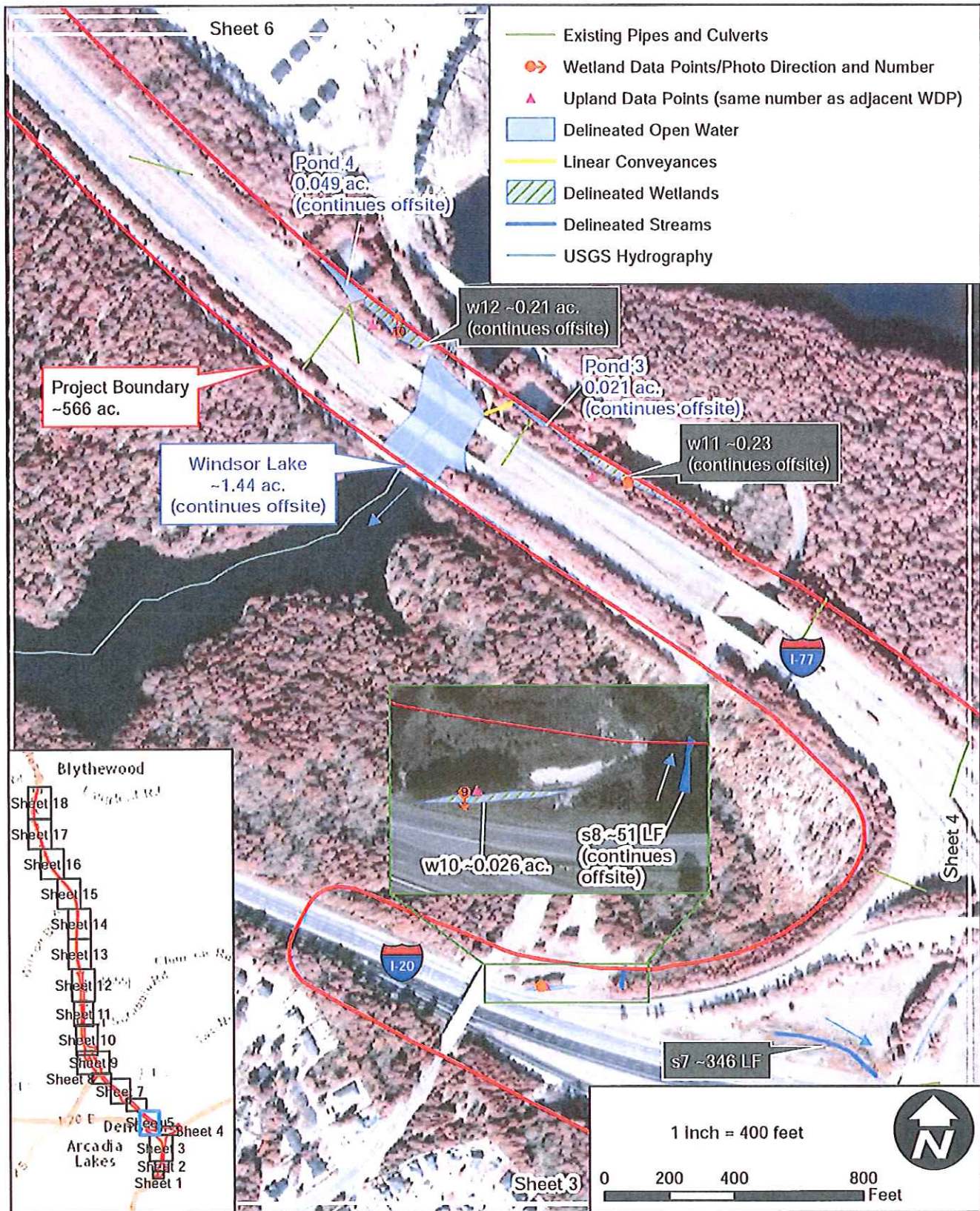


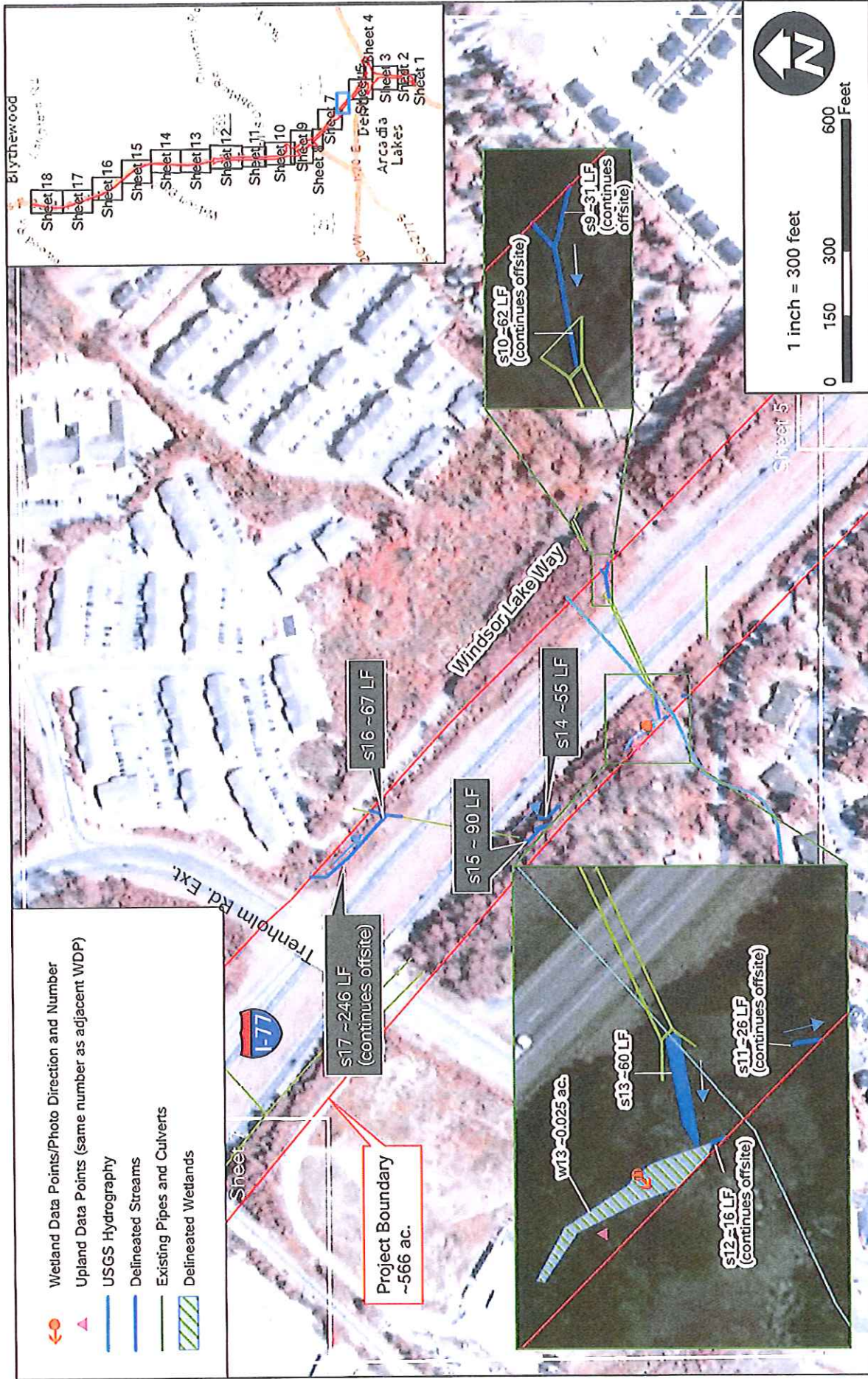
South Carolina
Department of Transportation





I-77 Roadway Widening and Improvements
Delineated Streams & Wetlands
Figure 5 (Sheet 4 of 18)
May 2015





I-77 Roadway Widening and Improvements

Delineated Streams & Wetlands

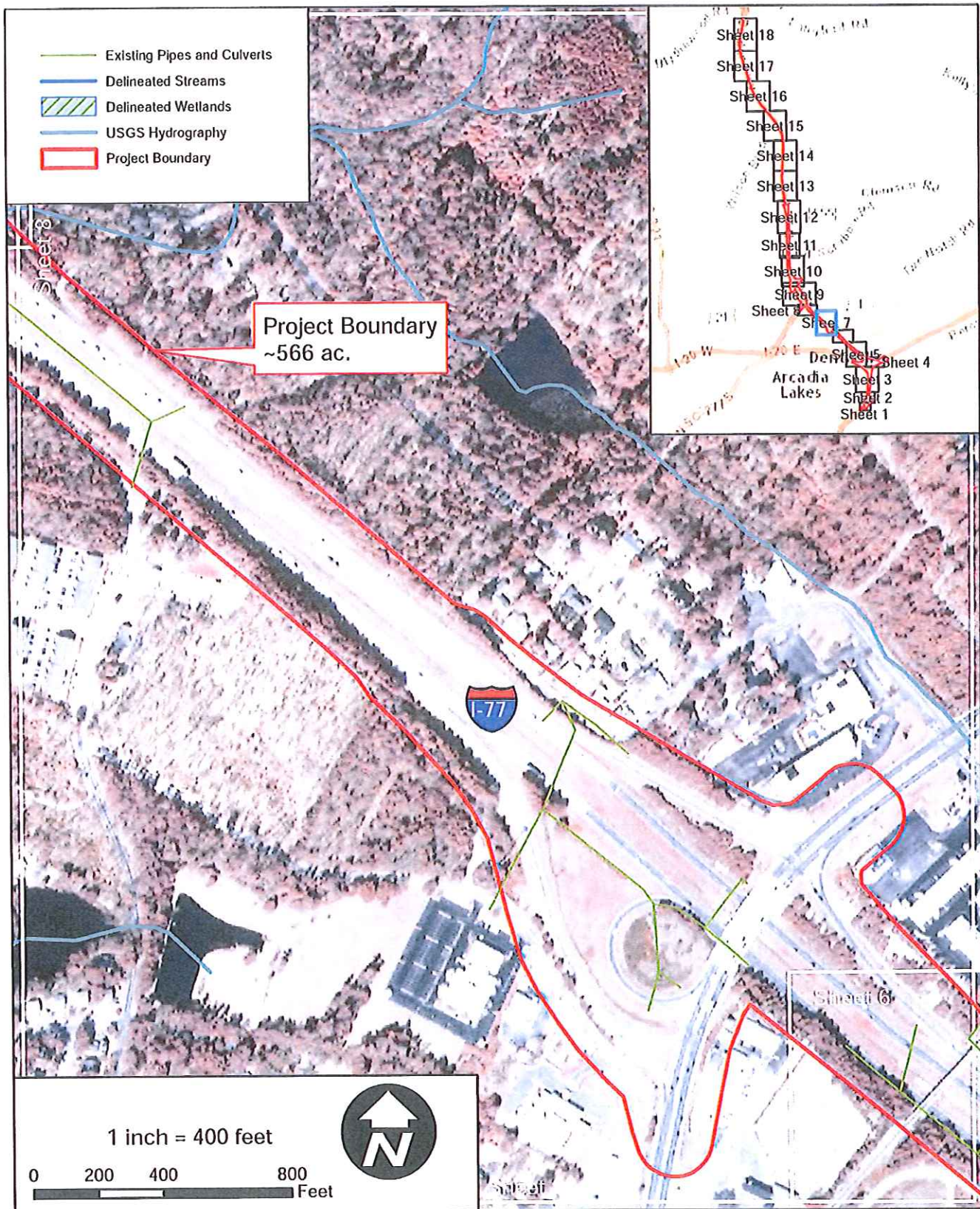
Figure 5 (Sheet 6 of 18)

May 2015

South Carolina Department of Transportation | Richland County, SC | Jurisdictional Determination



South Carolina
Department of Transportation



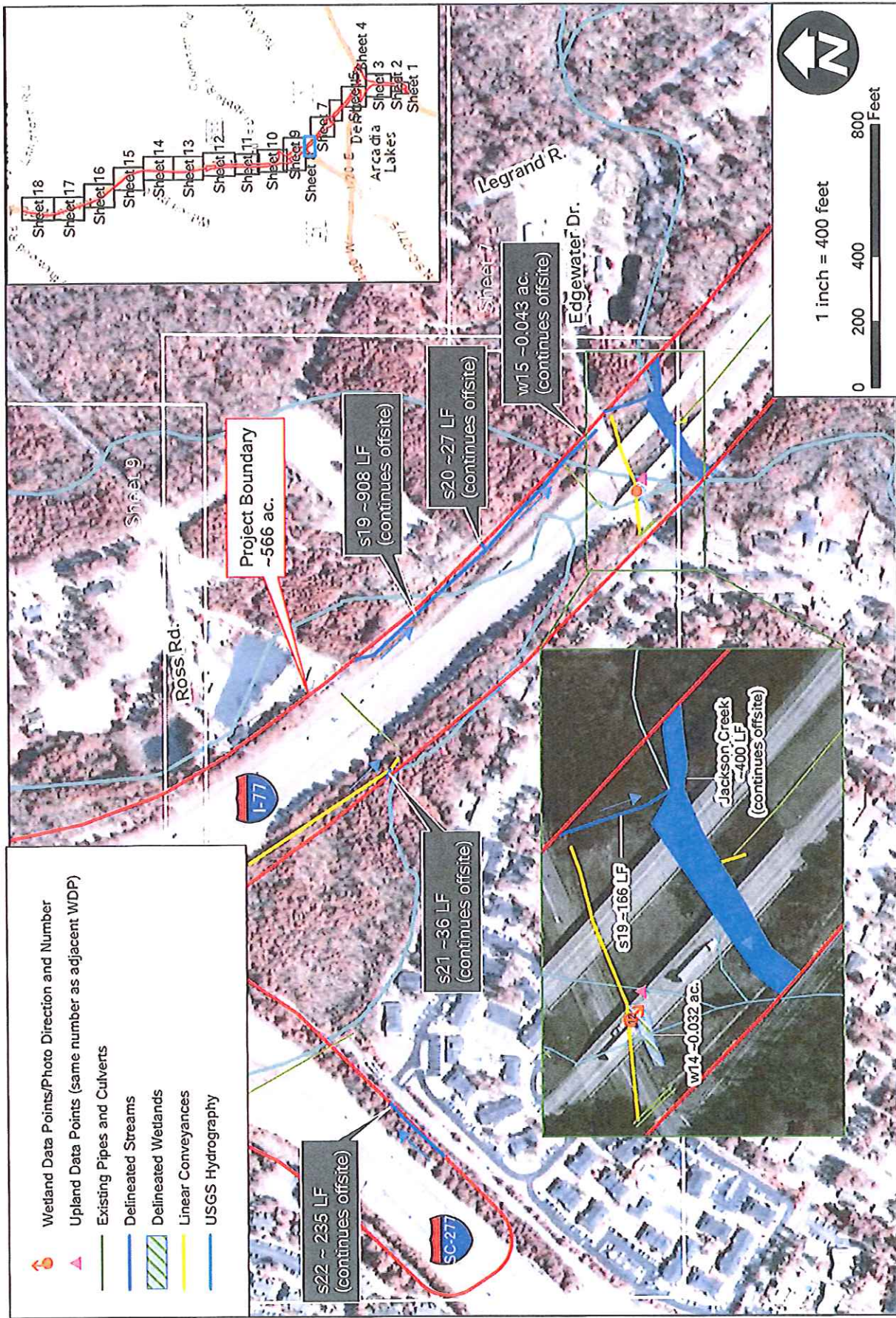
SCDOT
South Carolina
Department of Transportation

I-77 Roadway Widening and Improvements

Delineated Streams & Wetlands

Figure 5 (Sheet 7 of 18)

May 2015



I-77 Roadway Widening and Improvements

Delineated Streams & Wetlands

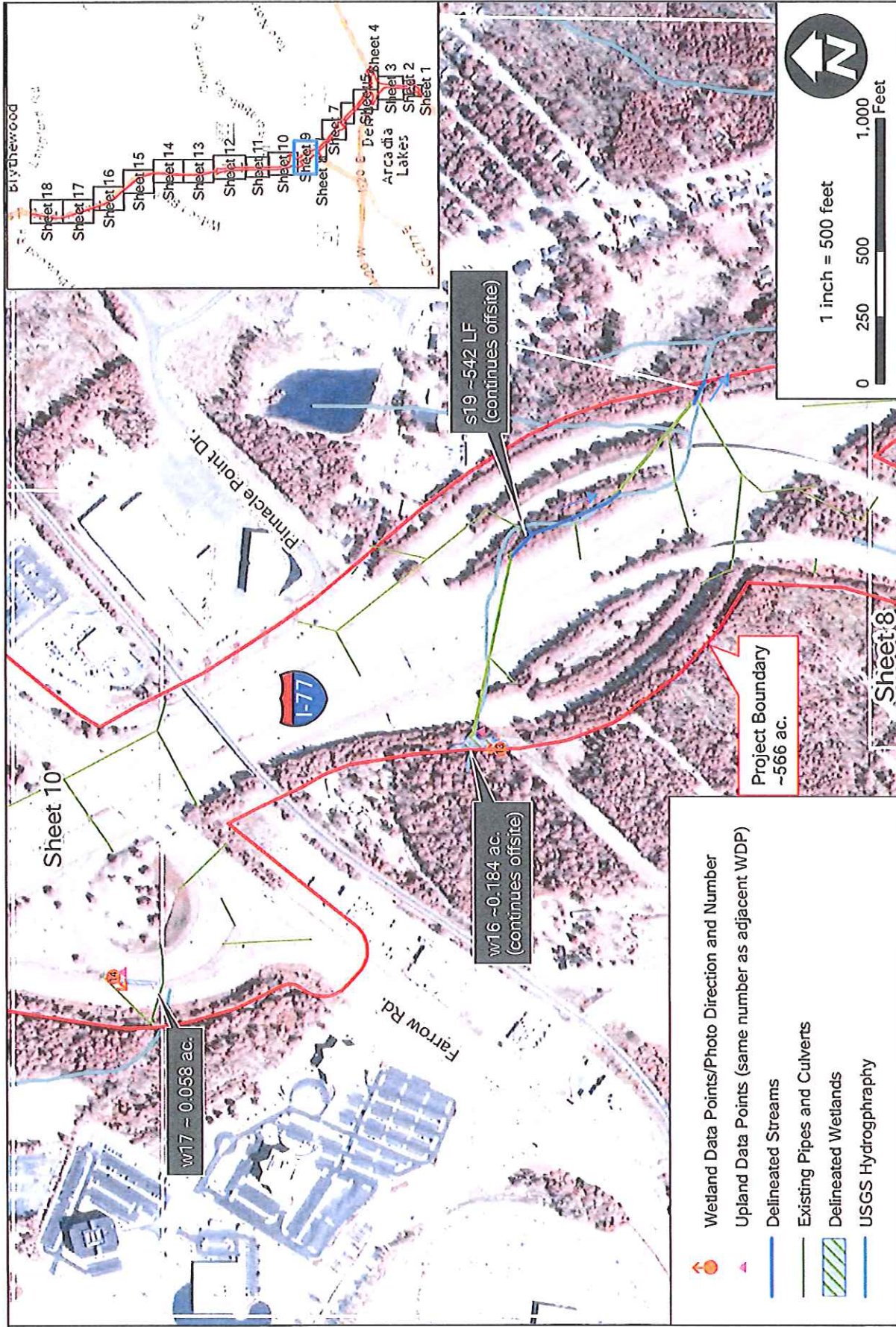
Figure 5 (Sheet 8 of 18)

May 2015

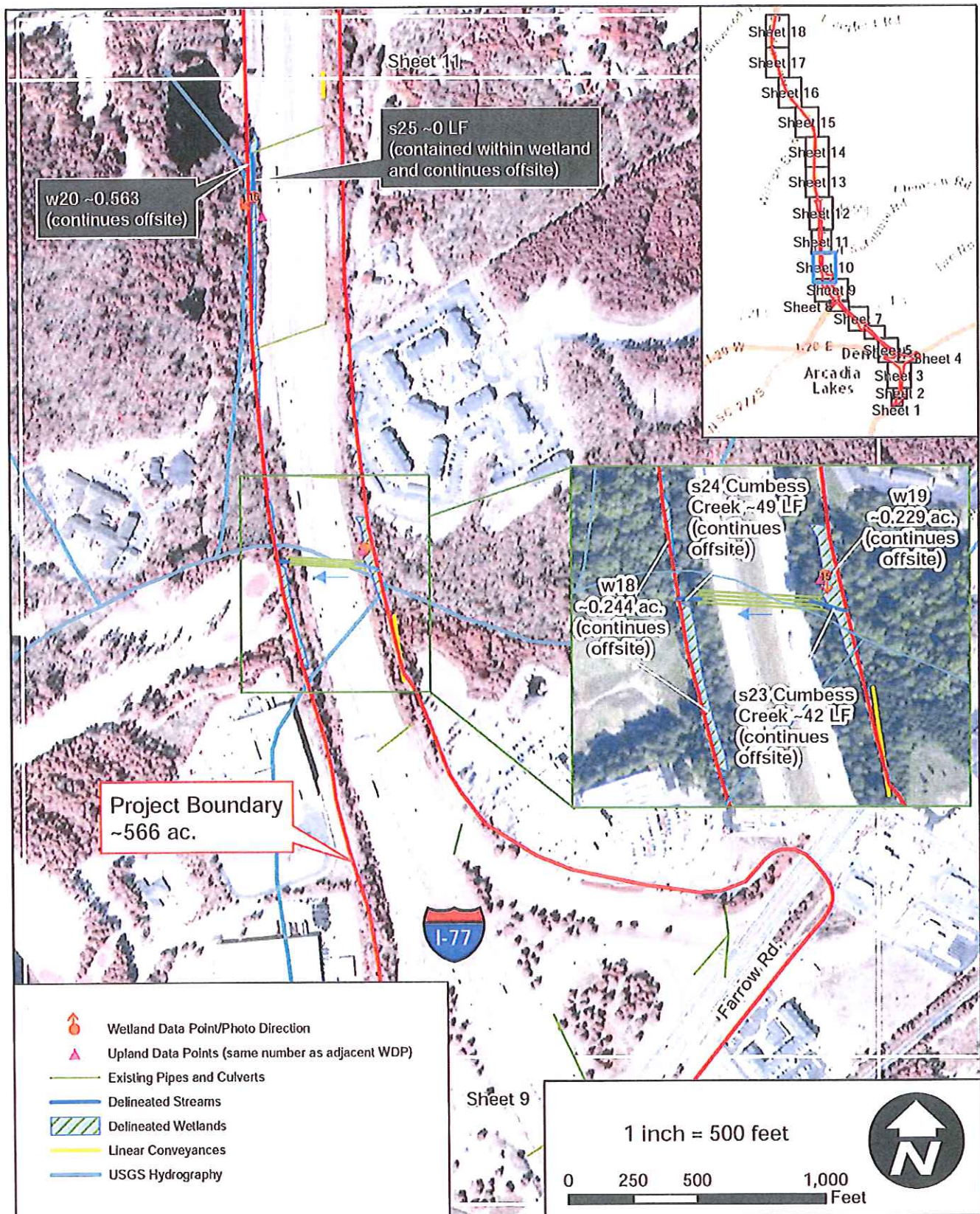
South Carolina Department of Transportation | Richland County, SC | Jurisdictional Determination

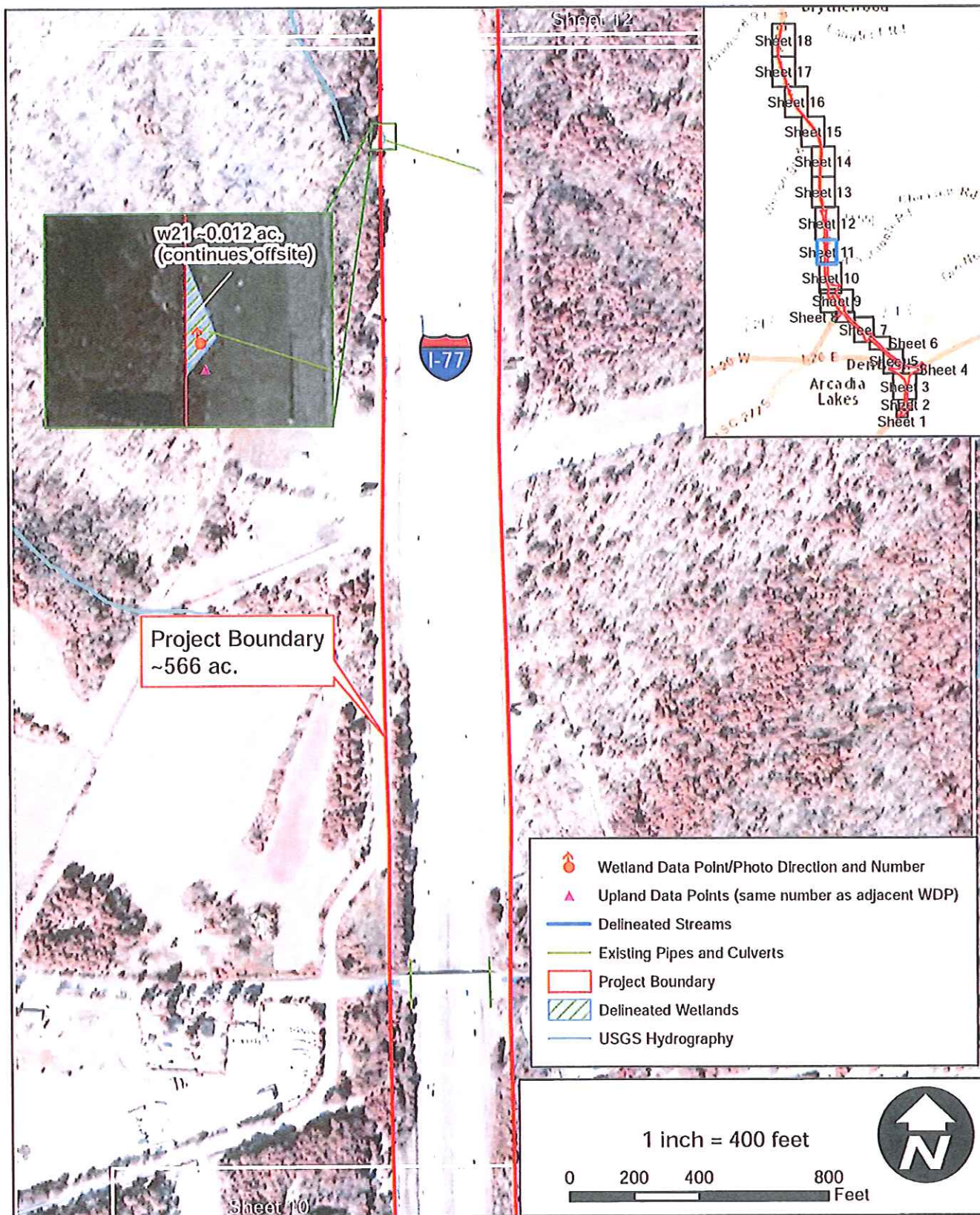


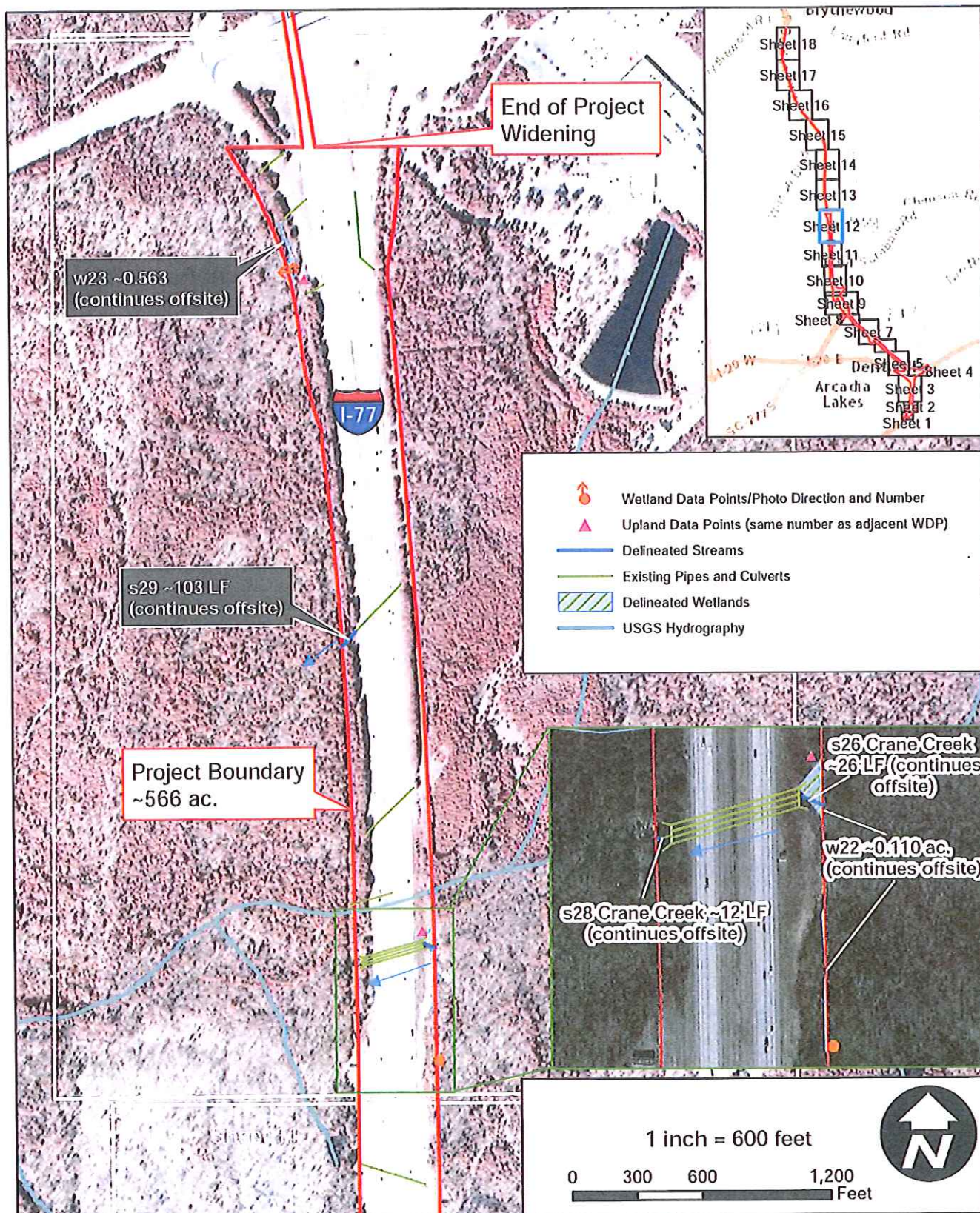
South Carolina
Department of Transportation

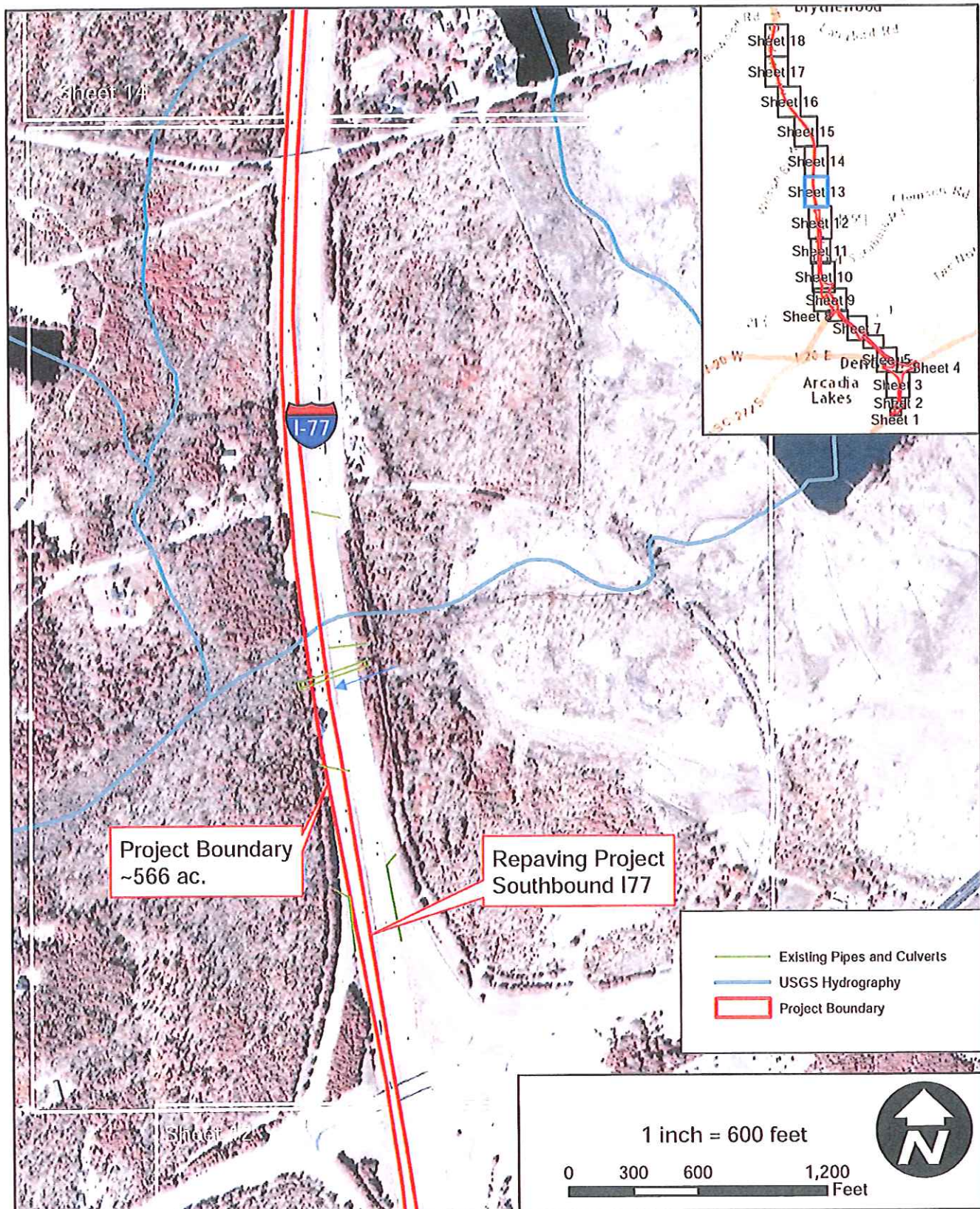


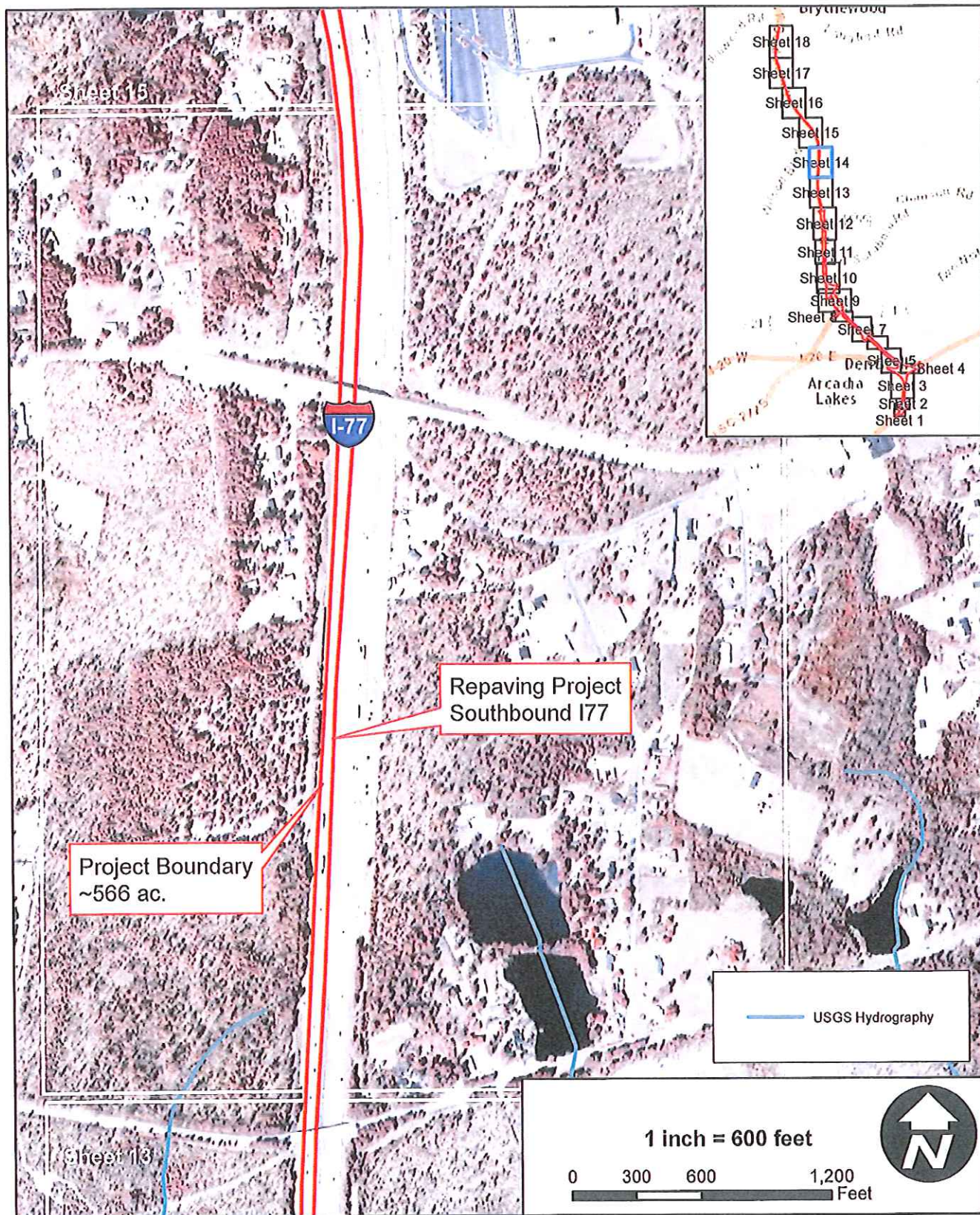
I-77 Roadway Widening and Improvements
Delineated Streams & Wetlands
Figure 5 (Sheet 9 of 18)
May 2015

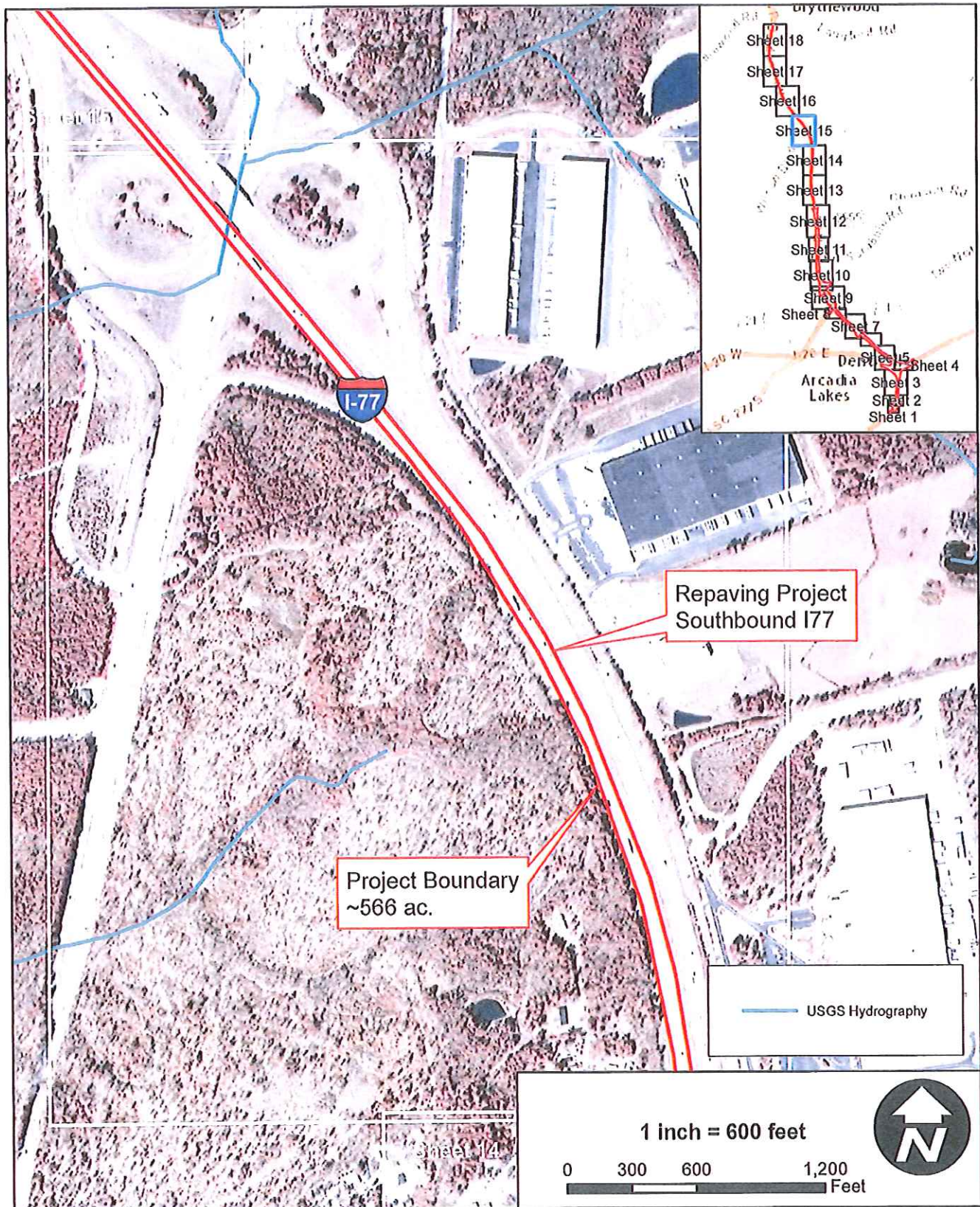


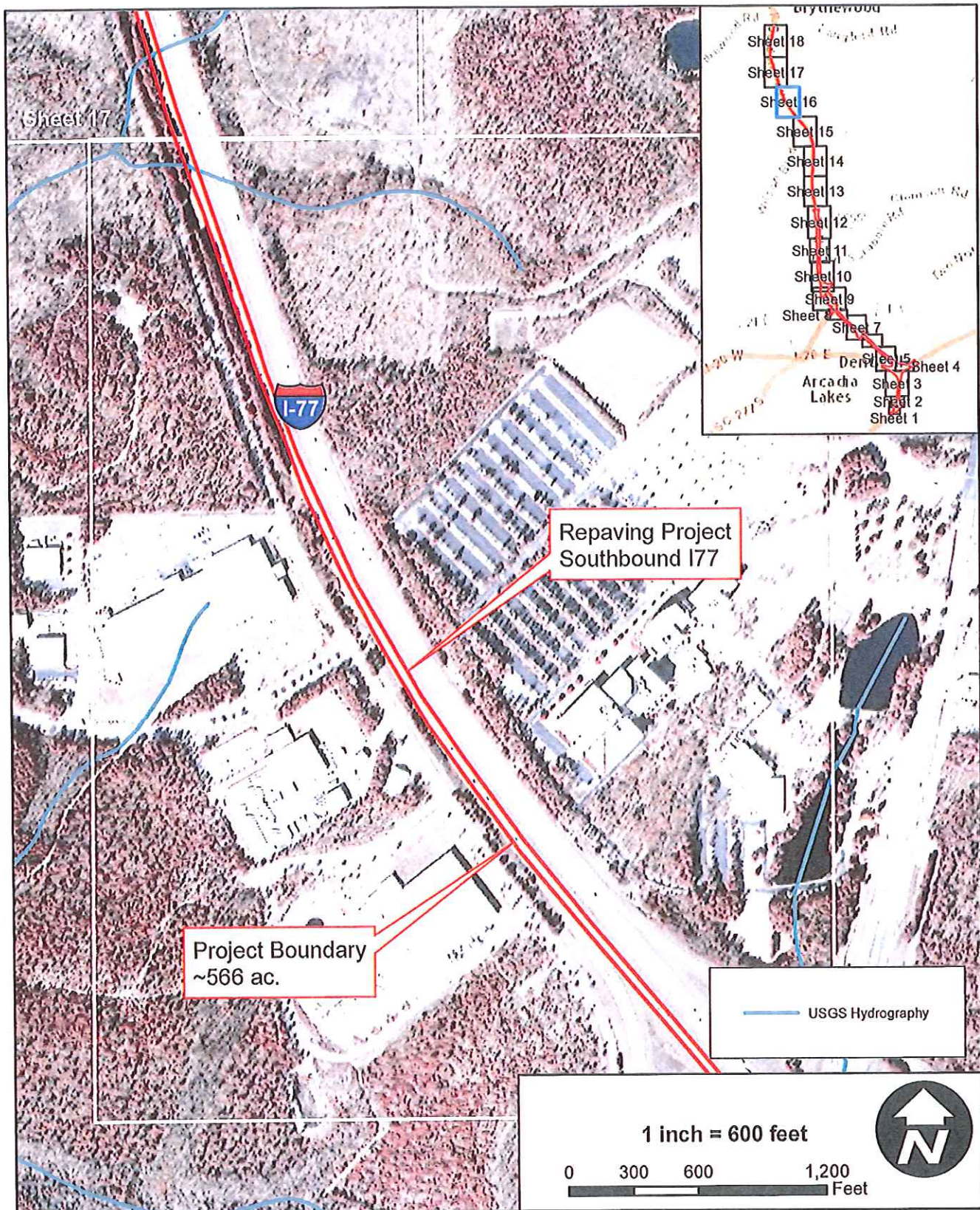


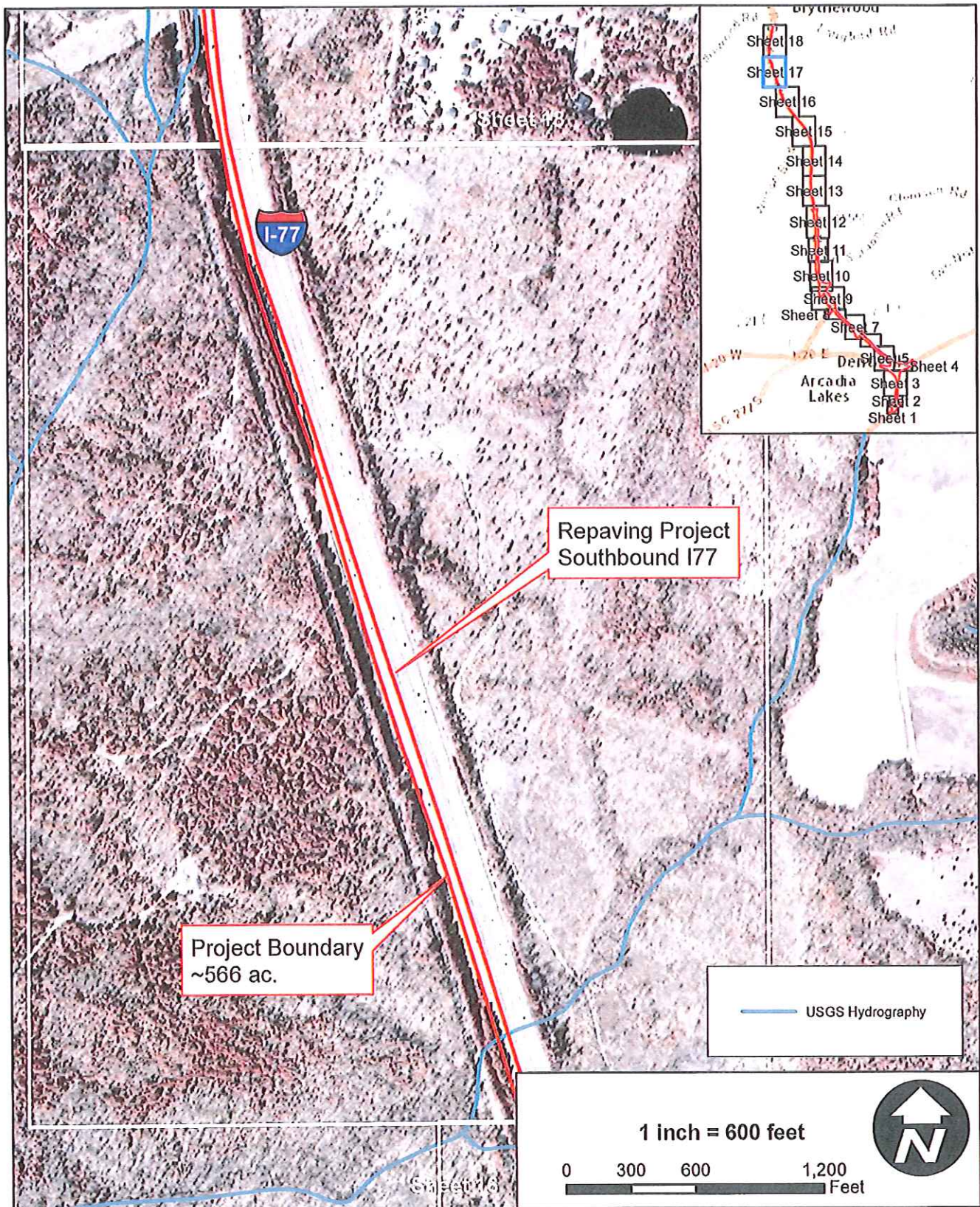


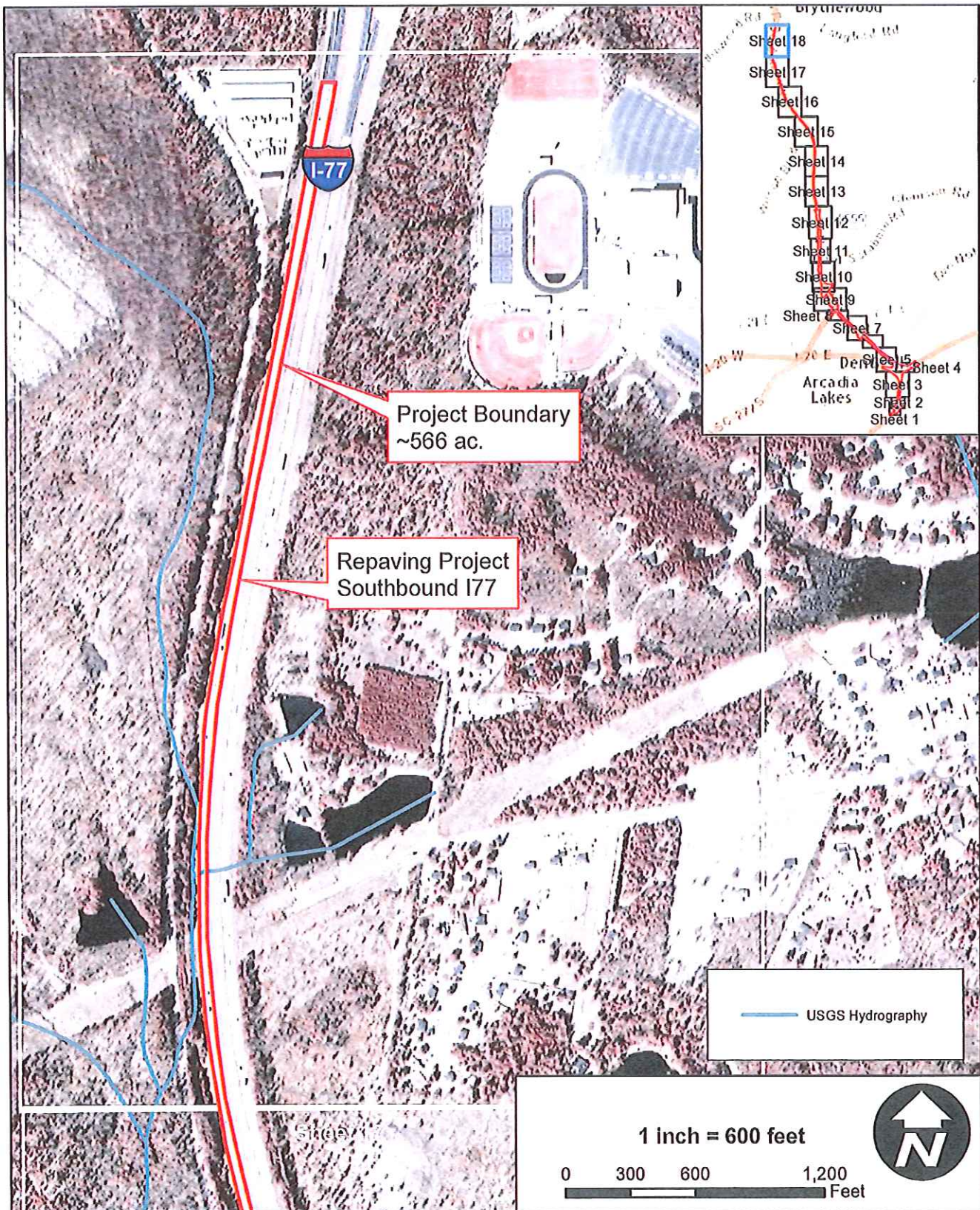












ATTACHMENT

PRELIMINARY JURISDICTIONAL DETERMINATION FORM

BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR PRELIMINARY JURISDICTIONAL DETERMINATION (JD):

July 8, 2015

B. NAME AND ADDRESS OF PERSON REQUESTING PRELIMINARY JD:

Mr. Sean Connolly
South Carolina Department of Transportation
P.O. Box 191
Columbia, South Carolina 29202-0191

C. DISTRICT OFFICE, FILE NAME, AND NUMBER: Charleston District, SCDOT Interstate 77 widening project in Richland County, (SCDOT P027002), SAC 2015-00155-DS

D. PROJECT LOCATION(S) AND BACKGROUND INFORMATION: Project is located along an approximate twelve mile segment of Interstate 77 from a location at mile marker 15 (just south of the Percival Road Interchange) to a location at mile marker 27 (just south of the Blythewood Road Interchange) in Richland County.

(USE THE ATTACHED TABLE TO DOCUMENT MULTIPLE WATERBODIES AT DIFFERENT SITES)

State: SC County/parish/borough: Richland Co. City:
Center coordinates of site (lat/long in degree decimal format):
Lat. 34.15376° N, Long. -80.964858° W. Universal Transverse Mercator: NAD 83
Name of nearest waterbody: Windsor Lake, Crane Creek

Identify (estimate) amount of waters in the review area:

Non-wetland waters: 5577 linear feet: Variable width (ft) and/or (Impoundments) 2.077 acres.

Cowardin Class: Riverine Stream Flow: Perennial

Wetlands: 4.506 acres. Cowardin Class: Emergent

Name of any water bodies on the site that have been identified as Section 10 waters:

Tidal: N/A

Non-Tidal: N/A

E. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

☒ Office (Desk) Determination. Date: July 8, 2015 ☒ Field Determination. Date(s): May 12, 2015

1. The Corps of Engineers believes that there may be jurisdictional waters of the United States on the subject site, and the permit applicant or other affected party who requested this preliminary JD is hereby advised of his or her option to request and obtain an approved jurisdictional determination (JD) for that site. Nevertheless, the permit applicant or other person who requested this preliminary JD has declined to exercise the option to obtain an approved JD in this instance and at this time.

2. In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring "pre-construction notification" (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an approved JD for the activity, the permit applicant is hereby made aware of the following: (1) the permit applicant has elected to seek a permit authorization based on a preliminary JD, which does not make an official determination of jurisdictional waters; (2) that the applicant has the option to request an approved JD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an approved JD could possibly result in less compensatory mitigation being required or different special conditions; (3) that the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization; (4) that the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the Corps has determined to be necessary; (5) that undertaking any activity in reliance upon the subject permit authorization without requesting an approved JD constitutes the applicant's acceptance of the use of the preliminary JD, but that either form of JD will be processed as soon as is practicable; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of Corps permit authorization based on a preliminary

JD constitutes agreement that all wetlands and other water bodies on the site affected in any way by that activity are jurisdictional waters of the United States, and precludes any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and (7) whether the applicant elects to use either an approved JD or a preliminary JD, that JD will be processed as soon as is practicable. Further, an approved JD, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331, and that in any administrative appeal, jurisdictional issues can be raised (see 33 C.F.R. 331.5(a)(2)). If, during that administrative appeal, it becomes necessary to make an official determination whether CWA jurisdiction exists over a site, or to provide an official delineation of jurisdictional waters on the site, the Corps will provide an approved JD to accomplish that result, as soon as is practicable.

This preliminary JD finds that there "may be" waters of the United States on the subject project site, and identifies all aquatic features on the site that could be affected by the proposed activity, based on the following information:

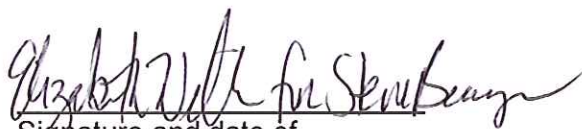
SUPPORTING DATA. Data reviewed for preliminary JD (check all that apply - checked items should be included in case file and, where checked and requested, appropriately reference sources below):

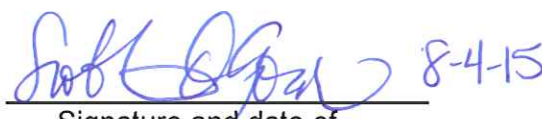
- ☒ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: HDR.
- ☒ Data sheets prepared/submitted by or on behalf of the applicant/consultant.
 - ☐ Office concurs with data sheets/delineation report.
 - ☐ Office does not concur with data sheets/delineation report

Although the Corps may not agree with all the information provided by the agent, the Corps agrees with the conclusions and boundaries established from site information documented.

- ☐ Data sheets prepared by the Corps: .
- ☐ Corps navigable waters' study: .
- ☒ U.S. Geological Survey Hydrologic Atlas: .
 - ☐ USGS NHD data.
 - ☒ USGS 8 and 12 digit HUC maps. 030501016 Broad River & 03050110 Congaree River
- ☒ U.S. Geological Survey map(s). Cite scale & quad name: Fort Jackson, Blythewood, SC.
- ☒ USDA Natural Resources Conservation Service Soil Survey. Citation: Pages 9, 15, 22, & 27; Fuquay, Pelion, Pelion-Urban Lakeland-Urban, Lakeland, Water, Herndon, Dothan, Blanton, Troup, Coxville series.
- ☒ National wetlands inventory map(s). Cite name: PFO1A, U12, PFO1Ah, PEM1Ch, U43, PUBHh, U42P, U14, U11, U21, & PEM1A.
- ☐ State/Local wetland inventory map(s): .
- ☐ FEMA/FIRM maps: .
- ☐ 100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)
- ☒ Photographs: ☒ Aerial (Name & Date): (1999) 11203:191 & 11206:64.
or ☒ Other (Name & Date): Photographs provided by consultant.
- ☐ Previous determination(s). File no. and date of response letter: .
- ☒ Other information (please specify): Site visit May 12, 2015.

IMPORTANT NOTE: The information recorded on this form has not necessarily been verified by the Corps and should not be relied upon for later jurisdictional determinations.


Signature and date of
Regulatory Project Manager
(REQUIRED)

 8-4-15
Signature and date of
person requesting preliminary JD
(REQUIRED, unless obtaining the signature is
impracticable)

I-77 widening, Richland Co

Site number	Latitude	Longitude	Cowardin Class	Estimated amount of aquatic resource in review area	Class of aquatic resource
Stream S 2	34.0555	- 80.923167	Riverine	900 linear feet	non-section 10 – non-wetland
Stream S 3	34.068833	- 80.919833	Riverine	374 linear feet	non-section 10 – non-wetland
Stream S 4	34.068667	- 80.920333	Riverine	82 linear feet	non-section 10 – non-wetland
Stream S 5	34.069833	-80.9185	Riverine	557 linear feet	non-section 10 – non-wetland
Stream S 6	34.069833	- 80.917333	Riverine	12 linear feet	non-section 10 – non-wetland
Stream S 7	34.068333	- 80.925333	Riverine	346 linear feet	non-section 10 – non-wetland
Stream S 8	34.069	-80.9275	Riverine	51 linear feet	non-section 10 – non-wetland
Stream S 9	34.078167	-80.9345	Riverine	31 linear feet	non-section 10 – non-wetland
Stream S 10	34.078167	- 80.934667	Riverine	62 linear feet	non-section 10 – non-wetland
Stream S 11	34.077667	-80.9355	Riverine	26 linear feet	non-section 10 – non-wetland
Stream S 12	34.077833	- 80.935667	Riverine	16 linear feet	non-section 10 – non-wetland
Stream S 13	34.077833	-80.9355	Riverine	60 linear feet	non-section 10 – non-wetland
Stream S 14	34.0785	- 80.936333	Riverine	55 linear feet	non-section 10 – non-wetland
Stream S 15	34.078667	-80.9365	Riverine	90 linear feet	non-section 10 – non-wetland
Stream S 16	34.079667	- 80.936333	Riverine	67 linear feet	non-section 10 – non-wetland

Site number	Latitude	Longitude	Cowardin Class	Estimated amount of aquatic resource in review area	Class of aquatic resource
Stream S 17	34.079833	- 80.936667	Riverine	246 linear feet	non-section 10 – non-wetland
Stream S 18	34.088167	- 80.949167	Riverine	400 linear feet	non-section 10 – non-wetland
Stream S 19	34.094167	-80.9535	Riverine	1672 linear feet	non-section 10 – non-wetland
Stream S 20	34.089667	- 80.950333	Riverine	27 linear feet	non-section 10 – non-wetland
Stream S 21	34.0905	- 80.952667	Riverine	36 linear feet	non-section 10 – non-wetland
Stream S 22	34.090167	- 80.956333	Riverine	235 linear feet	non-section 10 – non-wetland
Stream S 23	34.1065	- 80.961167	Riverine	42 linear feet	non-section 10 – non-wetland
Stream S 24	34.106667	- 80.962333	Riverine	49 linear feet	non-section 10 – non-wetland
Stream S 26	34.1235	- 80.962667	Riverine	26 linear feet	non-section 10 – non-wetland
Stream S 28	34.123667	- 80.961833	Riverine	12 linear feet	non-section 10 – non-wetland
Stream S 29	34.1275	-80.963	Riverine	103 linear feet	non-section 10 – non-wetland
WINDSOR LAKE	34.0735	- 80.929333	Lacustrine	1.44 acre	non-section 10 – non-wetland
POND 1	34.069	- 80.920333	Lacustrine	0.564 acre	non-section 10 – non-wetland
POND 2	34.069833	- 80.920833	Lacustrine	0.003 acres	non-section 10 – non-wetland
POND 3	34.074667	- 80.928333	Lacustrine	0.021 acres	non-section 10 – non-wetland
POND 4	34.074666	- 80.930333	Lacustrine	0.049 acres	non-section 10 – non-wetland

Site number	Latitude	Longitude	Cowardin Class	Estimated amount of aquatic resource in review area	Class of aquatic resource
Wetland W 2	34.050167	- 80.925333	Palustrine	0.012 acres	non-section 10 – wetland
Wetland W 3	34.051833	- 80.924333	Palustrine	0.006 acres	non-section 10 – wetland
Wetland W 4	34.052833	- 80.924333	Palustrine	0.221 acres	non-section 10 – wetland
Wetland W 5	34.053833	- 80.923333	Palustrine	0.117 acres	non-section 10 – wetland
Wetland W 6	34.0555	- 80.922167	Palustrine	0.077 acres	non-section 10 – wetland
Wetland W 7	34.067167	- 80.919833	Palustrine	0.259 acres	non-section 10 – wetland
Wetland W 8	34.069	- 80.920333	Palustrine	0.563 acres	non-section 10 – wetland
Wetland W 9	34.069833	-80.9195	Palustrine	0.494 acres	non-section 10 – wetland
Wetland W 10	34.068833	- 80.928167	Palustrine	0.026 acres	non-section 10 – wetland
Wetland W 11	34.073	- 80.927167	Palustrine	0.269 acres	non-section 10 – wetland
Wetland W 12	34.0745	- 80.929667	Palustrine	0.221 acres	non-section 10 – wetland
Wetland W 12	34.0745	- 80.929667	Palustrine	0.221 acres	non-section 10 – wetland
Wetland W 13	34.077833	- 80.935767	Palustrine	0.025 acres	non-section 10 – wetland
Wetland W 14	34.088333	- 80.949833	Palustrine	0.032 acres	non-section 10 – wetland

Site number	Latitude	Longitude	Cowardin Class	Estimated amount of aquatic resource in review area	Class of aquatic resource
Wetland W 15	34.088833	- 80.949167	Palustrine	0.032 acres	non-section 10 – wetland
Wetland W 16	34.0965	- 80.957833	Palustrine	0.177 acres	non-section 10 – wetland
Wetland W 17	34.100167	- 80.960833	Palustrine	0.053 acres	non-section 10 – wetland
Wetland W 18	34.1065	- 80.962333	Palustrine	0.53 acres	non-section 10 – wetland
Wetland W 19	34.106667	- 80.961167	Palustrine	0.336 acres	non-section 10 – wetland
Wetland W 20	34.109667	- 80.962667	Palustrine	0.692 acres	non-section 10 – wetland
Wetland W 21	34.121	- 80.962833	Palustrine	0.013 acres	non-section 10 – wetland
Wetland W 22	34.123	-80.9615	Palustrine	0.111 acres	non-section 10 – wetland
Wetland W23	34.1325	- 80.963833	Palustrine	0.135 acres	non-section 10 – wetland

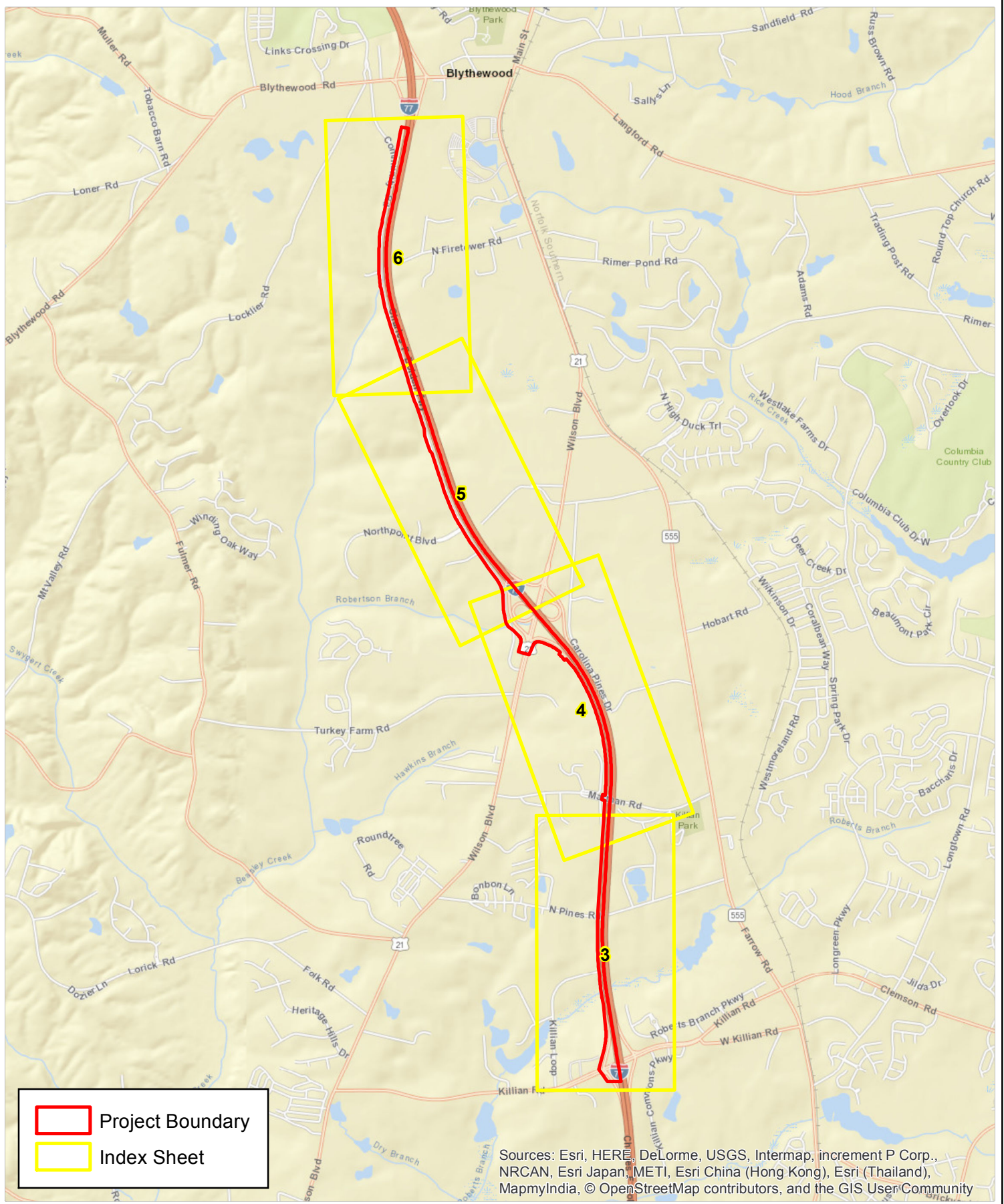


Figure 2. Project Location Index

Project ID P027002

I-77 Widening and Rehabilitation (MM15-MM27)

Richland County, South Carolina

SAC 2015-00155-DS

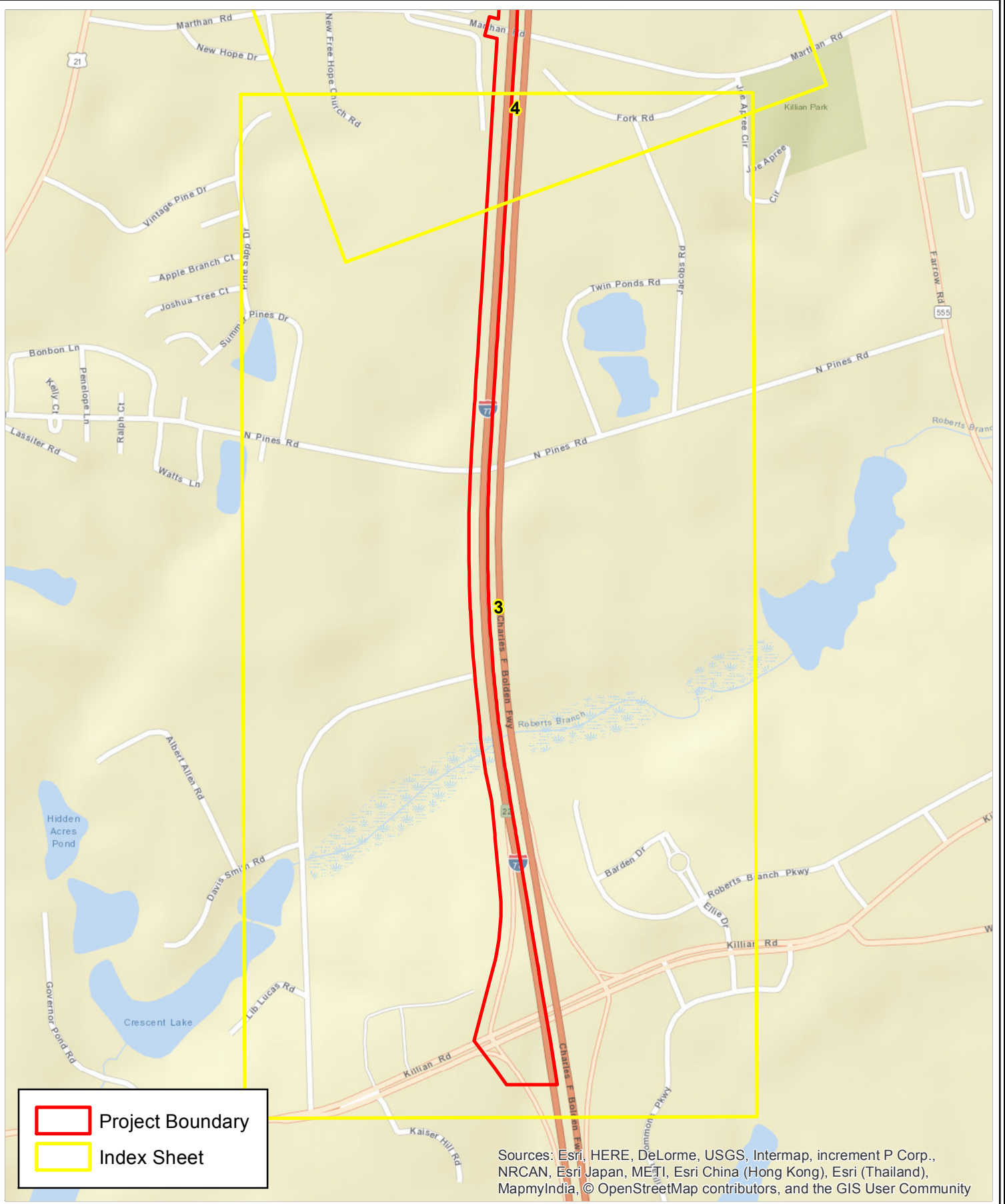


Figure 3. Project Location

Project ID P027002

I-77 Widening and Rehabilitation (MM15-MM27)

Richland County, South Carolina

SAC 2015-00155-DS

1 inch = 1,000 feet



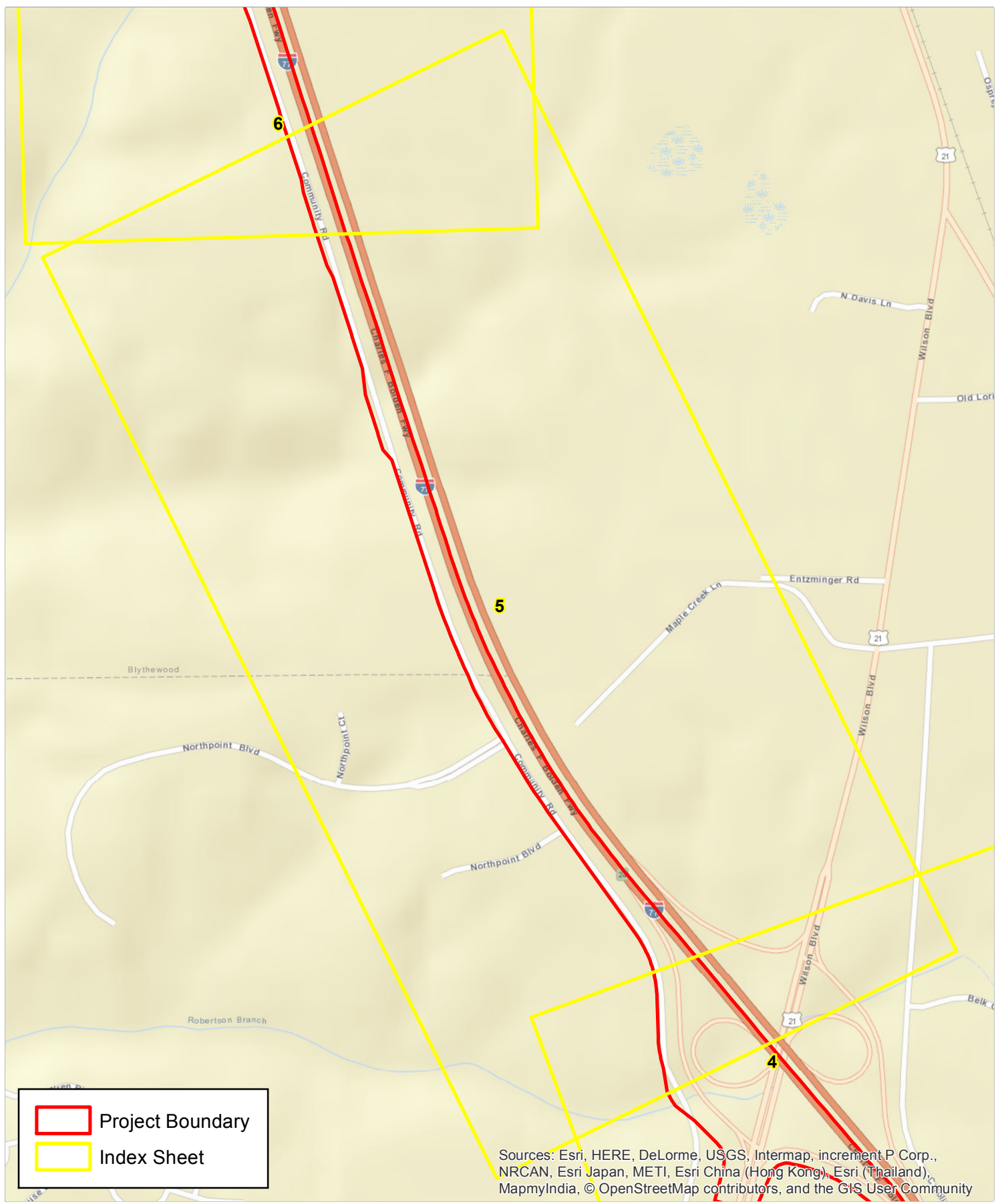


Figure 5. Project Location

Project ID P027002

I-77 Widening and Rehabilitation (MM15-MM27)

Richland County, South Carolina

SAC 2015-00155-DS

1 inch = 1,000 feet



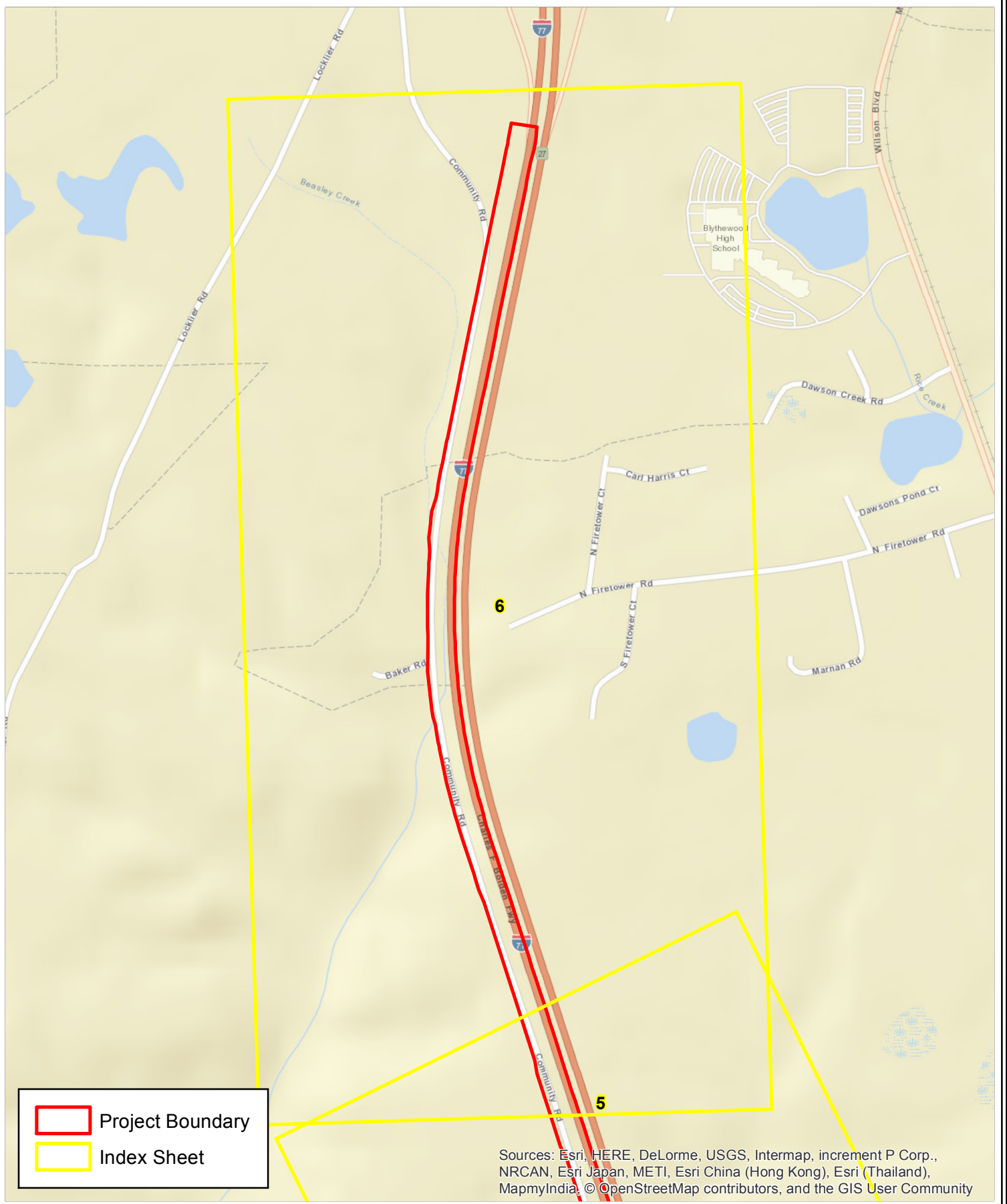


Figure 6. Project Location

Project ID P027002

I-77 Widening and Rehabilitation (MM15-MM27)

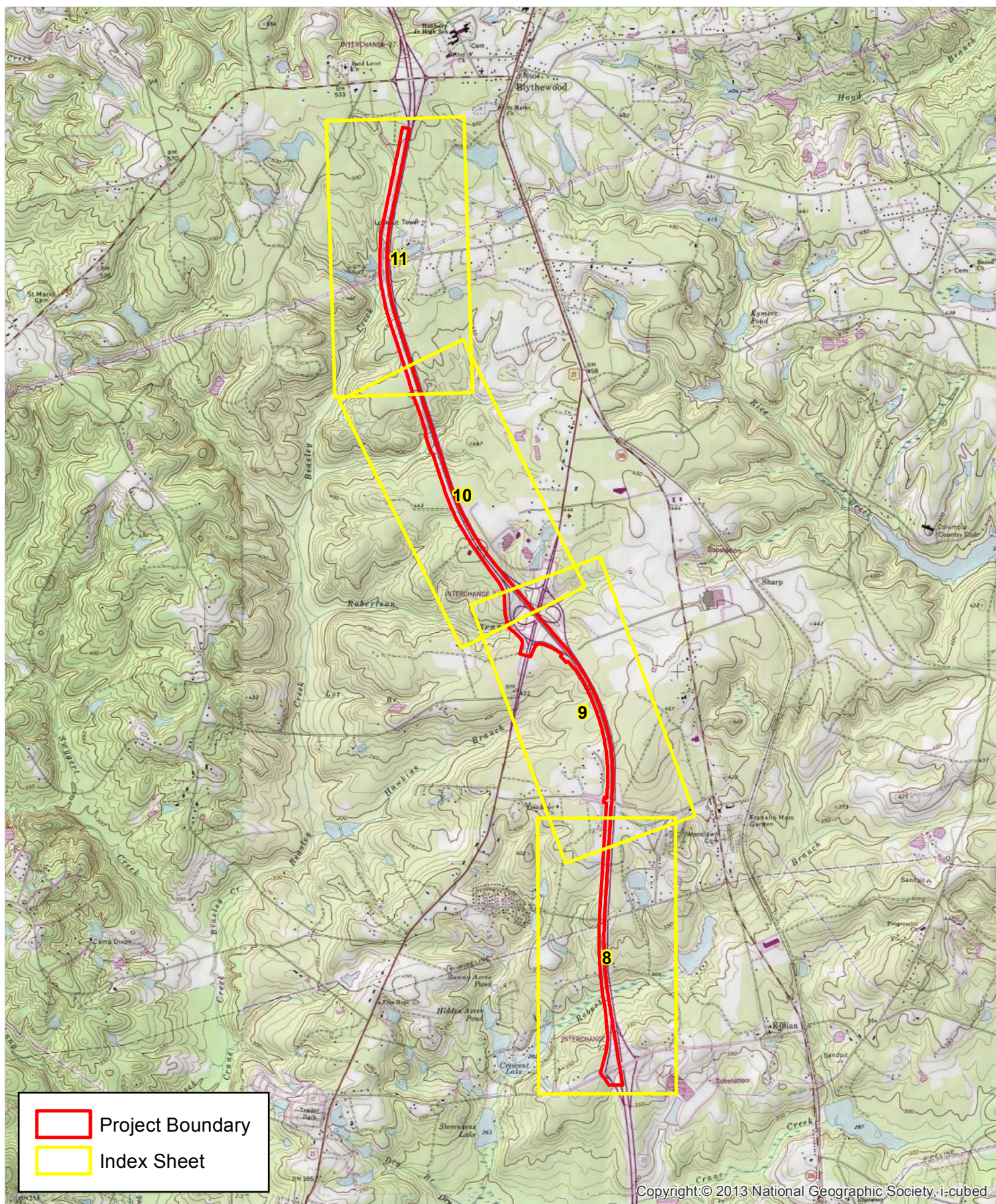
Richland County, South Carolina

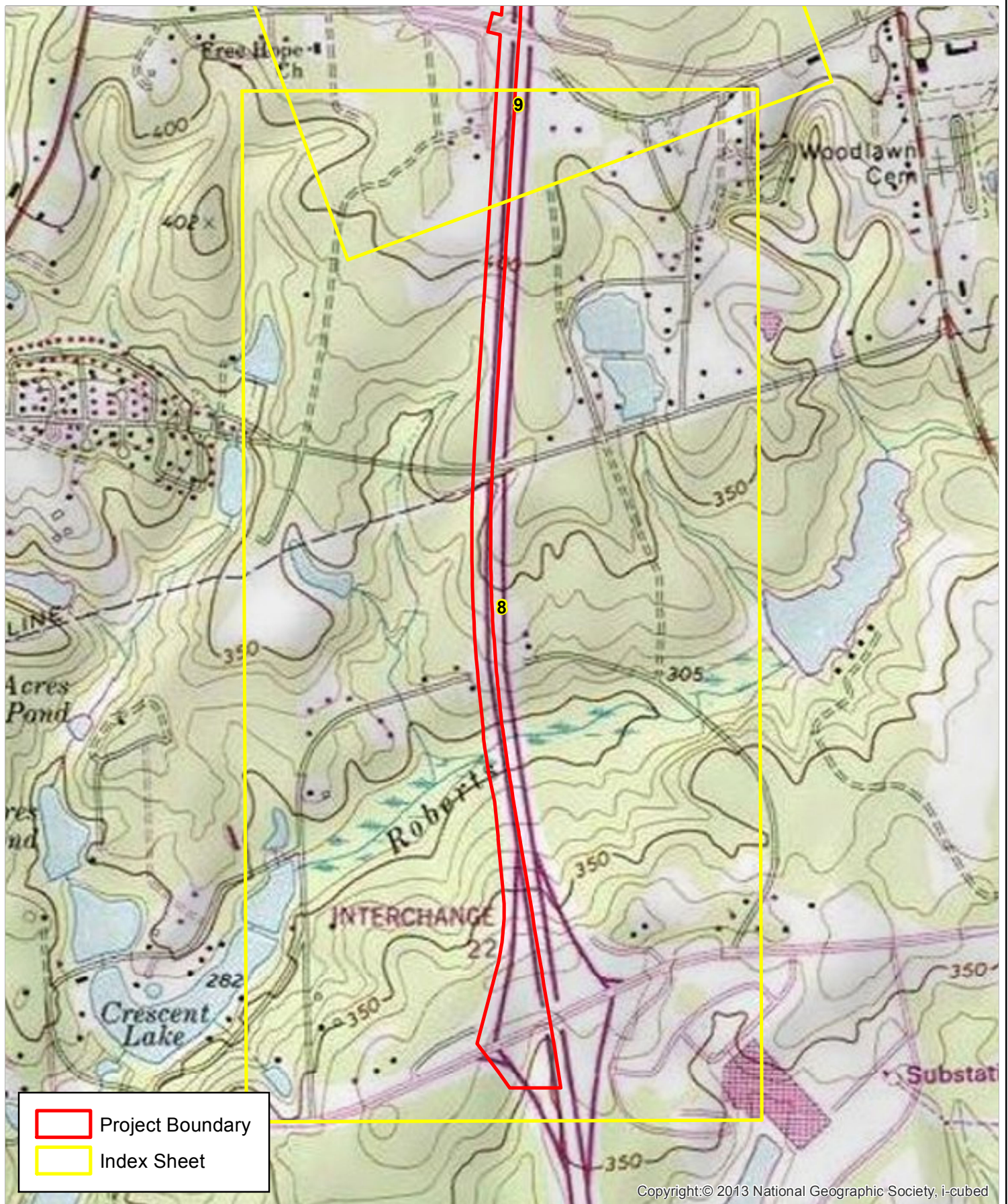
SAC 2015-00155-DS

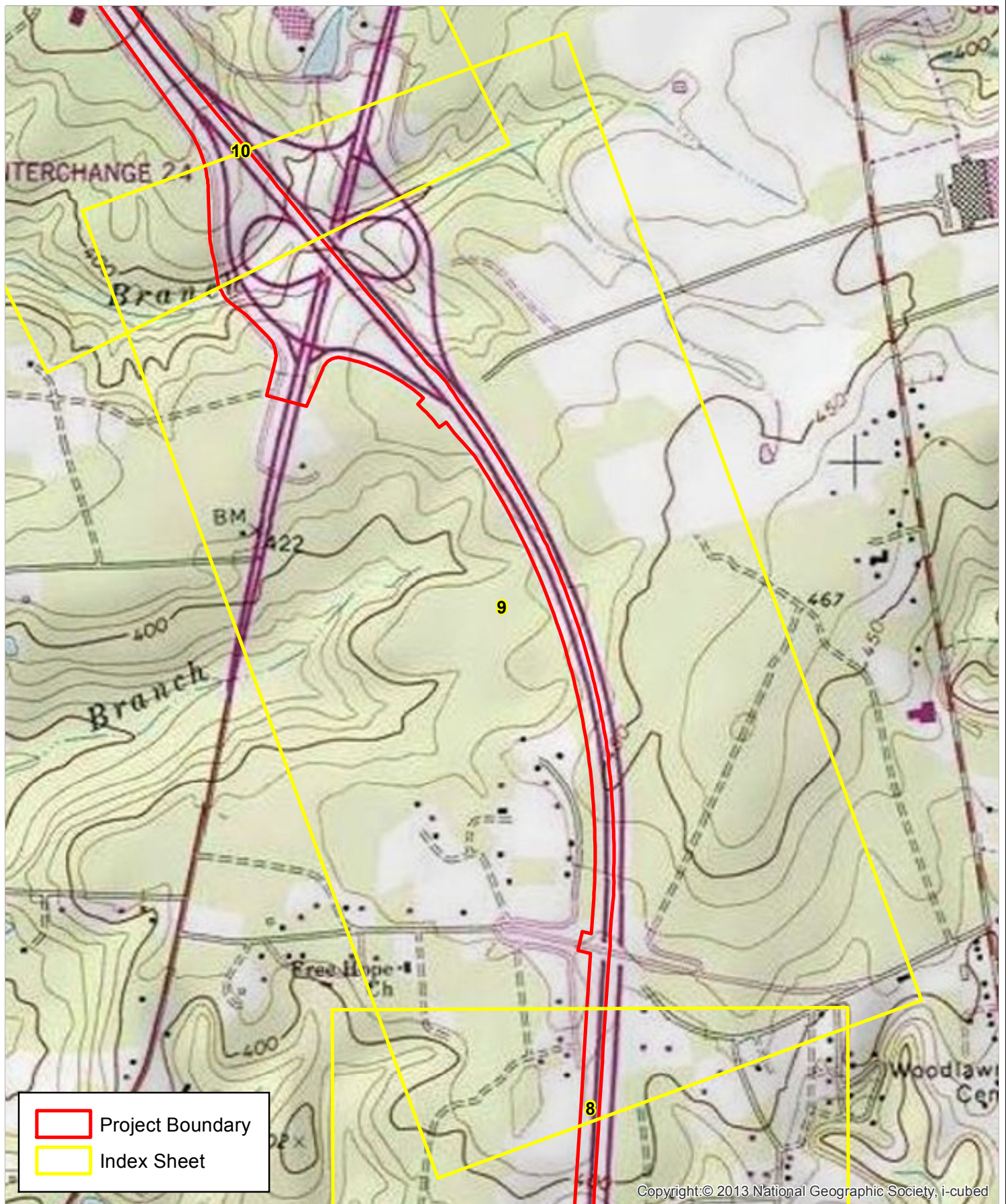
1 inch = 1,000 feet

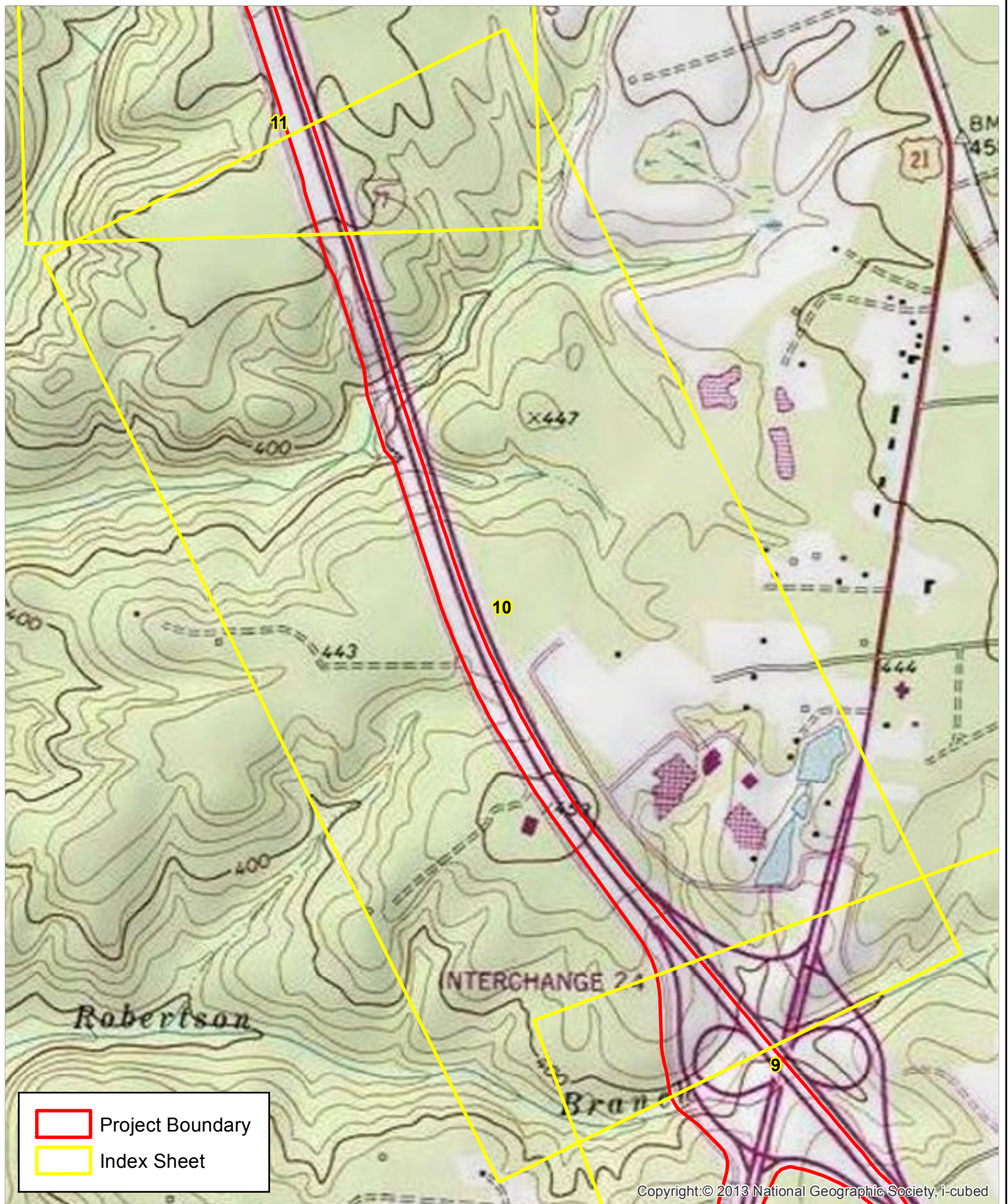
0 500 1,000 2,000 Feet

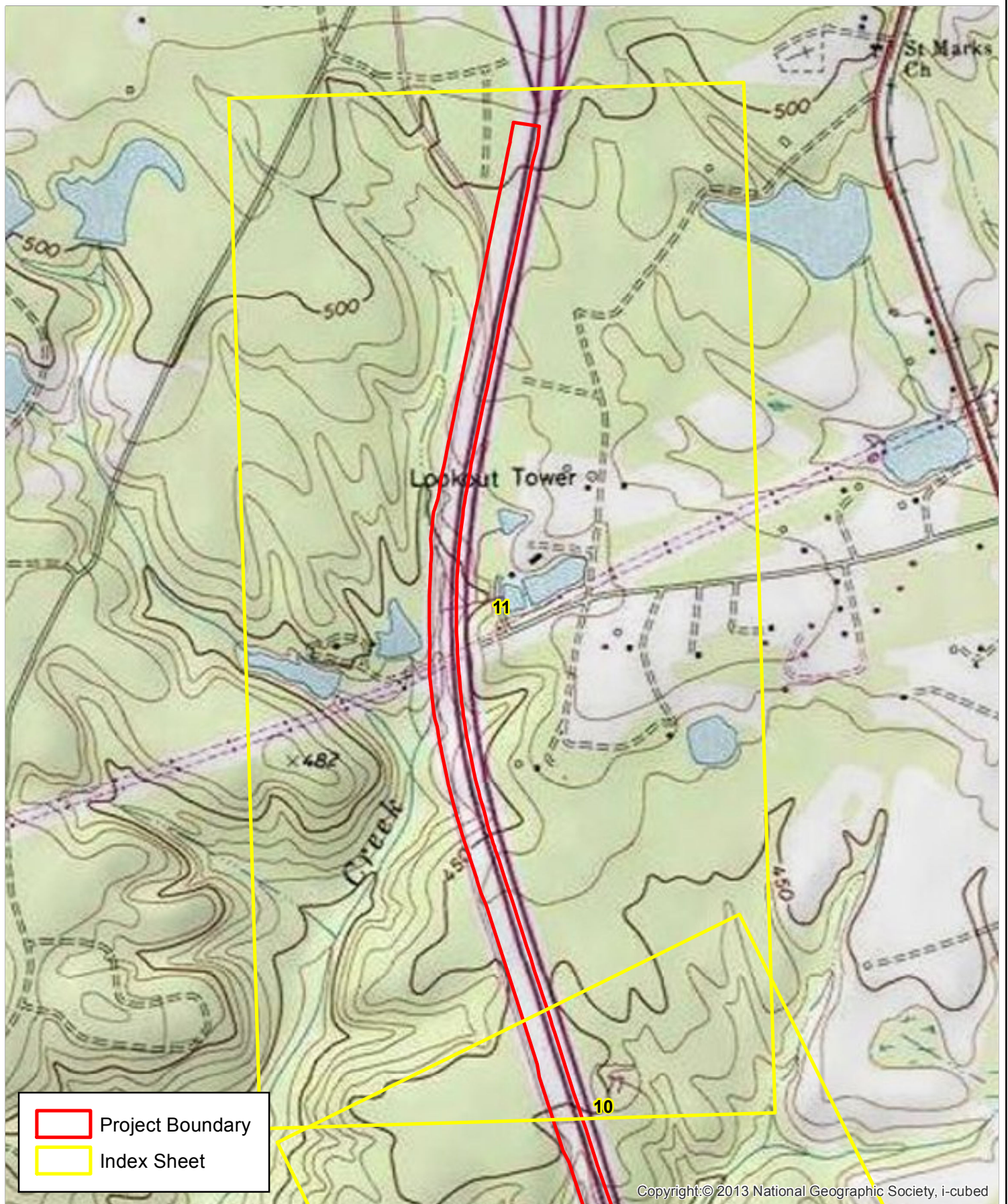


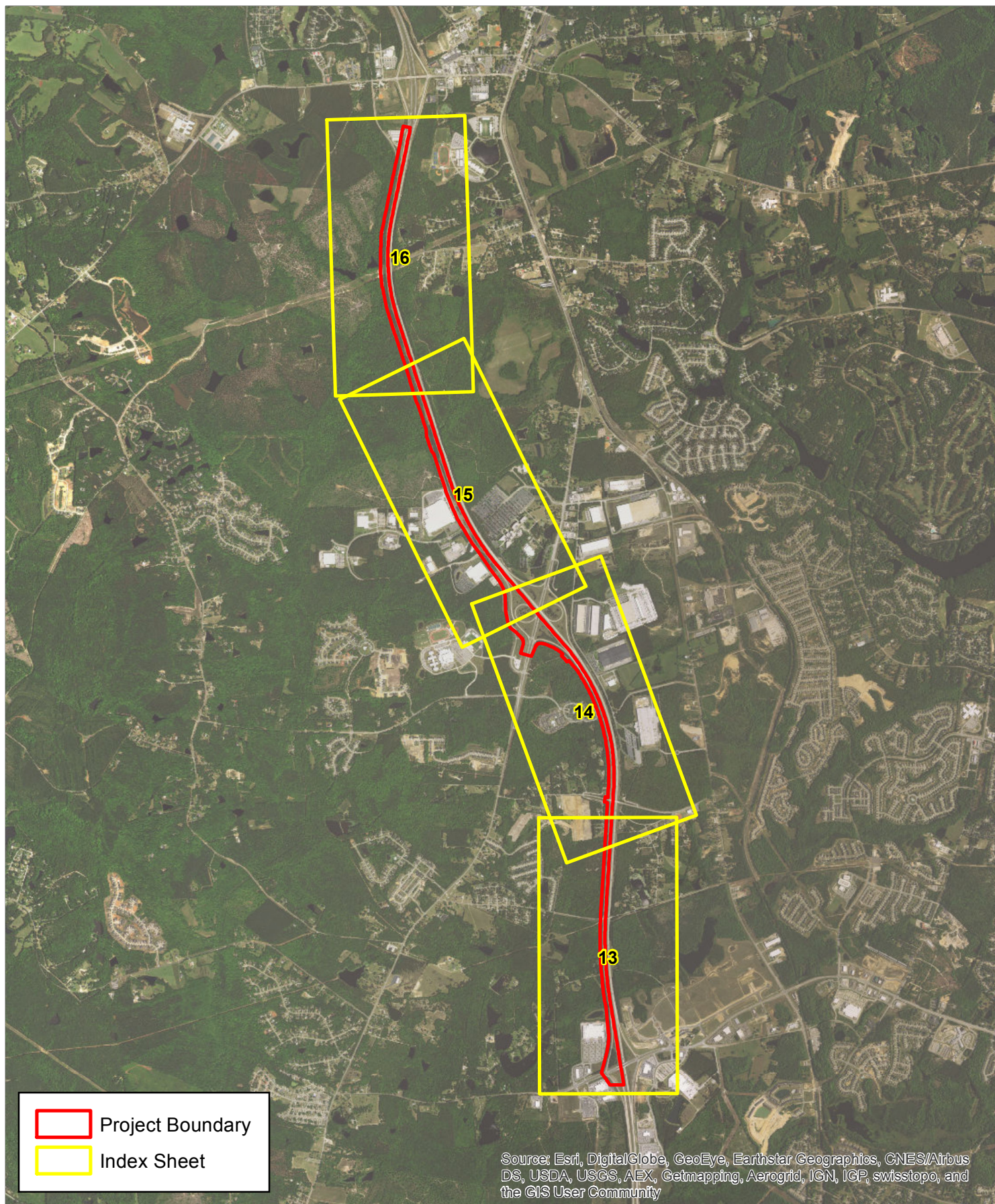












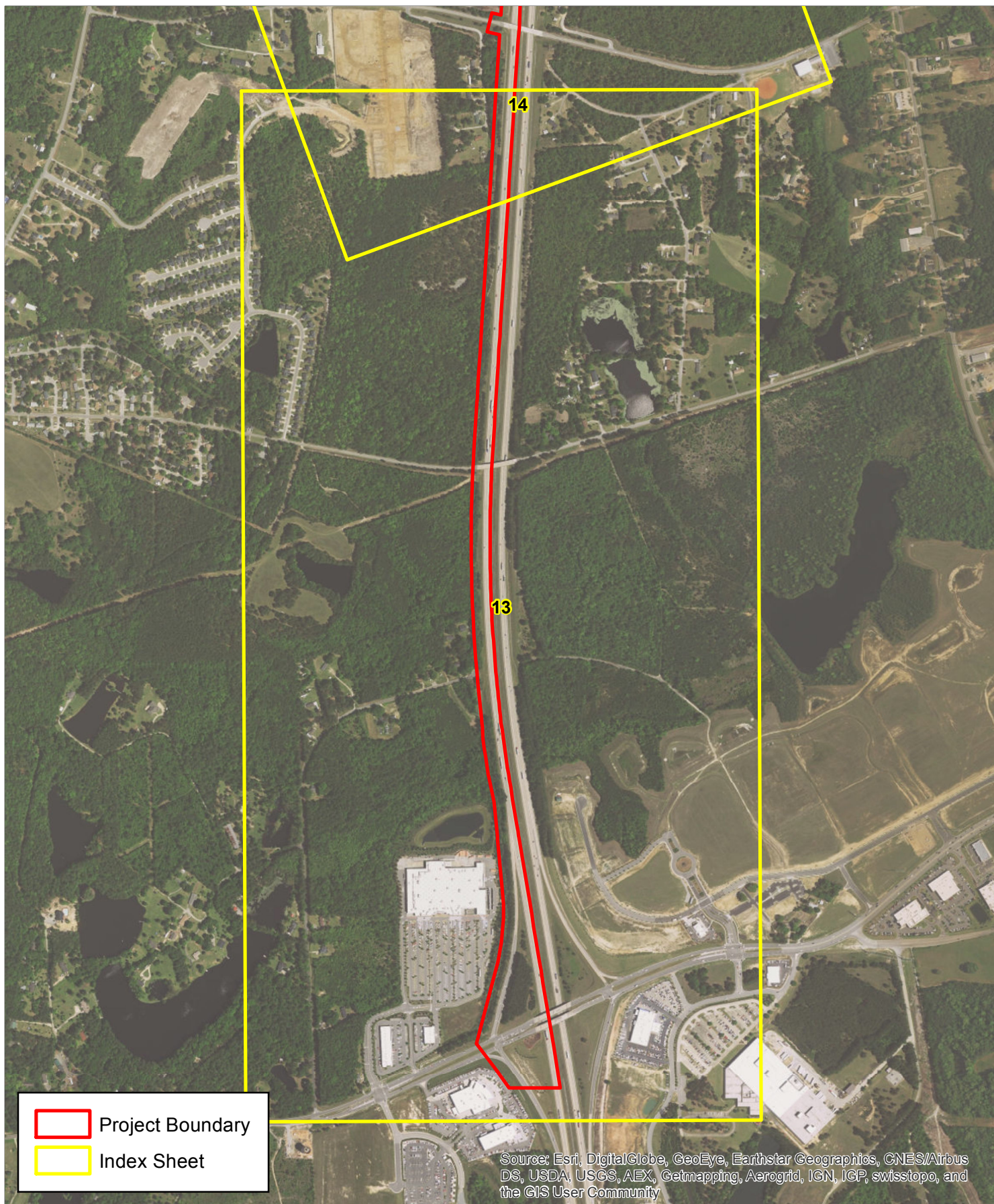


Figure 13. Aerial Map

Project ID P027002

I-77 Widening & Rehabilitation (MM15 - MM27)

Richland County, South Carolina

SAC 2015-00155-DS

1 inch = 1,000 feet

0 500 1,000 2,000
Feet





Figure 14. Aerial Map

Project ID P027002

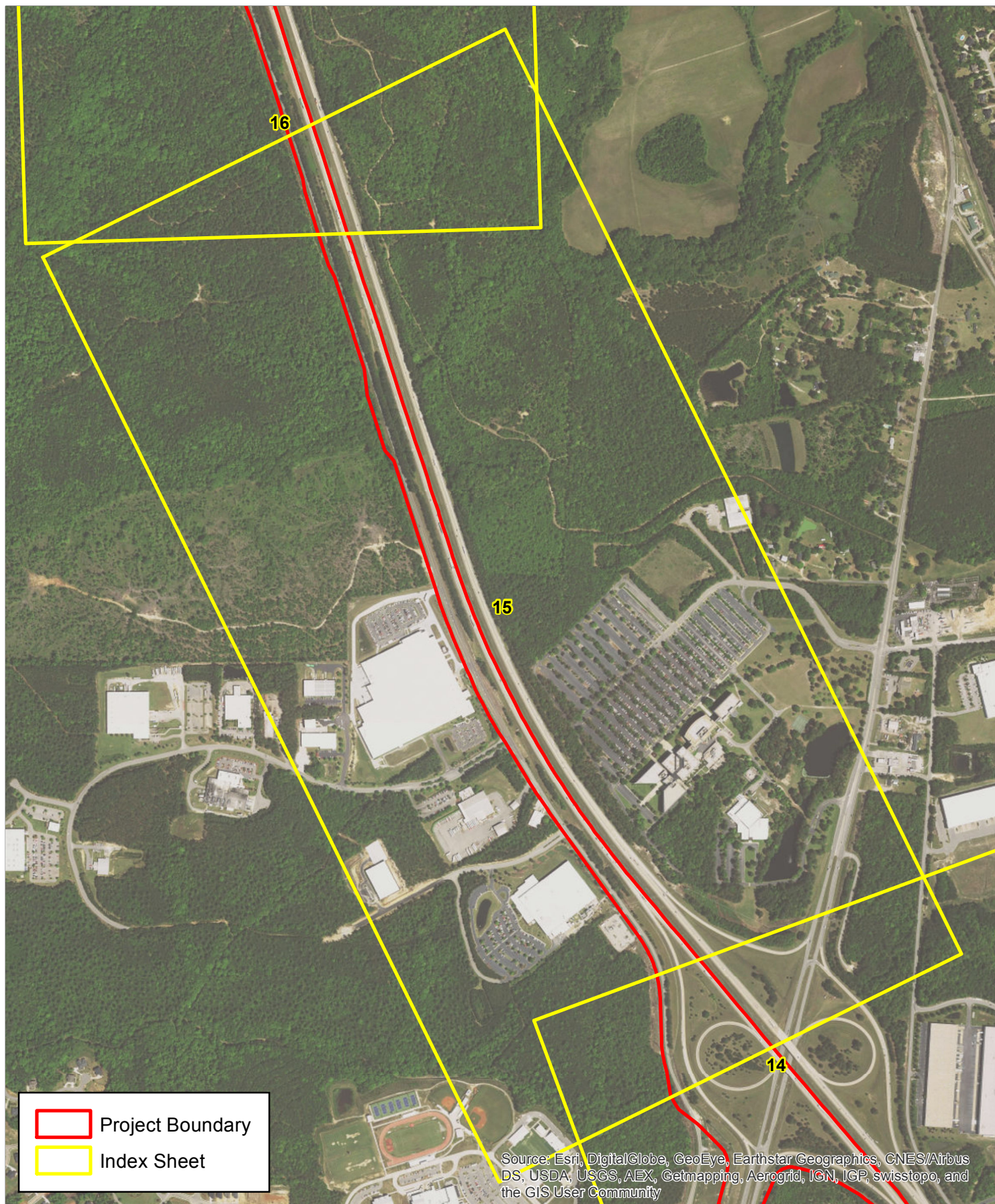
I-77 Widening & Rehabilitation (MM15 - MM27)

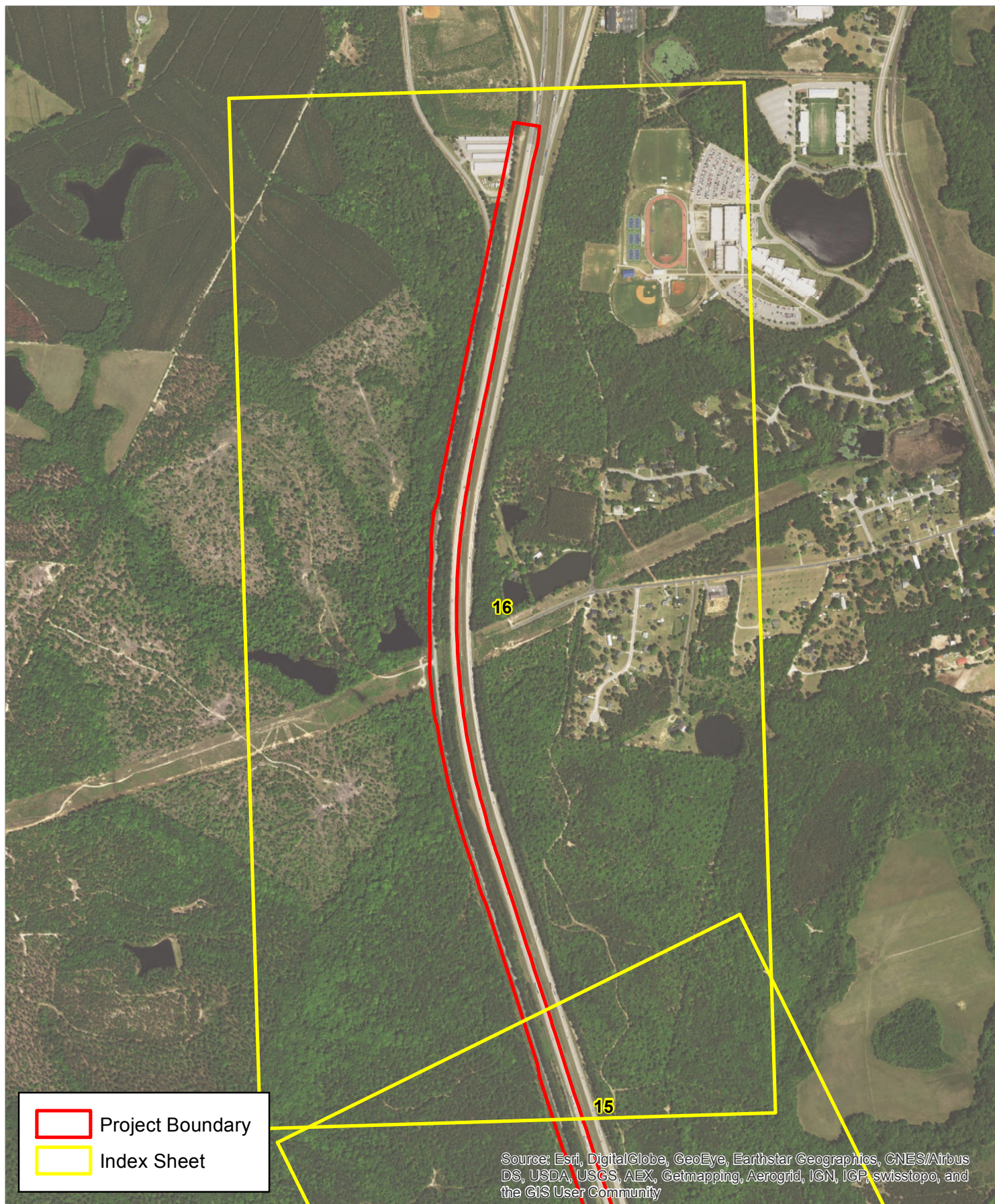
Richland County, South Carolina

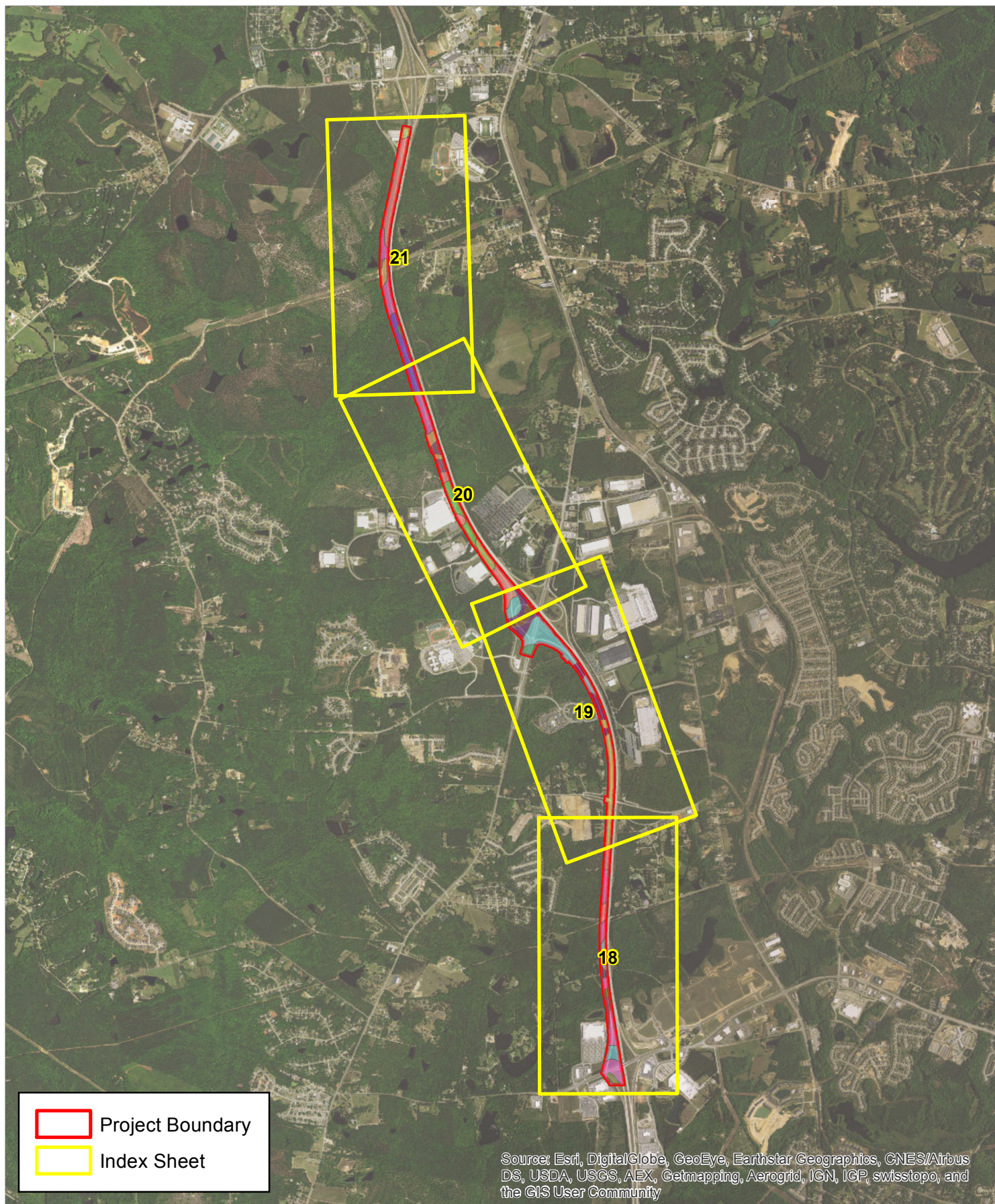
SAC 2015-00155-DS

1 inch = 1,000 feet









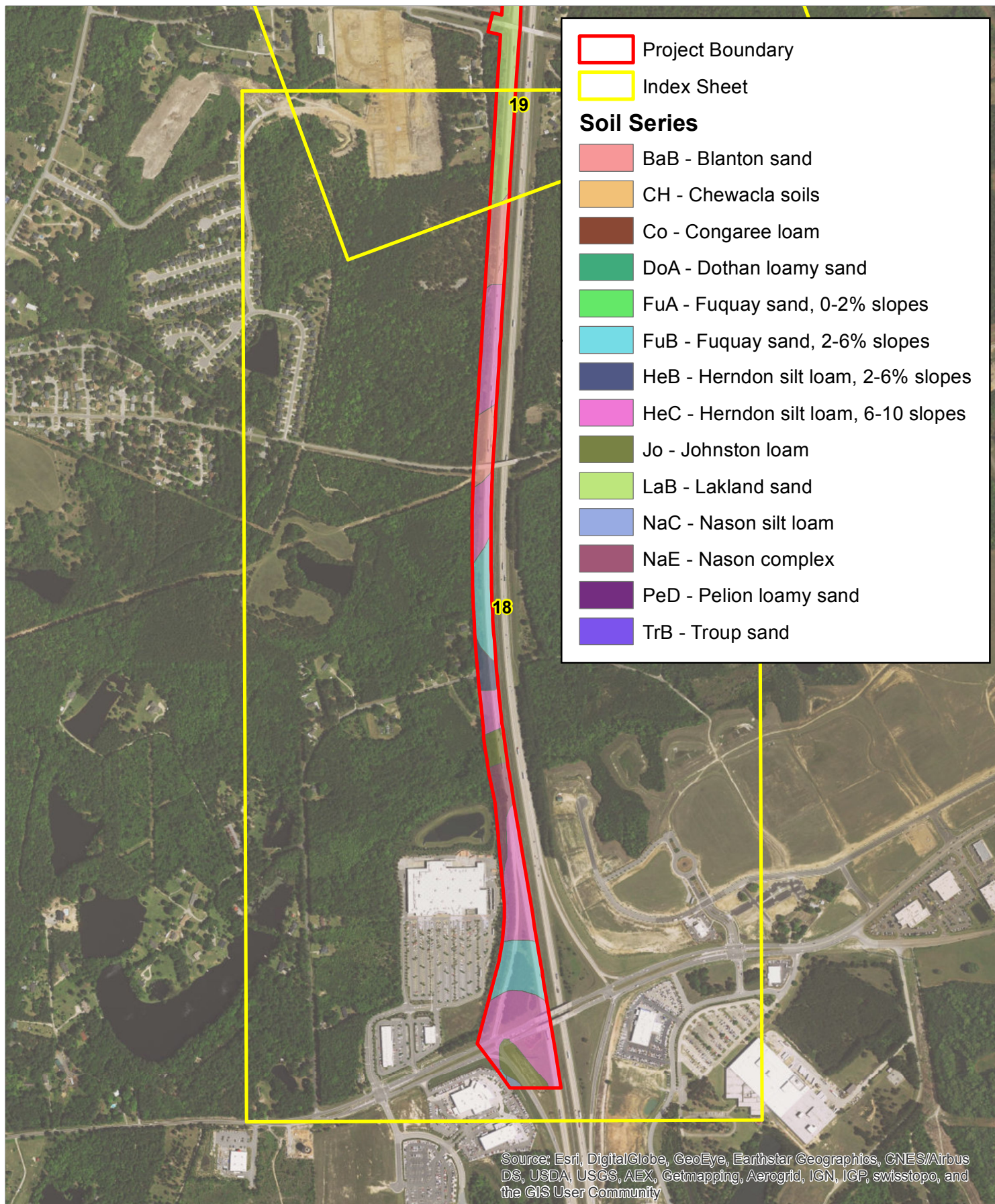


Figure 18. NRCS Soil Series Map

Project ID P027002

I-77 Widening & Rehabilitation (MM15 - MM27)

Richland County, South Carolina

SAC 2015-00155-DS

1 inch = 1,000 feet

0 500 1,000 2,000
Feet



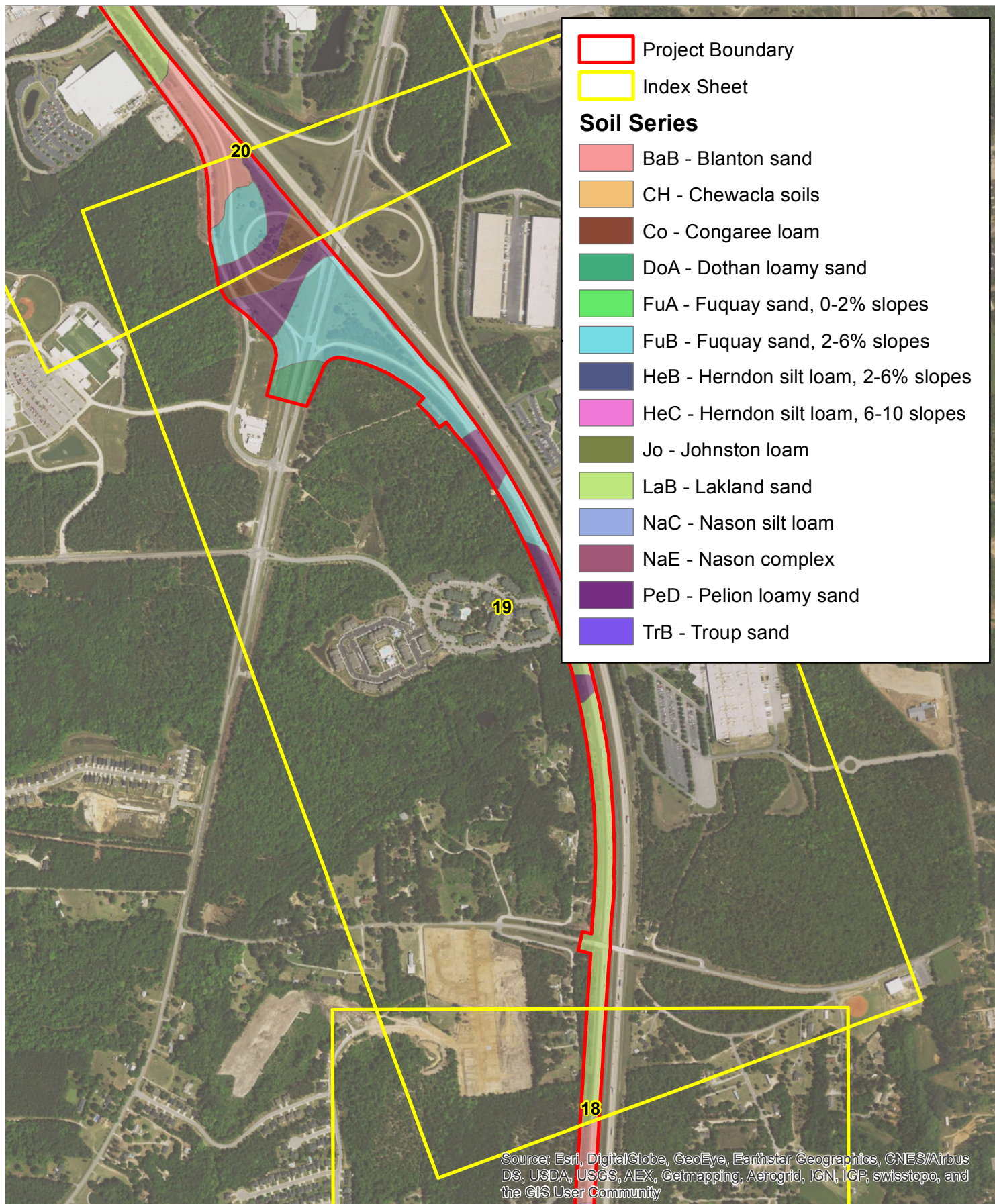


Figure 19. NRCS Soil Series Map

Project ID P027002

I-77 Widening & Rehabilitation (MM15 - MM27)

Richland County, South Carolina

SAC 2015-00155-DS

1 inch = 1,000 feet

0 500 1,000 2,000
Feet



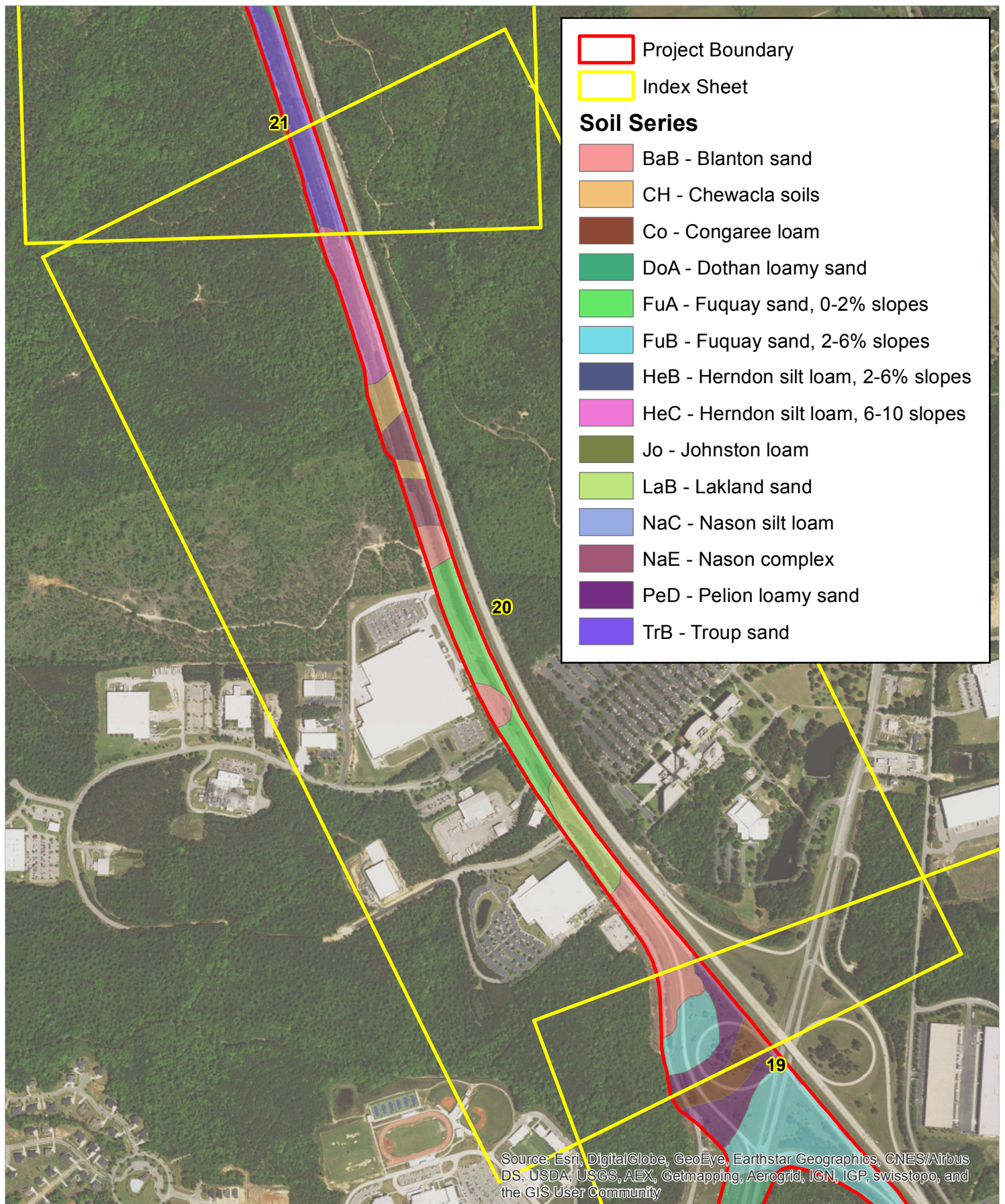


Figure 20. NRCS Soil Series Map

Project ID P027002

I-77 Widening & Rehabilitation (MM15 - MM27)

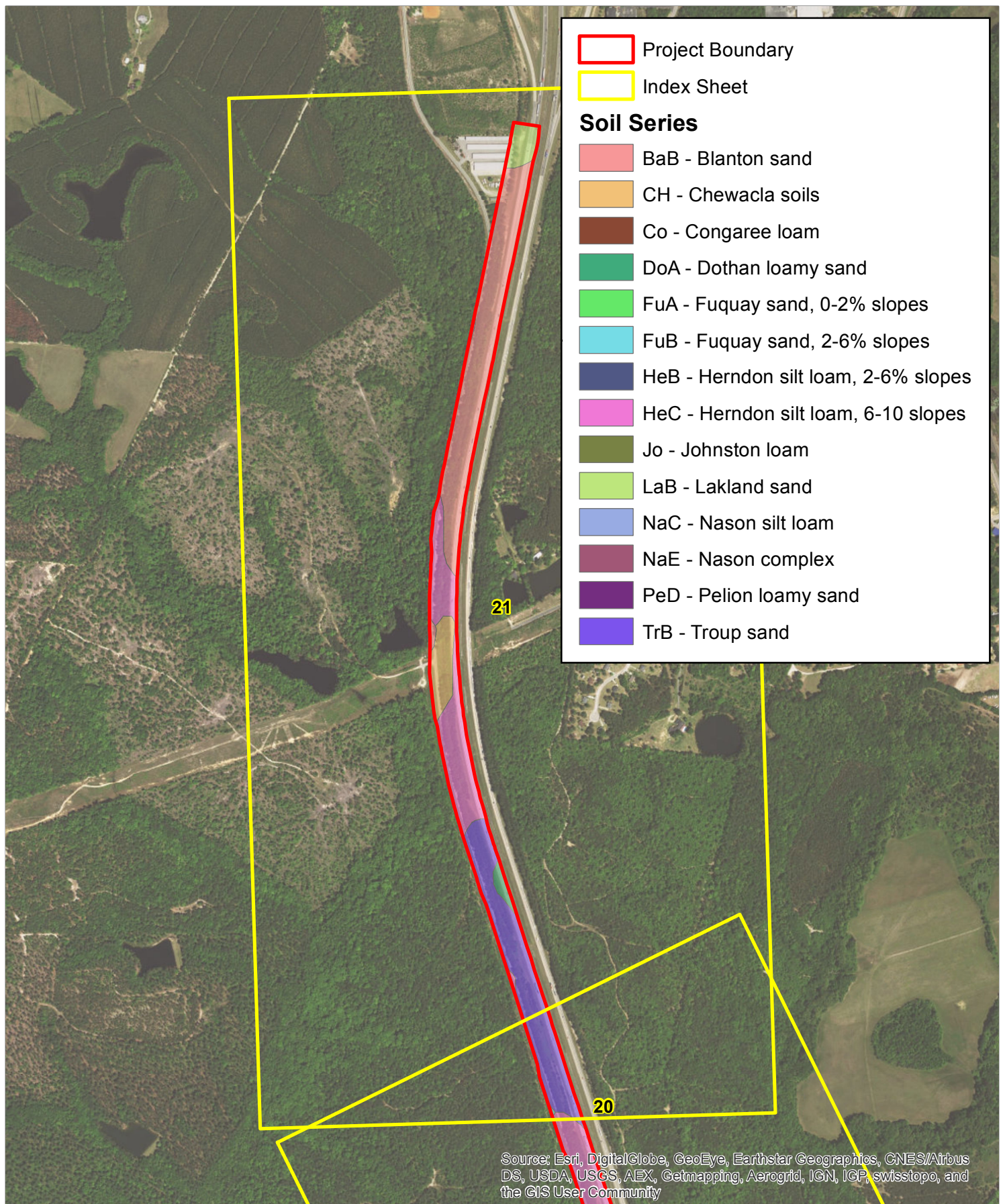
Richland County, South Carolina

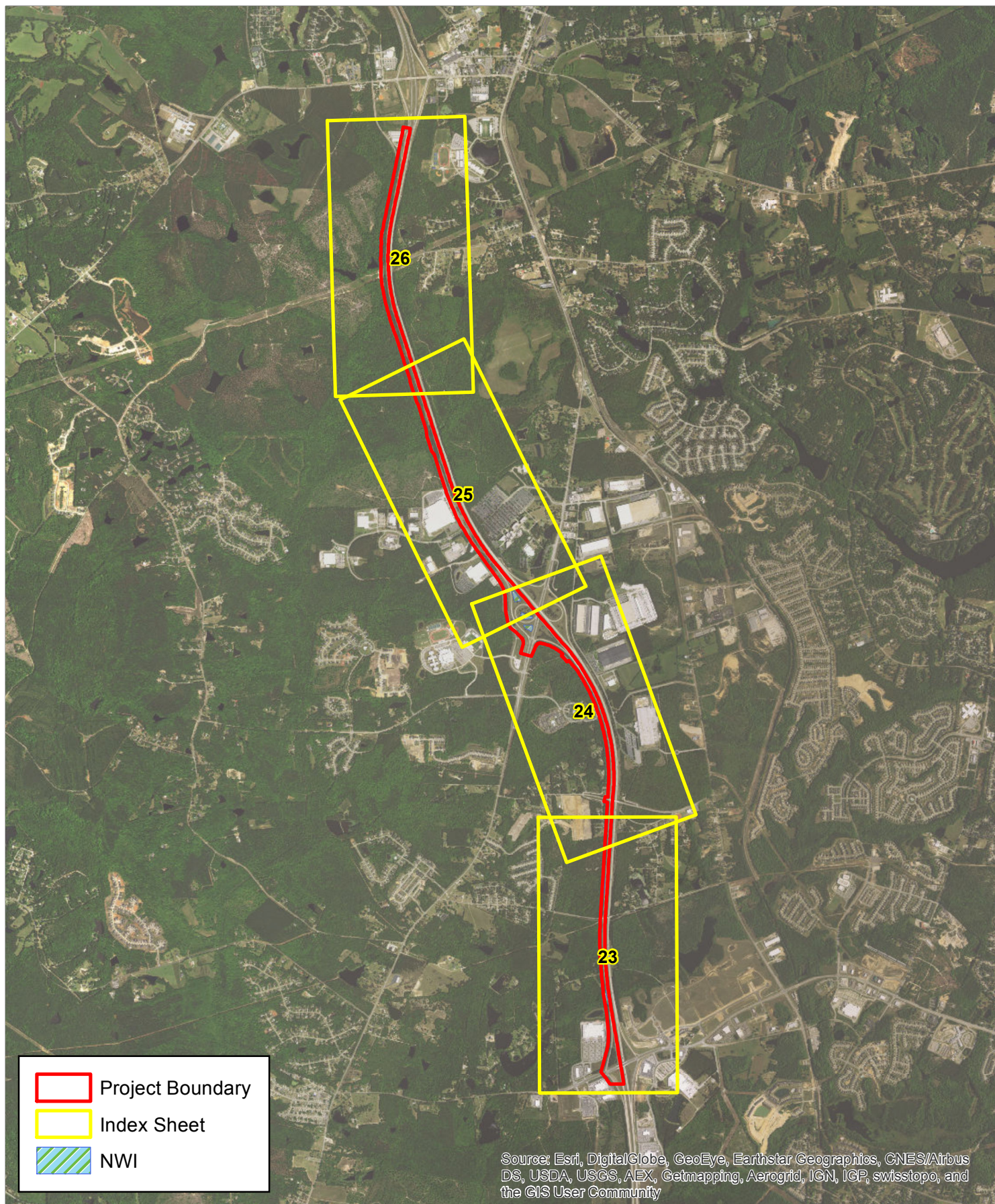
SAC 2015-00155-DS

1 inch = 1,000 feet

0 500 1,000 2,000
Feet







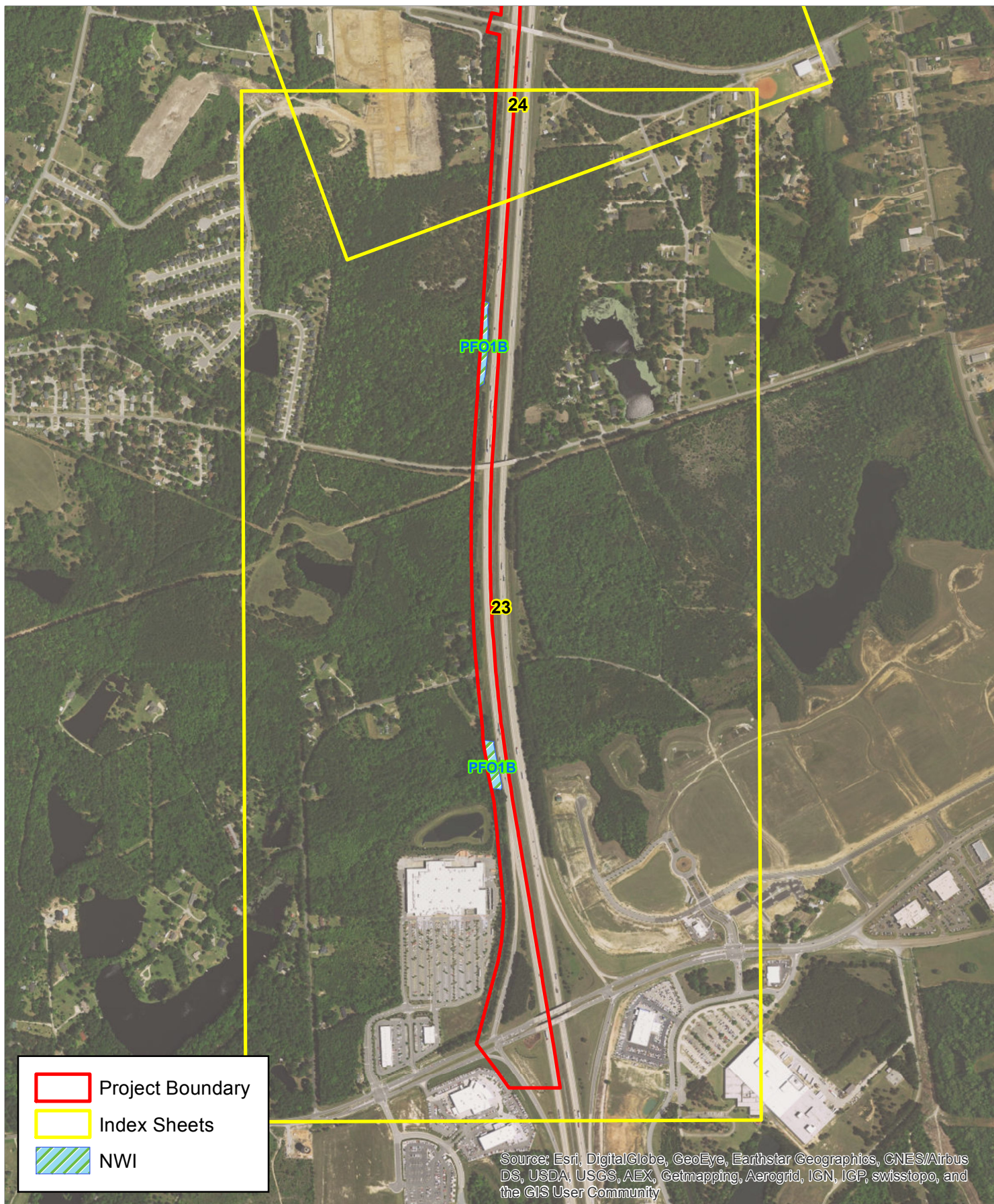


Figure 23. USFWS NWI Map

Project ID P027002

I-77 Widening & Rehabilitation (MM15 - MM27)

Richland County, South Carolina

SAC 2015-00155-DS

1 inch = 1,000 feet

0 500 1,000 2,000
Feet



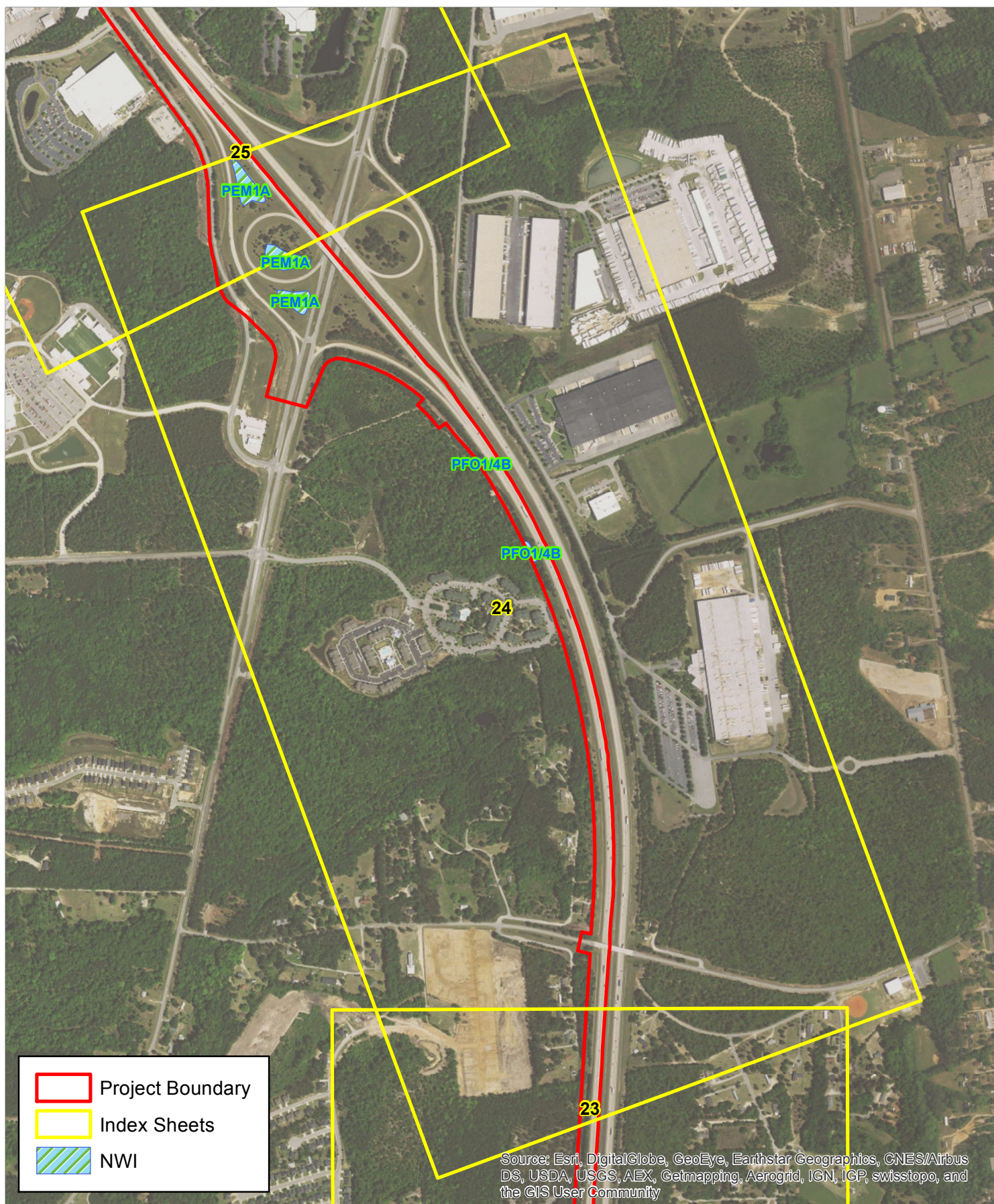


Figure 24. USFWS NWI Map

Project ID P027002

I-77 Widening & Rehabilitation (MM15 - MM27)

Richland County, South Carolina

SAC 2015-00155-DS

1 inch = 1,000 feet



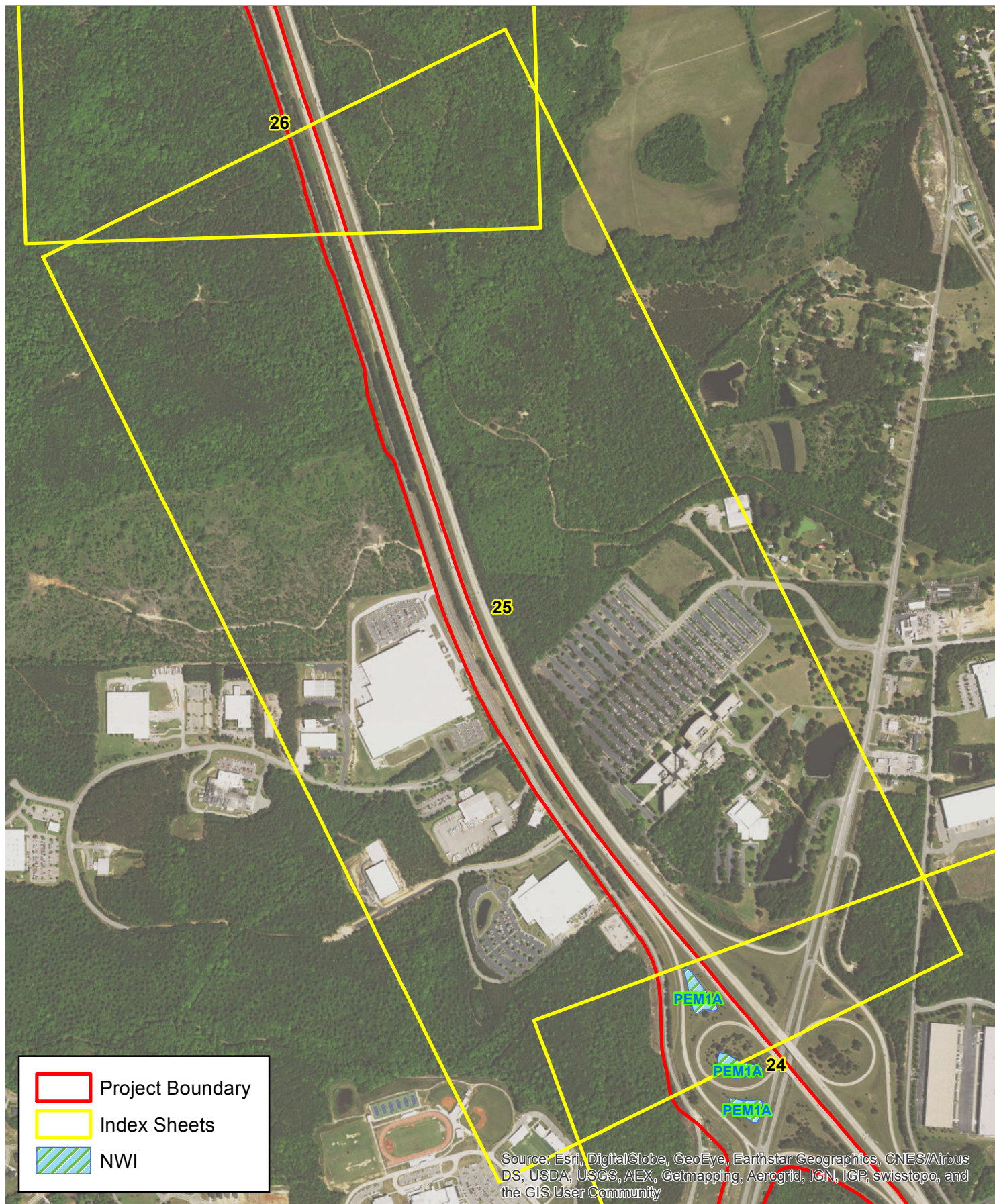


Figure 25. USFWS NWI Map

Project ID P027002

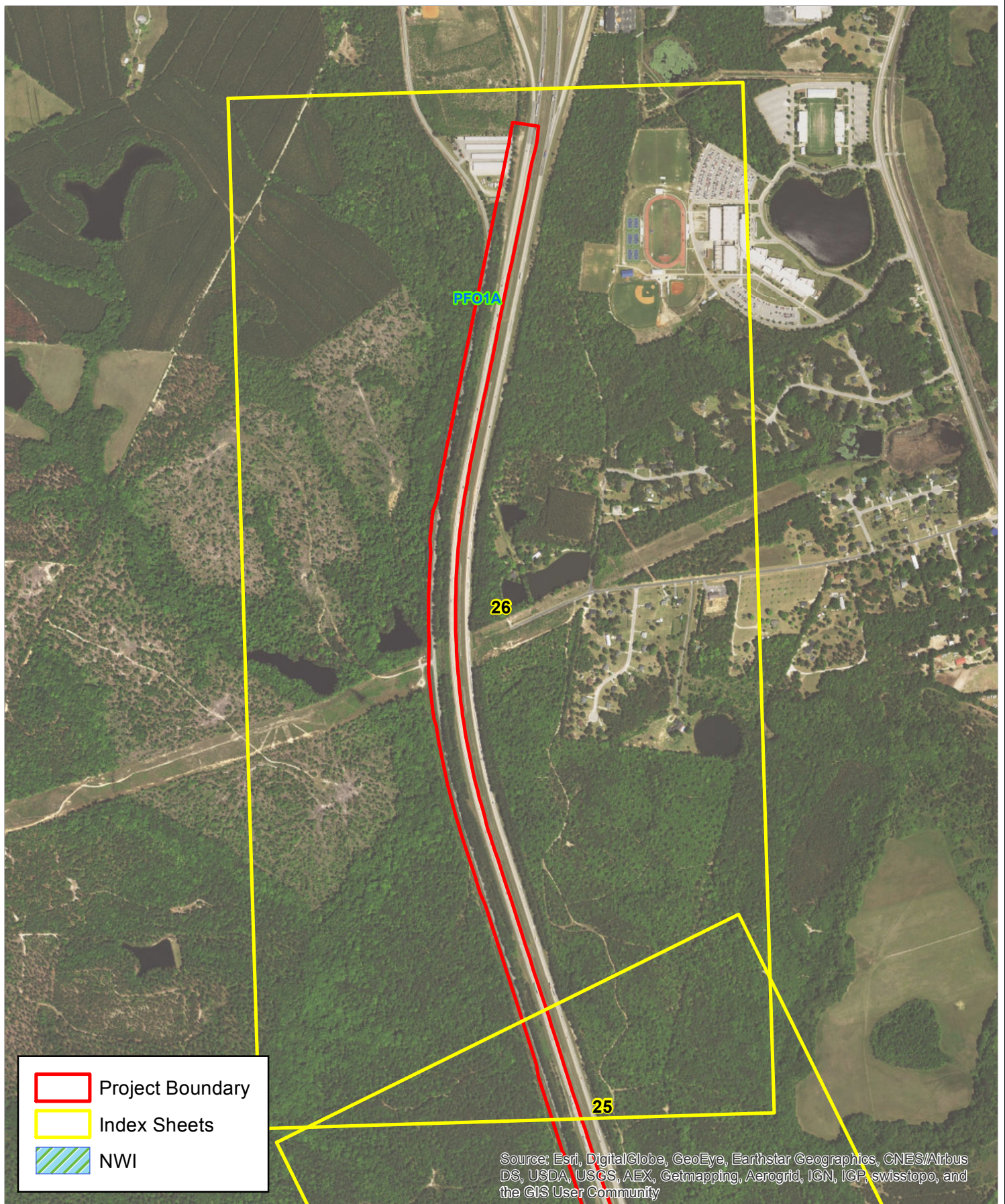
I-77 Widening & Rehabilitation (MM15 - MM27)

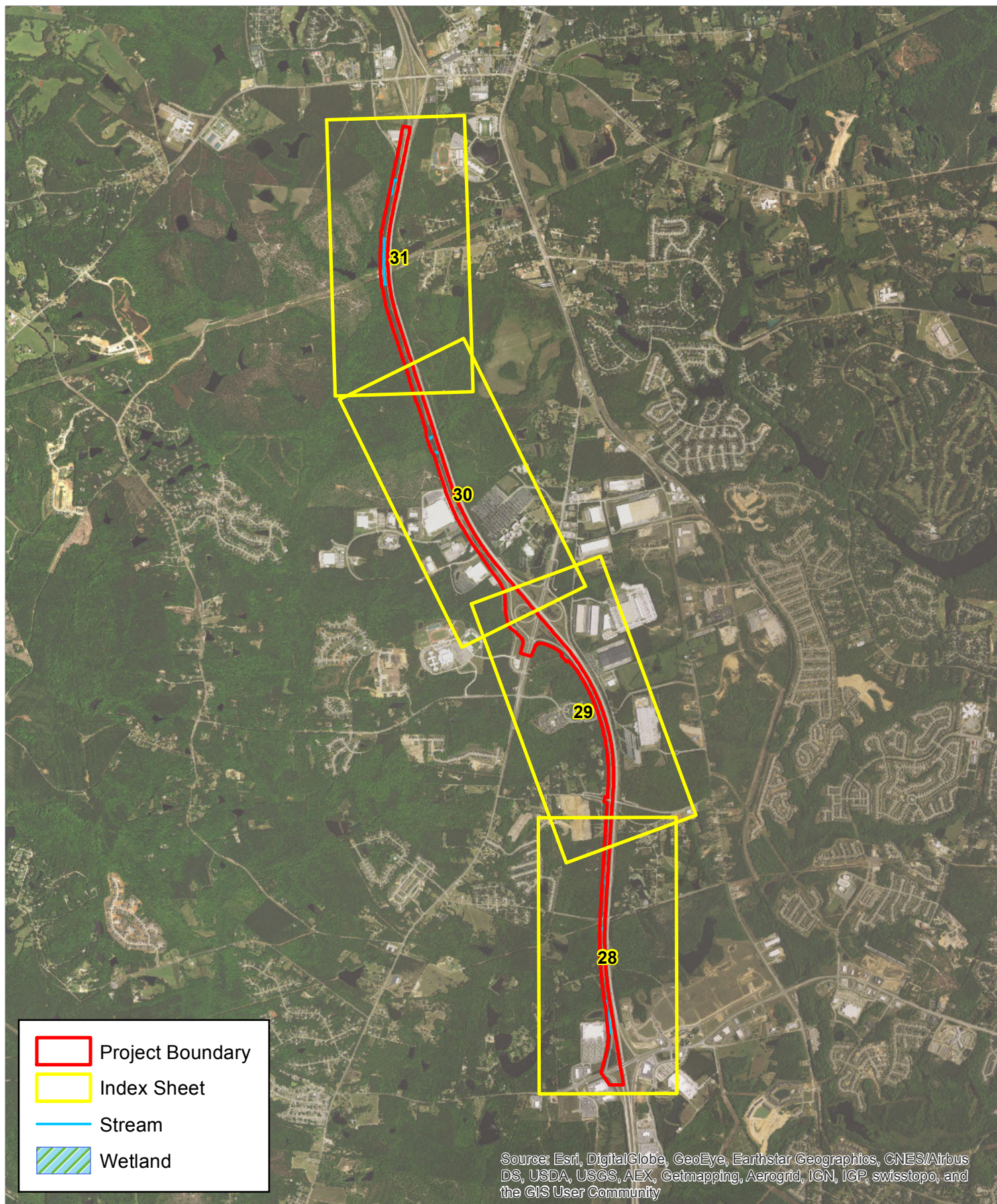
Richland County, South Carolina

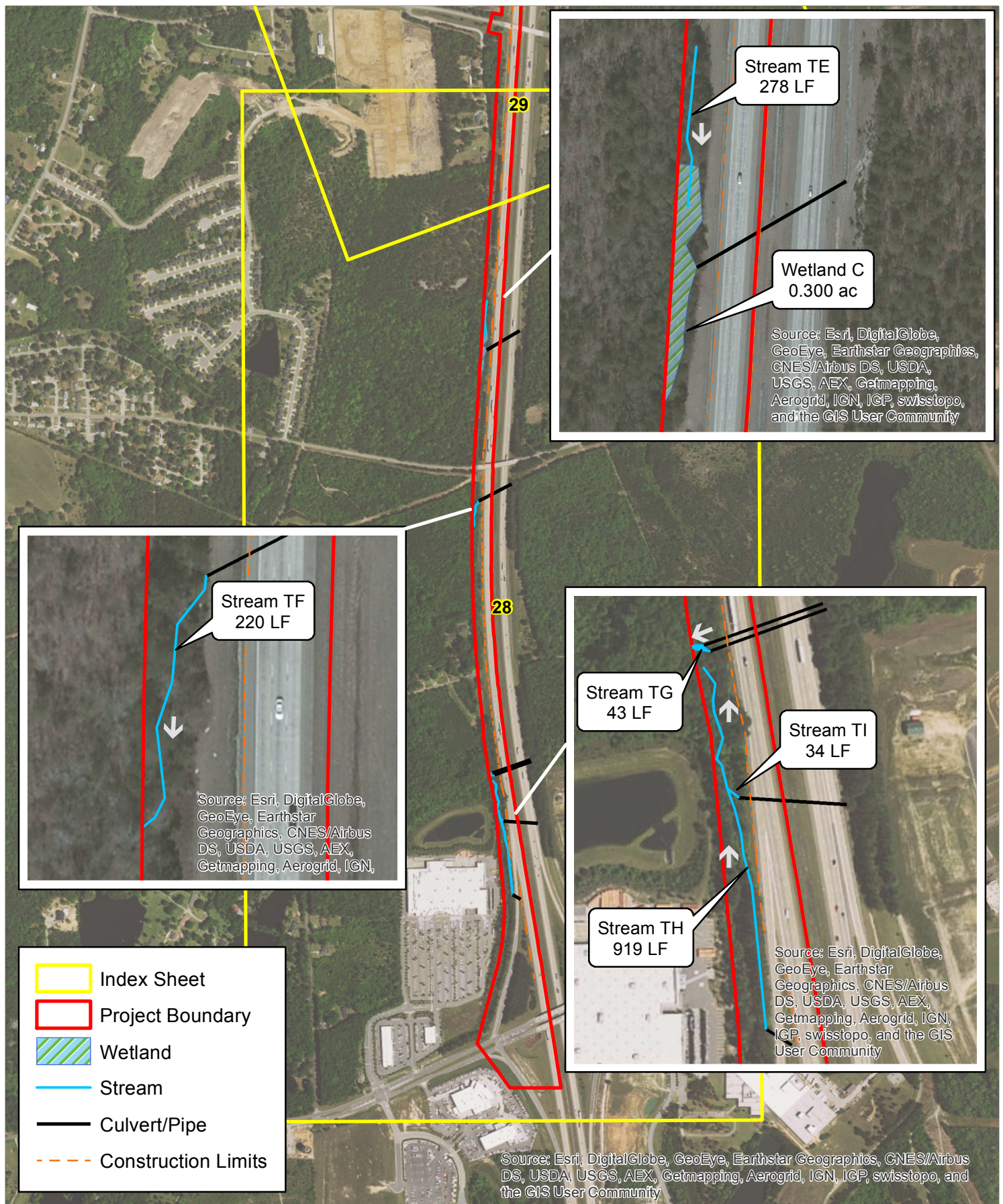
SAC 2015-00155-DS

1 inch = 1,000 feet









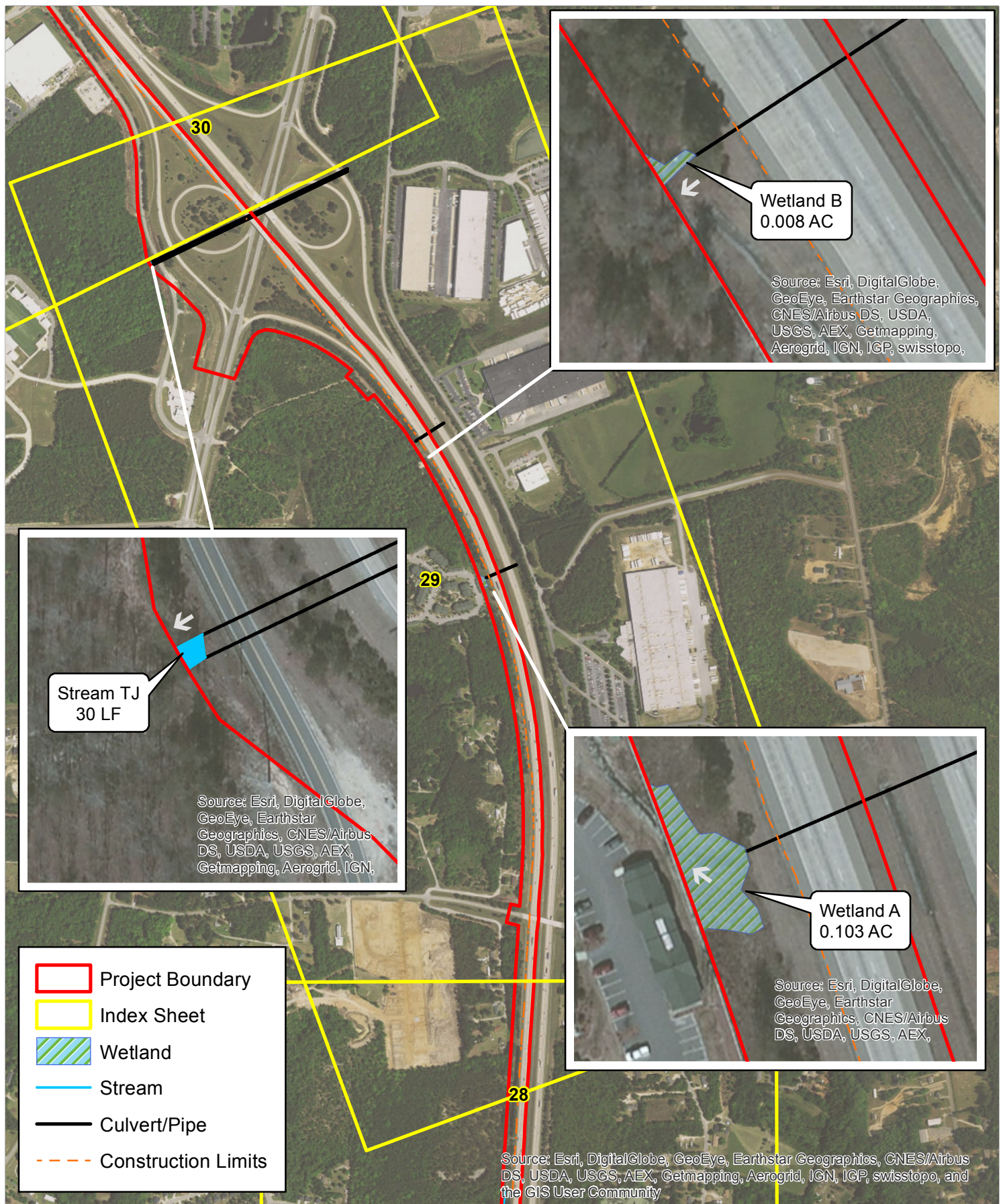


Figure 29. Waters of the US Map

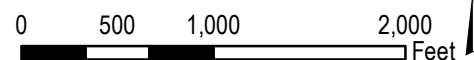
Project ID P027002

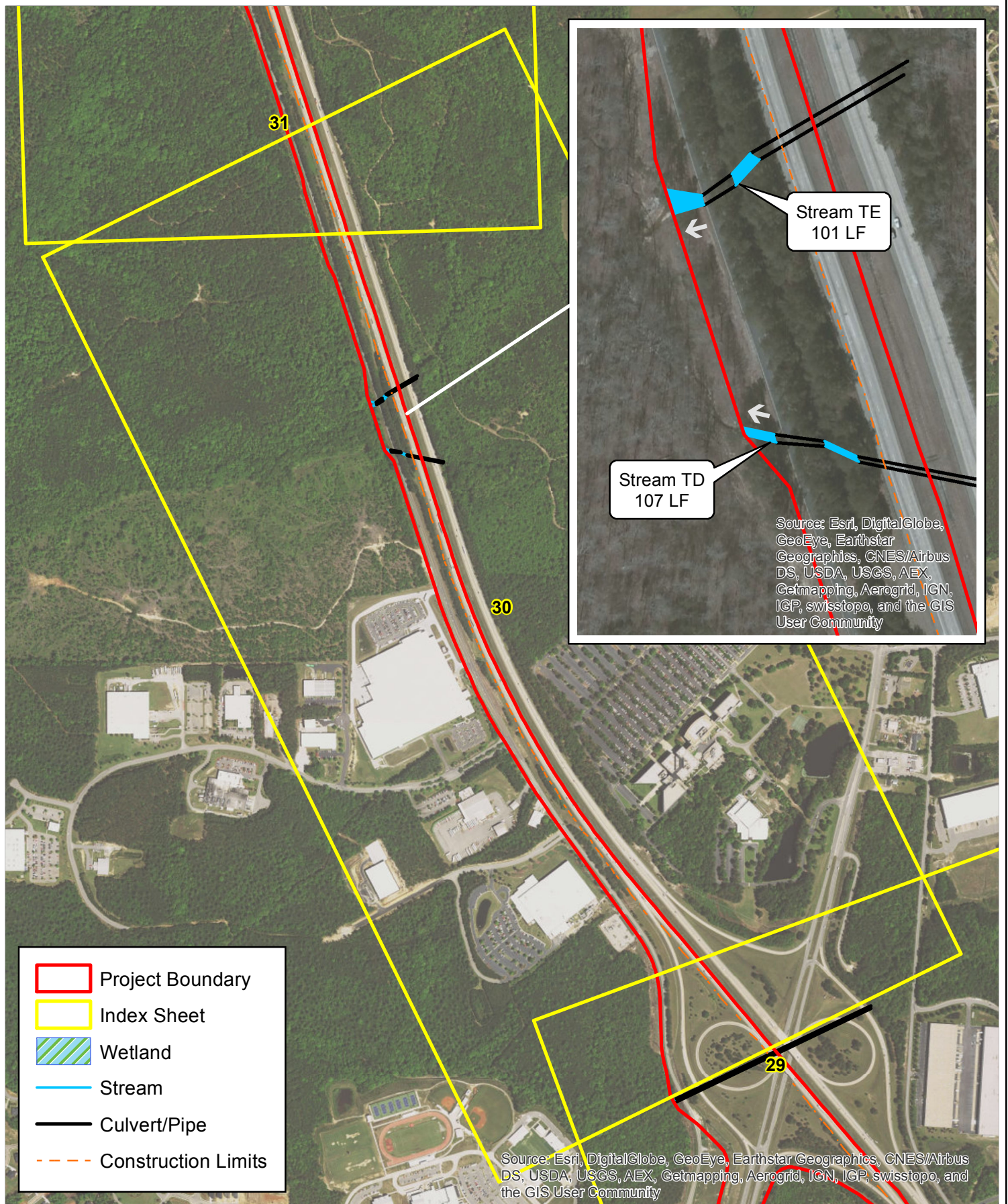
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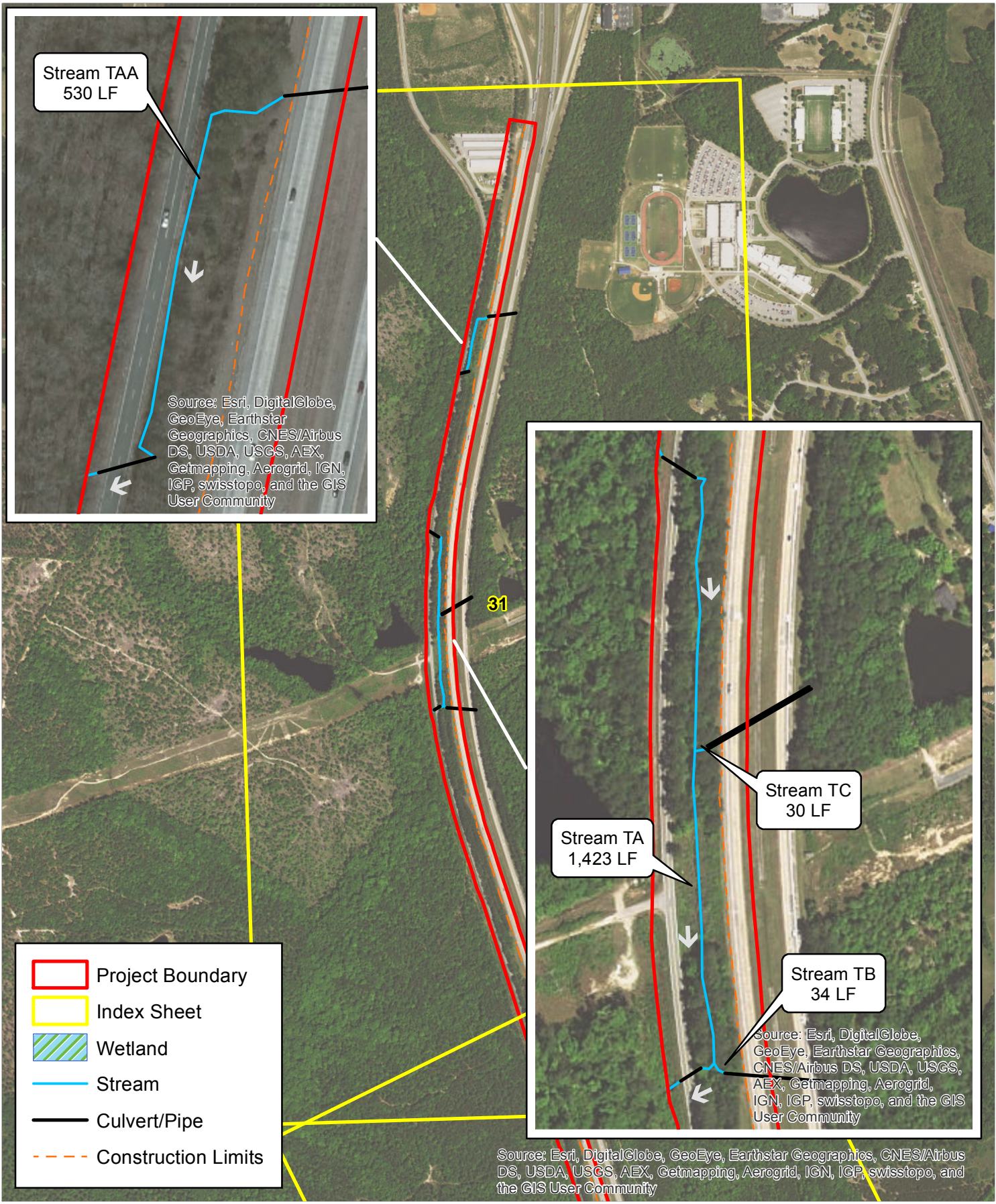
Richland County, South Carolina

SAC 2015-00155-DS

1 inch = 1,000 feet







Attachment D

Mitigation Information

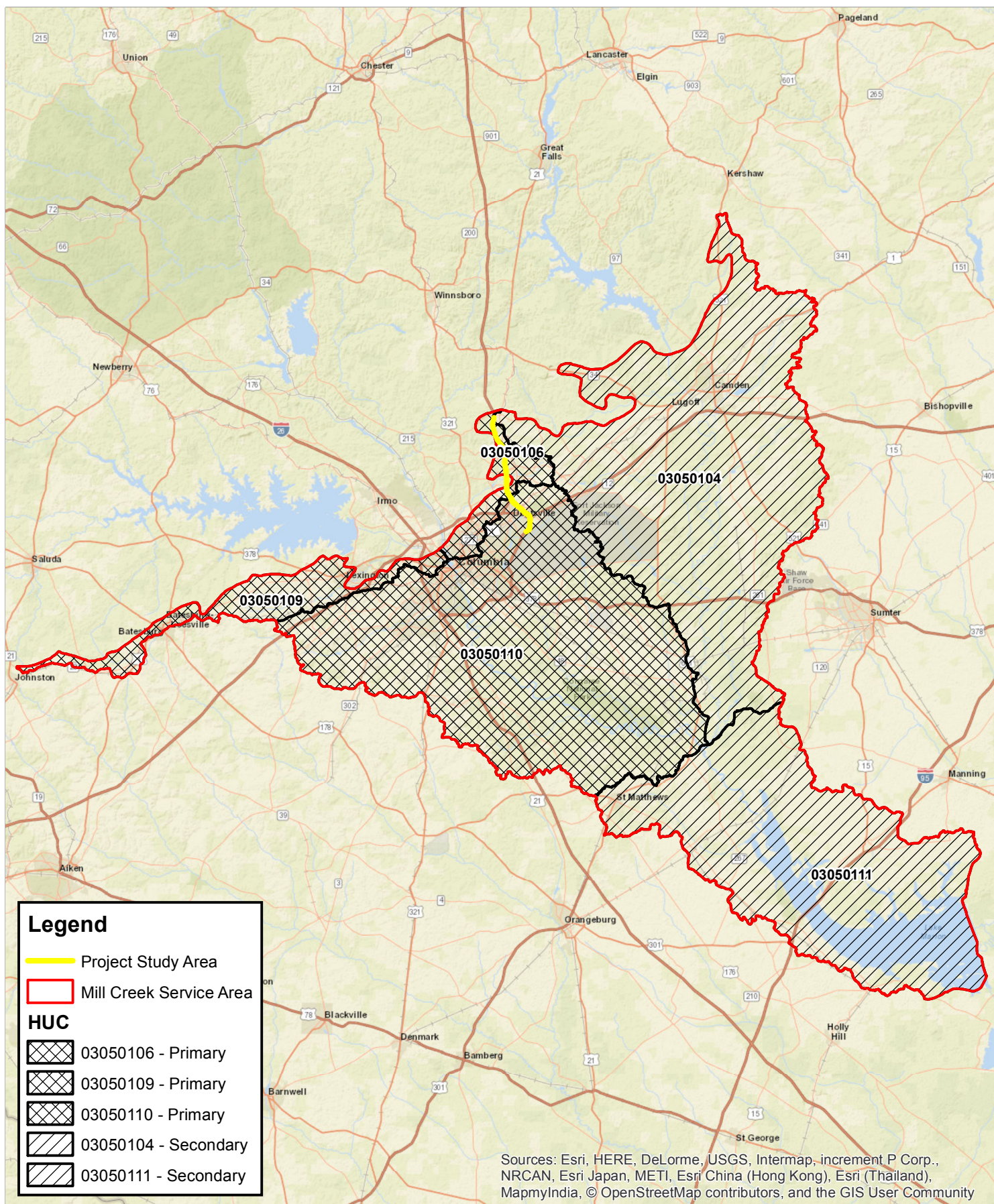
Linear System

Required Linear Mitigation Credits						
Impact Reach	S2	S15	S18	S19	S19	S23
Stream Type	0.8	0.8	0.4	0.8	0.8	0.8
Priority Category	0.1	0.1	0.1	0.1	0.1	0.1
Existing Condition	0.5	0.75	0.75	0.5	0.5	0.75
Duration	0.3	0.3	0.3	0.3	0.3	0.3
Dominant Impact	0.5	0.5	0.5	0.5	0.5	0.5
Cumulative Impact	0.1	0.1	0.1	0.1	0.1	0.1
Sum of R Factors (R)	2.3	2.55	2.15	2.3	2.3	2.55
Linear Feet Impact (LL)	5	33	15	15	27	15
R X LL=	11.50	84.15	32.25	34.50	62.10	38.25
Total Impacted Linear Feet:						110
Total Required Credits = SUM (R X LL):						262.75

Linear System

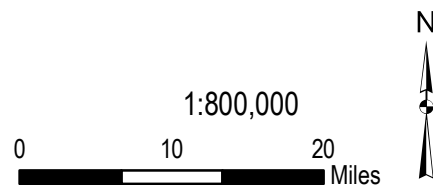
Required Linear Mitigation Credits						
Impact Reach	S26	S29				
Stream Type	0.4	0.8	0	0	0	0
Priority Category	0.1	0.1	0	0	0	0
Existing Condition	0.75	0.5	0	0	0	0
Duration	0.3	0.3	0	0	0	0
Dominant Impact	0.5	0.5	0	0	0	0
Cumulative Impact	0.1	0.1	0	0	0	0
Sum of R Factors (R)	2.15	2.3	0	0	0	0
Linear Feet Impact (LL)	23	18	0	0	0	0
R X LL=	49.45	41.40	0.00	0.00	0.00	0.00
Total Impacted Linear Feet:						41
Total Required Credits = SUM (R X LL):						90.85

Stream Mitigation Summary			
I. Required Mitigation		CREDITS	LF
A.	Required Mitigation Credit (RMC)	353.6	
B.	Has the permittee protected the remaining onsite aquatic resources? The permittee may be eligible for a 25% reduction in the RMC (A x 0.25).	no	
C.	Total Required Mitigation Credits = A - B	353.6	0.0
II. Third Party (Bank) Mitigation Summary		CREDITS	LF
D.	Riparian Buffer Preservation/Enhancement		
E.	Stream Restoration/Enhancement		
F.	Total 3rd Party Mitigation = D + E	353.6	0.0
III. Permittee-Responsible Mitigation Credit Summary		CREDITS	LF
G.	Riparian Buffer Preservation/Enhancement	0.0	0.0
H.	Stream Restoration/Enhancement	0.0	0.0
I.	Total Permittee Responsible Mitigation = G + H	0.0	0.0
IV. Proposed Mitigation Summary		CREDITS	LF
J.	Total Riparian Buffer Mitigation = D + G	0.0	0.0
K.	Total Stream Restoration/Enhancement = E + H	0.0	0.0
L.	Total Proposed Mitigation = F + I	353.6	0.0
V. Local Compensatory Mitigation Goals			Result
Proposed Mitigation Credits (PMC) \geq Required Mitigation Credits (RMC)			yes
PMCRestoration/Enhancement $\geq \frac{1}{2} \times \text{RMC}$			yes



955 Park Street
Columbia, SC 29201

Mill Creek Mitigation Bank Service Area
I-77 Roadway Widening and Improvements
Primary and Secondary Service Areas
Columbia, Richland County, SC
Source: ESRI, USACE
Date: August 2016



Attachment E

Categorical Exclusion – Type C



U.S. Department
of Transportation
**Federal Highway
Administration**

South Carolina

June 2, 2015

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

In Reply Refer To:
HDA-SC

Mr. Randy Williamson
Director, Environmental Services Office
South Carolina Department of Transportation
955 Park Street, P.O. Box 191
Columbia, SC 29202

Dear Mr. Williamson:

The South Carolina Department of Transportation (SCDOT) recently submitted a Categorical Exclusion (CE) for the Proposed Interstate 77 (I-77) Roadway Widening and Rehabilitation in Richland County, South Carolina (Federal Project Number P027002). The FHWA has determined that the project will not have significant impacts and that there will be no effect on threatened or endangered species or adverse impacts to historic resources. Enclosed is the approved CE for the project.

Please ensure that the project commitments made during the NEPA process are included in the project construction proposal and ultimately carried out. Please address any questions you may have concerning this project to Mr. J. Shane Belcher at 803-253-3187 or jeffrey.belcher@dot.gov.

Sincerely,

(for)

Robert D. Thomas
Acting Division Administrator

Enclosure

ec:
Ms. Heather Robbins, NEPA Division Manager

Reading File



May 2015

CATEGORICAL EXCLUSION TYPE C

Project Number: P027002

To: Federal Highway Administration

From: SCDOT, Heather Robbins, NEPA Division Manager

Project: I-77 Roadway Widening and Improvements

Project Description

The South Carolina Department of Transportation (SCDOT) proposes to widen approximately seven miles of Interstate 77 (I-77), in both directions, from Percival Road/SC-12 (mile marker 15) on the southern terminus to Killian Road (mile marker 22) on the northern terminus and rehabilitate the pavement surface along the existing lanes from Two Notch Road (mile marker 17) to Killian Road. The project also includes rehabilitating approximately five miles of pavement on the existing I-77 southbound lanes from Killian Road (mile marker 22) to Blythewood Road/SC-59 (mile marker 27) in Richland County, South Carolina (see **Figure 1 and Figure 2 in Appendix A**). From Percival Road (SC 12) to I-20 and from SC 277 to approximately mile marker 25, the existing segments of I-77 within the project limits consist of three southbound travel lanes and three northbound travel lanes. From I-20 to SC 277 and from mile marker 25 to Blythewood Road (S-59), the existing segments of I-77 consist of two travel lanes in each direction. The widening includes adding a single travel lane to the existing median in each direction, improving various exit ramps, and widening ten mainline bridges along I-77. The rehabilitation includes removing the pavement surface along the existing lanes and replacing it with new pavement. The existing project corridor consists of various commercial buildings, including one gas station, residential areas, streams and wetlands. Construction is anticipated to begin in spring 2016.

Purpose and Need

The purpose of the proposed project is to improve operational efficiency and accommodate future traffic volumes along the interstate corridor by increasing I-77's capacity. The existing project limits do not provide enough travel lanes for the traffic through the area, resulting in traffic congestion starting as early as year 2017 when the segment of I-77 between SC 277 and Killian Road is projected to operate at level of service (LOS) E (see Table 1 below and **Appendix B** for traffic data). The proposed widening project will provide the required number of lanes to operate at LOS D or better for the entire project corridor through design year 2037. The goals and objectives of the proposed project are to promote economic benefit, while avoiding and minimizing environmental impacts and mitigating unavoidable impacts.

Table 1: Peak Hour Directional Volumes & LOS

Route	Termini From	Termini To	Year	Volume	Peak Hour Directional			
					No-Build		Build	
					Existing # of Lanes in Each Direction	LOS	Proposed # of Lanes in Each Direction	LOS
I-77	SC 12	I-20	2013	4,281	3	C	-	-
I-77	SC 12	I-20	2017	4,452	3	D	4	C
I-77	SC 12	I-20	2027	4,942	3	D	4	C
I-77	SC 12	I-20	2037	5,432	3	E	4	C
I-77	I-20	SC 277	2013	2,902	2	D	-	-
I-77	I-20	SC 277	2017	3,018	2	D	3	B
I-77	I-20	SC 277	2027	3,350	2	D	3	C
I-77	I-20	SC 277	2037	3,682	2	E	3	C
I-77	SC 277	Killian Road	2013	4,952	3	D	-	-
I-77	SC 277	Killian Road	2017	5,150	3	E	4	C
I-77	SC 277	Killian Road	2027	5,717	3	E	4	D
I-77	SC 277	Killian Road	2037	6,283	3	F	4	D

Source: SCDOT Average Annual Daily Traffic data, see **Appendix B**.

Reasonable Availability of Funding

This project was identified under Act 98 of 2013, which provided SCDOT additional funding for bridge, resurfacing, and mainline interstate projects. All projects identified for funding have been prioritized and selected based on Act 114 criteria, including at a minimum, financial viability, public safety, traffic volume and congestion, potential for economic development, truck traffic, pavement condition, environmental impacts, alternative transportation solutions, and consistency with local land use plans. The priority criteria for mainline interstate widening projects, including the proposed I-77 widening, includes traffic volume, public safety, truck traffic, pavement condition, financial viability, environmental impacts, and economic development. Act 98 provided an annual appropriation to SCDOT, which in turn will transfer an equivalent amount to the South Carolina Transportation Infrastructure Bank (SCTIB) to be used to finance mainline interstate improvements. The pavement rehabilitation portion of the project is funded by the Federal Highway Administration (FHWA) Interstate Program.

FHWA requires demonstration of fiscal constraint at the NEPA stage of project development. Fiscal constraint is met when the Long Range Transportation Plan (LRTP), Transportation Improvement Program (TIP) and the Statewide Transportation Improvement Program (STIP) have sufficient financial information for demonstration that a project in the Metropolitan Transportation Plan (MTP), TIP and STIP can be implemented using committed, available, or reasonably available revenue resources. FHWA's Office of Planning, Environment, and Realty issued an informational memorandum on January 28, 2008, explaining the relationship between certain Transportation Planning and Air Quality Conformity regulations and the timing of a final NEPA decision.

The total estimated project construction cost is \$62.6 million and is outlined on page 26 and page 28 in the 2014-2019 STIP (Revision 10 – August 21, 2014).¹

Preferred Alternative – Widening Inside to the Median

This alternative would widen I-77 from Percival Road to Killian Road by adding a single travel lane in each direction to the existing median and repaving existing lanes (see Figure 3 and Figure 4 below).

Alternatives Analysis

Three alternatives, including the Preferred and No-Build were considered. The No-Build alternative was carried forward for a baseline comparison of impacts. Only two alternatives (Alternative 1 – Widening Inside to the Median and Alternative 2 – Widening to the Outside of Existing Roadway) met the purpose and need for the project.

Alternative 1 (Preferred) – Widening Inside to the Median

This alternative consists of widening the interstate from Percival Road to Killian Road by adding a single travel lane in each direction to the inside (within existing median), improving various exit ramps, and widening ten mainline bridges along I-77. This alternative provides an additional travel lane and improves operational efficiency and LOS along the corridor with minimal environmental and community impacts. By widening to the inside, the project would have no affect to cultural resources, and require no new right-of-way. This alternative would impact freshwater wetlands and streams and is anticipated to require a Section 404 Individual Permit (IP) with the expectation of reducing stream impacts through design minimization to an amount within the impact thresholds of the SCDOT General Permit (GP).

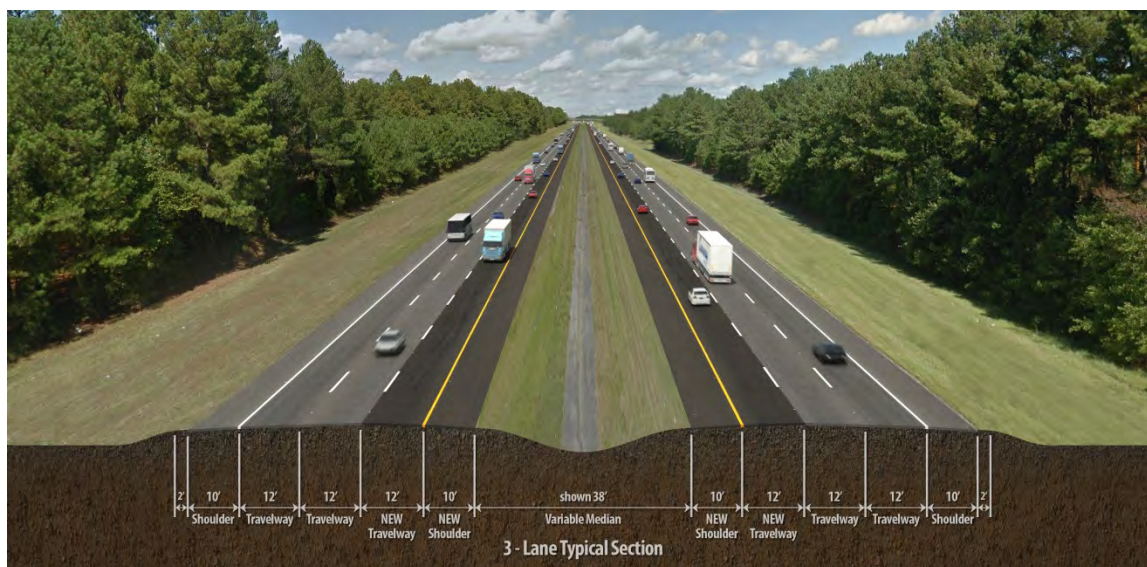


Figure 3: Proposed Typical 6-lane section
I-20 to SC 277

¹ SCDOT Statewide Transportation Improvement Program. 2013. *STIP 2014-2019. South Carolina's Six Year Transportation Program: October 1 – September 30, 2019*. Approved August 15, 2013.

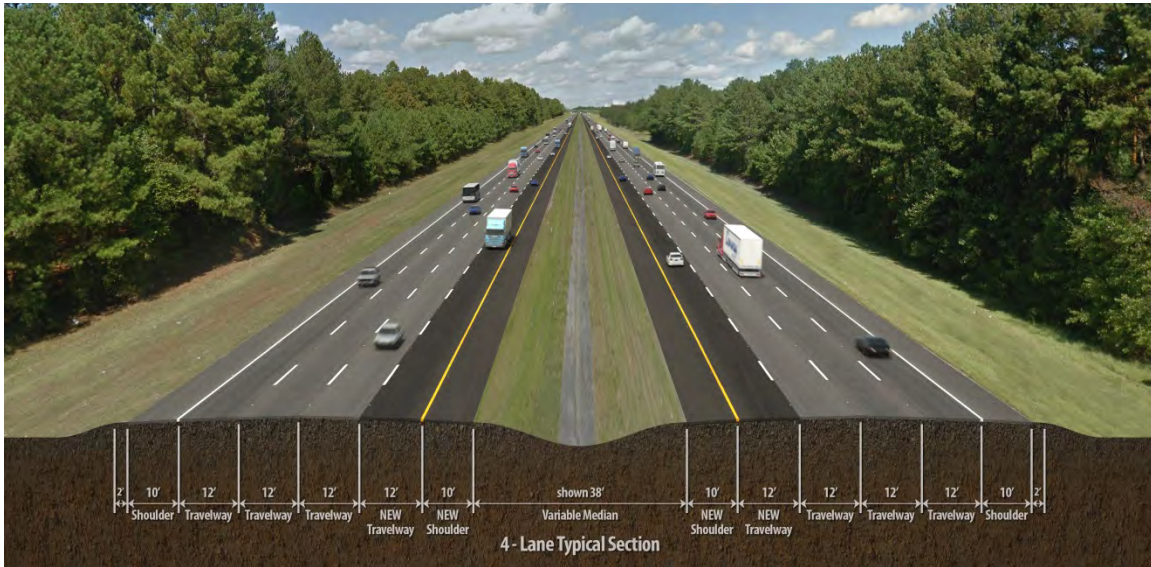


Figure 4: Proposed Typical 8-lane section
Percival Road (SC 12) to I-20 and SC 277 to Killian Road

Alternative 2 – Widening to the Outside of Existing Roadway

This alternative consists of widening the interstate from Percival Road to Killian Road by adding a single travel lane in each direction to the outside of the existing roadway. This alternative provides an additional travel lane and would improve operational efficiency and LOS along the corridor with minimal community impacts. By widening to the outside, the project would likely result in utility impacts and require new right-of-way. In addition, this alternative would have potential effects to cultural resources within previously undisturbed areas of the project corridor and impact greater than 0.30 acre of freshwater wetlands and greater than 300 linear feet of streams, which would require a Section 404 IP. This alternative would have greater wetland and stream impacts than Alternative 1 and due to the increased stream and wetland impacts, would result in increased costs for mitigation.

Table 2: Alternative Comparison

Alternative	Proposed New Right-of-Way (acres)	Estimated Stream Impacts (linear feet)	Estimated Wetland/Open Water Impacts (acres)	Estimated Mitigation Costs (\$)*
Alternative 1 – Widening inside to the median	0	317	0.09	198,125
Alternative 2 – Widening to the outside of existing roadway	~0.50	1,090	0.73	900,425

*Mitigation costs are based on current wetland and stream credit pricing and subject to change and credit availability.

Alternative 3 – No-Build

This alternative would propose no new design changes and would maintain the existing lane configuration. The LOS, operational efficiency, and interstate capacity would not be improved and accommodation would not be made for future traffic volumes; therefore, the No-Build alternative would not meet the purpose and need of the project and was therefore, eliminated from further consideration.

Comparison of Alternatives

Table 2 summarizes the impacts associated with each alternative. The analysis shows that Alternative 1 (the Preferred Alternative) would result in less overall project costs, taking into account wetland and stream mitigation costs, and right-of-way acquisition. Alternative 1 would result in less impact to streams and wetlands than Alternative 2. Alternative 1 best meets the purpose of the project while minimizing costs and impacts to the human and natural environment.

Socioeconomics and Demographics

As of 2010, Richland County has an estimated resident population of 384,504, making it the second most populated county in the state (out of 46 counties total) (US Census Bureau 2010)² (Table 3). Richland County had a 19 percent growth rate between the years of 2000 and 2010, the eighth fastest growing county in South Carolina. This trend of population growth is expected to continue with a 70 percent increase expected between 2000 and 2030 in Richland County.

Table 3: Estimated and Projected Population, Richland County

2000 Census	2010 Census	2009 Projection	2010 Projection	2020 Projection	2030 Projection	% Growth 2000-2030
320,677	384,504	404,400	424,300	440,100	456,000	70.3

Sources: http://www.sccommunityprofiles.org/census/proj_c2010.php
<http://www.sccommunityprofiles.org/census2010data.php>

Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-income Populations directs federal agencies to analyze “the environmental effects, including human health, economic and social effects, of Federal actions, including effects on minority communities and low income communities” when doing a NEPA analysis. The project corridor includes portions of seven Census Tracts (CT) (see **Figure 5 in Appendix C**):

- CT 101.02
- CT 113.03
- CT 113.04
- CT 113.05
- CT 114.04
- CT 114.12
- CT 9801

² US Census Bureau. 2010 Census. American FactFinder. Accessed April 6 and 7, 2015. Available from: <http://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml>

Socioeconomic data was obtained for these tracts from the 2010 Census including population, income, education levels, and housing characteristics for those living near the project corridor (See **Table 6** in **Appendix C**).

Approximately 35,000 people live in the CTs encompassing the project corridor. The population within the referenced CTs ranges from 23 percent to 50 percent white (average of 32 percent for all seven CTs), which is on average lower than Richland County's percentage (47 percent) and the state percentage (66 percent). The median age for those living in the CTs encompassing the project corridor is 31 to 39.5 years of age (average of 35 years old). This is slightly higher than the median age for Richland County (33 years old) and slightly lower than the median age for the state (38 years old). The median household income in the relevant CTs is equal to the levels for Richland County and the state. The percentage of individuals living below the poverty level is on average lower (13 percent) than the county and state percentages (17 and 18 percent, respectively). Based on this data, there are no disproportionate impacts to Environmental Justice populations.

Acquisitions/Displacements

After review of the proposed project, it has been determined that the project would not result in the relocation/displacement of any commercial or residential establishments. No new right-of-way will be acquired.

If any relocations or displacements were required, the SCDOT would process any new right-of-way acquisitions and relocations in compliance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended (42 United States Code [U.S.C.] 4601 *et seq.*). The purpose of these regulations is to ensure that owners of real property to be acquired for Federal and federally-assisted projects are treated fairly and consistently, to encourage and expedite acquisition by agreements with such owner, to minimize litigation and relieve congestion in the courts, and to promote public confidence in Federal and federally-assisted land acquisition programs.

Public Involvement

A Public Information Meeting (PIM) was held to inform local residents, businesses and local emergency responders about the project and to involve them in the project development process. Notice of the meeting was published in *The State* newspaper on March 2, 2015 and posted on SCDOT online and on social media (Twitter and Facebook) on March 9, 2015. The meeting was held on Tuesday, March 17, 2015 from 5 pm to 7 pm at Centura College, located at 7500 Two Notch Road, Columbia, South Carolina. Large displays showing the proposed project were available at the meeting for the public to review. SCDOT, FHWA, and design team personnel were readily available for attendees to discuss the project and answer questions. Project summary handouts and comment forms were provided and tablet computers were available to the public for completing electronic comment forms. Thirty-three (33) people attended the meeting. All attendees were encouraged to provide their concerns regarding the project. The comment period ended on April 1, 2015. As a result of the PIM a total of 10 written comments were received. Two comments were received by phone call prior to the meeting (See **Appendix D** for PIM documents). The majority of respondents were in support of the proposed project.

Section 106 - Cultural Resources (Archaeological/Historic)

In accordance with Title 36 Code of Federal Regulations (CFR), Part 800.4 (36 CFR 800.4), background research and an intensive architectural survey of the project's Area of Potential Effects (APE) was conducted in September 2014 to determine if previous cultural resources investigations and previously identified archaeological sites are located in the project limits. The APE extends 300 feet on either side of the road centerlines and is at least 600 feet wide. The architectural survey investigations identified five historic architectural resources within the APE, recommended not eligible for the National Register of Historic Places (NRHP). Three previously identified archeological sites are located within one-quarter mile of the project area. No previously identified historic architectural resources are located within one-quarter mile of the project area. Construction will take place within the existing right-of-way and the majority of construction will occur within previously disturbed areas of the project corridor; therefore, no archaeological investigations are required because the APE was previously disturbed. On March 6, 2015, the State Historic Preservation Office (SHPO) concurred with the findings that no historic properties will be affected by the proposed undertaking. On March 17, 2015 the Catawba Indian Nation-Tribal Historic Preservation Office concurred with the findings (see Archaeological Field Report and concurrences in **Appendix E**).

Section 4f/6f Resources

The basic purpose of Section 4(f) documentation is to protect "public parks and recreation lands, wildlife, and waterfowl refuges, and historic sites" from encroachment by public transportation facilities. In addition to mandating the physical protection of certain lands, (avoiding unintended physical "use" of them), Section 4(f) also addresses proximity impacts such as noise and vibration which may constitute a "constructive use" without actually intruding into the protected area. The FHWA rules require that when the physical location of a project will produce severe impacts to the activities, features, or attributes of a publicly owned park, recreation area, or wildlife and waterfowl refuge, or any significant historical site, then a Section 4(f) Evaluation must be completed. No Section 4(f) resources were identified within the project boundaries and thus there are no anticipated impacts to these resources.

Section 6(f) resources are places such as public parks, trails, courts, and other recreational areas that were purchased in part through federal grants from the Land and Water Conservation Fund Act of 1965 and are protected from conversion to non-public recreational uses. No Section 6(f) properties are located within the project limits and thus there are no anticipated impacts to these resources.

Water Quality

The South Carolina Department of Health and Environmental Control (SCDHEC) conducts water quality assessment and protection on a watershed basis. SCDHEC has assigned a classification to each State Water based on the desired uses of each waterbody, not on natural or existing water quality. Classifications protect waters for recreation, ecological resources, fish and aquatic life survival and propagation, and industrial and agricultural uses. Each classification has specific pollutant thresholds. Waters that exceed the threshold for their specific classification are targeted for water quality management action and are listed on the State of South Carolina Section 303(d) List. Monitoring stations around the state provide the data necessary to assess the quality of surface waters.

In November 2014 and April 2015, the SCDHEC's Water Quality and Watersheds tools were accessed to determine if any impaired waters were located within one-quarter mile upstream or downstream of the project area. No impaired waters were identified within one-quarter mile of the project area. Within the project area, the Broad River and Gills Creek tributaries, including Crane Creek, Cumbess Creek, and Jackson Creek are classified as Fresh Water (FW) according to SCDHEC's water classification system (R.61-68-Water Classifications and Standards, effective June 22, 2012)³ (see Permit Determination Form in **Appendix F**).

The project corridor is located within two total maximum daily load (TMDL) watersheds. The southern portion of the project corridor, between Percival Road and Farrow Road, is located in the Gills Creek watershed, or hydrologic unit 03050110-02. SCDHEC developed a dissolved oxygen (DO) TMDL for two monitoring stations, C-048 and C-017, within the Gills Creek watershed. The two stations were included as impaired on the state's 2008 §303(d) list due to low DO concentrations. Water quality monitoring (WQM) station C-017 is located on Gills Creek at Bluff Road, over nine miles south of the project corridor. WQM station C-048 is located along the project corridor on Jackson Creek at Windsor Lake spillway on Windsor Lake Boulevard. According to SCDHEC Technical Document: 011N-18, possible causes of low DO in the watershed include wildlife, failing septic systems, illicit connections, leaking sewers, sanitary sewer overflows, illicit dumping in water bodies, natural biochemical oxygen demand in swamps, agricultural runoff, pet wastes, and stormwater runoff. WQM Station C-048 currently supports water quality standards and it, as well as the associated stream segment, is no longer included on the 2014 §303(d) list.⁴

The northern portion of the project corridor, between Farrow Road and Blythewood Road, is located in the Crane Creek – Broad River watershed, or hydrologic unit 03050106-07. In 2005, SCDHEC established a TMDL for fecal coliform for the Broad River, which includes the Crane Creek – Broad River watershed. WQM station B-110 is located over one mile downstream of the I-77 project on the Elizabeth Lake Spillway. In 2004, WQM station B-110 barely surpassed the threshold of no more than ten percent of the instantaneous samples (400 colony forming units/100 milliliters). According to the SCDHEC Technical Report Number: 028-05, the most probable sources of fecal coliform loading at WQM station B-110 are from stormwater runoff within MS4 areas and nonpoint sources such as failing onsite waste disposal systems, leaking sewers, pets, and wildlife. As of 2014, WQM station B-110 fully supports recreational uses and is not listed for fecal coliform impairments.⁵

³ South Carolina Department of Health and Environmental Control (SCDHEC). 2012. *R.61-68, Water Classifications & Standards*. Effective June 22, 2012.

⁴ SCDHEC. 2010. Total Maximum Daily Load for Gills Creek Watershed. SCDHEC Monitoring Stations: C-048, C-017 (Hydrologic Unit Codes: 03050110-0201, -0202, -0203) Dissolved Oxygen. *SCDHEC Technical Document: 011N-18*.

⁵ SCDHEC. 2005. Total Maximum Daily Loads for Fecal Coliform for Turkey Creek, Meng Creek, Browns Creek, Gregorys Creek, Dry Fork, Sandy River, Elizabeth Lake, Little River, Winnsboro Branch, Jackson Creek, and Mill Creek watersheds and the lower portion of the Upper Broad River, South Carolina. Hydrologic Unit Code: 03050106 (B-086, B-136, B-064, B-243, B-155, B-335, B-046, B-074, B-075, B-110, B-316, B-280, B-337, B-145, B-350, B-123, B-077, B-102, B-338). *SCDHEC Technical Report Number: 028-05*.

Section 402 of the Clean Water Act (CWA) provides for various National Pollutant Discharge Elimination System (NPDES) permits, including stormwater discharges from land disturbing activities. SCDHEC administers the NPDES permitting program in the state. To minimize water quality impacts, SCDOT would implement its Erosion and Sediment Control Program, as approved by SCDHEC, during the construction phase of the project. Erosion and sediment control measures would be included in construction contract specifications. A NPDES permit would be acquired before the proposed construction begins. As the operator of a large Municipal Separate Storm Sewer System (MS4), SCDOT is also required to obtain NPDES permit coverage to discharge pollutants into Waters of the State, in accordance with its MS4 Permit.

The proposed project is not expected to have long-term impacts to water quality in the watersheds. Stormwater control measures, both during construction and post construction, are required for SCDOT projects with land disturbance and/or construction near §303(d), TMDL, outstanding resource waters (ORW), tidal, and other sensitive waters in accordance with the SCDOT's MS4 Permit.

The contractor would also be required to minimize potential stormwater impacts through implementation of construction best management practices, reflecting policies contained in 23 CFR 650B and SCDOT's *Supplemental Specifications on Seeding and Erosion Control Measures* (January 01, 2015). SCDHEC may require additional water quality protection and stormwater treatment measures during and after construction.

Wetlands and Streams

The United States Army Corps of Engineers (USACE), through Section 404 of the CWA, has regulatory authority over waters of the U.S., including wetlands. This authority empowers the USACE to identify wetland/upland boundaries and to regulate alterations of jurisdictional wetlands. These boundaries are established in accordance with the methodology in the 1987 Corps of Engineers Wetlands Delineation Manual. A jurisdictional delineation of the project corridor was conducted in August 2014 for the presence of jurisdictional waters of the U.S., including wetlands and streams. The jurisdictional delineation identified areas of freshwater wetlands, lakes or open water, and streams within the project corridor. A request for verification of the delineated features was submitted to the USACE on January 23, 2015. A field verification meeting was conducted with the USACE on May 12, 2015. The USACE approved the approximate-preliminary jurisdictional delineation on **PENDING DATE**. A copy of the USACE's approval letter and jurisdictional delineation maps are included in **Appendix F (PENDING)**.

Permitting

A USACE Section 404 permit is required for impacts to jurisdictional waters of the U.S., including wetlands. Section 404 of the CWA is administered by the USACE. Depending on the type and extent of jurisdictional waters of the U.S., including wetlands, to be affected, Section 404 permitting requirements can range from activities that are considered exempt or preauthorized to those requiring preconstruction notification (PCN) for a Nationwide Permit (NWP), SCDOT GP, or IP from the USACE.

Based on preliminary design and estimates, impacts to jurisdictional streams slightly exceed 300 linear feet of impacts and trigger an IP; however, due to the intent to deliver this project under a design-build contract, SCDOT anticipates that avoidance and minimization efforts, including, but not limited to reducing the construction footprint, can minimize impacts to jurisdictional waters of the U.S. within the threshold of a SCDOT

GP. Under the SCDOT GP, impacts are not to exceed 3.0 acres of freshwater impacts and/or 300 linear feet of jurisdictional stream impacts. Based on preliminary coordination, compensatory mitigation for wetland and stream impacts would require purchasing mitigation credits from an approved mitigation bank, based on credit availability. Permittee-responsible mitigation to cover the mitigation credits may be required if no credits are available at the time of permitting. The required mitigation for this project will be determined during final design through consultation with SCDOT, the USACE and other resource agencies. Estimated preliminary impacts to waters of the U.S. are in Table 4 below.

Table 4 - Amount of impact to Waters of the U.S. (Preferred Alternative)

Wetland Type	Approximate Amount of Waters	Estimated Amount of Impact	Estimated Mitigation Credits
Freshwater wetlands	4.5 acres	0.02 acre	0.22
Open water (lakes/ponds)	2.1 acres	0.07 acre	0.78
Jurisdictional streams	5,580 linear feet	317 linear feet	1,457

SCDHEC administers the Water Quality Certification program pursuant to Section 401 of the CWA. Section 401 requires that the state issue certification for any activity which requires a USACE Section 404 permit and may result in a discharge to State waters. All activities requiring a Section 404 permit result in a discharge to waters or wetlands. Therefore, SCDHEC must take certification action on all Section 404 permit applications. The Section 404 permit is not valid until Section 401 certification is approved.

Floodplains

The stream crossings at Crane Creek, Cumbess Creek, Jackson Creek, and Little Jackson Creek are located in special flood hazard area Zone AE, areas of high risk for flooding subject to inundation by the 1 percent annual-chance flood where base flood elevations are shown. Each of these crossings is eligible for “No-Rise” certifications since there will be no anticipated change in the 100-year flood elevations. The remainder of the proposed project area is located within Zone X, an area of minimal flood hazard outside of the 0.1 percent and 0.2 percent annual-chance (500-year) flood area, as defined by the Federal Emergency Management Agency (FEMA). FEMA Flood Insurance Rate Maps (FIRMs) for the project are in **Appendix G**. All major bridge and culvert crossings contain the floods with no overtopping of the roadway. Based on the hydraulic analysis of the preconstruction and post construction discharges, the planned roadway improvements will have no significant impact on either flood elevations or flood widths (**Appendix G**). A floodplain checklist was completed and can also be found in **Appendix G**.

Essential Fish Habitat

No essential fish habitat is present within the project limits.

Threatened and Endangered Species

A field survey of the project area, consisting of the project corridor within the existing SCDOT right-of-way (approximately 120 feet from the centerline of the northbound and southbound lanes and ramps) was conducted pursuant to Section 7 of the Endangered

Species Act. The following list of endangered (E), threatened (T), and candidate (C) species within Richland County was obtained from the U.S. Fish and Wildlife Service (USFWS) in October 2014 and then verified in February 2015:

Table 5 – Federally Protected Species in the Project Area

	Federally Protected Species	Scientific Names	Federal Status
Animals	Atlantic Sturgeon	<i>Acipenser oxyrinchus</i>	E
	Carolina heelsplitter	<i>Lasmigona decorate</i>	E
	Red-cockaded woodpecker	<i>Picoides borealis</i>	E
	Shortnose sturgeon	<i>Acipenser brevirostrum</i>	E
	Wood stork	<i>Myceteria americana</i>	E
	Bald Eagle	<i>Haliaeetus leucocephalus</i>	BGEPA*
Plants	Canby's dropwort	<i>Oxypolis canbyi</i>	E
	Rough-leaved loosestrife	<i>Lysimachia asperulaefolia</i>	E
	Smooth coneflower	<i>Echinacea laevigata</i>	E
	Georgia aster	<i>Symphyotrichum georgianum</i>	C

*Federally protected under the Bald and Golden Eagle Protection Act (BGEPA)

A survey of bird species nesting under bridges within the proposed project corridor was conducted in August 2014 in compliance with the Migratory Bird Treaty Act. During the survey, barn swallow nests were found under bridges at the following locations: I-20, Two Notch Road, State Route 277 Ramp, Farrow Road, and Hard Scrabble Road (S40-83). In accordance with the Migratory Bird Treaty Act, a full survey of these nests and coordination with the USFWS will be performed prior to any permit submittal and/or construction activity.

Methods

The project area was initially surveyed in the field in August 2014 for endangered and threatened species. Habitats surveyed were determined by each species' ecological requirements.

Results

Based on the literature and field visits it was determined that rough-leaved loosestrife and smooth coneflower are the only species which may be affected by the proposed project. For the rough-leaved loosestrife, although no individuals were identified during the survey, this plant was past its seasonal flowering stage (spring); thus identification may have proved difficult. Additionally, South Carolina Department of Natural Resources (SCDNR) data indicates that an area of potential habitat does exist in the southern portion of the proposed project boundary. Therefore, the proposed project may affect, but is not likely to adversely affect this species. For the smooth coneflower, although no individuals were identified during the survey, this plant was past its seasonal flowering stage (May through July); thus identification may have proved difficult. Additionally, one of its preferred habitats is along roadsides; therefore, this project may affect, but is not likely to adversely affect this species. A copy of the biological assessment as well as the USFWS concurrence letter (dated February 20, 2015) can be found in **Appendix H**.

Noise

In accordance with 23 CFR 772, "Procedures for Abatement of Highway Traffic Noise and Construction Noise," effective July 2011 and the SCDOT *Traffic Noise Abatement Policy*, effective September 1, 2014, a noise analysis is required for proposed federal-aid highway projects that will physically alter an existing highway or increase the number of

through-traffic lanes. A noise analysis was conducted to evaluate the existing noise levels and potential noise impacts associated with the proposed project. A copy of the noise analysis report can be found in **Appendix I**. The existing (2017) and design year (2037) traffic noise levels for the existing, No-Build, and build alternatives were predicted for noise sensitive sites (each representing one noise sensitive receptor) using the FHWA's latest traffic noise modeling software, Traffic Noise Model (TNM), version 2.5. A receptor is a discrete or representative location of a noise sensitive site or area based on the land use category. Existing land uses within the corridor are mainly residential (category B) with various category C (golf course/cemetery), category D (church/hospital), and category E (hotel/office) land uses in the corridor. Existing traffic noise levels were measured in the field and then compared against TNM results to verify the accuracy of the traffic noise model. If the modeled and measured levels are within plus or minus 3 A-weighted decibels (dBA) of one another, this is an indication that the model is within the accepted level of accuracy.

Approximately 459 noise sensitive receptors were identified within the project area. Based on the noise analysis, the project is anticipated to generate noise impacts at 249 of the 459 noise sensitive receptors along the project corridor.

When traffic noise impacts are identified, FHWA and SCDOT require that noise abatement be evaluated for feasibility and reasonableness. Noise abatement was evaluated for the affected receptors. The most feasible abatement measure for the project was noise barriers. A noise barrier evaluation was performed to determine whether feasible and reasonable barriers could be constructed at the noise sensitive sites as means to reduce or eliminate traffic noise impacts. Sixteen areas within the project corridor were evaluated for noise barriers in accordance with SCDOT guidelines. The noise barriers evaluated were either unable to achieve a 5 dBA reduction for at least 75 percent or more of the affected receptors, unable to achieve an 8 dBA reduction for at least 80 percent of the benefited receptors, or are not cost effective. If the cost per benefitted receptor is more than \$30,000 then the barrier is determined to not be cost effective. Therefore, noise barriers were evaluated, but not proposed. Noise abatement measures were found to be not feasible and reasonable per SCDOT guidelines and there appears to be no feasible and reasonable solutions available to mitigate the noise impacts.

Mobile Source Air Toxics (MSATs)

The purpose of this project is to improve operational efficiency and accommodate future traffic volumes along the interstate corridor in Richland County. Richland County is currently in attainment with national ambient air quality standards. This CE includes a basic analysis of the likely MSAT emission impacts of this project. However, available technical tools do not enable us to predict the project-specific health impacts of the emission changes associated with the alternatives in this CE. Due to these limitations, the following discussion is included in accordance with Council on Environmental Quality (CEQ) regulations (40 CFR 1502.22(b)) regarding incomplete or unavailable information:

Evaluating the environmental and health impacts from MSATs on a proposed highway project would involve several key elements, including emissions modeling, dispersion modeling in order to estimate ambient concentrations resulting from the estimated emissions, exposure modeling in order to estimate human exposure to the estimated concentrations, and then final determination of health impacts based on the estimated exposure. Each of these steps is encumbered by technical shortcomings or uncertain science that prevents a more complete determination of the MSAT health impacts of this project.

As discussed above, in Appendix C of FHWA's December 6, 2012 guidance, "Interim Guidance Update on Air Toxic Analysis for NEPA Documents," technical shortcomings of emissions and dispersion models and uncertain science with respect to health effects prevent meaningful or reliable estimates of MSAT emissions and effects of this project. Because of the limitations in the methodologies for forecasting health impacts described, any predicted difference in health impacts between alternatives is likely to be much smaller than the uncertainties associated with predicting the impacts. Consequently, the results of such assessments would not be useful to decision makers, who would need to weigh this information against project benefits, such as reducing traffic congestion, accident rates, and fatalities plus improved access for emergency response, that are better suited for quantitative analysis. A qualitative analysis provides a basis for identifying and comparing the potential differences among MSAT emissions, if any, from the various alternatives. The qualitative assessment presented below is derived in part from a study conducted by the FHWA entitled *A Methodology for Evaluating Mobile Source Air Toxic Emissions Among Transportation Project Alternatives*, found at: www.fhwa.dot.gov/environment/air_quality/air_toxics/research_and_analysis/methodology/methodology00.cfm

For each alternative in this CE, the amount of MSATs emitted would be proportional to the vehicle miles traveled (VMT), or Average Annual Daily Traffic (AADT), assuming that other variables such as fleet mix are the same for each alternative. The AADT estimated for each of the Build Alternatives (96,000 vehicles per day projected for 2035) is slightly higher than that for the No-Build Alternative, because the additional capacity increases the efficiency of the roadway and attracts rerouted trips from elsewhere in the transportation network. This increase in AADT would lead to higher MSAT emissions for the action alternative along the highway corridor, along with a corresponding decrease in MSAT emissions along the parallel routes. The emissions increase is offset somewhat by lower MSAT emission rates due to increased speeds; according to the U.S. Environmental Protection Agency's (EPA) MOVES2010b model, emissions of all of the priority MSAT decrease as speed increases. Because the estimated AADT under each of the Alternatives are nearly the same, it is expected there would be no appreciable difference in overall MSAT emissions among the various alternatives. Also, regardless of the alternative chosen, emissions will likely be lower than present levels in the design year as a result of EPA's national control programs that are projected to reduce MSAT emissions by over 80 percent between 2010 and 2050. Local conditions may differ from these national projections in terms of fleet mix and turnover, AADT or VMT growth rates, and local control measures. However, the magnitude of the EPA-projected reductions is so great (even after accounting for VMT growth) that MSAT emissions in the study area are likely to be lower in the future in nearly all cases.

The additional travel lanes contemplated as part of the Alternative 2 (Widening to Outside of Existing Roadway) would have the effect of moving some traffic closer to nearby homes, schools and businesses; therefore, there may be localized areas where ambient concentrations of MSATs could be higher under Alternative 2 than Alternative 1 (Preferred Alternative) and the No-Build Alternative. However, the magnitude and the duration of these potential increases compared to the No-Build alternative and Alternative 1 cannot be reliably quantified due to incomplete or unavailable information in forecasting project-specific MSAT health impacts. In sum, when a highway is widened, the localized level of MSAT emissions for the Build Alternative could be higher relative to the No-Build Alternative, but this could be offset due to increases in speeds and reductions in congestion (which are associated with lower MSAT emissions). Also, MSAT will be lower in other locations when traffic shifts away from them. However, on a regional basis, EPA's vehicle and fuel regulations, coupled with fleet turnover, will over time cause substantial reductions that, in almost all cases, will cause region-wide MSAT

levels to be significantly lower than today. Alternative 1 (Preferred Alternative) would widen the roadway inside to the median, away from potential receptors. Localized increases in MSAT concentrations are not anticipated under Alternative 1 (Preferred Alternative).

Land Use

The proposed project is located in the City of Columbia and unincorporated areas of Richland County, South Carolina. Land use in the surrounding areas consists of commercial and residential development with various golf courses, cemeteries, churches, hospitals, and hotels and wooded areas immediately adjacent to the roadway. Residential and mixed-use developments are planned near Blythewood Road and Killian Road and the roadway improvements provide economic benefit. The proposed project is not expected to modify existing land use or change the timing or density of development in the area. The project is not in conflict with any plan, existing land use, or zoning regulation.

Farmlands

The project has been assessed under the provisions of the Farmland Protection Policy Act (FPPA) of 1981. The FPPA outlines several different criteria that determine the presence of prime farmland. Prime farmland is land that is best suited for producing high yield crops because of soil quality, growing season, and moisture content. These criteria were scored on a Farmland Conversion Impact Rating Form for Corridor Type Projects (NRCS-CPA-106). Sites that score above 260 points total are eligible for protection under the FPPA, while sites receiving lower ratings are considered less eligible. Sites that score less than 160 points do not meet the criteria for FPPA protection. The total score is comprised of (1) the Relative Value of Farmland score and (2) the Total Corridor Assessment score. The Relative Value of Farmland (to be converted by the referenced alternative) score is assessed on a scale of 0 to 100. The Total Corridor Assessment score pertains to the use of land, the availability of farm support services, investments in existing farms, and the amount of land that could be rendered non-farmable due to construction of the proposed project. The Total Corridor Assessment has a scale of 0 to 160 points. According to an agreement with Natural Resources Conservation Service (NRCS), SCDOT and FHWA, if a site's Total Corridor Assessment score (NRCS-CPA-106 Form Section VI) is less than 100 points, Sections III, IV and V do not need to be completed and no additional assessment by the NRCS district office would be necessary. The Preferred Alternative received a Total Corridor Assessment score of 35. Since this Total Corridor Assessment score does not exceed the 100-point threshold described above, further coordination with NRCS and mitigation actions are not required. Refer to **Appendix J** for the Farmland Impact Conversion Rating Forms for Corridor Type Projects form (NRCS-CPA-106).

Hazardous Materials

The area directly adjacent to the interstate corridor outside of the existing right-of-way predominately consists of woody area, private property, and commercial buildings with low potential for underground storage tanks (USTs). Therefore, there is low potential for uncovering USTs or other hazardous-material-containing sites during construction activities for the Preferred Alternative or Alternative 2.

An examination of the project area within a one-half mile radius of the corridor and review of environmental records available at SCDHEC was conducted to determine if any sites with potential or existing environmental contamination were present within or

directly adjacent to the project corridor. The project corridor is the existing right-of-way, approximately 120 feet from the centerline of the northbound and southbound lanes and ramps. Databases included, but were not limited to, above ground storage tanks (ASTs), USTs, leaking underground storage tanks (LUSTs), dry cleaners, and Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) sites. The records review indicated that three USTs are within or abutting the project corridor (see **Figures 6a, 6b, and 6c in Appendix K**). The first UST site is Site #18025 (Pantry Express 600), associated with an existing Shell gas station located at 1909 Percival Road. The site is on the west side of Percival Road, approximately 100 feet outside of the I-77 right-of-way and is approximately 800 feet outside (southeast) of the construction limits. The second site, Site #09938 (Blue Cross Blue Shield of SC), is located at 2501 Faraway Drive on the southeast quadrant of I-77 and I-20. The site is approximately 200 feet outside of the right-of-way for the I-77 off-ramps to I-20 and is an abandoned UST (abandoned in 1991) that was subsequently removed. Releases were reported in 1993 and no compliance was required. The third site, Site #07474 (Rent-All Shops), is located at 7809 Two Notch Road on the southwest quadrant of Two Notch Road and I-77, less than 150 feet outside of the I-77 right-of-way. It is an abandoned UST (abandoned in 1993) that was subsequently removed. Releases were reported in 1993 and no compliance was required. This site is approximately 200 feet outside and up gradient of the construction limits. The proposed project will not require any new right-of-way and the sites are outside and/or up gradient from the proposed construction limits for the Preferred Alternative and Alternative 2; therefore, no further investigation is required.

It is SCDOT's practice to avoid the acquisition of USTs and other hazardous waste materials, if at all possible. If avoidance of hazardous materials is not a viable alternative and soils that appear to be contaminated with petroleum products were encountered during construction, SCDHEC will be informed. If stained soils or potentially hazardous materials are identified during construction, further investigation in the form of Phase I Environmental Site Assessment may be required to assess potential recognized environmental concerns. Hazardous materials will be tested and removed and/or treated with the U.S. Environmental Protection Agency (EPA) and SCDHEC requirements, if necessary.

The bridges within the project corridor were assessed for lead based paint and asbestos. Lead-based paint exceeding the SCDHEC disposal limit of 0.7 milligrams (mg)/centimeters squared (cm²) was detected in the green painted bolt plates, I-beams and braces of the I-77 bridges over Edgewater Drive and in the green painted bolt plates and I-beams braces of I-77 bridges over I-20 and I-20 ramp. Lead-based paint exceeding the SCDHEC disposal limit was also detected in the green painted bolt plates and I-beams of the I-77 bridges over the I-77 ramp near the I-20 traffic interchange and in the green painted bolt plates of the I-77 bridge over Windsor Lake Boulevard. In addition, lead-based paint exceeding the SCDHEC disposal limit was detected in the gray painted bolt plates of the I-77 bridges over Windsor Lake and although the traffic striping on the I-77 roadway throughout the project limits could not be sampled due to traffic safety reasons, it is presumed that the I-77 striping is lead-containing. Destructive actions (sanding, burning, demolition, component removal, paint preparation) to the lead-containing paint surfaces will require the contractor to comply with the standards of SCDHEC and Occupational Safety and Health Administration (OSHA), including but not limited to proper disposal, initial exposure monitoring, the use of personal protective equipment, and medical surveillance. If additional painted components are discovered during renovation activities, the paint should be tested prior to any destructive actions (sanding, burning, demolition, component removal, paint preparation) or disposal.

SCDHEC Regulation 61-107.19 permits demolition materials painted with lead-based paint (≥ 0.7 mg/cm²) to be disposed in a permitted Class Two (C&D) or Class Three Subtitle D, Municipal Solid Waste (MSW) landfill. However, accumulations of paint waste (chips, dust, or flakes) from the identified areas of lead-based paint may be classified as hazardous waste, which requires disposal in a Subtitle C (hazardous waste) landfill. The hazardous waste regulations include Title 40 Code of Federal Regulations parts 260 through 272. A sample of accumulated paint waste should be collected for analysis via Toxicity Characteristic Leaching Procedure (TCLP) to determine the waste's lead content and hazardous waste characteristics.⁶

The EPA and SCDHEC define materials as asbestos-containing if an asbestos content greater than one percent (>1%) is detected in a representative sample. Asbestos in concentrations greater than 1 percent was not identified in any of the structures sampled. If additional suspect materials are discovered during the planned renovation activities, bulk samples must be collected and analyzed for asbestos content prior to continuation of work. Prior to the demolition of any regulated facility or structure, written notification must be submitted to SCDHEC at least ten working days in advance of the demolition.

Community Impacts within the Project Corridor

The public information meeting indicated that there is general support of the proposed project. The comments received included a desire to extend the widening of I-77 to Blythewood Road and to improve the Killian Road traffic interchange. Overall under the Preferred Alternative, there would be no significant adverse effect on public facilities, businesses, or services as a result of the proposed project; nor is the proposed project expected to adversely affect the social environment or local economy.

⁶ S&ME. 2014. *Asbestos & Lead-Based Paint Assessment Report*. December 2, 2014.

Environmental Commitments

Permitting

Impacts to jurisdictional waters will be permitted under a Department of the Army Section 404 permit from the U.S. Army Corps of Engineers (USACE). Based on preliminary design, it is anticipated that the proposed project would be permitted under SCDOT's General Permit (GP). SCDOT will provide the USACE with information regarding any proposed demolition and construction activities during the Section 404 permitting process.

The required mitigation for this project will be determined through consultation with the USACE and other resource agencies. A detailed stream and wetland compensatory mitigation plan will be developed once final design is complete.

A NPDES permit would be acquired before the proposed construction begins. As the operator of a large Municipal Separate Storm Sewer System (MS4), SCDOT is also required to obtain NPDES permit coverage to discharge pollutants into Waters of the State, in accordance with its MS4 Permit.

Water Quality

Stormwater control measures, both during construction and post construction, are required for SCDOT projects constructed near §303(d), TMDL, outstanding resource waters (ORW), tidal, and other sensitive waters in accordance with SCDOT's MS4 Permit.

The contractor would be required to minimize potential stormwater impacts through implementation of construction best management practices, reflecting policies contained in 23 CFR 650 B and the SCDOT's *Supplemental Specifications on Seeding and Erosion Control Measures* (January 01, 2015). Other measures including seeding, silt fences and sediment basins, as appropriate will be implemented during construction to minimize impacts to Waters of the U.S.

Migratory Bird Treaty Act

The federal Migratory Bird Treaty Act, 16 USC § 703-711, states that it is unlawful to pursue, hunt, take, capture or kill; attempt to take, capture or kill; possess, offer to or sell, barter, purchase, deliver or cause to be shipped, exported, imported, transported, carried or received any migratory bird, part, nest, egg or product, manufactured or not.

The Department will comply with the Migratory Bird Treaty Act of 1918 in regard to the avoidance of taking of individual migratory birds and the destruction of their active nests. Prior to construction/demolition of the bridges the Resident Construction Engineer (RCE) will coordinate with SCDOT Environmental Services Office to determine if there are any active nests on the bridges. After this coordination, it will be determined whether construction/demolition can begin. After construction/demolition has begun, measures can be taken to prevent birds from nesting, such as screens, noise producers, and deterrents etc. If during construction or demolition a nest is observed on the bridge that was not discovered during the biological surveys, the contractor will cease work and immediately notify the SCDOT Environmental Services Office. SCDOT biologists will determine whether the nest is active and the species utilizing the nest. After this coordination, it will be determined whether construction/demolition can resume or whether a temporary moratorium will be put into effect. All costs for determining the need

for, the placing of deterrents, and applying of all special actions including, but not limited to, removing nests and any costs associated with conducting work in compliance with the Migratory Bird Treaty Act as stated herein will not be paid for separately but will be considered to have been included with other items of work.

USTs/Hazardous Materials

If avoidance of hazardous materials is not a viable alternative and soils that appear to be contaminated with petroleum products were encountered during construction, SC Department of Health and Environmental Control (SCDHEC), will be informed. Hazardous materials will be tested and removed and/or treated with the U.S. Environmental Protection Agency (EPA) and SCDHEC requirements, if necessary.

If potentially hazardous materials are encountered, an odor is identified, or significantly stained soil is visible during construction, further investigation in the form of a Phase I Environmental Site Assessment may be required to assess potential recognized environmental concerns.

Lead-based paint was detected on bridge surfaces in the project limits. Destructive actions (sanding, burning, demolition, component removal, paint preparation) to the lead-containing paint surfaces will require the contractor to comply with the standards of SCDHEC and Occupational Safety and Health Administration (OSHA), including but not limited to proper disposal, initial exposure monitoring, the use of personal protective equipment, and medical surveillance. If additional painted components are discovered during renovation activities, the paint should be tested prior to any destructive actions (sanding, burning, demolition, component removal, paint preparation) or disposal.

The existing structures shall be removed and disposed of by the Contractor in accordance with Subsection 202.4.2 of the Standard Specifications. The Contractor's attention is called to the fact that this project may require removal and disposal of structural components containing lead-based paints. Removal and disposal of structural components containing lead-based paints shall comply with all applicable Federal, State, and Local requirements for lead as waste, lead in air, lead in water, lead in soil, and worker health and safety.

Asbestos-containing materials was not detected in any of the structures sampled in the project limits; however, if additional suspect materials are discovered during the planned construction activities, bulk samples must be collected and analyzed for asbestos content prior to continuation of work.

Prior to the demolition of any regulated facility or structure, written notification must be submitted to SCDHEC at least ten working days in advance of the demolition.

Cultural Resources


The contractor and subcontractors must notify their workers to watch for the presence of any prehistoric or historic remains, including but not limited to arrowheads, pottery, ceramics, flakes, bones, graves, gravestones, or brick concentrations during the construction phase of the project, if any such remains are encountered, the Resident Construction Engineer (RCE) will be immediately notified and all work in the vicinity of the discovered materials and site work shall cease until the SCDOT Archaeologist directs otherwise.

6/1/2015
Date

Leather M. Robb
Environmental Project Manager

6/2/2015
Date

J. Shane Belcher
Federal Highway Administration

Date: 05/13/2015	SCDOT NEPA ENVIRONMENTAL COMMITMENTS FORM	
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Project ID : P027002	County : Richland	District : District 1	Doc Type: CE-C	Total # of Commitments: 6
----------------------	-------------------	-----------------------	----------------	---------------------------

Project Name: I-77 Roadway Widening and Improvements
--

The Environmental Commitment **Contractor Responsible** measures listed below **are to be included in the contract and must be implemented**. It is the responsibility of the Program Manager to make sure the Environmental Commitment **SCDOT Responsible** measures are adhered to. If there are questions regarding the commitments listed please contact:

CONTACT NAME: Tyke Redfearn	PHONE #: (803) 737-1430
------------------------------------	--------------------------------

ENVIRONMENTAL COMMITMENTS FOR THE PROJECT

General Permit	Responsibility: CONTRACTOR
-----------------------	----------------------------


Impacts to jurisdictional waters will be permitted under a Department of the Army Section 404 permit from the U.S. Army Corps of Engineers. Based on preliminary design, it is anticipated that the proposed project would be permitted under SCDOT's General Permit (GP). The required mitigation for this project will be determined through consultation with the USACE and other resource agencies.

Stormwater	Responsibility: SCDOT
-------------------	-----------------------

Stormwater control measures, both during construction and post-construction, are required for SCDOT projects with land disturbance and/or constructed in the vicinity of 303(d), TMDL, ORW, tidal, and other sensitive waters in accordance with the SCDOT's MS4 Permit. The selected contractor would be required to minimize potential stormwater impacts through implementation of construction best management practices, reflecting policies contained in 23 CFR 650 B and SCDOT's Supplemental Specifications on Seed and Erosion Control Measures (latest edition).

Water Quality	Responsibility: SCDOT
----------------------	-----------------------

The contractor will be required to minimize possible water quality impacts through implementation of construction BMPs, reflecting policies contained in 23 CFR 650B and the Department's Supplemental Specifications on Seeding and Erosion Control Measures (January 01, 2015). Other measures including seeding, silt fences, sediment basins, etc. as appropriate will be implemented during construction to minimize impacts to Water Quality

Project ID : <input type="text" value="P027002"/>	SCDOT NEPA ENVIRONMENTAL COMMITMENTS FORM	
ENVIRONMENTAL COMMITMENTS FOR THE PROJECT		

Migratory Bird Treaty Act (all bridge and box culvert projects)	Responsibility: <input type="text" value="CONTRACTOR"/>
<p>The federal Migratory Bird Treaty Act, 16 USC § 703-711, states that it is unlawful to pursue, hunt, take, capture or kill; attempt to take, capture or kill; possess, offer to or sell, barter, purchase, deliver or cause to be shipped, exported, imported, transported, carried or received any migratory bird, part, nest, egg or product, manufactured or not.</p> <p>The Department will comply with the Migratory Bird Treaty Act of 1918 in regard to the avoidance of taking of individual migratory birds and the destruction of their active nests. Prior to construction/demolition of the bridges the Resident Construction Engineer (RCE) will coordinate with SCDOT Environmental Services Office to determine if there are any active nests on the bridge. After this coordination, it will be determined whether construction/demolition can begin. After construction/demolition has begun, measures can be taken to prevent birds from nesting, such as screens, noise producers, and deterrents etc. If during construction or demolition a nest is observed on the bridge that was not discovered during the biological surveys, the contractor will cease work and immediately notify the SCDOT Environmental Services Office. SCDOT biologists will determine whether the nest is active and the species utilizing the nest. After this coordination, it will be determined whether construction/demolition can resume or whether a temporary moratorium will be put into effect. All costs for determining the need for, the placing of deterrents, and applying of all special actions including, but not limited to, removing nests and any costs associated with conducting work in compliance with the Migratory Bird Treaty Act as stated herein will not be paid for separately but will be considered to have been included with other items of work.</p>	

Non-Standard Commitment	Responsibility: <input type="text" value="CONTRACTOR"/>		
<table><tr><td><input type="text" value="Lead-Based Paint"/></td></tr><tr><td><p>The existing structures shall be removed and disposed of by the Contractor in accordance with Subsection 202.4.2 of the Standard Specifications. The Contractor's attention is called to the fact that this project may require removal and disposal of structural components containing lead-based paints. Removal and disposal of structural components containing lead-based paints shall comply with all applicable Federal, State, and Local requirements for lead as waste, lead in air, lead in water, lead in soil, and worker health and safety.</p></td></tr></table>		<input type="text" value="Lead-Based Paint"/>	<p>The existing structures shall be removed and disposed of by the Contractor in accordance with Subsection 202.4.2 of the Standard Specifications. The Contractor's attention is called to the fact that this project may require removal and disposal of structural components containing lead-based paints. Removal and disposal of structural components containing lead-based paints shall comply with all applicable Federal, State, and Local requirements for lead as waste, lead in air, lead in water, lead in soil, and worker health and safety.</p>
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Cultural Resources	Responsibility: <input type="text" value="CONTRACTOR"/>
<p>The contractor and subcontractors must notify their workers to watch for the presence of any prehistoric or historic remains, including but not limited to arrowheads, pottery, ceramics, flakes, bones, graves, gravestones, or brick concentrations during the construction phase of the project, if any such remains are encountered, the Resident Construction Engineer (RCE) will be immediately notified and all work in the vicinity of the discovered materials and site work shall cease until the SCDOT Archaeologist directs otherwise.</p>	

I-77 Roadway Widening and Improvements

Categorical Exclusion Type C

Project ID: P027002

Index of Appendices:

Appendix A – Project Location Maps

- Figure 1 – Project Location
- Figure 2 – I-77 Project Limits

Appendix B – SCDOT Traffic Data (Average Annual Daily Traffic peak hour volumes)

Appendix C – Socioeconomic Data

- Figure 5 – Census Tracts
- Table 5: Socioeconomic Characteristics

Appendix D – Public Involvement Documents

- Comment Summary Report (Person Event Report)
- PIM Sign-in sheet
- Newspaper advertisement
- PIM handout

Appendix E – Archaeological Field Report and concurrence letters

- Concurrence letters
- Archaeological Field Report

Appendix F – Permit Determination Form and Jurisdictional Determination

- Permit Determination Form
- SCDHEC Water Quality Information for Broad River and Gills Creek Watersheds
- Jurisdictional Determination Approval Letter
- Jurisdictional Determination Package

Appendix G – Floodplains and Drainage Information

- Floodplain Checklist
- FIRMs
- Hydraulics/Stormwater Analysis (from Drainage Report)

Appendix H – Biological Assessment and USFWS Concurrence Letter

Appendix I – Noise Analysis Report

Appendix J – Farmlands Worksheet

Appendix K – Hazardous Waste Sites Map (Figures 6a, 6b, 6c)



South Carolina
Department of Transportation

MAR 04 2015

March 3, 2015

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

RE: Cultural Resources Survey of I-77 Widening Project, Richland County, South Carolina.
Project ID: P027002

Dear Ms. Johnson:

Enclosed are two copies of a report that describes cultural resource investigations in Richland County, South Carolina. The investigations were conducted in advance of the proposed widening of Interstate 77 from Percival Road to Killian Road. The proposed project includes adding a travel lane in each direction, improving various exit ramps, and replacing or widening ten bridges.

As a result of the survey, five new historic architectural resources (Resources 6382, 6383, 6384, 6385, and 6386) were identified within the project's Area of Potential Effects. None of these resources were determined eligible for listing in the National Register of Historic Places. Since the majority of the project will be constructed within previously disturbed portions of the project corridor, no archaeological investigations were conducted. Based on the results of the survey, the Department has determined that **no historic properties will be affected** by the proposed undertaking.

Per the terms of the Section 106 Programmatic Agreement executed on December 13, 2011, 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 in the Department's findings. Please respond within 30 days if you have any objections or if you have need of additional information.

Sincerely,


Chad C. Long
Archaeologist/Environmental Project Manager

I ~~(do not)~~ concur in the above determination.

Signed: 

Date: 03/06/15

Enclosure

cc: Shane Belcher, FHWA
Dr. Wenonah Haire, CIN-THPO
Lisa LaRue Stopp, United Keetowah Band of Cherokee
Keith Derting, SCIAA

ec: Russell Townsend, EBCI
Tyler Howe, EBCI





South Carolina
Department of Transportation

March 3, 2015

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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Project ID: P027002

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Sincerely,


Chad C. Long
Archaeologist/Environmental Project Manager

I (~~do not~~) concur in the above determination.

Signed: Wenonah A. Haire, DO Date: 3/17/15

Enclosure

cc: Shane Belcher, FHWA
Dr. Wenonah Haire, CIN-THPO
Lisa LaRue Stopp, United Keetowah Band of Cherokee
Keith Derting, SCIAA

ec: Russell Townsend, EBCI
Tyler Howe, EBCI



RECEIVED

MAR 23 2015

Environmental Management
SCDOT



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
CHARLESTON DISTRICT, CORPS OF ENGINEERS
69A HAGOOD AVENUE
CHARLESTON, SOUTH CAROLINA 29403-5107

July 28, 2015

Regulatory Division

RECEIVED

AUG - 5 2015

Environmental Management
SCDOT

Mr. Sean Connolly
South Carolina Department of Transportation
P.O. Box 191
Columbia, South Carolina 29202-0191

Dear Mr. Connolly:

This is in response to your letter of January 23, 2015, requesting a Preliminary Jurisdictional Determination (Preliminary) for a 566 acre project area, located on and along an approximately 12 mile long segment of Interstate 77 (I-77) from mile marker 15 (just south of Percival Road Interchange) to mile marker 27 (just south of the Blythewood Road Interchange) in Richland County, South Carolina (SCDOT P027002). The project area is depicted on the enclosed Figures (Figure 5, Sheets 1-18 of 18) entitled "I-77 Roadway Widening and Improvements, Delineated Streams and Wetlands, Figure 5". Sheets 1-13 of 13 are dated May 2015 and Sheets 14-18 are dated April 2015. A preliminary jurisdictional determination is used to indicate that this office has identified wetlands or other waters on the property and believes these waters may be jurisdictional waters of the United States. Since the Preliminary does not verify the actual jurisdictional status of wetlands and/or waters of the United States on the property, it relies on the presumption of jurisdiction for the purpose of expediting the request for a Preliminary.

Based on an on-site inspection, a review of aerial photography, topographic maps, National Wetland Inventory maps and soil survey information, it has been concluded that the boundaries shown on the referenced figures are a reasonable approximation of the location and boundaries of the waters found on this site. The area in question contains approximately 5,577 linear feet of tributaries, 4.506 acres of federally defined freshwater wetlands, and 2.077 acres of other waters. You are cautioned that this delineation is approximate, subject to change, and should be used for planning purposes. This office should be contacted prior to performing any work in or around these wetlands or other waters. In order for a definitive determination to be provided, these areas should be located and marked on-site, sketched or surveyed, platted on a map, and should be accompanied by a request for an Approved Jurisdictional Determination. Upon receipt of such a request, this office can then issue an approved determination as to jurisdiction (rather than the presumption of jurisdiction). You should also be aware that the areas identified as wetlands or other waters may be subject to restrictions or requirements of other state or local government entities.

Please note that since this jurisdictional determination is a Preliminary, it is subject to change and therefore is not an appealable action under the Corps of Engineers administrative appeal procedures defined at 33 CFR 331. If a permit application is forthcoming as a result of this Preliminary, a copy of this letter, as well as the attached sketch or plat should be submitted as part of the application. Otherwise, a delay could occur in confirming that a preliminary jurisdictional determination was performed for the permit project area.

This preliminary jurisdictional determination is a non-binding action and as such has no expiration until it is superseded by an Approved Jurisdictional Determination. If you intend to request an Approved Jurisdictional Determination in the future, you are advised not to commence work in these wetlands and/or waters prior to receiving the Approved Jurisdictional Determination.

In future correspondence concerning this matter, please refer to SAC 2015-00155-DS. You may still need state or local assent. Prior to performing any work, you should contact the South Carolina Department of Health and Environmental Control.

Enclosed are two copies of the Preliminary Jurisdictional Determination Form signed by our office. Please sign both copies, retain one copy for your records and return one signed copy to this office in the enclosed self-addressed envelope.

If you have any questions concerning this matter, please contact Stephen Brumagin at 803-253-3445.

Sincerely,

A handwritten signature in black ink, appearing to read 'Travis G. Hughes', with a long horizontal line extending to the right.

Travis G. Hughes
Chief, Special Projects Branch

Enclosures:
Figure 5, sheets 1-18 of 18
Preliminary Jurisdictional Determination Form

Copy Furnished:

HDR
Ms. Renee Mulholland
3955 Faber Place Drive, Suite 300
North Charleston, South Carolina 29405



United States Department of the Interior

FISH AND WILDLIFE SERVICE

176 Croghan Spur Road, Suite 200
Charleston, South Carolina 29407



February 20, 2015

Mr. Edward W. Frierson
South Carolina Department of Transportation
P.O. Box 191
Columbia, SC 29202-0191

Re: Biological Assessment, I-77 Widening, Richland County, South Carolina
FWS Log No. 2015-I-0216

Dear Mr. Frierson:

The U.S. Fish and Wildlife Service (Service) has reviewed your January 21, 2015, Biological Assessment (BA) concerning the proposed widening of U.S. Interstate 77 (I-77) in Columbia, Richland County, South Carolina. The South Carolina Department of Transportation (SCDOT) prepared and submitted the BA in accordance with requirements set forth under section 7 of the Endangered Species Act (16 U.S.C. 1536 (c) (ESA)). The BA evaluated potential impacts to threatened and endangered (T&E) species protected under the ESA and now seeks the Service's concurrence on SCDOT's affect determination.

As proposed, the project will widen and rehabilitate approximately seven miles of I-77 starting at Percival Road and progressing north to Killian Road. The proposed work will consist of adding a travel lane for the north and south bound routes, improving existing exit ramps, and widening ten existing bridges. The SCDOT correctly determined that the project area does not contain any federally designated critical habitat but recognized that the area may contain suitable habitat for some federally T&E species.

As described in the BA, a survey to determine the presence of eight T&E species (listed in the BA) was performed August 4-7, 2014. Please note that the Carolina heelsplitter (*Lasmigona decorata*) is no longer considered as potentially occurring in Richland County. Until their presence is confirmed, future SCDOT projects in Richland County do not need to survey for or consider potential effects to the Carolina heelsplitter. The Service recommends that SCDOT contact the National Marine Fisheries Service for consultation requirements regarding the Atlantic and shortnose sturgeon. Three of the remaining five T&E species considered in the BA, Canby's dropwort, red-cockaded woodpecker, and the American wood stork, are known to inhabit Richland County but do not occur within the project area, due to the lack of suitable habitat. SCDOT concluded the project will have no effect upon these species; therefore no further consultation with the Service is required.

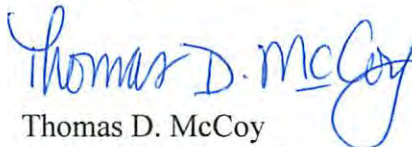
Suitable habitat for the rough-leaved loosestrife and smooth coneflower does occur along the maintained road right-of-ways along I-77. SCDOT performed the survey during the optimal time period for both species and did not observe any individual plants of either the rough-leaved loosestrife or smooth coneflower. As such, SCDOT concluded that the project may affect, but is not likely to adversely affect both plant species. The Service concurs with your conclusion. Please note that due to obligations under the ESA, the potential impacts of this project must be reconsidered if: (1) new information reveals impacts of this identified action may affect any 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 informational purposes only, the Service has included an updated list of species that have been petitioned for listing under the ESA as well as Candidate Species. These species are collectively referred to as "At-Risk Species" (ARS). We have included a list of the ARS that may occur in Richland County, South Carolina. Although there are no Federal protections afforded to ARS, please consider including them in future 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:

<http://www.fws.gov/southeast/candidateconservation>

Please contact the South Carolina Department of Natural Resources regarding potential impacts that may have occurred to State protected species. If the project may impact wetlands, contact the U.S. Army Corps of Engineers, Charleston District. If you have any questions regarding the Service's determination, please contact Mr. Mark Caldwell at (843) 727-4707, ext. 215 and reference FWS Log No. 2015-I-0216.

Sincerely,



Thomas D. McCoy
Acting Field Supervisor

TDM/MAC

South Carolina List of At-Risk, Candidate, Endangered, and Threatened Species - Richland County

CATEGORY	COMMON NAME/STATUS	SCIENTIFIC NAME	SURVEY WINDOW/ TIME PERIOD	COMMENTS
Amphibian	Chamberlain's dwarf salamander (ARS)	<i>Eurycea chamberlaini</i>	Spring/Fall surveys	Breeding survey: November to February
Bird	American wood stork (T)	<i>Mycteria americana</i>	February 15-September 1	Nesting season
	Bald eagle (BGEPA)	<i>Haliaeetus leucocephalus</i>	October 1-May 15	Nesting season
	Red-cockaded woodpecker (E)	<i>Picoides borealis</i>	April 1-July 31	Nesting season
Crustacean	Broad River spiny crayfish (ARS)	<i>Cambarus spicatus</i>	November-April	
Fish	American eel (ARS)	<i>Anguilla rostrata</i>	March 1-May 30; October 1-December 15	Temperature dependent: normally (17-20°C); can be found between 13-25°C
	Atlantic sturgeon* (E)	<i>Acipenser oxyrinchus*</i>	February 1-April 30	Spawning migration
	Blueback herring (ARS)	<i>Alosa aestivalis</i>	Mid-January-mid May	Peak: March-April
	Robust redbreast (ARS)	<i>Moxostoma robustum</i>	Late April-early May	Temperature dependent: 16-24°C
	Shortnose sturgeon* (E)	<i>Acipenser brevirostrum*</i>	February 1-April 30	Spawning migration
Insect	None Found			
Mammal	Rafinesque's big-eared bat (ARS)	<i>Corynorhinus rafinesquii</i>	Year round	Found in mines, caves, large hollow trees, buildings, and bat towers
	Tri-colored bat (ARS*)	<i>Perimyotis subflavus</i>	Year round	Found in mines and caves in the winter
Mollusk	Savannah lilliput (ARS)	<i>Toxolasma pullus</i>	March 1-September 30	
Plant	Bog spicebush (ARS)	<i>Lindera subcoriacea</i>	March-August	
	Canby's dropwort (E)	<i>Oxypolis canbyi</i>	Mid-July-September	
	Ciliate-leaf tickseed (ARS)	<i>Coreopsis integrifolia</i>	August-November	
	Georgia aster (ARS*)	<i>Symphyotrichum georgianum</i>	Early October-mid November	
	Purple baldwinia (ARS)	<i>Baldwinia atropurpurea</i>	August-November	
	Rough-leaved loosestrife (E)	<i>Lysimachia asperulaefolia</i>	Mid May-September	
	Sandhills lily (ARS*)	<i>Lilium pyrophilum</i>	Late July-August	
	Smooth coneflower (E)	<i>Echinacea laevigata</i>	Late May-October	
	Spathulate seedbox (ARS)	<i>Ludwigia spathulata</i>	June-October	
	Wire-leaved dropseed (ARS)	<i>Sporobolus teretifolius</i>	August-September	Following fire
Reptile	Southern hognose snake (ARS)	<i>Heterodon simus</i>	Most of the year	

2/18/2015

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

Attachment F

No-Rise Certifications

September 15, 2016

Heather Brown
Floodplain Coordinator
Richland County
2020 Hampton Street, 1st Floor, PO Box 192
Columbia, SC 29202
(803) 576-2158

Project: Crane Creek at I-77 Widening & Rehabilitation from MM 15 to MM 27

Dear Ms. Brown,

Infrastructure Consulting and Engineering is performing the hydraulic review of the I-77 Widening & Rehabilitation from MM 15 to MM 27. This project includes the FEMA modeling of two bridges and two bridge-sized culverts located in Zones AE. The two bridges are over Jackson Ck (Windsor Lake) and Little Jackson Ck. The two bridge-sized culverts are over Cumbess Ck and Crane Ck. These four sites are located in Richland County in South Carolina. This widening includes adding a travel lane towards the median in each direction.

This letter refers to the site located where I-77 crosses over Crane Creek within a Special Flood Hazard Area Zone AE area with a detailed study. The project site is in FEMA Map Panel 45079C0252L dated April 30, 2015. The upstream watershed contributing drainage area through this crossing is approximately 11.13 square miles. The I-77 Widening and Rehabilitation Design-Build project will not alter the existing length and size of the existing Triple 12-ft by 12-ft, 288 feet long reinforced concrete box culvert.

Enclosed is a copy of our hydraulic analysis reports and "No Impact" certification for the proposed crossing. If you concur with the "No Impact" submittal, please fill out the community section in the form below and send it to me via email. An approval by your department is required to continue with construction on this project.

Please contact me at 404-434-8638 if you have any questions or need any additional information.

Sincerely,



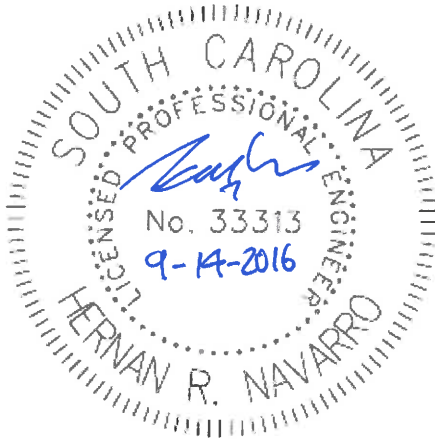
Ricardo Navarro, P.E.
Infrastructure Consulting and Engineering

South Carolina Department of Transportation

Engineering "No Impact" Certification

This document is to certify that I am a duly qualified engineer licensed to practice in the State of South Carolina. It is to further certify that the attached technical data supports the fact that the proposed I-77 Widening over Crane Creek will not create any impact on the 100-year flood elevations on Crane Creek at published and unpublished cross sections in the Flood Insurance Study for Richland County, dated April 30, 2015, in the vicinity of the project.

Seal:



Hernan Ricardo Navarro

Name

[Handwritten Signature]

Signature

9-14-2016

Date

Senior Hydraulic Engineer

Title

FOR COMMUNITY USE ONLY

Community Approval (please circle one):

Approved

Disapproved

Heather L. Brown

Community Official's Name

[Handwritten Signature]

Community Official's Signature

9.15.16

Date

Acting Floodplain Coordinator

Title

September 15, 2016

Heather Brown
Floodplain Coordinator
Richland County
2020 Hampton Street, 1st Floor, PO Box 192
Columbia, SC 29202
(803) 576-2158

Project: Cumbess Creek at I-77 Widening & Rehabilitation from MM 15 to MM 27

Dear Ms. Brown,

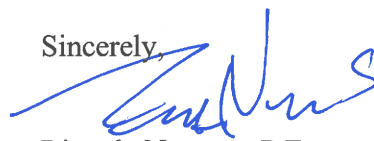
Infrastructure Consulting and Engineering is performing the hydraulic review of the I-77 Widening & Rehabilitation from MM 15 to MM 27. This project includes the FEMA modeling of two bridges and two bridge-sized culverts located in Zones AE. The two bridges are over Jackson Ck (Windsor Lake) and Little Jackson Ck. The two bridge-sized culverts are over Cumbess Ck and Crane Ck. These four sites are located in Richland County in South Carolina. This widening includes adding a travel lane towards the median in each direction.

This letter refers to the site located where I-77 crosses over Cumbess Creek within a Special Flood Hazard Area Zone AE area with a detailed study. The project site is in FEMA Map Panel 45079C0252L dated April 30, 2015. The upstream watershed contributing drainage area through this crossing is approximately 0.67 square miles. The I-77 Widening and Rehabilitation Design-Build project will not alter the existing length and size of the existing Triple 8-ft by 6-ft, 280 feet long reinforced concrete box culvert.

Enclosed is a copy of our hydraulic analysis reports and "No Impact" certification for the proposed crossing. If you concur with the "No Impact" submittal, please fill out the community section in the form below and send it to me via email. An approval by your department is required to continue with construction on this project.

Please contact me at 404-434-8638 if you have any questions or need any additional information.

Sincerely,



Ricardo Navarro, P.E.
Infrastructure Consulting and Engineering

South Carolina Department of Transportation

Engineering "No Impact" Certification

This document is to certify that I am a duly qualified engineer licensed to practice in the State of South Carolina. It is to further certify that the attached technical data supports the fact that the proposed I-77 Widening over Cumbess Creek will not create any impact on the 100-year flood elevations on Cumbess Creek at published and unpublished cross sections in the Flood Insurance Study for Richland County, dated April 30, 2015, in the vicinity of the project.

Seal:



Hernán Ricardo Navarro

Name

[Handwritten Signature]

Signature

9-14-2016

Date

Senior Hydraulic Engineer

Title

FOR COMMUNITY USE ONLY

Community Approval (please circle one):

Approved

Disapproved

Heather L Brown

Community Official's Name

Heather L Brown

Community Official's Signature

9.15.16

Date

Acting Floodplain Coordinator

Title

September 15, 2016

Heather Brown
Floodplain Coordinator
Richland County
2020 Hampton Street, 1st Floor, PO Box 192
Columbia, SC 29202
(803) 576-2158

Project: Jackson Creek at I-77 Widening & Rehabilitation from MM 15 to MM 27

Dear Ms. Brown,

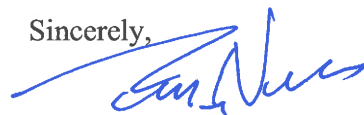
Infrastructure Consulting and Engineering is performing the hydraulic review of the I-77 Widening & Rehabilitation from MM 15 to MM 27. This project includes the FEMA modeling of two bridges and two bridge-sized culverts located in Zones AE. The two bridges are over Jackson Ck (Windsor Lake) and Little Jackson Ck. The two bridge-sized culverts are over Cumbess Ck and Crane Ck. These four sites are located in Richland County in South Carolina. This widening includes adding a travel lane towards the median in each direction.

This letter refers to the site located where I-77 crosses over Jackson Creek/Windsor Lake within a Special Flood Hazard Area Zone AE area with a detailed study. The project site is in FEMA Map Panel 45079C0258L dated April 30, 2015. The upstream watershed contributing drainage area through this crossing is approximately 5.79 square miles. The existing northbound bridge has an out to out width of 44.33 feet, is 360 feet long with a low chord elevation of 237.05 based on the received survey information. The existing bridge was built in 1984 with a ten 30-foot spans and one 60-foot span configuration. The proposed widened bridge will have an out to out width of 63.29 feet and with a low chord elevation of 237.05. The existing southbound bridge has the same out to out width and length as the northbound. The southbound has a low chord elevation of 240.84 based on the received survey information. The existing bridge was also built in 1984 but with a twelve 30-foot spans configuration. The proposed widened bridge will have an out to out width of 63.29 feet and a low chord elevation of 240.20. The distance from the upstream face of the northbound bridge and the downstream face of the southbound bridge is 162.4 feet for both existing and proposed conditions.

Enclosed is a copy of our hydraulic analysis reports and "No Impact" certification for the proposed crossing. If you concur with the "No Impact" submittal, please fill out the community section in the form below and send it to me via email. An approval by your department is required to continue with construction on this project.

Please contact me at 404-434-8638 if you have any questions or need any additional information.

Sincerely,



Ricardo Navarro, P.E.
Infrastructure Consulting and Engineering

South Carolina Department of Transportation

Engineering "No Impact" Certification

This document is to certify that I am a duly qualified engineer licensed to practice in the State of South Carolina. It is to further certify that the attached technical data supports the fact that the proposed I-77 Bridge Widening over Jackson Creek will not create any impact on the 100-year flood elevations on Jackson Creek at published and unpublished cross sections in the Flood Insurance Study for Richland County, dated April 30, 2015, in the vicinity of the project.

Seal:



Hernán Ricardo Navarro

Name

A handwritten signature in blue ink, appearing to read "Hernan Navarro", written over a horizontal line.

Signature

9-14-2016

Date

Senior Hydraulic Engineer

Title

FOR COMMUNITY USE ONLY

Community Approval (please circle one):

Approved

Disapproved

Heather L. Brown

Community Official's Name

Heather L. Brown

Community Official's Signature

9.15.16

Date

Acting Floodplain Coordinator

Title

September 15, 2016

Heather Brown
Floodplain Coordinator
Richland County
2020 Hampton Street, 1st Floor, PO Box 192
Columbia, SC 29202
(803) 576-2158

Project: Little Jackson Creek at I-77 Widening & Rehabilitation from MM 15 to MM 27

Dear Ms. Brown,

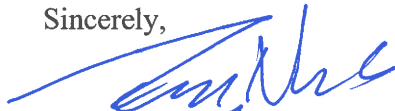
Infrastructure Consulting and Engineering is performing the hydraulic review of the I-77 Widening & Rehabilitation from MM 15 to MM 27. This project includes the FEMA modeling of two bridges and two bridge-sized culverts located in Zones AE. The two bridges are over Jackson Ck (Windsor Lake) and Little Jackson Ck. The two bridge-sized culverts are over Cumbess Ck and Crane Ck. These four sites are located in Richland County in South Carolina. This widening includes adding a travel lane towards the median in each direction.

This letter refers to the site located where I-77 crosses over Little Jackson Creek and Edgewater Drive within a Special Flood Hazard Area Zone AE area with a detailed study. The project site is in FEMA Map Panel 45079C0254L dated April 30, 2015. The upstream watershed contributing drainage area through this crossing is approximately 5.16 square miles. The existing northbound bridge has an out to out width of 44.33 feet, is 409.75 feet long with a low chord elevation of 250.01. The existing bridge was built in 1981 with a ten 30-foot spans, one 79.56-foot span and one 30.19-foot span radial configuration. The proposed widened bridge will have an out to out width of 63.29 feet and with a low chord elevation of 250.01. The existing southbound bridge has the same out to out width as the northbound. The southbound is 409.50 feet long, has a low chord elevation of 251.73. The existing bridge was also built in 1981 with a ten 30-foot spans, one 79.38-foot span and one 30.12-foot span radial configuration. The proposed widened bridge will have an out to out width of 63.29 feet and a low chord elevation of 251.27. The distance from the upstream face of the northbound bridge and the downstream face of the southbound bridge is 162.4 feet. These parallel bridges are skewed at a 22-degree angle.

Enclosed is a copy of our hydraulic analysis reports and "No Impact" certification for the proposed crossing. If you concur with the "No Impact" submittal, please fill out the community section in the form below and send it to me via email. An approval by your department is required to continue with construction on this project.

Please contact me at 404-434-8638 if you have any questions or need any additional information.

Sincerely,



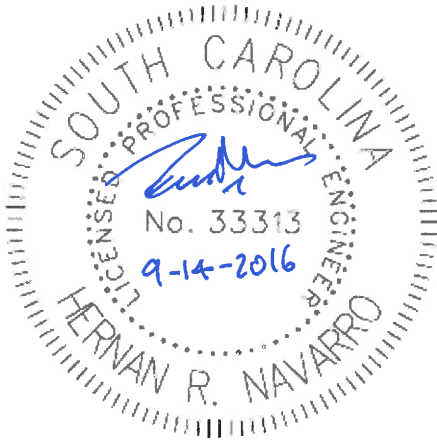
Ricardo Navarro, P.E.
Infrastructure Consulting and Engineering

South Carolina Department of Transportation

Engineering "No Impact" Certification

This document is to certify that I am a duly qualified engineer licensed to practice in the State of South Carolina. It is to further certify that the attached technical data supports the fact that the proposed I-77 Bridge Widening over Little Jackson Creek will not create any impact on the 100-year flood elevations on Little Jackson Creek at published and unpublished cross sections in the Flood Insurance Study for Richland County, dated April 30, 2015, in the vicinity of the project.

Seal:



Hernán Ricardo Navarro

Name

A handwritten signature in blue ink, appearing to read "Hernan Navarro".

Signature

9-14-2016

Date

Senior Hydraulic Engineer

Title

FOR COMMUNITY USE ONLY

Community Approval (please circle one):

Approved

Disapproved

Heather L. Brown

Community Official's Name

A handwritten signature in blue ink, appearing to read "Heather L. Brown".

Community Official's Signature

9-15-16

Date

Acting Floodplain Coordinator

Title

Attachment G

Site Photographs



SCDOT – I-77 Roadway Widening and Improvements
Wetland Photographs



Photograph #1 – w2 (looking northeast)



Photograph #2 – w3 - (looking east)



SCDOT – I-77 Roadway Widening and Improvements
Wetland Photographs



Photograph #3- w4 (looking east)



Photograph #4 - w5 (looking southeast)



**SCDOT – I-77 Roadway Widening and Improvements
Wetland Photographs**



Photograph #5 – w6 (looking southeast)



Photograph #6 – w7 (looking northeast)



**SCDOT – I-77 Roadway Widening and Improvements
Wetland Photographs**



Photograph #7 – w8 (looking north to pond 1)



Photograph #8 – w9 (looking north)



SCDOT – I-77 Roadway Widening and Improvements
Wetland Photographs



Photograph #9 – w10 (looking south)



Photograph #10 – w12 (looking north)



SCDOT – I-77 Roadway Widening and Improvements
Wetland Photographs



Photograph #11 – w13 (looking southwest)



Photograph #12 – w14 (looking southeast)



**SCDOT – I-77 Roadway Widening and Improvements
Wetland Photographs**



Photograph #13 – w16 (looking north)



Photograph #14 – w17 (looking southwest)



**SCDOT – I-77 Roadway Widening and Improvements
Wetland Photographs**



Photograph #15 – w18 & w19 (looking south)



Photograph #16 – w20 (looking southwest)



SCDOT – I-77 Roadway Widening and Improvements
Wetland Photographs



Photograph #17 – w23 (looking west)

End of Wetland Photos



SCDOT – I-77 Roadway Widening and Improvements
Stream Photographs



Photograph #1 – s2 (looking northeast)



Photograph #2 – s3 (looking northwest)



SCDOT – I-77 Roadway Widening and Improvements
Stream Photographs



Photograph #3 – s4 (looking north, pond in background)



Photograph #4 – s7 (looking west)



SCDOT – I-77 Roadway Widening and Improvements
Stream Photographs



Photograph #5 – s8 (looking north)



Photograph #6 – confluence of s9 and s10 (looking east)



SCDOT – I-77 Roadway Widening and Improvements
Stream Photographs



Photograph #7 – s11 (looking southeast)



Photograph #8 – s12 (looking northwest)



SCDOT – I-77 Roadway Widening and Improvements
Stream Photographs



Photograph #9 – s13 (looking northeast)



Photograph #10 – s14 (looking northwest)



SCDOT – I-77 Roadway Widening and Improvements
Stream Photographs



Photograph #11 – s15 (looking northwest)



Photograph #12 – s17 (looking northwest)



SCDOT – I-77 Roadway Widening and Improvements
Stream Photographs



Photograph #13 – s19 (looking north)



Photograph #14 – s20 (looking northeast)



SCDOT – I-77 Roadway Widening and Improvements
Stream Photographs



Photograph #15 – s21 (looking northeast)



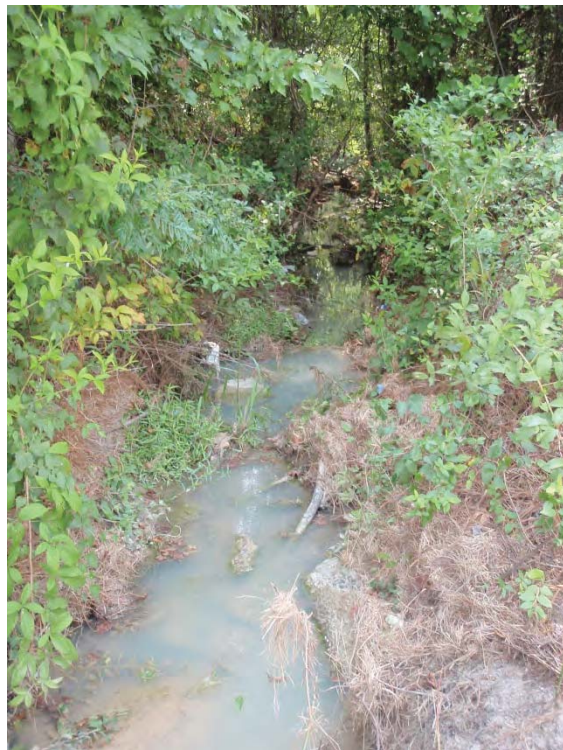
Photograph #16 – s22 (looking southwest)



SCDOT – I-77 Roadway Widening and Improvements
Stream Photographs



Photograph #17 – s25 (looking south)



Photograph #18 – s29 (looking west)

End of photos



SCDOT – I-77 Roadway Widening and Improvements
Southbound Rehabilitation Area



Looking west from the southbound (SB) side of I-77, north of Killian Road



Looking west from the SB side of I-77, north of N. Pines Road



**SCDOT – I-77 Roadway Widening and Improvements
Southbound Rehabilitation Area**



Looking west from the SB side of I-77, north of Blythewood Crossing



Looking west from the SB side of I-77, north of Blythewood Crossing



**SCDOT – I-77 Roadway Widening and Improvements
Southbound Rehabilitation Area**



Looking east from SB side of I-77, inside ramp median at Wilson Road interchange



Looking west from SB side of I-77, between ramps at Wilson Road interchange



**SCDOT – I-77 Roadway Widening and Improvements
Southbound Rehabilitation Area**



Looking west from SB side of I-77, between ramps at Wilson Road interchange



Looking west from SB side of I-77, south of State Route S-40-1868



**SCDOT – I-77 Roadway Widening and Improvements
Southbound Rehabilitation Area**



Looking north from northbound side of I-77, at Wilson Road interchange



Looking north from northbound (NB) side of I-77, inside ramp median at Wilson Road interchange



**SCDOT – I-77 Roadway Widening and Improvements
Southbound Rehabilitation Area**



Looking east from NB side of I-77, between ramps at Wilson Road interchange



Looking east from NB side of I-77, north of Northpoint Boulevard

Attachment H

SCDHEC 401 WQC Information

BOARD:
Allen Amsler
Chairman

Mark S. Lutz
Vice Chairman



Catherine B. Templeton, Director

Promoting and protecting the health of the public and the environment

BOARD:
R. Kenyon Wells

L. Clarence Batts, Jr.

Ann B. Kirol, DDS

John O. Hutto, Sr., MD

April 23, 2012

Lieutenant Colonel Edward P. Chamberlayne P.E., Commander
U.S. Army Corps of Engineers
69A Hagood Avenue
Charleston, SC 29403-5107

Re: Certification in Accordance with Section 401 of the Clean Water Act, as amended.
Certification of Consistency with the S.C. Coastal Zone Management Program

Dear Lieutenant Colonel Chamberlayne:

The South Carolina Department of Health and Environmental Control's (Department) Bureau of Water and the Office of Ocean and Coastal Resource Management have reviewed the U.S. Army Corps of Engineers' proposal to amend the Nationwide Permit program regulations. In accordance with agency procedures, the Department issued a Notice of Department Decision on April 06, 2012, taking action on these Nationwide Permits. Department staff determined that provided the proposed actions listed below (and in the attached table) are implemented and the proposed conditions outlined in the April 06, 2012 Notice of Department Decision are adhered to, there is a reasonable assurance that work authorized will be conducted in a manner consistent with the certification requirements of Section 401 of the Federal Clean Water Act (CWA), as amended, and the Coastal Zone Management Act (48-39-10 et.seq.).

In accordance with the provisions of Section 401, we certify that the indicated Nationwide Permits, subject to the provided conditions, are consistent with applicable provisions of Section 303 of the CWA, as amended. We also hereby certify that there are no applicable effluent limitations under Sections 301(b) and 302, and that there are no applicable standards under Sections 306 and 307 of the CWA. The attached general conditions apply to all Nationwide Permits.

Certification and Finding of Consistency

401 Water Quality Certification issued without conditions

3. Maintenance
4. Fish & Wildlife Harvesting, Enhance, Attract Devices, & Activities
5. Scientific Measurement Devices
6. Survey Activities
7. Outfall Structures and Associated Intake Structures
13. Bank Stabilization
15. U.S. Coast Guard Approved Bridges
18. Minor Discharges
19. Minor Dredging
20. Response Operations for Oil and Hazardous Substances
22. Removal of Vessels
25. Structural Discharges
27. Aquatic Habitat Restoration, Establishment & Enhancement Activities
30. Moist Soil Management for Wildlife
31. Maintenance of Existing Flood Control Facilities
32. Completed Enforcement Activities
33. Temporary Construction, Access, and Dewatering
36. Boat Ramps
37. Emergency Watershed Protection and Rehabilitation
38. Cleanup of Hazardous and Toxic Waste
40. Agricultural Activities
41. Reshaping Existing Drainage Ditches
45. Repair of Uplands Damaged by Discrete Events
48. Commercial Shellfish Aquaculture Activities

Coastal Zone Consistency Certification issued without conditions

1. Aids to Navigation
2. Structures in Artificial Canals
3. Maintenance
4. Fish & Wildlife Harvesting, Enhance, Attract Devices, & Activities
5. Scientific Measurement Devices
6. Survey Activities
7. Outfall Structures and Associated Intake Structures
8. Oil and Gas Structures on the Continental Shelf
9. Structures in Fleeting and Anchorage Areas
10. Mooring Buoys
11. Temporary Recreational Structures
13. Bank Stabilization
15. U.S. Coast Guard Approved Bridges
18. Minor Discharges
19. Minor Dredging
20. Response Operations for Oil and Hazardous Substances
22. Removal of Vessels
25. Structural Discharges
27. Aquatic Habitat Restoration, Establishment & Enhancement Activities
28. Modifications of Existing Marinas
30. Moist Soil Management for Wildlife
31. Maintenance of Existing Flood Control Facilities
32. Completed Enforcement Activities
33. Temporary Construction, Access, and Dewatering

SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL

2600 Bull Street • Columbia, SC 29201 • Phone: (803) 898-3432 • www.scdhec.gov

401 Water Quality Certification issued without conditions	Coastal Zone Consistency Certification issued without conditions
	36. Boat Ramps 37. Emergency Watershed Protection and Rehabilitation 38. Cleanup of Hazardous and Toxic Waste 40. Agricultural Activities 41. Reshaping Existing Drainage Ditches 45. Repair of Uplands Damaged by Discrete Events 48. Commercial Shellfish Aquaculture Activities
401 Water Quality Certification issued with conditions	Coastal Zone Consistency Certification issued with conditions
12. Utility Line Activities 14. Linear Transportation Projects 23. Approved Categorical Exclusions 29. Residential Developments 39. Commercial and Institutional Development 42. Recreational Facilities 43. Stormwater Management Facilities 44. Mining Activities 46. Discharge in Ditches	12. Utility Line Activities 14. Linear Transportation Projects 23. Approved Categorical Exclusions 29. Residential Developments 39. Commercial and Institutional Development 42. Recreational Facilities 44. Mining Activities 46. Discharge in Ditches

Denial and Finding of Inconsistency

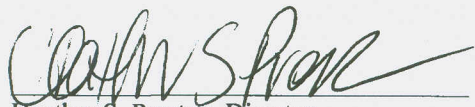
The Department has determined that there is not a reasonable assurance that work authorized by the following Nationwide Permits will be conducted in a manner consistent with the certification requirements of Section 401 of the CWA, as amended, or the Coastal Zone Management Act (48-39-10 et.seq.). In accordance with the provisions of Section 401 and the S.C. Coastal Zone Management Program, we deny 401 Water Quality Certification and Coastal Zone Consistency Certification for these Nationwide Permits.

401 Water Quality Certification denied	Coastal Zone Consistency Certification denied
16. Return Water From Upland Cont. Disposal Areas 17. Hydropower Projects 21. Surface Coal Mining Activities 34. Cranberry Production 49. Coal Remining Activities 50. Underground coal Mining Activities 51. Land-Based Renewable Energy Generation Facilities 52. Land-Based Renewable Energy Generation Pilot Projects	16. Return Water From Upland Cont. Disposal Areas 17. Hydropower Projects 21. Surface Coal Mining Activities 24. Indian Tribe or State Administered Section 404 Programs 34. Cranberry Production 35. Maintenance Dredging of Existing Basins 43. Stormwater Management Facilities 49. Coal Remining Activities 50. Underground coal Mining Activities 51. Land-Based Renewable Energy Generation Facilities 52. Land-Based Renewable Energy Generation Pilot Projects

Page Three
2012 Final Certifications for NWPs
April 23, 2012

If you have any questions, please contact Heather Preston at (803) 898-3105 or prestohs@dhec.sc.gov or Rheta Geddings DiNovo at (843) 953-0256 or dinovorg@dhec.sc.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "Heather S. Preston", written over a horizontal line.

Heather S. Preston, Director
Bureau of Water
Environmental Quality Control

A handwritten signature in black ink, appearing to read "Rheta Geddings DiNovo", written over a horizontal line.

Rheta Geddings DiNovo, Director
Regulatory Division
Office of Ocean and Coastal Resource Management

Nationwide Permit Number & Topic	401 Cert Action	CZC Cert Action (Outside of the Critical Area)
1. Aids to Navigation	N/A	Issue
2. Structures in Artificial Canals	N/A	Issue
3. Maintenance	Issue	Issue
4. Fish and Wildlife Harvesting, Enhancement, and Attraction Devices and Activities	Issue	Issue
5. Scientific Measurement Devices	Issue	Issue
6. Survey Activities	Issue	Issue
7. Outfall Structures and Associated Intake Structures	Issue	Issue
8. Oil and Gas Structures on the Outer Continental Shelf	N/A	Issue
9. Structures in Fleeting and Anchorage Areas	N/A	Issue
10. Mooring Buoys	N/A	Issue
11. Temporary Recreational Structures	N/A	Issue
12. Utility Line Activities	Issue w/ Cond	Issue w/ Cond
13. Bank Stabilization	Issue	Issue
14. Linear Transportation Projects	Issue w/ Cond	Issue w/ Cond
15. U.S. Coast Guard Approved Bridges	Issue	Issue
16. Return Water From Upland Contained Disposal Areas	Deny	Deny
17. Hydropower Projects	Deny	Deny
18. Minor Discharges	Issue	Issue
19. Minor Dredging	Issue	Issue
20. Response Operations for Oil and Hazardous Substances	Issue	Issue
21. Surface Coal Mining Operations	Deny	Deny
22. Removal of Vessels	Issue	Issue
23. Approved Categorical Exclusions	Issue w/ Cond	Issue w/ Cond
24. Indian Tribe or State Administered Section 404 Programs	N/A	Deny
25. Structural Discharges	Issue	Issue
26. [Reserved]	N/A	N/A
27. Aquatic Habitat Restoration, Establishment & Enhancement Activities	Issue	Issue
28. Modifications of Existing Marinas	N/A	Issue
29. Residential Developments	Issue w/ Cond	Issue w/ Cond
30. Moist Soil Management for Wildlife	Issue	Issue
31. Maintenance of Existing Flood Control Facilities	Issue	Issue
32. Completed Enforcement Actions	Issue	Issue
33. Temporary Construction, Access and Dewatering	Issue	Issue
34. Cranberry Production Activities	Deny	Deny
35. Maintenance Dredging of Existing Basins	N/A	Deny
36. Boat Ramps	Issue	Issue
37. Emergency Watershed Protection and Rehabilitation	Issue	Issue
38. Cleanup of Hazardous and Toxic Waste	Issue	Issue
39. Commercial and Institutional Developments	Issue w/ Cond	Issue w/ Cond
40. Agricultural Activities	Issue	Issue
41. Reshaping Existing Drainage Ditches	Issue	Issue
42. Recreational Facilities	Issue w/ Cond	Issue w/ Cond
43. Stormwater Management Facilities	Issue w/ Cond	Deny
44. Mining Activities	Issue w/ Cond	Issue w/ Cond
45. Repair of Uplands Damaged by Discrete Events	Issue	Issue
46. Discharges in Ditches	Issue w/ Cond	Issue w/ Cond
47. [Reserved]	N/A	N/A
48 Commercial Shellfish Aquaculture Activities	Issue	Issue
49. Coal Remining Activities	Deny	Deny
50. Underground Coal Mining Activities	Deny	Deny
51. Land-Based Renewable Energy Generation Facilities	Deny	Deny
52. Land-Based Renewable Energy Generation Pilot Projects	Deny	Deny

Nationwide Permit 401 and CZC General Conditions
Certified April 23, 2012

EXPLANATION, EVALUATION, AND PROPOSED ACTION OF THE NATIONWIDE PERMITS

General Conditions: These conditions apply to all of the nationwide permits (NWP) unless otherwise noted. A project proposed for authorization under a NWP should not be considered unless it meets all of the following general conditions plus any special conditions listed for each NWP.

1. Activities in the Critical Areas (as defined in 48-39-10, R 30.1(D) and R 30.10) require a direct permit from SCDHEC OCRM. SCDHEC OCRM's action on direct critical area permits will serve as the consistency determination for the critical area activity.

Nationwide Permit 401 and CZC Specific Conditions

Certified April 23, 2012

NWP 14: Linear Transportation Projects

Proposed Conditions of the 401 Water Quality Certification:

1. A compensatory mitigation plan must be submitted and approved by the SCDHEC for projects with impacts exceeding 0.10 acres or 300 linear feet.
2. Linear transportation projects must cross perpendicular (to the extent practicable) to the aquatic site area. Impacts certified under this NWP must be limited to three crossings per single and complete project and must be in non-tidal wetlands only.
3. This NWP is not certified for activities located in or adjacent to (as determined by SCDHEC) waters defined (as per Regulation 61-68) as Outstanding National Resource Waters (ONRW), Outstanding Resource Waters (ORW), or Trout Waters.
4. This NWP is not certified for activities located in or adjacent to (as determined by SCDHEC) impaired waters (as defined by 303(d) of the Clean Water Act).

Proposed Regional Conditions for the Coastal Zone Consistency Certification:

Provided all the conditions of the 401 Water Quality Certification, plus the following conditions, are included as Regional Conditions, the NWP will be consistent with the S.C. Coastal Zone Management Program.

1. The use of multiple NWPs on one tract or land parcel is not approved in the coastal zone without SCDHEC OCRM concurrence.
2. For all projects, the applicant must provide a Wetland Master Plan consistent with the policies and procedures of Chapter III Policy Section XII E. of the S.C. Coastal Zone Management Program. **WMP policies also include the preservation of all wetlands not proposed to be impacted through approved restrictive covenants.** The plan must include an identification of all wetlands, all wetland impacts/activities, drainage patterns, conceptual development, and a mitigation plan.
3. A one-day newspaper notice in accordance with the provisions of the S.C. Coastal Zone Management Program, Chapter V C. 1. A., Notice of Certification must be included.