



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

South Carolina

August 22, 2018

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

In Reply Refer To:
HDA-SC

Mr. Chad Long
Director Environmental Services Office
South Carolina Department of Transportation (SCDOT)
955 Park Street, P.O. Box 191
Columbia, South Carolina 29202

Subject: I-26 Widening and Interchange Improvements; Mile Marker 85 to 101, Finding of No Significant Impact (FONSI) and Interchange Modification Report Approval; Federal Project Number P029208.

Dear Mr. Long:

The FHWA has received your letter requesting a Finding of No Significant Impact (FONSI) determination for the subject project. Based on the information provided to complete the environmental process the FHWA finds that the project will have no significant impacts; therefore a FONSI determination is justified. Please proceed accordingly with the publication of the notice of availability of location and preliminary design approval and availability of the FONSI. The final documentation is to be made available to the public upon request. A notice of the FONSI approval shall be sent to the affected units of Federal, State, and local governments. A notice shall also be sent to the State inter-governmental review contacts established under Executive Order 12372.

We have also reviewed the Interchange Modification Report (IMR) submitted on July 26, 2018 for Interstate access revisions at Exits 85, 91, and 97. Based on our review, the modifications as recommended are acceptable. As the selected alternative contained in the NEPA document is consistent with the IMR, the proposed access revision to the Interstate System is approved. Please note that the approved access revision is valid for a period of eight years and must be re-assessed if not advanced to construction within this timeframe.

By our adoption of the FONSI and completion of the public comment/hearing requirements of 23 U.S.C. 128, the SCDOT is authorized to proceed with further project development. 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 to Mr. J. Shane Belcher at jeffrey.belcher@dot.gov /803-253-3187 or Mr. Rickele Gennie at rickele.gennie@dot.gov /803-253-3295.

Sincerely,

Emily O. Lawton
Division Administrator

Enclosure

ec: Mr. Ed Frierson, SCDOT NEPA Coordinator, RPG 3
Mr. Brad Reynolds, SCDOT Design-Build Program Manager

July 26, 2018

Emily O. Lawton
Federal Highway Administration
1835 Assembly Street, Suite 758
Columbia, South Carolina 29201

Re: Interchange Modification Reports for Review and Approval
Interstate 26 at SC 202 (Highway 202) – Exit 85 &
Interstate 26 at S-48 (Columbia Avenue) – Exit 91
Interstate 26 at US 176 (Broad River Road) – Exit 97
Richland and Newberry Counties

Dear Ms. Lawton:

Enclosed are the Interchange Modification Reports for the above referenced locations. The South Carolina Department of Transportation has reviewed and approved these reports. We request that the Federal Highway Administration review and provide concurrence on these reports.

If you should have additional questions regarding these reports, please do not hesitate to contact me at (803) 737-1440 or reynoldsbs@scdot.org.

Sincerely,


Reynolds, Brad S.
2018.07.26
09:52:28 -04'00'
Bradley S. Reynolds, P.E.
Program Manager

Approval by FHWA: 

Date: 8/22/18

BSR:bsr

Enclosure

ec: Rickele Gennie, FHWA Operations Engineer
Tad Kitowitz, FHWA Operations Engineer Team Leader
Ron Hinson, Traffic Design Review Engineer
File: PC/BSR



Finding of No Significant Impact *and* Public Hearing Certification

I-26 Widening and Interchange Improvements

From mile marker (MM) 85 near Little Mountain to MM 101 near Irmo

Newberry, Lexington, and Richland Counties

August 14, 2018



The following individuals may be contacted for additional information concerning the project:

Shane Belcher

Environmental Coordinator
Federal Highway Administration
1835 Assembly Street, Suite 1270
Columbia, S.C. 29201
(803) 253-3187

Bradley S. Reynolds, PE, DBIA

Design Build Program Manager
South Carolina Department of Transportation
955 Park Street
Columbia, SC 29202
(803) 737-1440

Project No. P029208

Date: 08/14/2018



Project ID: P029208 County: Newberry, Lexington, Richland District: District 1 Doc Type: FONSI Total # of Commitments: 18

Project Name: I-26 Widening (MM85 to MM101)

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: Bradley S. Reynolds, PE, DBIA **PHONE #:** (803) 737-1440

ENVIRONMENTAL COMMITMENTS FOR THE PROJECT

Non-Standard Commitment NEPA Doc Ref: EA Page: 46 Paragraph: 2 Responsibility: CONTRACTOR

Conservation Easement

Three parcels located within the PSA (TMS 01700-10-04, 01700-10-22, and 01700-10-26) are held in a Richland County conservation easement . Impacts to the tracts should be minimized to the maximum extent practicable during final design. The Richland County Conservation Division has indicated that to impact the property, ROW would need to be acquired through eminent domain and possibly condemnation. Any ROW acquisition or use of the property will need to be coordinated with the property owner and Richland County.

Water Quality NEPA Doc Ref: EA Page: 52 Paragraph: 2 Responsibility: CONTRACTOR

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

Stormwater NEPA Doc Ref: EA Page: 52 Paragraph: 3 Responsibility: CONTRACTOR

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).

Project ID: P029208

SCDOT
NEPA ENVIRONMENTAL COMMITMENTS
FORM



ENVIRONMENTAL COMMITMENTS FOR THE PROJECT

Non-Standard Commitment

NEPA Doc Ref: EA Page: 59 Paragraph: 2 Responsibility: SCDOT/CONTRACTOR

Individual Permit

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 an Individual Army Corps of Engineers Permit (IP). SCDOT will provide the Army Corps with information regarding any proposed demolition 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. The Contractor is responsible for obtaining the Section 404 permit and required mitigation, in consultation with SCDOT.

Non-Standard Commitment

NEPA Doc Ref: EA Page:59,60 Paragraph:5,3 Responsibility: Contractor

Invasive Species Management

SCDOT will comply with the intent of EO 13112 regarding Invasive Species by actively stabilizing all temporarily disturbed areas with measures and/or seed mixtures that would not include invasive species. Best Management Practices contained in the SCDOT Standard Specifications for Highway Construction would be used to reduce the introduction or spread of invasive species. Cleared areas would be seeded with both temporary and permanent seed mixtures. Vegetative matting and/ or other techniques may also be used to stabilize areas that are cleared of vegetation, preventing the growth or spread of invasive species.

Floodplains

NEPA Doc Ref: EA Page: 62 Paragraph: 2 Responsibility: SCDOT

The selected contractor will send a set of final plans and request for floodplain management compliance to the local County Floodplain Administrator.

Project ID: P029208

SCDOT
NEPA ENVIRONMENTAL COMMITMENTS
FORM



ENVIRONMENTAL COMMITMENTS FOR THE PROJECT

Migratory Bird Treaty Act

NEPA Doc Ref: EA Page: 64 Paragraph: 2 Responsibility: SCDOT

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 South Carolina Department of Transportation (SCDOT) 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.

The contractor shall notify the Resident Construction Engineer (RCE) at least four (4) weeks prior to construction/demolition/maintenance of bridges and box culverts. The RCE will coordinate with SCDOT Environmental Services Office (ESO), Compliance Division, to determine if there are any active birds using the structure. After this coordination, it will be determined when construction/demolition/maintenance can begin. If a nest is observed that was not discovered after construction/demolition/maintenance has begun, the contractor will cease work and immediately notify the RCE, who will notify the ESO Compliance Division. The ESO Compliance Division will determine the next course of action.

The use of any deterrents by the contractor designed to prevent birds from nesting, shall be approved by the RCE with coordination from the ESO Compliance Division. The cost for any contractor provided deterrents will be provided at no additional cost to SCDOT.

Non-Standard Commitment

NEPA Doc Ref: EA Page: 77 Paragraph: 2-5 Responsibility: CONTRACTOR

Air Quality

State and local regulations regarding dust control and other air quality emission reduction controls will be followed. In order to minimize the amount of construction dust generated, current state best management practices, will be followed during the construction of the project. These include covering earth-moving trucks to keep dust levels down, watering haul roads, and refraining from open burning, except as may be permitted by local regulations. The construction equipment would also produce slight amounts of exhaust emissions. The EPA has listed a number of approved diesel retrofit technologies which may be deployed as emissions mitigation measures for equipment used in construction at the discretion of the Contractor, in consultation with SCDOT.

Non-Standard Commitment

NEPA Doc Ref: FONSI Page: 12 Paragraph: 7 Responsibility: SCDOT/CONTRACTOR

Noise - Barrier Walls

Based on the studies thus far accomplished, SCDOT intends to install highway traffic noise abatement measures in the form of a barrier at NAA 5 and 6 (Westcott Ridge and Arbor Springs). These preliminary indications of likely abatement measures are based upon preliminary design for a barrier cost of \$35.00 per square foot that will reduce the noise level by at least 5 dB(A) for residences. If it subsequently develops during final design that these conditions have substantially changed, the abatement measures might not be provided. A final decision of the installation of the abatement measure(s) will be made upon completion of the project's design.

Project ID: P029208

SCDOT
NEPA ENVIRONMENTAL COMMITMENTS
FORM



ENVIRONMENTAL COMMITMENTS FOR THE PROJECT

Noise

NEPA Doc Ref: EA Page: 96 Paragraph: 4 Responsibility: SCDOT

SCDOT will inform local planning officials of future, generalized noise levels expected to occur in the project vicinity after FHWA has made a final decision on the Environmental document.

Non-Standard Commitment

NEPA Doc Ref: EA Page: 96 Paragraph: 2 Responsibility: CONTRACTOR

Noise - Traffic

It will be necessary that some work be required during non-peak traffic hours in nights and/or weekends. These activities may impact adjacent residential areas and thus a specific work plan will be necessary regarding work during these time periods and will be submitted for approval by the SCDOT Resident Construction Engineer prior to its undertaking.

USTs/Hazardous Materials

NEPA Doc Ref: EA Page: 100 Paragraph: 2 Responsibility: SCDOT

If avoidance of hazardous materials is not a viable alternative and soils that appear to be contaminated are encountered during construction, the South Carolina Department of Health and Environmental Control (SCDHEC) will be informed. Hazardous materials will be tested and removed and/or treated in accordance with the United States Environmental Protection Agency and the SCDHEC requirements, if necessary.

Project ID: P029208

SCDOT
NEPA ENVIRONMENTAL COMMITMENTS
FORM



ENVIRONMENTAL COMMITMENTS FOR THE PROJECT

Non-Standard Commitment

NEPA Doc Ref: EA Page: 103 Paragraph: 1 Responsibility: SCDOT

Lead-based paint

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.

Non-Standard Commitment

NEPA Doc Ref: EA Page: 103 Paragraph: 1 Responsibility: CONTRACTOR

Lead-based paint

Lead-based paint surveys must be taken on 6 of the 10 bridges included within the project area. The results should be submitted to SCDOT RCE for review prior to demolition or reconstruction. Excluded from additional surveys are S-167 (Parr Road), S-39 (Holy Trinity Church Road), SC 202, and S-48 (Columbia Ave) which have already tested positive for the presence of lead-based paint.

Non-Standard Commitment

NEPA Doc Ref: EA Page: 102 Paragraph: 2 Responsibility: CONTRACTOR

Asbestos

SCDOT has surveyed the existing bridges for Asbestos Containing Material (ACM). The 10 bridges in the project corridor contain ACM. Potential removal of ACM would be coordinated with the SCDHEC Bureau of Air Quality, Asbestos Section prior to demolition or disturbances to the existing bridges.

Project ID: P029208

SCDOT
NEPA ENVIRONMENTAL COMMITMENTS
FORM



ENVIRONMENTAL COMMITMENTS FOR THE PROJECT

Non-Standard Commitment

NEPA Doc Ref: EA Page: 108 Paragraph: 3 Responsibility: SCDOT/CONTRACTOR

Cultural Resources - Cemeteries

The Department will ensure that the existing known limits of the Comalander and Summer-Counts Cemeteries are identified and delineated in the field. Prior to construction activities near these cemeteries, a construction barrier fence or other appropriate barrier will be erected a minimum of 10 feet beyond the known cemetery limits. This will ensure that these cemeteries and any potential unmarked graves associated with them will be protected. As currently designed, these cemeteries are not proposed to be impacted by the project. However, if construction would need to impede into a delineated area, the Department will provide an archaeologist on site to monitor all ground disturbing activities near the affected area(s).

Non-Standard Commitment

NEPA Doc Ref: EA Page: 109 Paragraph: 1 Responsibility: CONTRACTOR

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 material shall cease until the SCDOT Archaeologist directs otherwise.

Non-Standard Commitment

NEPA Doc Ref: EA Page: 110 Paragraph: 5 Responsibility: SCDOT/CONTRACTOR

Displacements

The SCDOT, and/ or contractor will acquire all new right-of-way and process any relocations in compliance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended (42 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.

Table of Contents

1.	PROJECT DESCRIPTION	2
2.	PURPOSE AND NEED	3
3.	ALTERNATIVES CONSIDERED	4
3.2.1	REASONABLE ALTERNATIVES FOR THE INTERCHANGES	5
3.2.2	PREFERRED ALTERNATIVE	7
4.	REVISIONS SINCE APPROVAL OF THE EA	12
5.	SUMMARY OF IMPACTS RELATED TO THE PREFERRED ALTERNATIVE	13
6.	PROJECT COORDINATION AND PUBLIC INVOLVEMENT	28
7.	BASIS FOR FINDING OF NO SIGNIFICANT IMPACT	30

LIST OF FIGURES

Figure 1	Project Location Map.....	3
Figure 2	Exit 85 Alternative 1A, Preferred Alternative.....	8
Figure 3	Exit 91 Alternative 3, Preferred Alternative.....	10
Figure 4	Exit 97 Alternative 1, Preferred Alternative.....	11

LIST OF TABLES

Table 1	Reasonable Alternatives (Interchanges) Comparison Matrix.....	2
Table 2	Impacts from the I-26 Preferred Alternative.....	9
Table 3	Estimated Wetland Impacts from the I-26 Revised Preferred Alternative.....	16
Table 4	Estimated Stream Impacts from the I-26 Revised Preferred Alternative.....	17
Table 5	Floodplains and Existing Crossings in the I-26 Widening PSA.....	19

APPENDICES

Appendix A	Exit 85 IMR
Appendix B	Exit 91 IMR
Appendix C	Exit 91 IMR Addendum
Appendix D	Exit 97 IMR
Appendix E	I-26 Widening Jurisdictional Determination (SAC 2018-00748)
Appendix F	Approved JD (SAC 2015-01451-DS) for the S-48 Columbia Ave. Corridor Project
Appendix G	FEMA Floodplain Updated Maps
Appendix H	Public Hearing Certification Package

**FEDERAL HIGHWAY ADMINISTRATION
SOUTH CAROLINA DIVISION OFFICE
FINDING OF NO SIGNIFICANT IMPACT
for
I-26 Widening and Interchange Improvements
Newberry, Lexington, and Richland Counties, South Carolina.**

Project ID P029208

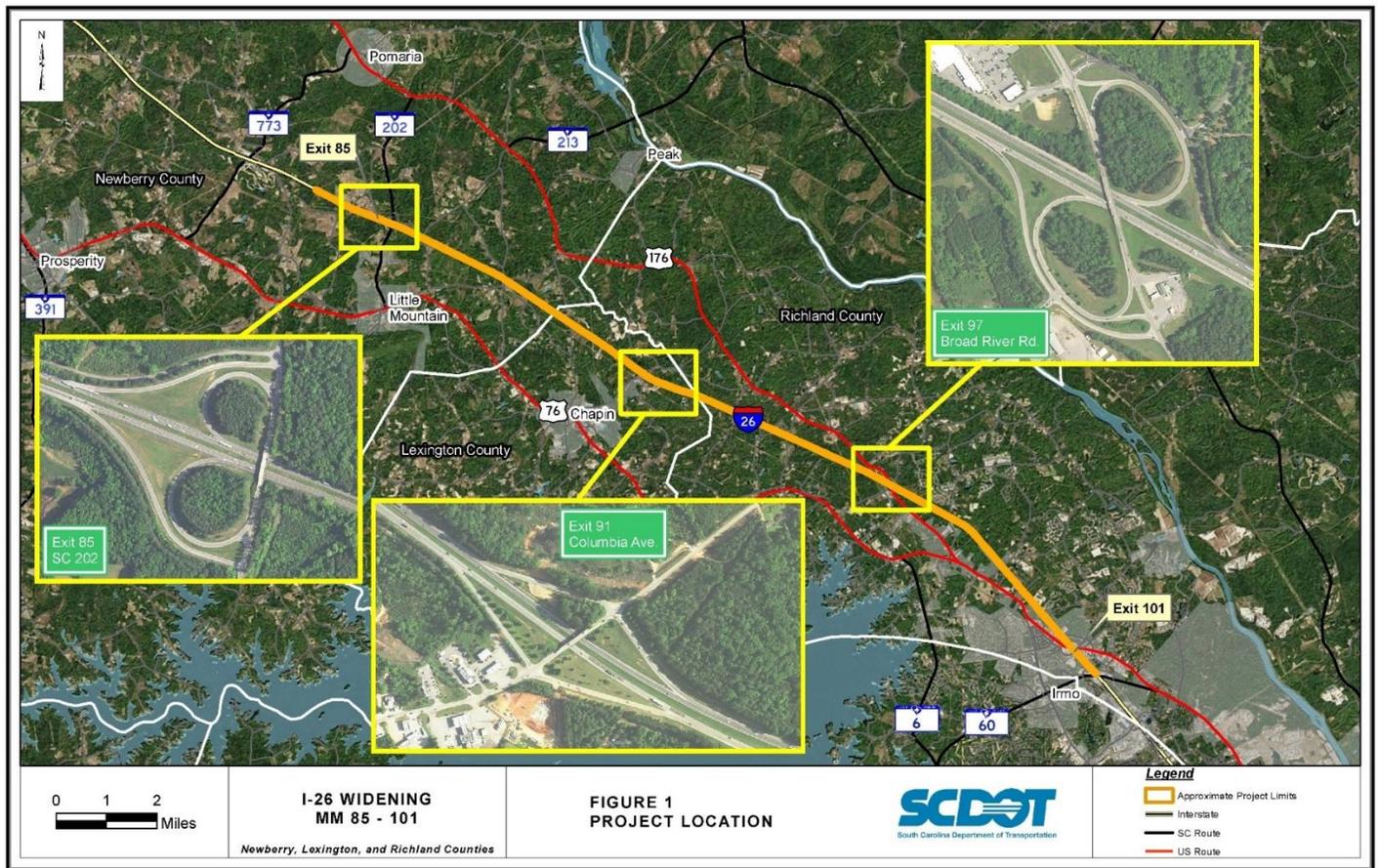
1. Project Description

The South Carolina Department of Transportation (SCDOT), in coordination with the Federal Highway Administration (FHWA), proposes improvements and upgrades to Interstate 26 (I-26) to support increasing vehicular use. SCDOT proposes widening I-26 and reconstructing three interchanges from mile marker (MM) 85 near Little Mountain to MM 101 near Irmo in Newberry, Lexington, and Richland counties. Improvements would take place from 1.6 miles west of the SC 202 (Exit 85) interchange to the US 176 (Exit 101) interchange (Figure 1). The improvements would widen the mainline of I-26 from Exit 85 to Exit 101. I-26 would be widened for a total of 6 lanes, three in each direction from Exit 85 to Exit 97 and 8 lanes, four in each direction from Exit 97 to Exit 101. Interchange improvements would be provided at Exits 85, 91, and 97. A total of seven overpasses that cross I-26 would be replaced including S-36-167 (Parr Road), S-36-39 (Holy Trinity Church Road), S-32-49 (Peak Street), S-40-405 (Old Hilton Road), S-40-234 (Mt. Vernon Church Road), S-40-80 (Shady Grove Road), and S-40-58 (Koon Road). The truck weigh station near MM 94 would be improved as a weigh-in-motion station.

The proposed project is consistent with the Central Midlands Council of Governments Long Range Transportation Plan and is included in SCDOT's Statewide Transportation Improvement Program (STIP) for Richland, Lexington, and Newberry Counties. The federal National Highway Performance Program (NHPP) identifies funds for construction in the system upgrade interstate program. The federal Advanced Construction program identifies funds for construction, also in the system upgrade interstate program. Additionally, funds are identified in the NHPP for construction from the pavement and reconstruction program. There are currently \$530 million dollars allocated in the STIP for this project¹.

¹ SCDOT, Statewide Transportation Improvement Program 2017 – 2022, Amended July 19, 2018.

Figure 1: Project Location



2. Purpose and Need

The proposed project has two primary purposes:

- increase roadway capacity to address the projected increased traffic volumes; and,
- correct geometric deficiencies along the mainline and at several interchanges and overpasses in this section of I-26 by bringing them into compliance with current state and federal design standards.

The secondary purpose is to improve safety which will be enhanced by improving the geometric design of the facility.

The needs for this project were identified through information in the Interstate 26 Widening Traffic Analysis Report and the Accident Analysis Report, as well as that collected through meetings with SCDOT; federal, state and local agencies; project stakeholders, and the public.

The following needs have been identified in connection with the proposed federal action within the study area:

- Increase capacity of the roadway system to account for peak hour demand which leads to congestion, delays, and crashes;
- Improve interchanges to meet traffic and safety requirements; and
- Improve public safety through reducing traffic congestion.

Expanded discussion regarding the project need is included in Section 2.2 of the approved Environmental Assessment (EA).

3. Alternatives Considered

To simplify the evaluation of alternatives, this project was considered in two parts, the mainline widening and the interchanges to be improved. This allows each preliminary interchange alternative to be compared against the others for that interchange and one Preferred Alternative to be identified for each interchange. The best interchange alternatives can then be combined with the best mainline alternative to produce an overall Preferred Alternative for the project.

There is one build alternative for the mainline of I-26. The widening of I-26 to 6 lanes would begin from 1.6 miles west of the Exit 85 interchange to the Exit 97 interchange. This would widen the mainline of I-26, providing additional through travel lanes in both directions from near Exit 85 to Exit 97. From near Exit 97 to Exit 101, two additional through travel lanes would be added for a total of four lanes in each direction of this segment.

There were several preliminary alternatives developed for the interchanges to be improved. Many of the alternatives had similar interchange designs and provided similar traffic improvements, but with slightly different ramp and frontage road alignments. These alignment variations resulted in substantially higher impacts to residential homes and streams, without providing a greater improvement to the roadway network and traffic flow when compared to other alternatives. Therefore, several of the initial alternatives posed were eliminated based on impacts.

There were five preliminary alternatives developed for the interchange at Exit 85. Alternatives 1 and 2 were eliminated and Alternatives 1a, 2a, and 3 were carried forward as Reasonable Alternatives. Three preliminary interchange alternatives were evaluated for Exit 91. Alternative 1 was eliminated from further consideration and Alternatives 2 and 3 were carried forward as Reasonable Alternatives. Three alternatives were developed for Exit 97 and all had

similar operational performance and impacts. Thus, all were carried forward as reasonable alternatives for Exit 97. At Exit 97 there were no alternatives that were considered but eliminated from further study.

The No-Build alternative, which consists of SCDOT making no improvements to the roadway, was considered as a baseline for comparison. The No-Build alternative would not provide for the proposed improvements that are necessary to increase roadway capacity or correct geometric deficiencies along this corridor. Due to the inability to improve traffic congestion within the project corridor, the No-Build alternative was eliminated from further consideration. However, the No-Build alternative was retained as a baseline for comparison and evaluation.

3.2.1 Reasonable Alternatives for the Interchanges

Exit 85 Reasonable Alternatives:

Alternative 1a would replace the existing Exit 85 interchange with a combination of a diamond-shaped and partial cloverleaf-shaped interchange. Alternative 1a meets the purpose and need, has the lowest overall construction cost, does not require any residential or commercial relocations, requires the lowest acreage of new right-of-way, and results in the lowest impact to streams making it the least environmentally damaging practicable alternative. Therefore, this alternative was selected as the Preferred Alternative.

With Alternative 2a the existing eastbound and westbound loop ramps would be upgraded as a partial cloverleaf-shaped interchange, similar to the existing alignment. Alternative 2a was not selected as the Preferred Alternative because it would not provide greater improvements to congestion or safety when compared to other alternatives. Additionally, Alternative 2a is the most expensive of the Exit 85 improvements for construction costs and requires almost twice the amount of new right-of-way.

The dual roundabout design of Alternative 3 would construct a new interchange that includes a roundabout at either end of the I-26 overpass. The dual roundabout design requires a relatively large footprint, resulting in the highest impacts to streams of all the alternatives. This alignment would also require that three homes be relocated; the highest number among all of the alternatives. Due to the high stream and residential home impacts, this alternative was not selected as the Preferred Alternative.

Exit 91 Reasonable Alternatives:

Each of the Exit 91 interchange reasonable alternatives share some common features. All would meet the purpose and need and each would modify access to several businesses.

According to traffic studies included in the IMR, Alternative 2 would provide the best Level of Service of the alternatives for eastbound traffic. This alternative would impact slightly fewer parcels than Alternative 3; however, it would require more than twice as much additional right-of-way. Alternative 2 would also have greater impacts to wetlands and streams and would cost more to construct. Due to the impacts this alternative would have on the surrounding human and natural environment, Alternative 2 is not the Preferred Exit 91 interchange Alternative.

Alternative 3 would replace the existing Exit 91 interchange with a diverging diamond interchange. Alternative 3 was selected as the Preferred interchange Alternative because it meets the purpose of the proposed project and is the least environmentally damaging practicable alternative to the human and natural environment.

Exit 97 Reasonable Alternatives:

There are three Reasonable Alternatives developed for Exit 97 and they share some common features. They all would meet the purpose and need for the project by reducing congestion and bringing the interchange into compliance with current state and federal design requirements. Each of the three alternatives would avoid impacting historic sites, historic archaeological sites, and protected plant and animal species.

Alternative 1 would replace the existing Exit 97 interchange with a diverging diamond interchange. Alternative 1 would impact the least amount of streams and wetlands, when compared to the remaining reasonable alternatives, making this the least environmentally damaging practicable alternative. It requires the least amount of new right-of-way and has the lowest overall estimated construction cost. The diverging diamond would also reduce congestion and provide a safer interchange, satisfying the project purpose and need. Because of these reasons, Alternative 1 was selected as the Preferred Alternative.

Alternative 2 would replace the existing interchange with a partial cloverleaf interchange. The Alternative 2 improvements would result in the greatest impact to both wetlands and streams. The construction costs for this alternative are slightly higher than that of Alternative 1, but are lower than the costs for Alternative 3. Alternative 2 would impact the highest number of sensitive noise receptors (11) when compared to the other Reasonable Alternatives. The eastbound entrance loop will be at or slightly over capacity in the design year according to the SCDOT Highway Design Manual. Because of the higher environmental impacts and potential loop capacity issue, this alternative was not selected as the Preferred Alternative.

Alternative 3 replaces the existing Exit 97 interchange with a Single Point Urban Interchange (SPUI). The SPUI alternative would cost the most for overall construction and would cause the second highest stream impacts. Because of the higher environmental impacts, higher

construction cost, and the low level of service by the year 2040, this alternative was not selected as the Preferred Alternative.

Table 1: Reasonable Alternatives (Interchanges) Comparison Matrix

Categories	Mainline Build Alternative*	Exit 85 Alternative 1A (Diamond w/ Partial Cloverleaf) *	Exit 85 Alternative 2A (Partial Cloverleaf)	Exit 85 Alternative 3 (Bowtie)	Exit 91 Alternative 2 (Partial Cloverleaf)	Exit 91 Alternative 3 (Diverging Diamond)*	Exit 97 Alternative 1 (Diverging Diamond)*	Exit 97 Alternative 2 (Partial Cloverleaf)	Exit 97 Alternative 3 (Single Point Urban Interchange)
Construction Cost	-	\$13,300,000	\$16,500,000	\$11,200,000	\$22,890,000	\$22,421,500	\$23,800,000	\$24,000,000	\$31,100,000
Wetlands (Acres)	0.26	0	0	0	0.21	0	0.17	0.22	0.17
Streams (Linear Feet)	2,124	1,460	1,520	1,781	460	142	158	261	175
Floodplain Potential Crossings	4	3	3	2	0	0	0	0	0
Protected Species	No	No	No	No	No	No	No	No	No
Historical Sites	No	No	No	No	No	No	No	No	No
Archaeological Sites	No	No	No	No	No	No	No	No	No
Right of Way (Acres)	38	17	32	13	18	8	12	16	15
Relocations: Business	0	0	0	0	1	1	1	1	1
Relocations: Residential	0	0	1	3	0	0	0	3	0
Environmental Justice Communities Present	Yes	Yes	Yes	Yes	No	No	No	No	No
Section 4(f)/6(f) Sites	No	No	No	No	No	No	No	No	No
Noise (receptors impacted)	244	5	5	5	12	13	9	11	8
Hazardous Materials Sites	0	0	0	0	1	2	6	6	6

* Preferred Alternative

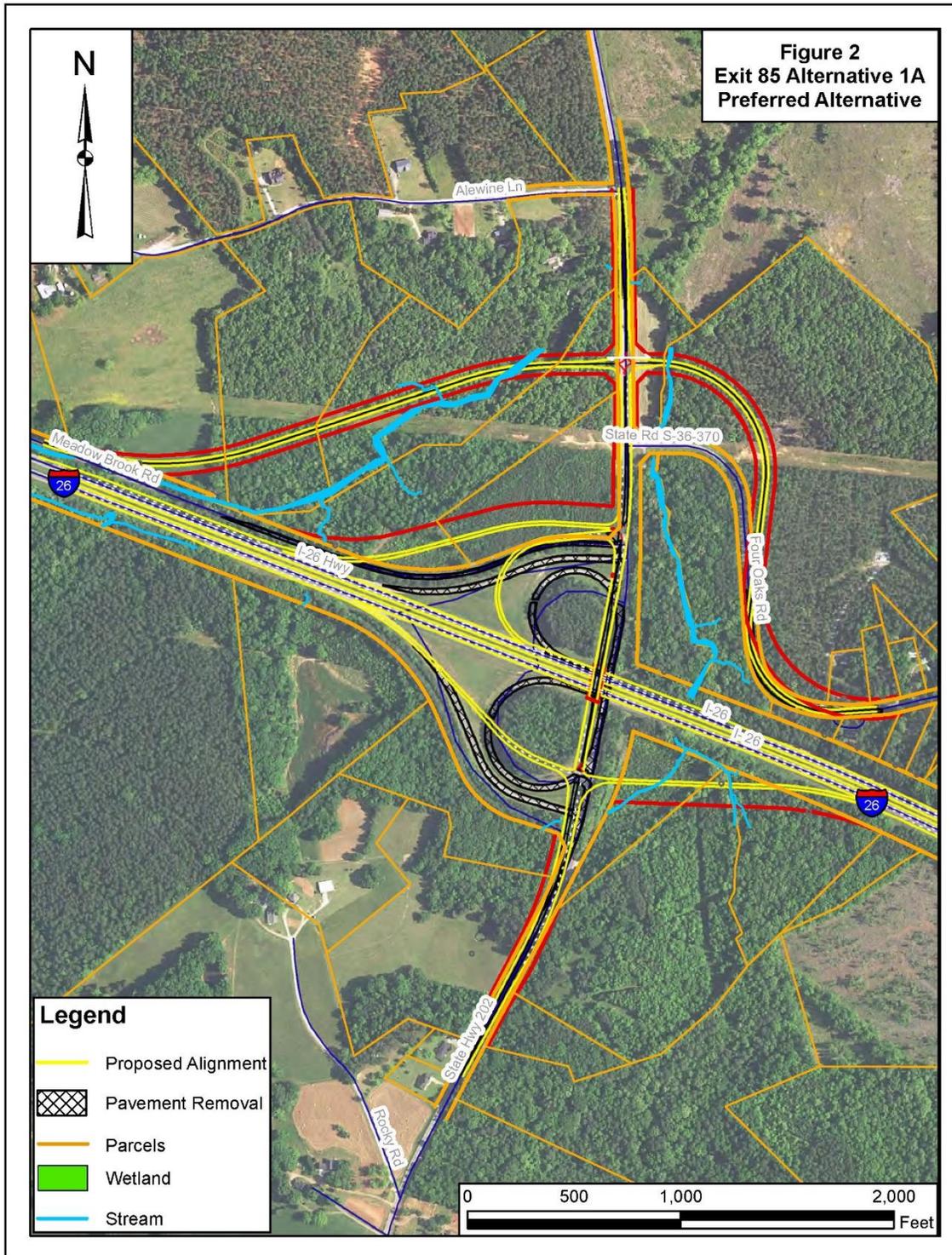
3.2.2 Preferred Alternative

There is one build alternative for the mainline of I-26. The widening of I-26 to 6 lanes would begin from 1.6 miles west of the Exit 85 interchange to the Exit 97 interchange. This would widen the mainline of I-26, providing additional through travel lanes in both directions from near Exit 85 to Exit 97. From near Exit 97 to Exit 101, two additional through travel lanes would be added for a total of four lanes in each direction of this segment. The through lanes would each be 12 feet wide. The outside shoulders would primarily be paved for 10 feet, with an additional earthen shoulder of 2 feet. The inside shoulders would be paved for 10 feet with an inside concrete barrier or paved for 10 feet with an additional earthen shoulder of 2 feet. Bridge overpasses are proposed to be replaced on new adjacent alignment, except for Koon Road which would be off alignment and temporarily detoured. The mainline build alternative is selected as the Preferred Alternative because it satisfies the purpose of the project and results in the lowest impacts to the environment.

Alternative 1a would replace the existing Exit 85 interchange with a combination of a diamond-shaped and partial cloverleaf-shaped interchange (Figure 2). This was selected as the Preferred Alternative at Exit 85 because it meets the purpose and need, has the lowest overall construction cost, does not require any residential or commercial relocations, requires the

lowest acreage of new right-of-way, and results in the lowest impact to streams, making it the least environmentally damaging practicable alternative.

Figure 2: Exit 85 Alternative 1A, Preferred Alternative



Alternative 3, the Preferred Alternative at Exit 91, would replace the existing I-26 interchange at Columbia Avenue with a new diverging diamond interchange at Exit 91 (Figure 3). The existing roadways in the vicinity of the interchange would also be upgraded to meet SCDOT’s current design and safety standards. Alternative 3 was selected as the Preferred Interchange Alternative at Exit 91 because it meets the purpose of the proposed project and is the least damaging practicable alternative to the human and natural environment.

At Exit 97, Alternative 1, a diverging diamond interchange design, was selected as the Preferred Alternative (Figure 4). Alternative 1 would impact the least number of streams and wetlands when compared to the remaining build alternatives, making this the least environmentally damaging practicable alternative. It also requires the least amount of new right-of-way and has the lowest overall estimated construction cost. The diverging diamond would reduce congestion and provide a safer interchange, satisfying the project purpose and need. Because of these reasons, Alternative 1 was selected as the Preferred Exit 97 interchange Alternative.

As a result of the mainline widening and overpass bridge replacements, there would be no impacts to historic sites, historic archaeological sites, parks, environmental justice communities, or protected species. Two cemeteries, located off of Parr Road and Peak Road would be avoided. The mainline widening would result in impacts to Waters of the U.S., including wetlands and streams. A potentially hazardous materials site, the former Edenfield Heating and Air (and previous gasoline station), located at 1024 Mount Vernon Church Road is located adjacent to and partly within the study area. Pending final design, additional assessment of this site may be needed to determine if hazardous materials could be impacted. Noise impacts to 244 receptors are expected from widening the I-26 mainline. Table 2 details all project impacts.

Table 2: Impacts from the I-26 Revised Preferred Alternative

Potential Impacts	Mainline and Interchange Preferred Alternative
Wetlands (Acres)	0.599
Streams (Linear Feet)	4,389
Floodplain Potential Crossings	7
Protected Species	No
Historical Sites	No
Archaeological Sites	No
Right of Way (Acres)	75
Relocations: Business	1
Relocations: Residential	0
Environmental Justice Communities	No
Section 4(f)/6(f) Sites	No
Noise (receptors impacted)	271
Hazardous Materials Sites	8

Figure 3: Exit 91 Alternative 3, Preferred Alternative

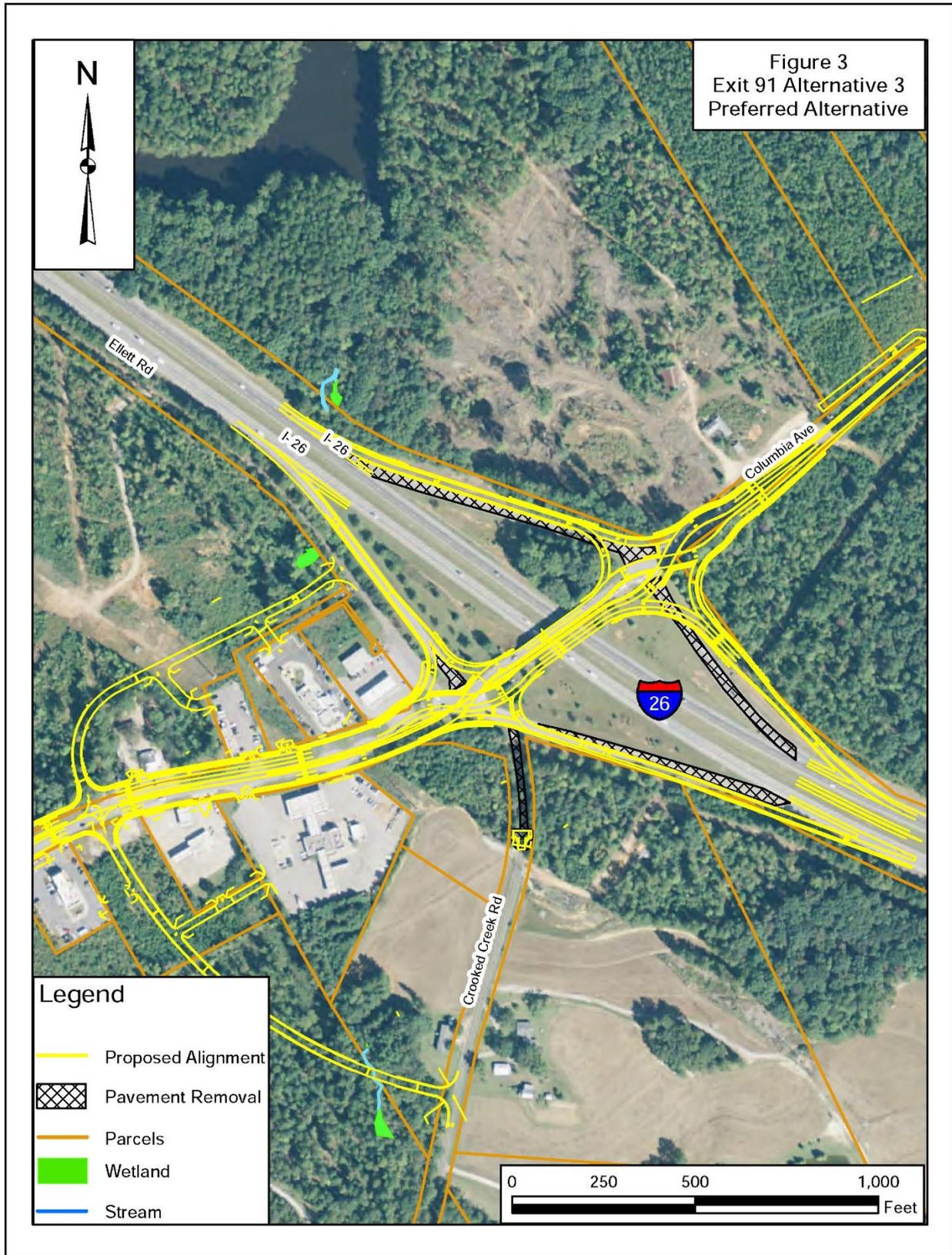
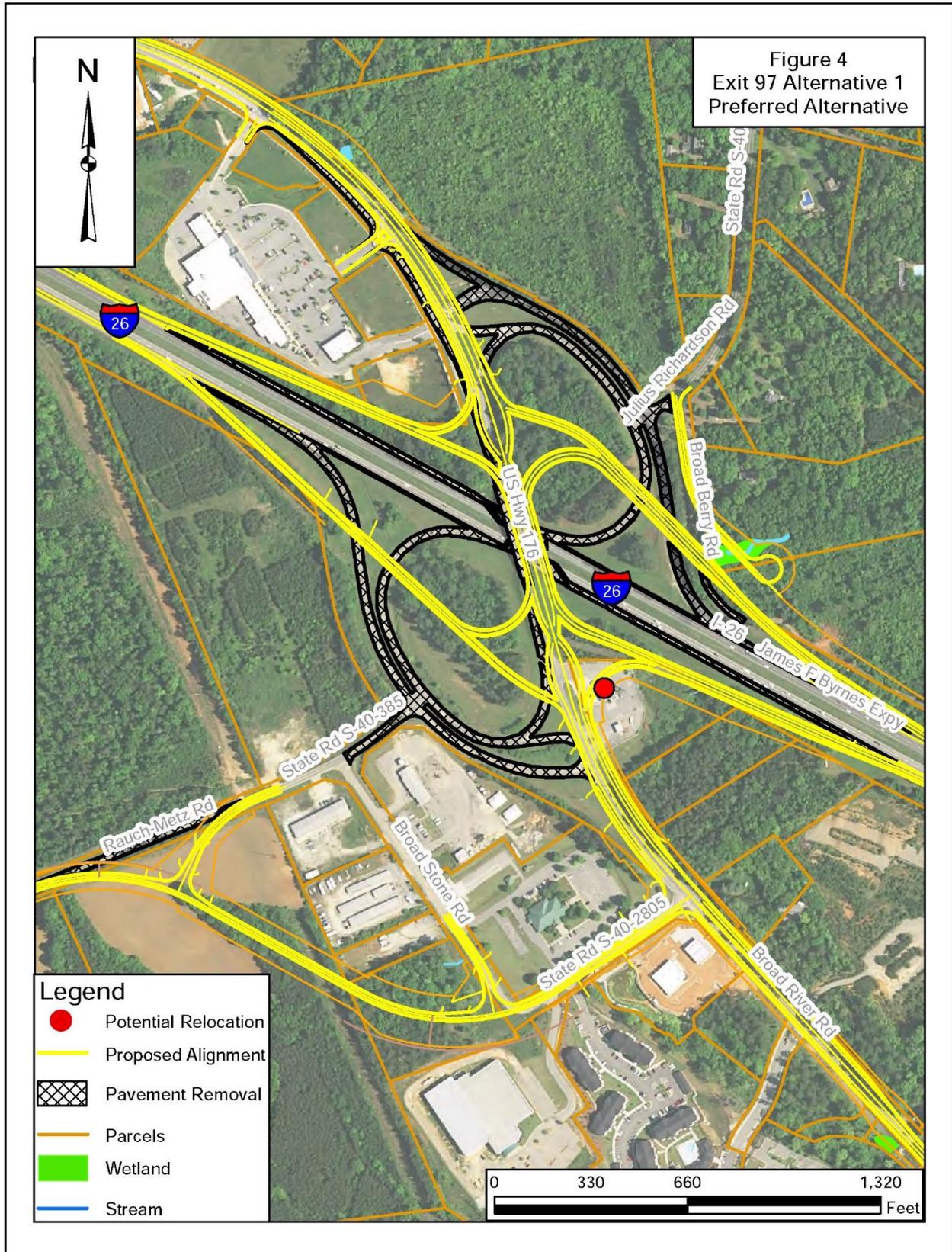


Figure 4: Exit 97 Alternative 1, Preferred Alternative



4. Revisions Since Approval of the EA

The project design was reviewed in light of the publication of the EA and following the public hearing. Several changes were made as a result of design amendments, public feedback, and additional technical information.

The interchange at Exit 91 has been reconfigured to allow for an extension of the westbound off-ramp. There are no additional environmental impacts resulting from this change.

A right turn-lane from Columbia Avenue onto the I-26 eastbound on-ramp (near Chapin Furniture) was added. There are no additional environmental impacts resulting from this change.

Following the approval of the EA, the Interchange Modification Reports (IMR) at Exits 85, 91, and 97 were revised, including an addendum to the Exit 91 IMR (Appendix A, B, C, and D).

A Jurisdictional Determination (JD) Request (SAC 2018-00748) was submitted to the U.S. Army Corps of Engineers (USACE) for review and verification in May 2018. Updated wetlands and streams are shown on Figures 2, 3, and 4 for the preferred interchange alternatives. Updated JD figures were subsequently submitted to the USACE in July 2018 and were approved on August 2, 2018 (Appendix E). Slight changes in the construction limits of the preliminary design and the addition or extension of several streams in the revised JD request results in greater stream impacts that originally estimated in the EA, with an increase of 505 feet (from 3,884 feet originally to 4,389 feet). Additional wetlands have been added to the JD, resulting in an increase from 0.430 acres of impacts to 0.599 acres of impacts (see details in Tables 3 and 4, Section 5). The final determination of impacts to jurisdictional features will be made following final design and submission of the Section 404 permit. Additional detail regarding stream impacts can be found in Section 5, Summary of Impacts Related to the Preferred Alternative.

On July 5, 2018, the Federal Emergency Management Agency (FEMA) published updated floodplain maps near Chapin and Exit 91. The updated maps show special flood zone A along Risters Creek, just west of Exit 91 and along Wateree Creek Tributary 7, just east of Exit 91 (Appendix G). These areas were previously designated as flood zone A during preliminary design and there are no changes as a result of the new mapping. Additional detail regarding floodplains can be found in Section 5, Summary of Impacts Related to the Preferred Alternative.

Based on the studies thus far accomplished, SCDOT intends to install highway traffic noise abatement measures in the form of a barrier near the Westcott Ridge and Arbor Springs neighborhoods. These preliminary indications of likely abatement measures are based upon preliminary design for a barrier cost of \$35.00 per square foot that will reduce the noise level

by at least 5 dB(A) for residences. If it subsequently develops during final design that these conditions have substantially changed, the abatement measures might not be provided. A final decision of the installation of the abatement measure(s) will be made upon completion of the project's design. The public involvement process related to the potential noise barriers has been completed. SCDOT solicited the viewpoints of all of the benefited receptors (homeowners and/or residents) on whether or not they desired the proposed barrier wall. Greater than 50% of those surveyed are in support of a barrier wall. Additional detail regarding traffic noise impacts can be found in Section 5, Summary of Impacts Related to the Preferred Alternative.

Information related to the potential relocation of a business has been updated since the approval of the EA. A storage shed associated with Chapin Building Supply was formerly slated for relocation. The structure, originally reported as an "outbuilding" is an open-air storage shed. Chapin Building Supply is no longer operating, however the open-air storage shed associated with the business remains intact. If the storage shed will need to be removed for construction, it will be handled during the right-of-way acquisition process.

Documentation related to the Public Hearing, including the Public Hearing Certification, has been completed and is summarized in Section 6, Project Coordination and detailed in Appendix H of the Finding of no Significant Impact (FONSI).

5. Summary of Impacts Related to the Preferred Alternative

This section includes a discussion on the probable beneficial and adverse social, economic, and environmental effects of the Preferred Alternative on the surrounding human and natural environment and describes the measures proposed to mitigate potential adverse impacts. An expanded discussion regarding the probable impacts on the environment is included in Chapter 4 of the EA. Environmental studies conducted on these alternatives indicate the absence of any significant impacts by the project on the surrounding environment.

LAND USE

The project corridor is located primarily within unincorporated areas of Newberry, Lexington, and Richland Counties, but includes small portions of the Towns of Irmo and Chapin. Existing land uses are primarily forested land and commercial businesses with areas of rural residential and light industrial operations. The closest incorporated municipalities are the City of Columbia to the southeast; the Town of Irmo to the southwest; the Town of Chapin to the southwest; the Town of Little Mountain to the south and the City of Newberry to the northwest.

An approximate 23-acre area along Old Hilton Road, north of I-26 is protected with a Richland County Conservation Easement. Preliminary design along Old Hilton Road has been shifted away from this property to the maximum extent feasible to minimize impacts. A small area of the property (approximately less than 0.1 acre) would need to be utilized to tie-in with the road improvements. This would impact a vegetated area that is currently adjacent to Old Hilton Road. There is no current public use of the property. Impacts to the tracts should be minimized to the maximum extent practicable during final design. This could possibly be accomplished through the right of way process as a “permission only tract”. This would not require the property ownership to change and land would not be directly acquired. Improvements could also take place through direct acquisition of the portion of land needed, either through negotiations or condemnation. The Richland County Conservation Division has indicated that to impact the property, right of way would need to be acquired through eminent domain and possibly condemnation. Any right of way acquisition or use of the property would need to be coordinated with the property owner and Richland County.

Along the mainline of I-26, land uses consist mainly of forested land but become increasingly mixed with commercial and residential properties moving from west to east towards Columbia. A small industrial park (Chapin Business and Technology Park) and a planned residential/commercial neighborhood are located southwest of Exit 91. The industrial park has infrastructure and zoning in place but no buildings as of yet. The adjacent residential/commercial area is in the planning stages. The project as currently proposed remains consistent with existing and planned development of this area of the I-26 corridor.

FARMLANDS

The potential impacts to farmlands from the Preferred Alternative corridor were calculated and sent to the Natural Resources Conservation Service (NRCS) for their assessment. Based on the Farmland Conversion Impact Rating Form CPA-106 for corridor type projects received from NRCS, the total point value on the Preferred Alternative is 130. Since the total points are less than the maximum allowable score of 160 and the Preferred Alternative corridor comprises only a minimal portion of the county’s farmlands, consideration of alternative sites or additional studies are not required under the act.

WATER QUALITY

The project is located within the Lower Broad River Watershed (HUC 03050106-07) located within the Broad River Sub-Basin. SCDHEC’s Watershed and Water Quality Information was reviewed through an online query in September 2017 and July 2018. Stations B-800 and B-801 are impaired based on macroinvertebrate community data. These stations are located along

Rocky Creek and Wateree Creek respectively and are within 6 linear miles or 9 river miles of the PSA. In addition, a Total Maximum Daily Load (TMDL) for fecal coliform has been established within HUC 03050106, as stated in the Basinwide Watershed Water Quality Assessment Report for the Broad River Basin (SCDHEC, 2007). Increased pavement would result in an increase in run-off to the surface waters adjacent to the project. This run-off could contain sediments and contaminants resulting from the operation of motor vehicles. During construction activities, temporary siltation may occur in adjacent waters and erosion would be increased. Water quality concerns would be avoided and/or mitigated through compliance with regulations covering watershed protection, floodplain protections, and stormwater management and through the use of SCDOT's Best Management Practices. The proposed project is not anticipated to contribute to these impairments or have long term impacts on water quality.

WETLANDS AND STREAMS

A Jurisdictional Determination (JD) is a two-step process of 1) identifying and locating jurisdictional Waters of the United States (including streams and wetlands) on a property and 2) determining whether those areas are regulated by the USACE under section 404 of the Clean Water Act. Several JDs have been previously completed along the I-26 corridor including:

- Preliminary JD, March 7, 2016 (SAC 2014-01110-DS) along I-26 between MM 101 and MM 89;
- Preliminary JD, May 12, 2016 (SAC 2016-00168-DS) along I-26 from MM 75 to MM 89;
- Approved JD (AJD), January 20, 2017 (SAC 2015-01451-DS) for the S-48 Columbia Avenue corridor improvement project near Exit 91 (See Appendix F).

This I-26 widening and interchange improvements project will be covered by only two JDs:

- the AJD for the S-48 Columbia Avenue corridor mentioned above (SAC 2015-01451-DS); and
- the new I-26 widening Preliminary JD (SAC 2018-00748) that was submitted to the USACE for review and verification in May 2018 (updated July 2018 and approved August 2, 2018, Appendix E).

Impacts to identified wetlands and streams would occur as a result of widening the road, extending existing culverts, and replacement or construction of bridges. Based on preliminary design the mainline and interchange improvements to I-26 would impact 0.599 acres of wetlands (Table 3). Additional wetlands have been added to the JD since the original calculation of impacts, resulting in an increase from 0.430 acres of impacts to 0.599 acres of impacts. These wetland impacts are calculated from approximate construction limits and right

of way limits and may be modified as final design is completed. The majority of the impacts at each of these wetlands would be less than 0.1 acre.

Table 3: Estimated Wetland Impacts from the I-26 Revised Preferred Alternative

Wetland Name (July 2018 JD Figures)	EA Impact (Acres)	FONSI Impact (Acres)	Wetland Type
Wetland B	0.10	0.1	PFO
Wetland C	0.01	0.05	PEM
Wetland D	0.17	0.197	PFO
Wetland E	0.02	0.012	PFO
Wetland G	0.01	0.01	PFO
Wetland I	N/A	0.002	PFO
Wetland J	N/A	0.009	PFO
Wetland L	0.001	0.001	PFO
Wetland M	0.11	0.111	PFO
Wetland O	N/A	0.057	PEM
Wetland P	N/A	0.05	PEM
TOTAL	0.43	0.599	

**PFO - Palustrine Forested Wetland. *PEM - Palustrine Emergent Wetland*

Based on preliminary design, the mainline widening and interchange improvements are estimated to impact 4,389 linear feet of streams (Table 4). These impacts are calculated from approximate construction limits and right of way limits and may be modified as final design is completed. This results in impacts to 48 of the 84 streams found in the project study area. Of those 48 waterways identified as streams, slightly less than half (20 streams) of these aquatic resources are functioning as small drainages that primarily convey intermittent water flows and/or flows that are driven by surface water drainage through stormwater. The remaining 28 impacted streams function as natural drainage areas, identified as blue line streams on USGS topographic maps.

A JD Request (SAC 2018-00748) was submitted to the Corps for review and verification and was approved on August 2, 2018 (Appendix E). Slight changes in the construction limits of the preliminary design and the addition or extension of several streams in the revised JD request results in greater stream impacts that originally estimated in the EA, by an increase of 505 feet (from 3,884 feet originally to 4,389 feet). The final determination of impacts to jurisdictional wetlands will be made following final design and submission of the Section 404 permit.

Table 4: Estimated Stream Impacts from the I-26 Revised Preferred Alternative

Stream Name (July 2018 JD Figures)	EA Impact (Feet)	FONSI Impact (Feet)	Condition
Non-wetlands waters 4	52.9	50.4	Natural
Non-wetlands waters 7A	31.8	31.8	Natural
Non-wetlands waters 8A	65.7	65.6	Natural
Non-wetlands waters 8B	59.3	59.3	Drainage
Non-wetlands waters 8C	85.6	73.5	Drainage
Non-wetlands waters 10	N/A	3.7	Drainage
Non-wetlands waters 12	53.1	177.3	Natural
Non-wetlands waters 13	68.0	82.9	Natural
Non-wetlands waters 15	31.5	32.6	Natural
Non-wetlands waters 17	374.3	375.8	Natural
Non-wetlands waters 18	23.0	22.9	Natural
Non-wetlands waters 19A	27.3	27.3	Natural
Non-wetlands waters 20	30.6	30.7	Natural
Non-wetlands waters 25A	55.0	55.1	Drainage
Non-wetlands waters 26	35.1	36.1	Natural
Non-wetlands waters 27	22.2	18.9	Natural
Non-wetlands waters 28	42.8	41.9	Natural
Non-wetlands waters 29	30.3	30.3	Natural
Non-wetlands waters 30A	42.5	43.6	Natural
Non-wetlands waters 30B	2.0	1.9	Drainage
Non-wetlands waters 32	26.7	26.6	Drainage
Non-wetlands waters 33A	3.7	3.7	Drainage
Non-wetlands waters 36A	302.1	302.1	Natural
Non-wetlands waters 36B	17.1	17.1	Drainage
Non-wetlands waters 36D	30.8	30.8	Drainage
Non-wetlands waters 38A	43.3	42.2	Natural
Non-wetlands waters 38B	10.3	10.3	Natural
Non-wetlands waters 38D	8.2	8.1	Natural
Non-wetlands waters 39A	61.9	61.8	Drainage
Non-wetlands waters 40A	666.0	342.4	Natural
Non-wetlands waters 40D	60.0	60.1	Drainage
Non-wetlands waters 40E	111.8	60.2	Drainage
Non-wetlands waters 43	22.4	22.3	Natural
Non-wetlands waters 45A	445.6	339.4	Natural
Non-wetlands waters 45B	275.9	275.8	Drainage
Non-wetlands waters 54A	21.2	21.2	Drainage
Non-wetlands waters 54B	12.9	12.9	Drainage
Non-wetlands waters 54C	185.1	185.1	Drainage
Non-wetlands waters 60	80.9	363.2	Drainage
Non-wetlands waters 103	47.5	47.5	Natural
Non-wetlands waters 104	86.6	86.6	Drainage
Non-wetlands waters 107	N/A	363.9	Drainage
Non-wetlands waters 110	N/A	75.3	Natural
Non-wetlands waters D	85.0	102.4	Drainage
Non-wetlands waters HA	22.5	51.4	Natural
Non-wetlands waters J	33.9	55.1	Natural
Tributary 4 (NWW N)	142.7	142.6	Drainage
TOTAL	3884.5	4,389	

ENVIRONMENTAL PERMITS

An Individual Permit through the Clean Water Act, Section 404 from the USACE will be required to place fill material in onsite streams and wetlands. The final determination of impacts to jurisdictional wetlands and streams will be made following final design and submission of the Section 404 permit

SCDHEC's 401 Water Quality Certification, pursuant to Section 401 of the Federal Water Pollution Control Act of 1972 as amended by the Clean Water Act of 1977 and the Water Quality Act of 1987, will also be required. Certification is required for activities permitted by the USACE for construction occurring in navigable waters or discharge of dredged or fill material into the State's waters.

Section 402 of the Clean Water Act authorizes the Environmental Protection Agency (EPA) to regulate stormwater discharge. The regulatory authority that oversees this regulation is the SCDHEC Bureau of Water. Stormwater discharges are regulated through the issuance of National Pollutant Discharge Elimination System permits. Stormwater runoff and discharges can be sources of water-borne pollutants, which lower the water quality of a water body. Section 402 compliance would be completed prior to the commencement of construction of the project.

MITIGATION

Compensatory mitigation is normally required to offset unavoidable losses of waters of the U.S. The CEQ has defined mitigation in 40 CFR § 1508.20 to include: avoiding impacts, minimizing impacts, rectifying impacts, reducing impacts over time, and compensating for impacts. Three general types of mitigation include avoidance, minimization, and compensatory mitigation. Avoidance has been practiced by the relocation of road segments to avoid impacts. Impacts have been minimized by increasing headwall heights, thus reducing the lengths of culverts and pipes used within streams.

Currently, there is no USACE-approved mitigation bank with a suitable amount of credits to purchase as compensatory mitigation. If a mitigation bank is not utilized, a permittee responsible mitigation plan may need to be developed by the design-build contractor, in cooperation with the SCDOT, which would require USACE approval. This requires protection and restoration of a wetland and/or stream system, typically within the same watershed as the impact site. Specific mitigation requirements would be established during the Section 404/401 permitting process.

INVASIVE SPECIES MANAGEMENT

In 1999, a Presidential Executive Order on Invasive Species (EO 13112) was issued to direct all federal agencies to address invasive species concerns and refrain from actions likely to increase invasive species problems. SCDOT would comply with the intent of EO 13112 regarding invasive species by actively stabilizing all temporarily disturbed areas with protective measures and/or seed mixtures that would not include invasive species.

FLOODPLAINS

Floodplains are defined FEMA as “any land area susceptible to being inundated by floodwaters from any source”. The 100-year floodplain is defined and regulated by the FEMA as the area adjacent to any particular waterway that would be inundated by the base flood, an event that has a one-percent chance of occurring in any given year.

On July 5, 2018, FEMA published updated floodplain insurance rate maps (FIRMs) near the Town of Chapin and Exit 91. The updated maps show special flood zone A along Risters Creek, just west of Exit 91 and along Wateree Creek Tributary 7, just east of Exit 91. These areas were previously designated as flood zone A during preliminary design and there are no changes as a result of the new mapping. Table 5 lists all floodplain crossings that may be impacted by the project. The extents of each floodplain and updated FIRMs are illustrated in Appendix G.

Table 5: Floodplains and Existing Crossings in the I-26 Widening Study Area

FLOODPLAIN	FIRM PANEL ID	DATE EFFECTIVE	FEMA ZONE	EXISTING CROSSING
Metz Branch	45079C0090K	December 21, 2017	Zone AE	Culvert
Wateree Creek	45079C0090K	December 21, 2017	Zone AE	Culvert
Moccasin Branch	45079C0206L	December 21, 2017	Zone AE	Culvert
Risters Creek	45063C0040J	July 5, 2018	Zone A	Culvert
Wateree Creek Tributary 7	45063C0050J	July 5, 2018	Zone A	Culvert
Rocky Creek	45071C0410C	September 16, 2011	Zone A	Culvert
Crims Creek	45071C0410C	September 16, 2011	Zone A	Culvert
Unnamed Tributary to Rocky Creek	45071C0410C	September 16, 2011	Zone A	Culvert

It is currently proposed that a bridge or culvert will be required for crossings at Four Oaks Road and Meadowbrook Road. As the preliminary design is developed, precise potential impacts to the floodplain can be calculated.

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 FEMA.

These encroachments are not anticipated to increase the risk of flooding within these floodplains and the proposed project would be designed to meet the “No-Rise” requirements. A detailed hydraulic analysis would be performed for each encroachment of a FEMA-regulated floodplain during final design. The contractor would send a set of final plans and a request for floodplain management compliance to the local County Floodplain Administrator(s).

MIGRATORY BIRDS

The Migratory Bird Treaty Act (MBTA) protects a wide variety of bird species, making it illegal for anyone to take, possess, import, export, transport, sell, purchase, barter, or offer for sale, purchase, or barter, any migratory bird, or the parts, nests, or eggs of such a bird except under the terms of a valid permit issued pursuant to federal regulations (16 USC § 703–712). Executive Order 13186 “Responsibilities of Federal Agencies to Protect Migratory Birds” also directs and guides Federal agencies in implementing the MBTA. The migratory bird species protected by the MBTA are listed in 50 CFR § 10.13. The USFWS has statutory authority and responsibility for enforcing the MBTA. Any activity which results in the “take” of migratory birds is prohibited unless authorized by USFWS. Ground nests, arboreal nests, and nests built on man-made structures could occur within the project area. Active nests of both the barn swallow (*Hirundo rustica*) and the Eastern phoebe (*Sayornis phoebe*) were documented on many box culverts and structures in the project corridor.

To avoid impacts to nesting birds, the contractor shall notify the Resident Construction Engineer (RCE) at least four weeks prior to construction/demolition/maintenance of bridges and box culverts. The RCE will coordinate with SCDOT Environmental Services Office (ESO), Compliance Division, to determine if there are any active birds using structures. After this coordination, it would be determined when construction/demolition/maintenance can begin. If a nest is observed that was not discovered after construction/demolition/maintenance has begun, the contractor will cease work and immediately notify the RCE, who will notify the ESO Compliance Division. The ESO Compliance Division will determine the next course of action. The use of any deterrents by the contractor designed to prevent birds from nesting, shall be approved by the RCE with coordination from the ESO Compliance Division.

THREATENED AND ENDANGERED SPECIES

Pursuant to Section 7 of the Endangered Species Act, activities by federal agencies must be reviewed for their effects on protected species. The USFWS has identified nine endangered, threatened, or candidate species known to occur or that have a high possibility of occurring in Lexington, Newberry, and/ or Richland County:

- Bald eagle (*Haliaeetus leucocephalus*) – Bald and Golden Eagle Protection Act
- Red-cockaded woodpecker (*Picoides borealis*) – Federal/State Endangered
- Wood stork (*Mycteria americana*) – Federal Threatened
- Atlantic Sturgeon (*Acipenser oxyrinchus*) – Federal Endangered
- Shortnose sturgeon (*Acipenser brevirostrum*) – Federal Endangered
- Canby's dropwort (*Oxypolis canbyi*) – Federal Endangered
- Michaux's sumac (*Rhus michauxii*) – Federal Endangered
- Rough-leaved loosestrife (*Lysimachia asperulaefolia*) – Federal Endangered
- Smooth coneflower (*Echinacea laevigata*) – Endangered

This project would have No Effect on species identified as state and/or federally threatened or endangered. The data collected from online resources and databases, in addition to the field site visits, did not identify species that may be found within or directly adjacent to the project study area. Suitable habitat for protected species was not identified within the study area.

AIR QUALITY

The 1990 Clean Air Act Amendments (CAAA) and guidelines, issued by the EPA, set forth guidelines to be followed by agencies responsible for attainment of the National Ambient Air Quality Standards (NAAQS). The CAAA Section 176(c) requires that Federal transportation projects are consistent with state air quality goals, found in the State Implementation Plan (SIP), which is developed by the South Carolina Department of Health and Environmental Control. This project was evaluated for its consistency with state and federal air quality goals. The pollutants considered include carbon monoxide (CO), lead (Pb), nitrogen dioxide (NO₂), particulate matter (PM₁₀ and PM_{2.5}), ozone (O₃) and sulfur dioxide (SO₂) and mobile source air toxics (MSATs). Results indicate that the project is in compliance with both state and federal air quality standards. The following narrative provides a more detailed discussion of the analysis and results.

The additional travel lanes contemplated as part of the project alternatives will have the effect of moving some traffic closer to nearby homes, schools, and businesses; therefore, there may be localized areas where ambient concentrations of MSAT could be higher under the Preferred Alternative than the No-Build Alternative, particularly where the interchanges are realigned. However, the magnitude and the duration of these potential increases compared to the No-

Build alternative 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 Preferred 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 regionwide MSAT levels to be significantly lower than today.

Some phases of construction operations would temporarily contribute to air pollution. Particulates would increase slightly in the corridor as dust from construction collects in the air surrounding the Selected Alternative. Construction equipment would temporarily produce slight amounts of exhaust emissions. The contractor would be required to comply with applicable state and local guidelines and regulations regarding emission control.

NOISE

A detailed traffic noise analysis has been conducted for the proposed corridor and its adjacent noise receptors. Under existing conditions, 112 receptors adjacent to the project corridor will receive noise levels that approach or exceed their respective noise abatement criteria (NAC). For the design year (2040) Build Preferred Alternative, 271 receptors are predicted to be impacted by noise from the proposed project. A copy of the Detailed Traffic Noise Study is included as Appendix J of the EA.

FHWA and SCDOT require evaluation of noise abatement for impacted receivers resulting from the proposed project. The evaluation considers both the feasibility and reasonableness of noise abatement measures. Several measures were evaluated including; traffic management measures, altering the horizontal and vertical alignment, noise insulation for specific use structures, acquisition of property right for a buffer zone, acquisition of property rights to construct noise barriers, constructing noise barriers within or outside existing rights of way.

For each alternative, analysis of noise abatement locations were assessed to determine if a noise abatement measure might be feasible and reasonable, based on preliminary design plans, location of receptors, and modeling results. This resulted in two noise barriers that would be both feasible and reasonable to construct. Based on the studies thus far accomplished, SCDOT intends to install highway traffic noise abatement measures in the form of a barrier near the Westcott Ridge and Arbor Springs neighborhoods. These preliminary indications of likely abatement measures are based upon preliminary design for a barrier cost of \$35.00 per square foot that will reduce the noise level by at least 5 dB(A) for residences. If it subsequently

develops during final design that these conditions have substantially changed, the abatement measures might not be provided. A final decision of the installation of the abatement measure(s) will be made upon completion of the project's design.

The public involvement process related to the potential noise barriers has been completed. SCDOT solicited the viewpoints of all of the benefited receptors (homeowners and/or residents) on whether or not they desired the proposed barrier wall. Greater than 50% of those surveyed responded that they are in support of a barrier wall, fulfilling this reasonableness criterion for the barriers at both Westcott Ridge and Arbor Springs.

General construction noise impacts, such as temporary speech interference for passers-by and those individuals living or working near the project, can be expected particularly from paving operations, and earth moving equipment during construction.

However, considering the relatively short-term nature of construction noise it is expected that these impacts would not be substantial. To avoid or minimize lane closures during peak traffic hours, it will be necessary that some work be required during non-peak traffic hours during early evening and/or weekends. These activities may impact adjacent residential areas and thus a specific work plan will be necessary regarding approval of work during these time periods. The contractor would be required to comply with applicable local noise ordinances and OSHA regulations concerning noise attenuation devices on construction equipment. SCDOT will inform local planning officials of future, generalized noise levels expected to occur in the project vicinity.

HAZARDOUS WASTE AND UNDERGROUND STORAGE TANKS

A Phase I Environmental Site Assessment (ESA) was conducted using the American Society for Testing and Materials (ASTM) E 1527-13, Standard Practice for Environmental Site Assessments: Phase I ESA Process. The purpose of the Phase I ESA is to identify recognized environmental conditions such as contaminated soils or water, in connection with the proposed project's study area. Based on the findings of this assessment and the available information, the following ten sites are considered to represent a moderate to high potential for impacts to the study area:

- Corner Pantry 132 site, located at 661 Columbia Avenue, within the study area.
- Pitt Stop 7 site, located at 648 Columbia Avenue, within the study area.
- Rainbow Gas Garden 12, located at 650 Columbia Avenue, adjacent to and partly within the study area.
- Corner Pantry 154 site, located at 11090 Broad River Road, within the study area.
- Former Liberty Truck Stop, located at 11107 Broad River Road, adjacent to the study area.

- Former Char-Lees Service Station, located at I-26 and Highway 76 (suspected to have been located near the former Liberty Truck Stop site above), adjacent to the study area.
- Ballentine Section Shed, located at 1050 Broad Stone Road, adjacent to the study area.
- Pitt Stop 02 site, located at 11047 Broad River Road, adjacent to and partly within the study area.
- Former Edenfield Heating and Air (former gasoline service station), located at 1024 Mount Vernon Church Road, adjacent to and partly within the study area.
- Jac's Dolls (former gasoline service station), located at 11214 Broad River Road, adjacent to and partly within the study area.

Upon completion of more detailed design plans of the Preferred Alternative, it may be warranted to conduct detailed investigations of those suspect sites potentially impacted by the roadway improvements, or any portion of the project study area that has the potential to have been adversely impacted by any of the referenced environmental sites. The determination of areas that may warrant a Phase II ESA should be site specific, based on hydrogeologic conditions, distance from specific environmental concerns, and other relative factors.

Asbestos surveys have been conducted for all ten existing project bridges in accordance with the Asbestos Hazard Emergency Response Act guidelines, as required by the EPA and the SCDHEC prior to renovation or demolition of public or commercial structures. Additionally, lead-based paint surveys were conducted of four of the ten structures. Lead-based paint surveys on the remaining six structures must be completed prior to modification or demolition of these structures.

Asbestos containing material (ACM) was detected on the ten bridges tested. SCDHEC regulations will not allow for a Category II ACM to be left in place during demolition activities. If necessary to demolishing or modify any of the ten bridges, a copy of the asbestos report and a notification of demolition or renovation forms must be submitted to the SCDHEC at least ten working days prior to activities begin.

Lead-based paint surveys were conducted on four of the ten bridges and lead-based paint was found on the S-36-167 (Parr Road), S-36-39 (Holy Trinity Church Road), SC 202, and S-48 (Columbia Ave) bridges. The results of the analyses indicate that all of the metal components of the bridge structures, except for the galvanized metal guard rails are coated with lead-based paint. These materials include the anchor bolt plates, bolts, and the bridge shoes. If these bridge components are disturbed during renovation or demolition, contractors and workers should be informed as to the presence of lead-based paint and appropriate work practices and personal protective equipment should be used to prevent exposure to lead dust/fumes or spreading lead contamination from the work site. Lead-based paint surveys must be taken on 6

of the 10 bridges included within the project area and results submitted to SCDOT ESO for review prior to demolition or reconstruction.

CULTURAL RESOURCES

Section 106 of the National Historic Preservation Act of 1966, as amended, requires federal agencies to consider the effects of their actions on historic properties. In accordance with 36 CFR 800.4, archival research and coordination with the State Historic Preservation Office (SHPO) was performed to identify and help predict the locations of significant cultural resources in the vicinity of the proposed study area. The archaeological and architectural surveys performed were designed to provide the necessary management data to allow for the sites and properties to be evaluated for recommendations of eligibility to the National Register of Historic Places (NRHP). As a result of the survey, several previously-identified and seven newly identified archeological resources were researched. None of these sites were recommended eligible for listing on the NRHP. Additionally, twenty-six previously-identified architectural sites were researched and 27 new sites were recorded. None of these sites were recommended eligible for listing on the NRHP. The Preferred Alternative will not directly impact any architectural or archaeological resource deemed eligible for the NRHP and SHPO has concurred with the findings of no effect

Two cemeteries were documented during the survey process. One is the previously identified Comalander Cemetery (site number 1938). This resource is located at 840 Peak Street, Chapin, SC and has been deemed not eligible for the NRHP. The second is a newly identified Summer-Counts Cemetery. This resource is located near Parr Road, near the intersection with Four Oaks Road in Newberry County and has been deemed not eligible for the NRHP. SCDOT will ensure that the existing known limits of the Comalander and Summer-Counts Cemeteries are identified and delineated in the field. Prior to construction activities near these cemeteries a construction barrier fence or other appropriate barrier will be erected a minimum of 10 feet beyond the known cemetery limits. This will ensure that these cemeteries and any potential unmarked graves associated with them will be protected. As currently designed, these cemeteries are not proposed to be impacted by the project. However, if construction would need to impede into a delineated area, SCDOT will provide an archaeologist on site to monitor all ground disturbing activities near the affected area(s).

RELOCATIONS

The construction of the Preferred Alternative may result in the relocation of one business. Under Exit 97 Preferred Alternative 1, the Evergreen 123 Exxon station at 11090 Broad River Road would need to be relocated. This business is a gasoline retailer and convenience store.

In addition, there would be partial acquisition, or strip takes, of properties adjacent to the roadway improvements, resulting in a total of approximately 75 acres of ROW being acquired.

The SCDOT would acquire all new right-of-way and process any relocations in compliance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended (42 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

SOCIAL AND ECONOMIC CONSIDERATIONS

This project was analyzed in terms of potential impacts to communities, schools, employment patterns and population trends. The project study area is located northwest of the City of Columbia, SC. It falls within Newberry, Lexington, and Richland counties. These counties have seen a steady increase in population since the 1950's. More specifically, the eastern portion of Newberry and Lexington Counties have seen a sharp increase in commercial and residential development in the last decade. The Preferred Alternative will require variable right of way widths in selected areas of the project. The acquisition of new right of way is not anticipated to adversely impact the county's property tax base nor should the extension project result in adverse effects to local finances, employment patterns, or population trends.

Some disruptions to traffic flow may occur during construction, but this will be a temporary effect. Once completed, the I-26 widening project should benefit residents by providing congestion relief and improving safety.

ENVIRONMENTAL JUSTICE

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, requires federal agencies to identify community issues of concern during the NEPA planning process, particularly those issues relating to decisions that may disproportionately impact low-income or minority populations.

The EPA'S EJScreen tool was utilized to analyze potentially affected communities. A census tract analysis of the project corridor was also conducted using 2010 Census data and the 2011-2015 American Community Survey in order to determine the presence of these two population factors.

Of the ten census block groups that intersect the project study area, one block in Newberry County had a higher minority population and higher rate of poverty than the county rate. A second Newberry County block near the Peak Street overpass over I-26 also had a higher

minority rate population. One tract in Richland County has a higher percentage of poverty when compared to the county rate.

The proposed project would not specifically benefit or harm any social group or result in disproportionately high or adverse impacts on low-income or high-minority populations. The proposed project would result in an improved and structurally safer and more modern transportation facility for the county and community residents.

INDIRECT AND CUMULATIVE EFFECTS

Indirect effects are caused by the action, are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect effects may include growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems. Two resources were identified as a result of public comment, agency comment, and evaluation of potential impacts for study as part of the Indirect and Cumulative Impact Analysis. These resources are streams/water quality and land use.

Cumulative effects are the summation of impacts on the environment which result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes those actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

Examples of indirect land use impacts that could occur from the proposed I-26 Improvements would be an influx of businesses that depend upon proximity to an interstate as well as increased business patronage at existing businesses due to improved access from the interstate. Similarly, the potential for residential development could be enhanced due to the benefits of improved mobility resulting from the interstate widening and upgrading of the interchanges.

Development of currently undeveloped property has the potential to indirectly impact water quality through increasing impermeable areas and thus increasing volumes of stormwater runoff, which would contain various levels of pollutants. Runoff is dependent upon numerous variables, and therefore the specific impacts are both site- and event-specific. The increase in impervious area with an associated transportation use is not expected to increase specific pollutant loading related to fecal coliform bacteria and the established TMDL. The growth that has occurred and is anticipated to continue has impacted water quality by removing or relocating streams and eliminating wetlands, as a cumulative effect. This is also expected to continue as new roadways and developments are constructed.

Land use impacts are mitigated by being in conformance with local land use and transportation plans and development ordinances. The proposed project does not contradict land use and transportation plans and is not anticipated to alter future land use plans. Water quality impacts would be mitigated by stormwater control measures, both during construction and post-construction, which are required for new development projects in the counties and cities of the study area. Impacts to aquatic habitat are addressed through the Section 404 permitting process. Approval of a permit to impact streams and wetlands is required through the USACE. Compensatory mitigation is typically required for any impacts to jurisdictional areas.

6. Project Coordination and Public Involvement

Letter of Intent

On September 6, 2016, SCDOT sent a Letter of Intent (LOI) to representatives of federal, state and local agencies as well as non-governmental organizations. The LOI provided general project information and requested comments on potential environmental issues and concerns within the study area. An Agency Coordination Effort meeting was held on June 9, 2016. SCDOT gave an overview of the project to agency personnel and the method for completing the project Jurisdictional Determination was discussed.

Public Information Meetings

SCDOT hosted two informal drop-in open Public Information Meetings on October 11, 2016 at the Chapin High School Cafeteria and October 13, 2016 at the Chapin Middle School Cafeteria. Public notice of the meetings was advertised through placement of informational signage placed at interchange access points, advertised through the SCDOT's website, and through local media outlets.

The purpose of the two meetings in October was to provide the local community, citizens, and project stakeholders an introduction to the project as well as to gather information from the public and any interested organizations. The comments received were considered when the alternatives were later developed during the design and environmental evaluation process. A total of 25 people attended the October 11, 2016 meeting. A total of 26 people attended the October 13, 2016 meeting. Meeting summaries are included in Appendix O of the EA.

A second Public Information meeting was held on May 23, 2017 at the Chapin High School cafeteria as an open house format. The purpose of the meeting was to present preliminary alternatives for the improvements to the mainline and interchanges and receive comment on those designs from the public. A total of 115 community stakeholders attended the May 23,

2017 meeting. During the meeting, attendees were provided the opportunity to submit written comments regarding the project. Comments that were received at the meeting and during the public comment period are summarized and included in Appendix O of the EA.

Public Hearing

A public hearing was held for the project in the gym or “arena” at Chapin High School located at 300 Columbia Ave. Chapin, SC. The public hearing was held on Tuesday, March 13th, 2018 from 5:00 p.m. to 7:00 p.m. The informal presentation began at 5:00 p.m. and was open throughout the two-hour meeting. The formal presentation began at 6:00 p.m. followed by an opportunity for attendees to make formal verbal comments.

Approximately 137 people attended the Public Hearing. Two sets of display boards were exhibited on easels and on individual tables with room for attendees to circulate and gain a more detailed description of the project. Copies of the EA were available as well. Representatives from the SCDOT and the project team were located at each set of tables to assist the public and answer any questions. Two video monitors were also available for viewing. One monitor played a continuous loop of the short video produced by the SCDOT regarding the diverging diamond interchange proposed at Exit 97. Another video monitor played a video related to the traffic noise process.

Public Hearing Comments

Over one hundred comments were received as a result of the Public Hearing. Ten comments were hand written and submitted at the meeting, 65 arrived by email, 18 were delivered by the postal service, 32 were submitted via the SCDOT website, and 48 comments were submitted through an online project-location platform known as WikiMaps.

Many of the comments were in direct reference to any of the several common topics including; noise pollution or the need for noise abatement, the realignment of interchanges, closing of Julius Richardson Road, replacement locations for overpass bridges, traffic concerns along West Shady Grove Road, or the potential acquisition of right of way. The comments, Department’s responses, and the public hearing transcript have been included in the project’s Public Hearing Certification Package submitted with the SCDOT’s request for approval of a FONSI for the project (Appendix H).

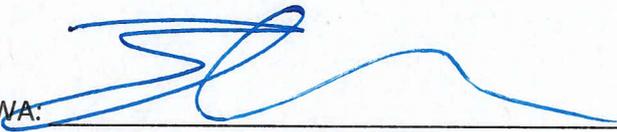
7. Basis for Finding of No Significant Impact

The FHWA has determined that this project will have no significant impact on the human environment. This FONSI is based on the EA and other supporting information, which has been

**Interstate 26 Widening MM 85 - MM101, Newberry, Lexington, Richland Counties, SC
Finding of No Significant Impact and Public Hearing Certification**

independently evaluated by the FHWA and determined to adequately and accurately discuss the need, environmental issues, and impacts of the project and appropriate mitigation measures. The EA provided sufficient evidence and analysis for determining that an Environmental Impact Statement is not required. The FHWA takes full responsibility for the accuracy, scope and content of the EA and other environmental documentation for this project.

Date: 8/22/2018

FHWA: 
Emily O. Lawton, Division Administrator