



I-20/26/126 CORRIDOR IMPROVEMENT PROJECT
FHWA-SC-EIS-18-01-F
MAY 2019

Record of Decision & Final Environmental Impact Statement

Summary

Selected Alternative Page 41

Prepared by
South Carolina Department
of Transportation
and
Federal Highway Administration



U.S. Department of Transportation
Federal Highway Administration



I-20/26/126 Corridor Project in Lexington and Richland Counties, South Carolina FINAL ENVIRONMENTAL IMPACT STATEMENT and RECORD OF DECISION

Submitted Pursuant to 42 U.S.C. 4332(2)(c) by the
U.S. Department of Transportation Federal Highway Administration and
South Carolina Department of Transportation in cooperation with
U.S. Army Corps of Engineers

5/2/19
Date of Approval

May 2, 2019
Date of Approval

Chit Shell
South Carolina Department of Transportation

[Signature]
Federal Highway Administration

The following persons may be contacted for additional information concerning this document:

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The Federal Highway Administration (FHWA) and South Carolina Department of Transportation (SCDOT) propose to upgrade the I-20/26/126 corridor and reconstruct associated interchanges in Richland and Lexington Counties, South Carolina. The primary purpose of the proposed Carolina Crossroads project is to implement a transportation solution(s) that would improve mobility and enhance traffic operations by reducing existing traffic congestion within the I-20/26/126 corridor while accommodating future traffic needs. The Final Environmental Impact Statement (FEIS) discusses the changes that have occurred to the Recommended Preferred Alternative design based on public and agency comments as well as further engineering refinements after the DEIS. Based on these updates and after review of the potential impacts and mitigation measures, the Refined Recommended Preferred Alternative is selected as the Build Alternative for the project in the Record of Decision (ROD).

FHWA is issuing a single document that consists of the FEIS and ROD pursuant to Public Law 112-141, 126 Stat. 405, Section 1319(b). As a result, the 30-day waiting period between the FEIS and ROD, prescribed in 23 CFR 771.127(a), will not occur. FHWA intends to issue a Notice of Final Federal Agency Action on the ROD pursuant to 23 CFR 771.139. This notifies the public that one or more Federal agencies have taken final action on permits, licenses, or approvals for this project, and claims seeking judicial review of those Federal agency actions will be barred unless such claims are filed within 150 days after the date of publication of the notice, or within such shorter time period as is specified in the Federal laws pursuant to which judicial review of the Federal agency action is allowed.





Environmental Commitments

Date: <input style="width: 80%;" type="text" value="May 2019"/>	SCDOT NEPA ENVIRONMENTAL COMMITMENTS FORM	
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Project ID: <input style="width: 85%;" type="text" value="P027662"/>	County: <input style="width: 85%;" type="text" value="Richland/Lexingt"/>	District: <input style="width: 85%;" type="text" value="District 1"/>	Doc Type: <input style="width: 85%;" type="text" value="EIS"/>	Total # of Commitments: <input style="width: 85%;" type="text" value="35"/>
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Project Name:

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: Brian Klauk, PE **PHONE #:** (803)-737-5051

ENVIRONMENTAL COMMITMENTS FOR THE PROJECT

Non-Standard Commitment	NEPA Doc Ref: <input style="width: 85%;" type="text" value="Chapter 2, Section 2.2.2.2"/>	Responsibility: <input style="width: 85%;" type="text" value="SCDOT"/>
<input style="width: 95%;" type="text" value="Mass Transit"/>		
<p>SCDOT will work with CMRTA and CMCOG to develop two park-and-ride lots to improve mobility during construction and mitigate congestion resulting from the project. SCDOT would construct the two sites and maintain them during construction of the project. Engineering feasibility, timing and continued maintenance of the sites would be determined in coordination with CMRTA and the CMCOG prior to the start of construction. In the event a permanent site cannot be developed, SCDOT would work with CMRTA and CMCOG to identify and provide funding for existing parking lots that could be leased for park-and-ride use during construction.</p>		

Non-Standard Commitment	NEPA Doc Ref: <input style="width: 85%;" type="text" value="Chapter 2, Section 2.2.9"/>	Responsibility: <input style="width: 85%;" type="text" value="SCDOT"/>
<input style="width: 95%;" type="text" value="Mass Transit"/>		
<p>SCDOT will implement a congestion management tool/commuter services application to improve mobility during construction and mitigate congestion by informing commuters of available options such as carpooling, ridesharing, vanpools and other transit oriented options.</p>		

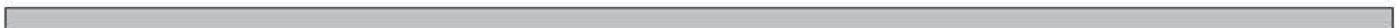
Non-Standard Commitment	NEPA Doc Ref: <input style="width: 85%;" type="text" value="Chapter 2"/>	Responsibility: <input style="width: 85%;" type="text" value="SCDOT"/>
<input style="width: 95%;" type="text" value="Mass Transit"/>		
<p>SCDOT will assist COMET/CMRTA ongoing efforts through such measures as accommodating transit (bus) stops at interchange locations, which may include bus turnouts. In addition, SCDOT will work with CMRTA to monitor bus operations and capacity during construction and in the event that capacity is reached, SCDOT will provide support in determining funding for enhanced bus service during construction based upon a framework to be agreed upon with CMRTA.</p>		

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Non-Standard Commitment	NEPA Doc Ref: Chapter 2, Section 2.2.2.2	Responsibility: Contractor/SCDOT
Bicycle/Pedestrian		
<p>Prior to final design, SCDOT will coordinate with the City of Columbia and CMCOG to ensure that existing and planned bicycle and pedestrian facilities identified in the local and regional plans and existing and proposed connections to such facilities are accommodated where located within the limits of the Carolina Crossroads project at crossing routes and interchanges where feasible.</p> <p>During construction, SCDOT will accommodate bicycle/pedestrian access. SCDOT will coordinate with the local municipalities and/or trail groups to post information on temporary sidewalk or bicycle facility closures or detours. Sidewalk and/or bicycle lane/path closures will be communicated to the agency with jurisdiction at least 48 hours in advance and appropriate signage will be placed.</p>		

Displacements	NEPA Doc Ref: Chapter 3, Section 3.3	Responsibility: SCDOT
<p>SCDOT 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.) and the SCDOT ROW Manual. 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.</p> <p>Temporary construction easements may be needed for some properties. SCDOT will temporarily use these properties during construction and would provide compensation to the landowner for the temporary use. The property will be fully returned to the owner when the use of the property is no longer required, typically when construction is complete.</p>		

Non-Standard Commitment	NEPA Doc Ref: Chapter 3, Section 3.3	Responsibility: Contractor/SCDOT
Public Involvement		
<p>Changes in access for school bus routes will be discussed with the school system in advance of when they will actually take place, so that the school systems can adjust routes in a timely manner. Coordination with local school districts will also occur during construction. SCDOT and the contractor will coordinate with the school system during development of the community outreach program.</p>		



Project ID: <input type="text" value="P027662"/>	SCDOT NEPA ENVIRONMENTAL COMMITMENTS FORM	
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Non-Standard Commitment	NEPA Doc Ref: <input type="text" value="Chapter 3, Section 3.3"/>	Responsibility: <input type="text" value="Contractor/SCDOT"/>
<input type="text" value="Public Involvement During Construction"/>		
<p>Written translations of public involvement documents will be provided for Spanish language speaking populations, as well as other measures determined by SCDOT to ensure meaningful access to project information during construction. Efforts will be made to ensure meaningful opportunities for public participation during construction. Additional meetings will be held when warranted to address community concerns.</p>		

Non-Standard Commitment	NEPA Doc Ref: <input type="text" value="Chapter 3, Section 3.13"/>	Responsibility: <input type="text" value="Contractor/SCDOT"/>
<input type="text" value="Public Outreach During Construction"/>		
<p>The contractor(s), through a community outreach program, will let the community know what types of closures to expect (i.e. temporary, long-term), when to expect them and who to contact, if needed.</p> <p>SCDOT and the contractor(s) will coordinate with emergency service providers such as police, fire protection and ambulance services before construction to ensure that access for emergency vehicles will be maintained.</p>		

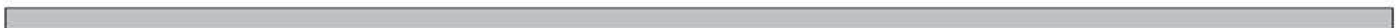
Non-Standard Commitment	NEPA Doc Ref: <input type="text" value="Chapter 3, Section 3.5"/>	Responsibility: <input type="text" value="Contractor/SCDOT"/>
<input type="text" value="Noise"/>		
<p>Based on the studies thus far accomplished, SCDOT intends to install highway traffic noise abatement measures in the form of a barrier at Noise Sensitive Area (NSA) O and S. These barriers are located on the south side of I-20 from the Saluda River extending approximately 2,300 feet west (Barrier O), and on the south side of I-20 from the Broad River Road exit extending approximately 4,380 feet east towards the Broad River (Barrier S). 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 5dB(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. Since there are residences located on the opposite side of the interstate adjacent to Barriers O and S, sound absorption materials will be added to the barriers to minimize noise reflectivity of the barriers towards receptors on the other side of the interstate.</p>		

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Non-Standard Commitment	NEPA Doc Ref: <input type="text" value="Chapter 3, Section 3.5"/>	Responsibility: <input type="text" value="SCDOT"/>
<input type="text" value="Noise"/>		
<p>In order to help local officials and developers consider highway traffic noise in the vicinity of a proposed Type I project, SCDOT will inform them of the predicted future noise levels and the required distance from the roadways needed to ensure that noise levels remain below the NAC for each type of land use per 23 CFR 772.17. The information will be provided within three months of the Record of Decision (ROD) publication.</p>		

Non-Standard Commitment	NEPA Doc Ref: <input type="text" value="Chapter 3, Section 3.13"/>	Responsibility: <input type="text" value="CONTRACTOR"/>
<input type="text" value="Noise"/>		
<p>During construction, powered construction equipment will not be operated during the traditional evening and/or sleeping hours within 150 feet of a noise sensitive site, to be decided either by local ordinances and/or agreement with SCDOT.</p>		

Water Quality	NEPA Doc Ref: <input type="text" value="Chapter 3, Section 3.6"/>	Responsibility: <input type="text" value="CONTRACTOR"/>
<p>The contractor(s) 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.</p>		

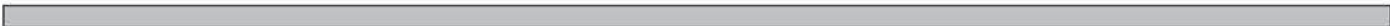


Project ID: <input type="text" value="P027662"/>	SCDOT NEPA ENVIRONMENTAL COMMITMENTS FORM	
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Non-Standard Commitment	NEPA Doc Ref: <input type="text" value="Chapter 3, Section 3.6"/>	Responsibility: <input type="text" value="CONTRACTOR"/>
<input type="text" value="Water Quality"/>		
<p>Stormwater modeling will be completed for the final design of the project. Stormwater runoff would be mitigated by discharging stormwater into appropriately designed BMP's before being released into receiving waters. During construction, the contractor(s) will identify and avoid all point sources of fecal coliform as identified in Chapter 3, Section 3.6.</p>		

Non-Standard Commitment	NEPA Doc Ref: <input type="text" value="Chapter 3, Section 3.6"/>	Responsibility: <input type="text" value="CONTRACTOR"/>
<input type="text" value="Permits"/>		
<p>A Section 401 State Water Quality Certification will be required for the overall project. The contractor(s) is responsible for obtaining the certification as part of the Joint 404/401 permit application process.</p>		

Non-Standard Commitment	NEPA Doc Ref: <input type="text" value="Chapter 3, Section 3.6"/>	Responsibility: <input type="text" value="CONTRACTOR"/>
<input type="text" value="Permits"/>		
<p>The contractor(s) is responsible for development of a project specific SWPPP and for obtaining a Section 402 NPDES permit for the project prior to initiating land disturbing activities.</p>		

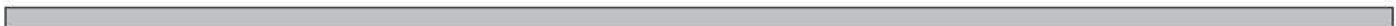


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Non-Standard Commitment	NEPA Doc Ref: <input type="text" value="Chapter 3, Section 3.7"/>	Responsibility: <input type="text" value="CONTRACTOR"/>
<input type="text" value="Permits"/>		
<p>A State Navigable Waters permit will be required for construction over any navigable waterways (i.e., the Saluda River). The contractor will be responsible for obtaining this permit.</p>		

Individual Permit	NEPA Doc Ref: <input type="text" value="Chapter 3, Sec 3.7/3.18"/>	Responsibility: <input type="text" value="SCDOT"/>
<input type="text" value="Permits"/>		
<p>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 will be permitted under an Individual Army Corps of Engineers Permit (IP). SCDOT will provide the USACE with information regarding any proposed activities during the Section 404 permitting process. One permit would be obtained for the overall project. The required mitigation for the this project will be determined through consultation with the USACE and other resource agencies.</p>		

Non-Standard Commitment	NEPA Doc Ref: <input type="text" value="Chapter 3, Section 3.8"/>	Responsibility: <input type="text" value="CONTRACTOR"/>
<input type="text" value="Floodplains"/>		
<p>Detailed hydraulic and hydrologic studies for each bridge crossing will be performed to determine the correct sizing of bridges and culverts. The project will be designed to be consistent with local floodplain development plans. Prior to construction activity in the area, coordination with Dominion Energy and Federal Energy Regulatory Commission (FERC) will be required for the two Saluda River floodway crossings due to its function as part of a hydroelectric facility.</p>		

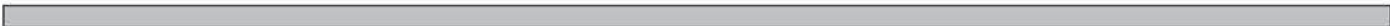


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Non-Standard Commitment	NEPA Doc Ref: <input type="text" value="Chapter 3, Section 3.8"/>	Responsibility: <input type="text" value="CONTRACTOR"/>
<input type="text" value="Floodplains"/>		
<p>The project will be designed in an effort to meet "No-Rise" requirements. In the event a "No-Rise" condition cannot be achieved, coordination with FEMA will require the preparation of a CLOMR (Conditional Letter of Map Revision) / LOMR (Letter of Map Revision) package for the encroachment. Where regulatory floodplains are defined, hydraulic structures will be designed to accommodate a 100-year (1% annual chance) flood. Where no regulatory floodplains are defined, culverts and bridges will be designed to accommodate a 50-year or greater magnitude flood event. Ongoing design efforts to minimize floodplain impacts will be coordinated with resource and regulatory agencies during the final design process.</p>		

Non-Standard Commitment	NEPA Doc Ref: <input type="text" value="Chapter 3, Section 3.8"/>	Responsibility: <input type="text" value="CONTRACTOR"/>
<input type="text" value="Floodplains"/>		
<p>Prior to construction, the selected contractor(s) will send a set of final plans and request for floodplain management compliance to the local County Floodplain Administrator.</p>		

Non-Standard Commitment	NEPA Doc Ref: <input type="text" value="Chapter 3, Section 3.8"/>	Responsibility: <input type="text" value="CONTRACTOR"/>
<input type="text" value="Floodplains"/>		
<p>No substantial impacts to floodplain values are anticipated from the proposed project. If conditions change based on final design, additional measures will be evaluated to restore lost floodplain values.</p>		



Project ID: <input type="text" value="P027662"/>	SCDOT NEPA ENVIRONMENTAL COMMITMENTS FORM	
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Non-Standard Commitment	NEPA Doc Ref: <input type="text" value="Chapter 3, Section 3.9"/>	Responsibility: <input type="text" value="Contractor/SCDOT"/>
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To mitigate for natural upland forested habitats, lost as a result of the project, SCDOT will plant trees (native species), as defined by the final design plans, within the rights-of-way adjacent to new or improved interchanges and roadways outside of required clear safety zones.

Impacts to areas providing significant wildlife habitat, such as river floodplains and other large riparian buffers, will be minimized to the extent practicable through avoidance and minimization design measures such as the use of appropriate BMP's.

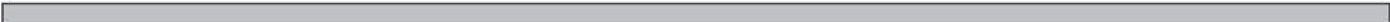
Construction activities will be conducted within the disturbed footprint of the existing roadway and utility right-of-way to the maximum extent practicable.

Non-Standard Commitment	NEPA Doc Ref: <input type="text" value="Chapter 3, Section 3.11"/>	Responsibility: <input type="text" value="CONTRACTOR"/>
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To mitigate the temporary impacts to the Saluda Riverwalk Extension, SCDOT will notify the City of Columbia Parks and Recreation Department at least 48 hours in advance as to when the trail will be temporarily closed. SCDOT will also work closely with the Parks and Recreation Department to communicate the closing to trail users during construction. When construction is complete, the condition of the trail will be equal to existing conditions.

Non-Standard Commitment	NEPA Doc Ref: <input type="text" value="Chapter 3, Section 3.12"/>	Responsibility: <input type="text" value="CONTRACTOR"/>
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Prior to construction, the project contractor will perform Phase II ESAs on the properties identified within the footprint, including the subject properties, and/or on the adjoining properties or the ROW. Ultimately, the Phase II ESAs will include environmental sample collection (e.g. soil, soil gas, and groundwater), specifically, in areas where a potential for disturbance of soil and/or groundwater exists. Asbestos Containing Material and/or Lead Based Paint testing will be assessed separately. Materials containing asbestos and lead-based paints will be managed and disposed of properly at an appropriate permitted facility to minimize impacts during the construction and cleanup. Activities will be monitored by a professional that is certified in the removal, handling and disposal of lead-based paint and/or asbestos-containing materials.

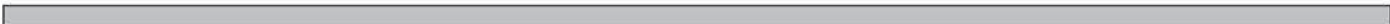


Project ID: <input style="width: 150px;" type="text" value="P027662"/>	SCDOT NEPA ENVIRONMENTAL COMMITMENTS FORM	
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Non-Standard Commitment	NEPA Doc Ref: <input style="width: 100px;" type="text" value="Chapter 3, Section 3.12"/>	Responsibility: <input style="width: 100px;" type="text" value="CONTRACTOR"/>	
<input style="width: 100%;" type="text" value="Hazardous Materials"/>			
<p>A spill prevention, control, and countermeasures (SPCC) plan will be prepared in accordance with 40 CFR 112, for the handling of oils or oil-based products during construction to prevent a discharge of oil into navigable waters.</p>			

Non-Standard Commitment	NEPA Doc Ref: <input style="width: 100px;" type="text" value="Chapter 3, Section 3.12"/>	Responsibility: <input style="width: 100px;" type="text" value="CONTRACTOR"/>	
<input style="width: 100%;" type="text" value="Hazardous Materials"/>			
<p>A hazardous waste management plan will be prepared for the handling of hazardous materials during construction, and an on-site health and safety plan will be developed for construction activities to protect human health (i.e. workers, residents, recreation and trespassers) and the environment within proximate to the site.</p> <p>The hazardous waste management plan will also state that disposal of waste materials will be disposed of in approved landfills.</p>			

Non-Standard Commitment	NEPA Doc Ref: <input style="width: 100px;" type="text" value="Chapter 3, Section 3.12"/>	Responsibility: <input style="width: 100px;" type="text" value="CONTRACTOR"/>	
<input style="width: 100%;" type="text" value="Hazardous Materials"/>			
<p>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 immediately. 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. SCDHEC Hazardous Waste Treatment, Storage, and Disposal compliance staff can be contacted at 803-898-0290.</p>			

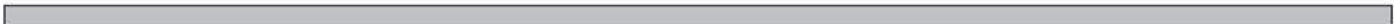


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Non-Standard Commitment	NEPA Doc Ref: <input type="text" value="Chapter 3, Section 3.13"/>	Responsibility: <input type="text" value="CONTRACTOR"/>
<input type="text" value="Cultural Resources"/>		
<p>During the construction phase of the project, the 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. If any such remains are encountered, the Resident Construction Engineer (RCE) and SCDOT's Construction Manager would be immediately notified and all work in the vicinity of the discovered materials and site work shall cease until the SCDOT Chief Archaeologist directs otherwise. SCDOT Chief Archaeologist, Bill Jurgelski, can be contacted at 803-737-1448.</p>		

Non-Standard Commitment	NEPA Doc Ref: <input type="text" value="Chapter 3, Section 3.13"/>	Responsibility: <input type="text" value="SCDOT"/>
<input type="text" value="Cultural Resources"/>		
<p>An archaeological professional will be present during any ground disturbing activities related to Site 38LX212. Additionally, sites 38RD140, 38RD1175, and 38RD1176 will be protected from indirect effects, including borrow sites and equipment staging. Sites will be clearly marked in the field using orange construction fencing prior to beginning construction activities in the vicinity of the resources.</p>		

Non-Standard Commitment	NEPA Doc Ref: <input type="text" value="Chapter 3, Section 3.13"/>	Responsibility: <input type="text" value="CONTRACTOR"/>
<input type="text" value="Cultural Resources"/>		
<p>The Saluda Canal (Site 38RD59) would be clearly plotted on all construction plans along with an appropriate buffer of 25 feet. This zone would be clearly marked in the field using orange fencing during construction, and all ground disturbance and construction staging activities would be conducted outside of this buffer in order to avoid all possible impacts to the resource.</p>		



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Non-Standard Commitment	NEPA Doc Ref: <input type="text" value="Chapter 3, Section 3.13"/>	Responsibility: <input type="text" value="CONTRACTOR"/>
<input type="text" value="Air Quality"/>		
<p>The contractor(s) will ensure that all construction equipment is properly tuned and maintained.</p> <p>Idling time will be minimized to save fuel and reduce emissions.</p> <p>Water will be applied to control dust as needed to prevent dust impacts off site. There will be no open burning of removed vegetation. Vegetation will be chipped or delivered to waste energy facilities.</p>		

Migratory Bird Treaty Act	NEPA Doc Ref: <input type="text" value="Chapter 3, Section 3.13"/>	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. 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.</p> <p>The Contractor will 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. SCDOT will be responsible for the removal/management of any active bird nests.</p>		

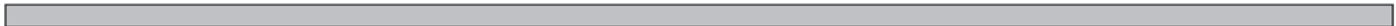
Non-Standard Commitment	NEPA Doc Ref: <input type="text" value="Chapter 3, Section 3.13"/>	Responsibility: <input type="text" value="CONTRACTOR"/>
<input type="text" value="Borrow Pits"/>		
<p>Potential borrow areas to be used for fill dirt for the project will be field reviewed and assessed for the presence of any jurisdictional features, and BMPs will be applied prior to disturbance to avoid and/or minimize erosion and runoff of sediments.</p>		



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Non-Standard Commitment	NEPA Doc Ref: <input type="text" value="Chapter 3, Section 3.13"/>	Responsibility: <input type="text" value="CONTRACTOR"/>
<input type="text" value="Construction"/> Construction operations will be scheduled for off-peak traffic hours when reasonable/feasible.		

Non-Standard Commitment	NEPA Doc Ref: <input type="text" value="Chapter 3, Section 3.13"/>	Responsibility: <input type="text" value="CONTRACTOR"/>
<input type="text" value="Construction"/> A traffic maintenance plan will be developed prior to construction initiation to minimize interference to traffic flow from construction equipment and activities.		



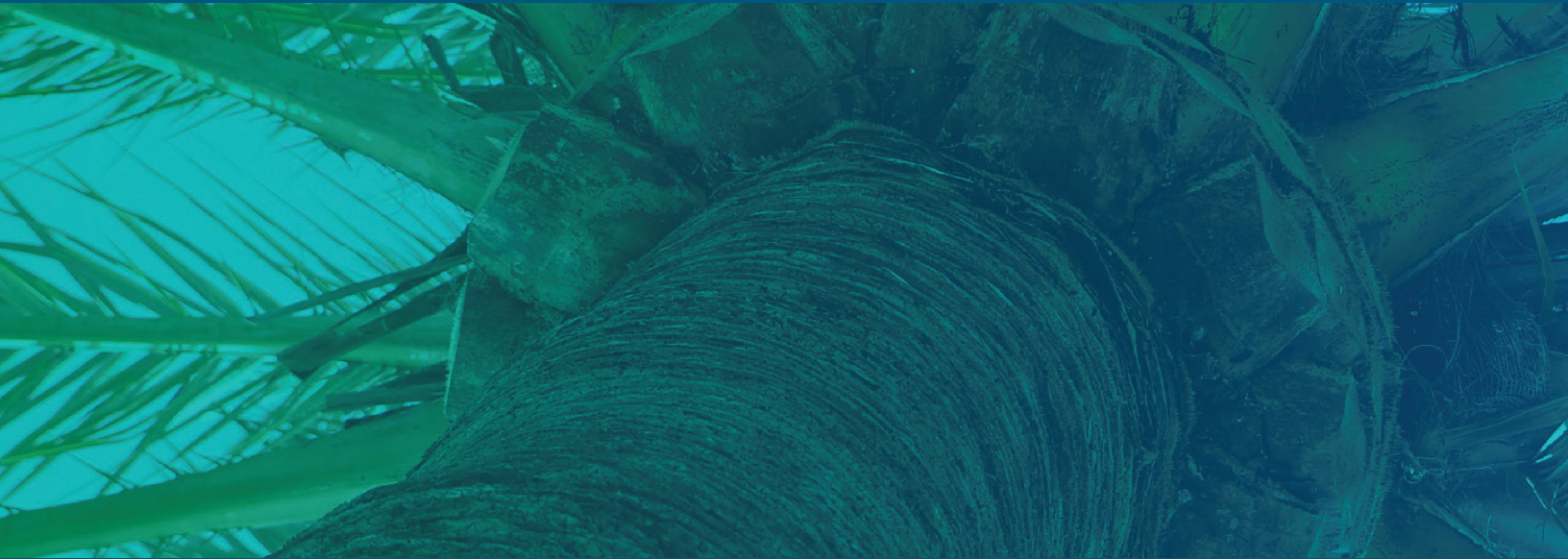


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A full copy of the FEIS is available on www.scdotcarolinacrossroads.com

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How will the project be funded?

61



What is FHWA's final decision on the Carolina Crossroads Project?

63



What are the next steps?

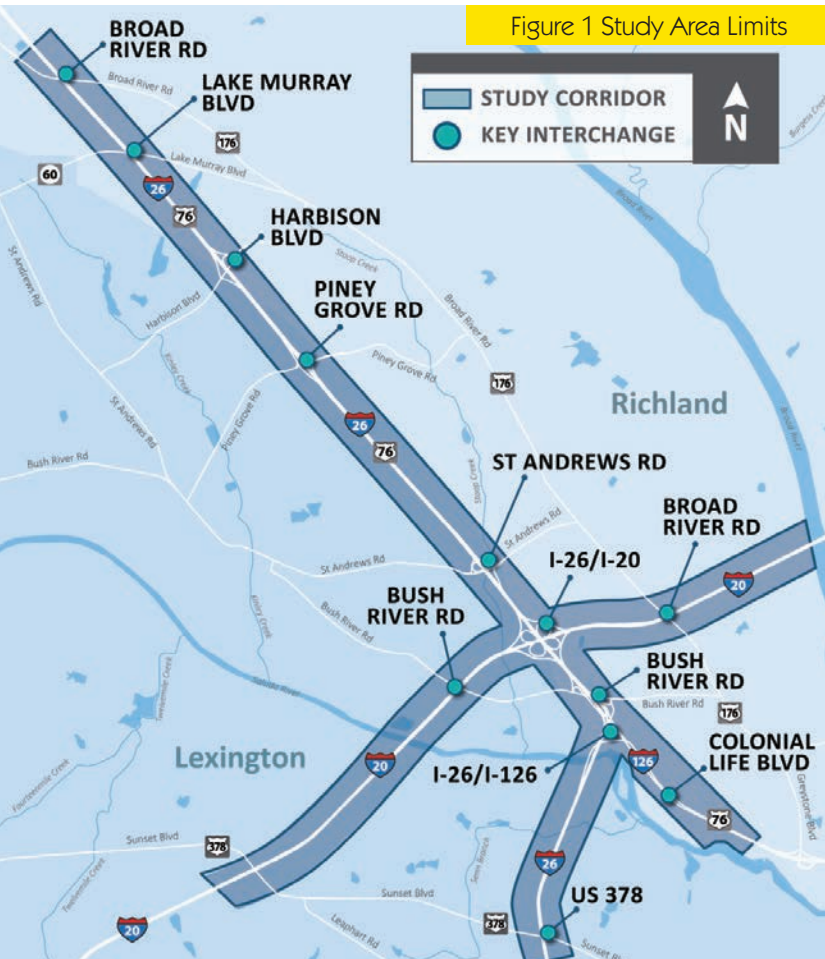


What is the Carolina Crossroads Project?

The I-20/26/126 corridor (refer to Figure 1) is listed as one of South Carolina’s most congested interstate corridors. The corridor has become a major hub for the Midlands’ commuters as well as travelers and commerce, serving as a main route in and out of Columbia. As an interstate corridor initially developed in the 1950s and 1960s and improved during the 1970s and 1980s, (refer to Figure 2) the I-20/26/126 corridor does not meet current vehicular traffic demands. Traffic models show that the corridor currently operates at an unacceptable Level of Service (LOS) currently. It experiences heavy traffic

congestion due to increases in traffic volumes and abrupt driving maneuvers resulting in above average crash rates. Finding an up-to-date solution has become a statewide priority.

The South Carolina Department of Transportation (SCDOT), in consultation with the Federal Highway Administration (FHWA), studied alternatives to improve mobility and enhance traffic operations within the I-20/26/126 corridor.



19 Bridges



12 Interchanges



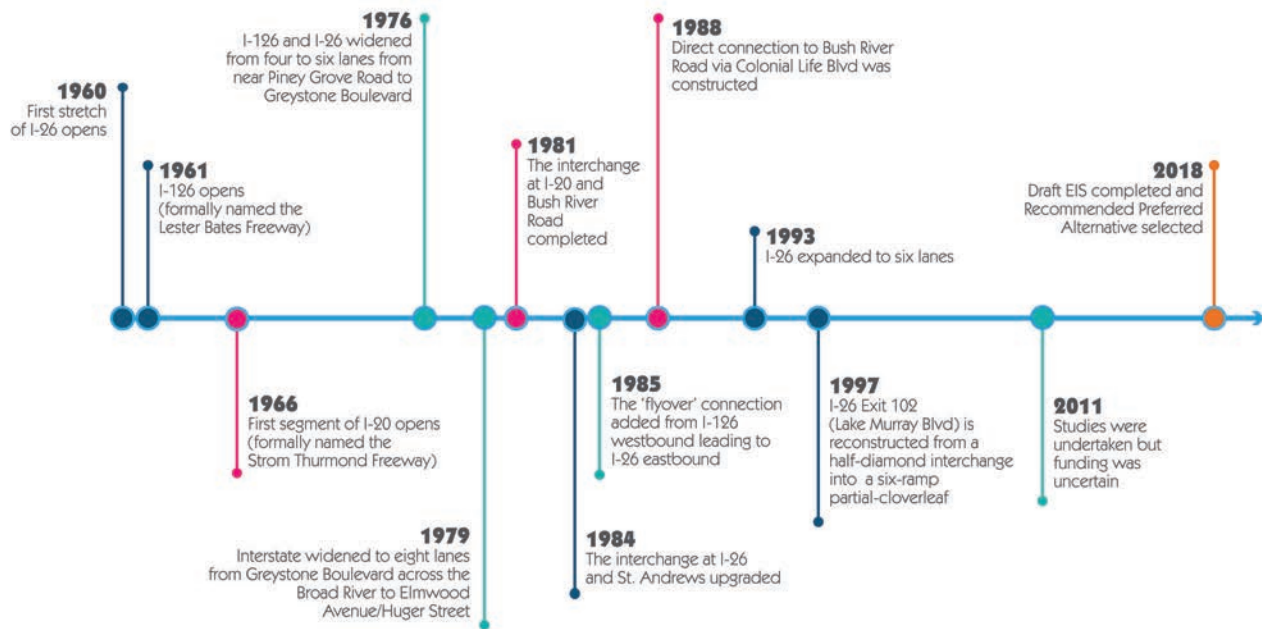
14 Interstate (Miles)



166 Roadway (Lane Miles)



Figure 2 History of the I-20/26/126 Corridor



SCDOT and FHWA completed a Draft Environmental Impact Statement (DEIS) detailing the alternatives studied and the potential impacts. The DEIS was issued on July 26, 2018, and a public hearing was held on August 23, 2018. RA1 was identified as the Recommended Preferred Alternative (RPA) in the DEIS. The public comment period on the DEIS occurred between July 26, 2018 and September 24, 2018. The Final Environmental Impact Statement (FEIS) was prepared to describe and evaluate changes made to the Recommended Preferred Alternative based on substantive comments received during the public comment period and further engineering refinements. The Record of Decision (ROD) is FHWA's decision on the Selected Alternative and associated proposed mitigation for the project.

FHWA has prepared this ROD in combination with the I-20/26/126 Carolina Crossroads FEIS, in accordance with 23CFR§771.124 which provides that the FEIS and ROD should be combined unless:

1. The FEIS makes substantial changes to the proposed action that are relevant to environmental or safety concerns; or,
2. There are significant new circumstances or information relevant to environmental concerns that bear on the proposed action or the impacts of the proposed action.

Although minor refinements have been made, they are not substantial and the general alignment and function remain the same as the DEIS RPA.

Furthermore, no significant new circumstances or information have become known since the DEIS was published. Therefore a combined FEIS/ROD was determined to be appropriate for this project.

Who is leading the project?

FHWA is the lead federal agency and SCDOT is the project sponsor and lead state agency. Lead agencies identify and involve cooperating and participating agencies, develop coordination plans, provide opportunities for the public and agencies to be involved in defining the purpose and need statement and determining the range of alternatives, and collaborate with cooperating and participating agencies to determine methodologies and the level of detail for analyzing alternatives. Lead agencies must also provide oversight with regard to managing the National Environmental Policy Act (NEPA) process and resolving issues.

What are cooperating and participating agencies?

A cooperating agency is any agency, other than a lead agency, that has jurisdiction by law or special expertise with respect to any environmental impact involved in a proposed project or project alternative. A participating agency is a federal, state, tribal, regional, or local government agency that might have an interest in the project. For this project, the U.S. Army Corps of Engineers (USACE), Charleston District, is a cooperating agency, as they will have a federal action on whether to issue or deny a Department of Army Section 404 Permit. The other agencies that participated in the project are listed in the table on the following page.



Who are the lead agencies for the Carolina Crossroads I-20/26/126 Corridor Project?

The FHWA is the lead federal agency and SCDOT is the project sponsor and lead state agency.



U.S. Department of Transportation
Federal Highway Administration

Agency or Local Government

Type of Agency Involvement

Federal Agencies



U.S. Army Corps of Engineers

Cooperating



U.S. Environmental Protection Agency

Participating



U.S. Fish and Wildlife Service

Participating

State Agencies



South Carolina Department of Archives and History

Participating



South Carolina Department of Health & Environmental Control

Participating



South Carolina Department of Natural Resources

Participating



South Carolina Department of Public Safety

Participating

Local Governments or Agencies



Central Midlands Council of Governments

Participating



Central Midlands Regional Transit Authority

Participating



Richland County

Participating



Lexington County

Participating



What is the purpose and need of the project?

What is the Purpose of the Carolina Crossroads I-20/26/126 Corridor Improvement Project?

The primary purpose of the proposed Carolina Crossroads project is to implement a transportation solution(s) that would improve mobility and enhance traffic operations by reducing existing traffic congestion within the I-20/26/126 corridor while accommodating future traffic needs. Secondary purposes of the proposed Carolina Crossroads project are to enhance safety throughout the corridor, improve freight mobility, and improve system linkages, while minimizing community and environmental impacts (refer to Figure 3).

Why is a Corridor Improvement Needed?

Outdated Infrastructure

As an interstate corridor initially developed in the 1950s and 1960s and improved during the 1970s and 1980s, I-20, I-26 and I-126 did not meet current vehicular traffic demands. It experiences heavy traffic congestion due to increases in vehicular traffic, vehicle weaving,

interchange spacing, and above average accident rates. Access ramps to and from each interstate also consistently become congested.

Growth in Population and Employment

Population in the region is projected to increase an average of 70% between now and 2040 and employment is expected to increase by over 11% (Central Midlands Council of Governments, CMCOG, 2012). Large increases of both population and employment over this extended period will increase the number of travelers in the project corridor.

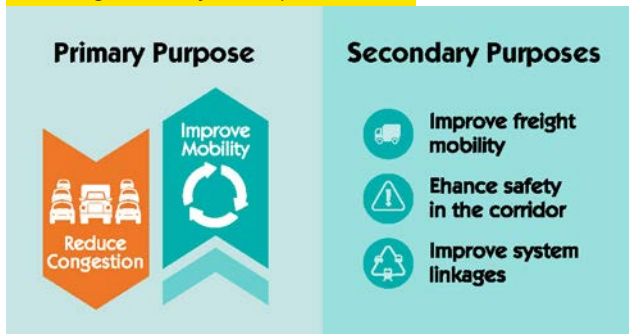
Increase in Roadway Congestion

Traffic models show that the corridor operates at unacceptable levels of service (LOS) at peak hours currently (i.e., between 7:30 a.m. – 9:00 a.m. and between 4:00 p.m. – 6:30 p.m.). Projected population growth in the study area, coupled with increases in freight travel, will exacerbate congestion. In the project corridor, I-26 experiences more traffic crashes than the state average.

Safety Concerns

To identify where crashes were more frequent, the project team collected crash data from the SCDOT Office of Traffic Engineering for roadway segments within the study area. There were a total of 2,370 crashes reported along I-26 from January 1, 2012 to December 31, 2014 (Figure 4). These were split nearly evenly in the eastbound (1,171 crashes) and westbound (1,199 crashes) directions.

Figure 3 Project Purposes



The most frequent crashes were rear-end crashes (over 60 percent) while same direction sideswipe crashes and “no crash with motor vehicle” crashes made up 18 and 17 percent of the total crashes, respectively. High crash rates are attributed to extended periods of congestion throughout the corridor and abrupt driving maneuvers due to the multiple weaving movements at and adjacent to the I-20/26 system to system interchange.

All segments of the I-20/26 interchange exceed the average for Fatal and Severe Injury (FSI) crashes. Additionally, the I-20/26/126 study area crash rate is higher than other comparable freeway-to-freeway systems in the State. Much of this crash risk is attributed to the complex weaving maneuvers that take place within a relatively short section of freeway.

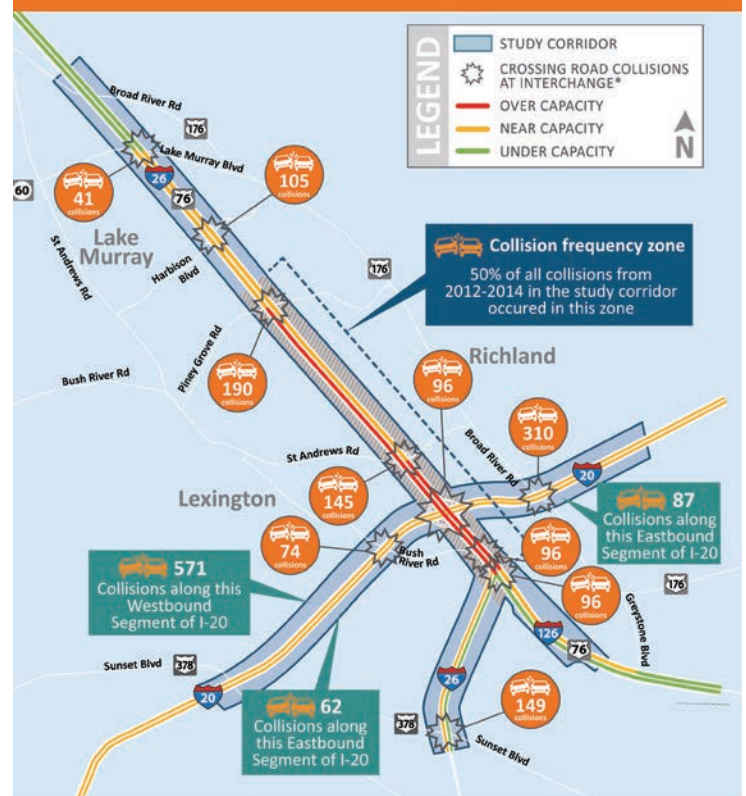
A crash hotspot analysis revealed that there are several hotspot crash locations on the three freeway sections in proximity to the I-20/26/126 interchange. This analysis identified several safety considerations which would mitigate the high crash risk throughout this interchange. Those considerations include:

- Reducing or eliminating the multiple weaving segments on I-26 eastbound in proximity to the off- and on-ramps to I-20, and on I-26 westbound between the I-126/I-26 ramp merge and Exit 103 at Harbison Boulevard;
- Improving westbound I-126 between the I-20 ramp diverge and the I-26 merge, where considerable traffic weaves occur between all three freeways;

- Reducing or eliminating the weaving segments on I-20 between Exit 64 (I-26) and Exit 63 (Bush River Road);
- Separating system-to-system traffic flow, especially from I-20 westbound to I-26 westbound;
- Lengthening merge sections; and,
- Improving interchange ramp termini at arterial and collector roads to reduce crash risk through geometric modifications.

Figure 4 I-20/26/126 Corridor Collision Summary

The collision data shown below is based on 2012-2014 averages. The traffic capacity data is based on daily averages collected in 2014 during peak traffic hours.



*Collisions occur along arterial roadways at the interchanges, not along the mainline.



What Alternatives were considered?

Preliminary Screening

The Alternatives Analysis process consisted of four screening levels, referred to as Preliminary Screening, Level 1 (comprised of Level 1A and Level 1B), Level 2, and Level 3 (refer to Figure 5). Detailed information about the alternatives development & screening process can be found in Chapter 2 and Appendix C of the FEIS.

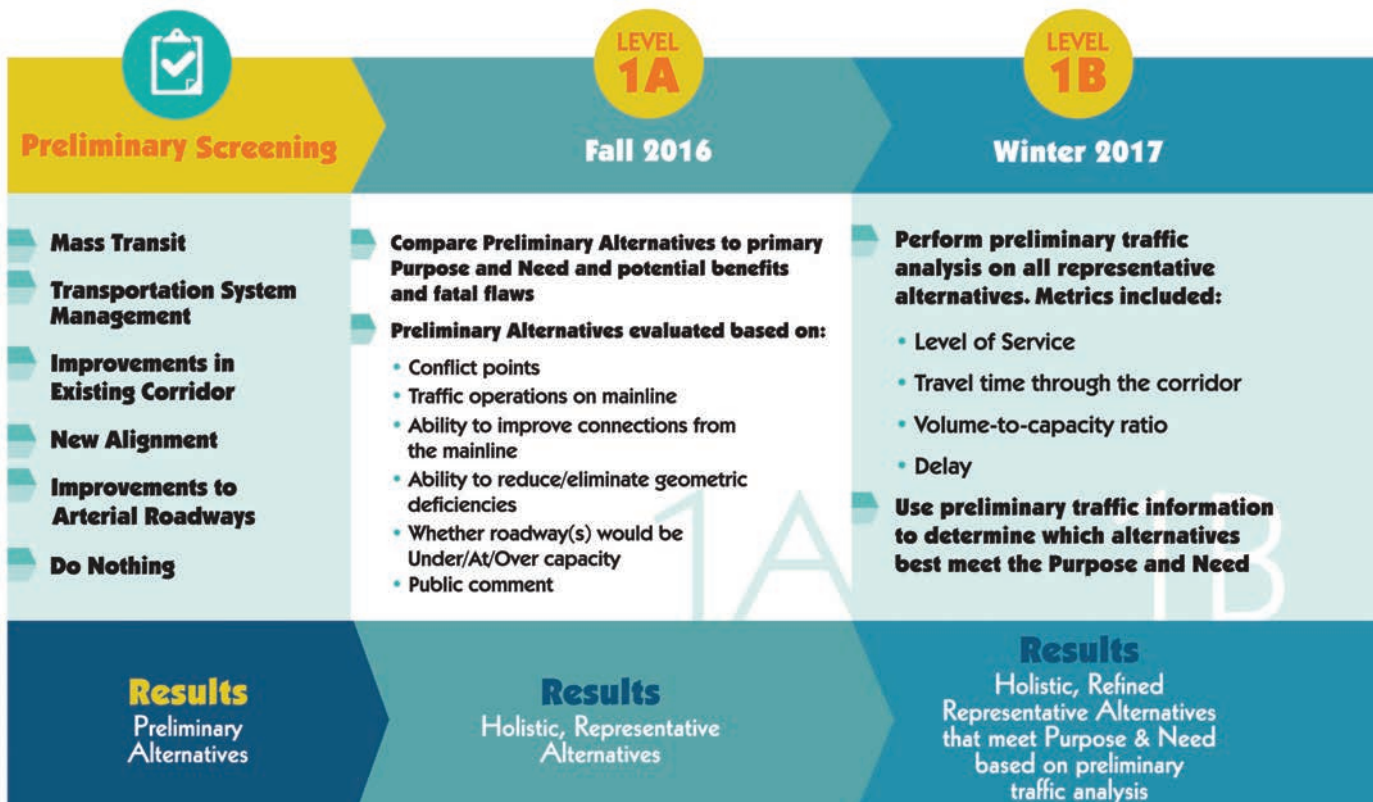
Preliminary Screening looked at a range of alternatives to meet the purpose and need of the project. Six alternatives were identified and further examined to see if they met the primary purpose and need of the project using established evaluation criteria. The two alternatives that were carried forward from the

preliminary screening were the existing corridor improvements alternative and the No-Build alternative. The eliminated alternatives were determined not to be able to fulfill the Purpose and Need as standalone alternatives. However, elements of the eliminated alternatives were further evaluated to determine if some elements could be incorporated into the Recommended Preferred Alternative. Refer to Chapter 2 of the FEIS for further detail.

Level 1A Screening

Since the majority of the traffic congestion and safety concerns occur at or near interchange locations along the I-20/26/126 corridor, the project team opted to initially focus on the

Figure 5 Alternatives Analysis Process





interchange locations by developing potential improvement options for each of the 12 interchanges located in the corridor. As a result, 54 interchange options were developed for the 12 interchanges along the corridor, along with mainline interstate (I-26) alternatives.

These interchange options were evaluated against the purpose and need as well as the following five qualitative screening criteria:

- A reduction of conflict points on the I-20/26/126 corridor;
- Improved traffic operations on the I-20/26/126 corridor;
- Improved connections from the I-20/26/126 corridor;

- Reduced/eliminated geometric deficiencies;
- Whether the alternative would result in interchanges along I-20/26/126 being under, at, or over capacity, based on general traffic parameters.

Through the Level 1A screening step, 16 interchange options were eliminated.

Level 1B Screening:

Using the remaining 38 interchange options, nine holistic, representative alternatives were developed that encompassed all viable interchange improvements as well as the mainline improvements being proposed. These are listed in Table 2.1 of the FEIS. These nine



representative alternatives were evaluated further in the Level 1B screening analysis using more detailed traffic capacity and traffic operations information to determine how well they met the primary purpose and need of the project. As a result, four representative alternatives were carried forward to Level 2 screening.

Level 2 Screening

The four alternatives that advanced to the Level 2 screening (see Table 2.3 of alternatives chapter) were evaluated against environmental constraints, cost, and the purpose and need components, while minimizing community and environmental impacts. As a result of the Level 2 screening, two representative alternatives were carried forward to the Level 3 screening as reasonable alternatives (RA).

RA1 and RA5 were presented to the public at the Reasonable Alternatives Public Information Meeting on September 19, 2017. Chapter 2 of the FEIS provides detailed information on the Level 2 screening and potential impacts.

Level 3 Screening

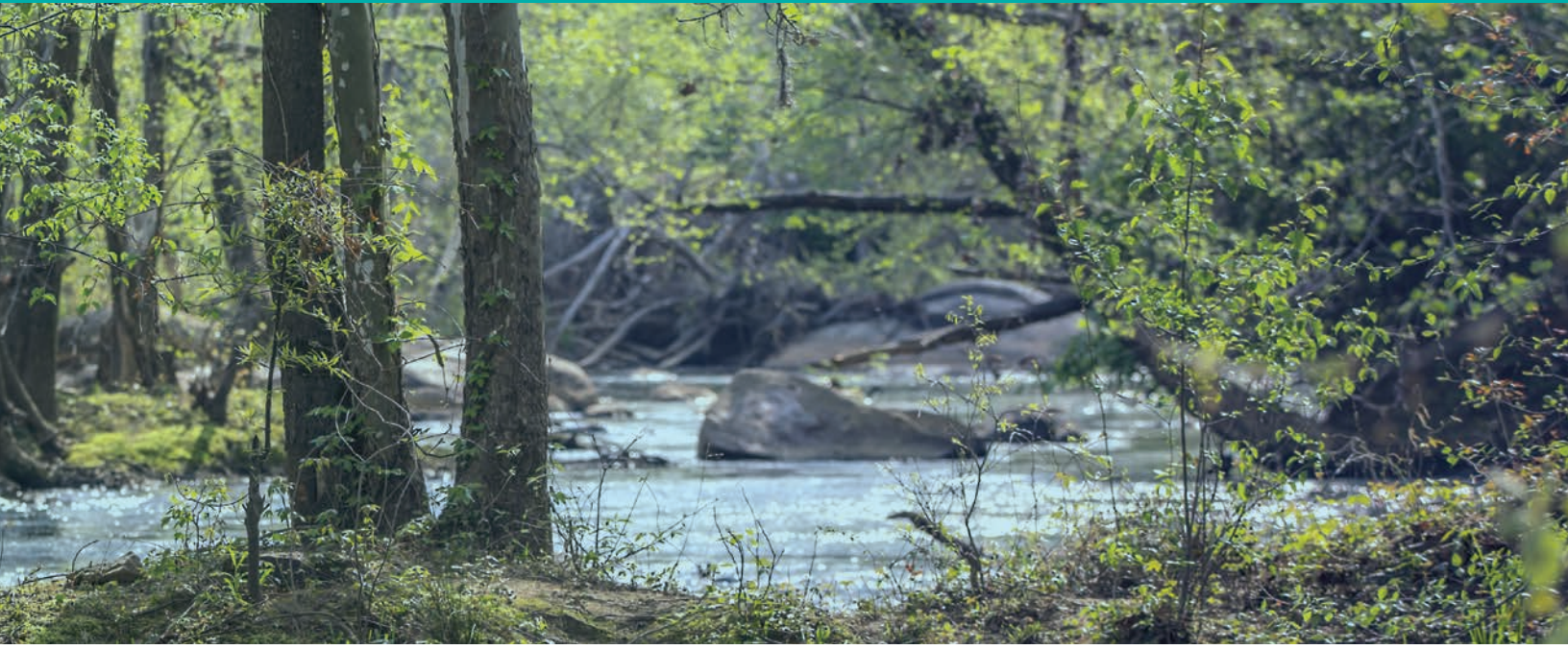
The Reasonable Alternatives (RA1 and RA5), were analyzed to determine if traffic operations could be further improved. It was determined that the diverging diamond design provided more benefits than the partial cloverleaf design at the I-20/Bush River Road interchange. Thus, RA5 was modified accordingly. As part of the Level 3 screening, the two Reasonable Alternatives (RA1 and RA5 Modified) were further assessed through a more detailed traffic analysis and environmental impact analysis. Specifically, the two Reasonable Alternatives were analyzed based on traffic measures of effectiveness (MOEs); their ability to meet the primary purpose and need of the proposed project; and, their potential impacts to the environment. These MOEs included level-of-service, travel time benefits, and delay time. RA1, RA5 modified, and the No-build Alternative were carried forward for detailed study in the DEIS.

Reasonable Alternative 1 (Recommended Preferred Alternative)

Reasonable Alternative 5 Modified

No-Build Alternative

These alternatives were evaluated in detail in the DEIS and resulted in the selection of a Recommended Preferred Alternative (RPA). Through the detailed traffic analysis, it was determined that RA1 would best meet the purpose and need to reduce congestion and improve mobility and therefore, was determined to be the RPA for the project.



No-Build Alternative

NEPA requires an analysis of the No-Build Alternative. This alternative serves as a baseline so that decision-makers can compare the environmental effects of the reasonable alternatives. The No-Build Alternative does not include a new I-20/26/126 corridor but it does include all other projects in the CMCOG Columbia Area Transportation Study (COATS) - Moving the Midlands 2040 Long Range Transportation Plan. These projects would also be built independent of the Carolina Crossroads Project.

Without an improved I-20/26/126 corridor, the primary purpose of the proposed Carolina Crossroads project would not be met. Mobility and traffic operations would not be improved within the corridor and traffic congestion would get worse.

USACE Public Interest Review Factors

The USACE's Public Interest Review Factors were also used to evaluate the potential impacts upon the waters of the U.S. and how this impact would affect the interests of the public. Many of the USACE Public Interest Review Factors were quantified and compared during the evaluation of the reasonable alternatives, including: land use; consideration of property ownership; wetlands; fish and wildlife; water quality; floodplains; historic properties; and recreation. These resources were assessed for impacts at the Level 3 screening.

Recommended Preferred Alternative in the DEIS

When comparing the detailed traffic analysis, detailed environmental analysis, input from the public, input from resource and regulatory agencies, constructibility factors, and construction costs, the Reasonable Alternative that would best satisfy the public need while minimizing impacts would be RA1. For these reasons, RA1 was selected as the RPA in the DEIS. The full analysis of the Reasonable Alternatives are detailed in Chapter 2 of the FEIS.



What input did the public and agencies have on the Recommended Preferred Alternative?

The DEIS was made available to the public, as well as appropriate federal, state, and local agencies on July 26, 2018, and a public hearing was held on August 23, 2018. The public hearing was held to present the RPA in the DEIS, including associated environmental impacts and potential mitigation measures.

Project team members were on hand to answer questions and talk to attendees. In addition, the public hearing had three formal verbal comment sessions that adhered to SCDOT Public Involvement Policy. These sessions occurred at 12:30 p.m., 3:00 p.m. and 6:00 p.m. where attendees were able to make formal verbal comments. In addition, comments were accepted from the public and agencies between August 3, 2018 and September 24, 2018. A total of 580 attendees signed in at the public hearing, and a total of 47 people provided formal verbal comments. A total of 154 comments were collected in-person at the public hearing, and a total of 1,226 comments were received during the comment period. A copy of comments and a summary of comment responses can be found in Appendix O of the FEIS.

Comments received from the public were primarily related to mass transit, design modifications, noise, flooding/floodplains, costs, aesthetics, and utilities. Comments received during the DEIS comment period and public hearing were reviewed by project team members and a response was provided for all substantive comments. There was significant public feedback about the addition of the proposed Tram Road and Beatty Road bridge during both the public hearing and DEIS comment period indicating that the bridge was not desired.

The RPA and potential impacts were presented to the agencies on August 9, 2018. The meeting is summarized in Chapter 4 and the meeting minutes are in Appendix B. Several agencies commented on the DEIS and explained concerns regarding mass transit, environmental impacts and mitigation. There were a total of 10 agency comments received, and copies of the comment letters and responses can be found in Appendix B. A summary of the agency comments and responses can be found in Chapter 4 and the following pages.



Table 1 Agency Comment/Response Matrix

Date	Agency	Comment
Federal Agencies		
August 21, 2018	US Fish and Wildlife Service	We don't have any comments to offer at this time. Thank you for the opportunity.
September 11, 2018	US Environmental Protection Agency	<p>The U.S. Environmental Protection Agency has reviewed the referenced document in accordance with Section 309 of the Clean Air Act and Section 102(2)(C) of the National Environmental Policy Act (NEPA). The South Carolina Department of Transportation (SCDOT), in cooperation with the Federal Highway Administration (FHWA), is proposing to upgrade and redesign a major section of interstate corridor in Lexington and Richland Counties that spans from 1-20 near the Saluda River crossing to the Broad River crossing; 1-26 from Broad River Road to US 378; and 1-126 from 1-26 to Colonial Life Boulevard. The primary purpose of the project, also known as 'Carolina Crossroads', is to improve mobility and enhance traffic operations by reducing existing traffic congestion within the 1-20/26/126 corridor. The EPA has reviewed the DEIS and the two alternatives outlining the corridor upgrades and redesign. In addition to a No Action alternative, SCDOT considered two action alternatives that advanced through their screening process to become "reasonable alternatives" (i.e. Alternatives RAI and RAS modified).</p> <p>From this process a preferred alternative was designated (RAI). Key features of the preferred alternative include:</p> <ul style="list-style-type: none"> • A proposed turbine interchange at the 1-26 and 1-20 junction, which eliminates all loop ramps in the interchange. • Widening of 1-26 with one additional lane in each direction from US 176/Broad River Road to 1-126. • Adding new collector-distributor lanes. • Relocating the existing interchange at 1-26 and Bush River Road to eliminate traffic conflict points and weaving between Bush River Road and the 1-20/1-26 interchange. • Reconfiguring the Colonial Life Boulevard interchange to a full interchange to provide access to Bush River Road from 1-126. • Interchange improvements at each interchange from Harbison Boulevard to 1-126 on 1-26; from Bush River Road to Broad River Road on 1-20; and from 1-26 to Colonial Life Boulevard on 1-126 <p>The EPA acknowledges SCDOT's effort in producing a comprehensive document. The DEIS clearly outlines the purpose and need of the project; presents a discussion of the alternatives with a thorough analysis; describes the affected environment; the assessment of environmental, transportation, social, and economic impacts; identifies mitigation measures to offset potential impacts; and presents a recommended preferred alternative. The EPA rates this DEIS as "LO" (Lack of Objections). The review has not identified any potential environmental impacts requiring substantive changes to the preferred alternative. The EPA appreciates the opportunity to review this DEIS and SCDOT's earlier coordination efforts during scoping and project development. If you have questions on our comments, please contact Ms. Alya Singh-White, at (404) 562-9339 or singh-white.alya@epa.gov.</p>

Response

Thank you for your letter regarding the Carolina Crossroads I-20/26/126 Corridor Improvements Project in Lexington and Richland Counties, South Carolina. The South Carolina Department of Transportation (SCDOT) and the Federal Highway Administration (FHWA) appreciate your review on of the Draft Environmental Impact Statement (DEIS).

The SCDOT project team is working to complete a FEIS and FHWA anticipates publishing an FEIS and a Record of Decision (ROD) concurrently in spring 2019.

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The SCDOT project team is working to complete a FEIS and FHWA anticipates publishing an FEIS and a Record of Decision (ROD) concurrently in spring 2019.

Table 1 Agency Comment/Response Matrix

Date	Agency	Comment
<p>September 11, 2018</p>	<p>US Department of the Interior</p>	<p>The Department of the Interior (Department) has reviewed the Draft Environmental Impact Statement (DEIS) and Section 4(f) Evaluation for the I-20/26/126 Corridor Project in Lexington and Richland Counties, South Carolina. The Department offers the following comments and recommendations for your consideration:</p> <p>Section 4(f) Comments</p> <p>The Federal Highway Administration (FHWA) and South Carolina Department of Transportation (SCDOT) propose to upgrade the I-20/26/126 corridor and reconstruct associated interchanges in Richland and Lexington Counties, South Carolina. The purpose of the proposed project is to improve mobility, enhance traffic operations by reducing existing traffic congestions, and accommodate future traffic needs. Two build alternatives (Alternative 1 and Alternative 5 Modified) and one No-build Alternative is evaluated in the DEIS. Alternative one is identified as the Preferred Alternative.</p> <p>The Saluda Riverwalk is a protected section 4(f) property and is within the area of potential affect. The proposed project includes a new interstate ramp to be constructed from 1-26 westbound to I-26 eastbound and would result in a new bridge over the Saluda River and over the Saluda Riverwalk. While this project would not directly impact this facility, temporary closure of the trail and closure or relocation of restroom facility would be required during construction for safety reasons. Since the project impacts would be temporary and no permanent impacts to the trail or its access are anticipated the SCDOT and FHWA has determined that the project would result in deminimis, or minimal impact to the trail and restroom facility. The Department concurs that there is no prudent and feasible alternative, and that all possible planning has taken place to minimize harm to this 4(f) resource. The Department has a continuing interest in working with the SCDOT and the FHWA to ensure impacts to resources of concern to the Department are adequately addressed. For issues concerning section 4(f) resources, please contact Anita Barnett, Southeast Regional Office, National Park Service, 100 Alabama Street, 1924 Building, Atlanta Georgia, telephone 404-507-5706.</p>
<p>September 24, 2018</p>	<p>US Army Corps of Engineers</p>	<p>The Corps of Engineers received the Draft Environmental Impact Statement (DEIS), prepared by the Federal Highway Administration (FHWA) in cooperation with the South Carolina Department of Transportation (SCDOT) for the I-20/26/126 Corridor Project, known as Carolina Crossroads, on August 6, 2018. We appreciate the extensive coordination efforts that have gone into the development of this document. Our goal in the participation in that coordination is to assist your office in the development of a Final Environmental Impact Statement (EIS) which, to the extent practicable, addresses National Environmental Policy Act (NEPA) informational needs for the Corps as well as FHWA. This effort is expected to lead to a reduction in duplication of effort in compliance with applicable regulations and therefore to expedite the total review time associated with this project.</p> <p>Upon review of the signed DEIS, the Corps has determined that the current draft does address the Corps' NEPA concerns to the degree practicable given the information available at this time, and this office does not have further comments on this DEIS.</p> <p>In closing, we look forward to continuing our collaborative effort towards an expedient review process as we move toward future phases of this project. Please be advised that our concurrences are based upon the most current information available, and that future developments or new information may affect later stages of the regulatory review process. Though we anticipate our participation and concurrence on this project will help facilitate the permit process, it can in no way guarantee permit issuance.</p>

Response

The South Carolina Department of Transportation intends to complete a 4(f) de minimis evaluation for the Saluda Riverwalk property. The project team is working to complete a Final Environmental Impact Statement (FEIS) and the Federal Highway Administration anticipates publishing an FEIS and a Record of Decision (ROD) concurrently in spring 2019. The 4(f) de minimis evaluation will be included in the Final Environmental Impact Statement (FEIS).

The South Carolina Department of Transportation (SCDOT) and the Federal Highway Administration (FHWA) appreciate your review on of the Draft Environmental Impact Statement (DEIS) and comments on the Clean Water Act (CWA). Please refer to Chapter 3, Section 3.7, (page 3-279 to 281) of the DEIS for an overview of SCDOT's proposed compensatory mitigation plan for the Carolina Crossroads project. SCDOT is using current mitigation regulations and guidance to develop the mitigation plan for the project, including the 2008 U.S. Army Corps of Engineers (USACE) and U.S. Environmental Protection Agency (EPA) regulations Compensatory Mitigation for Losses of Aquatic Resources (33 CFR Parts 325 and 332) and USACE Charleston District Compensatory Mitigation Guidelines (dated October 7, 2010). Pursuant to these documents, SCDOT is monitoring existing and proposed mitigation banks that could serve the project, as well as evaluating additional forms of acceptable mitigation in the event mitigation banks cannot provide the necessary mitigation. Additional mitigation details to satisfy the 2008 Mitigation Rule and the Charleston District's SOP for mitigation will be included in the Final Environmental Impact Statement (FEIS), and we understand that additional project information would be needed for Section 404 permitting requirements before the Corps can arrive at a permit decision.

Table 1 Agency Comment/Response Matrix

Date	Agency	Comment
State Agencies		
September 6, 2018	Office of Regulatory Staff - Energy Office	<p>To whom it may concern:</p> <p>The SC Office of Regulatory Staff- Energy Office (Energy Office) is in receipt of your letter dated August 3, 2018 to solicit comments and to initiate interagency coordination to help identify and evaluate the environmental impacts related to the proposed construction of the project referenced as the 1-20/26/126 Corridor project (Carolina Crossroads). We appreciate this opportunity to be involved in this interagency process.</p> <p>SC Code Ann. Section 57-3-780 describes the basic functions of the Department of Transportation and requires that, “Before building or expanding existing primary highways, roads, and streets, the department shall consider and make written determination whether it is financially and physically feasible to include:</p> <ul style="list-style-type: none"> (1) high occupancy vehicle lanes, when the construction or expansion is in a metropolitan area; (2) pedestrian walkways or sidewalks; and (3) bicycle lanes or paths. <p>A copy of this determination must be submitted to the State Energy Office.” As part of our mission, the Energy Office takes this responsibility seriously and we appreciate this opportunity to be involved in the planning process. Given transportation accounts for roughly 30 percent of energy use in South Carolina and nationally, it is important to evaluate how highway/road expansion may increase or decrease vehicle miles traveled and thereby increase or decrease energy consumption. Generally, the Energy Office supports any efforts to decrease vehicle miles traveled along South Carolina’s roadways, whether it be with bicycle and pedestrian lanes or sidewalks, promoting alternative fuels, car or van pooling, rideshare programs, transit, light synchronization, etc. Not only do these efforts reduce vehicle miles traveled, thereby reducing energy consumption, but they also typically reduce air emissions which can be harmful to human health and the environment. The Energy Office appreciates that high occupancy vehicle lanes and park and rides were considered as part of congestion mitigation options associated with this project (see Appendix E, page 12 and 26 respectively1); however, to complete our review, we respectively request quantitative data/documentation that supports this analysis. Please provide this information to our office on or before October 12, 2018.</p>
September 24, 2018	SC Department of Natural Resources	<p>The Federal Highway Administration, in cooperation with the South Carolina Department of Transportation, has prepared a Draft Environmental Impact Statement (DEIS) for the Carolina Crossroads Corridor Project. The project area generally encompasses Interstate 20 (I-20) from the existing Saluda River crossing to the existing Broad River crossing, Interstate 26 (I-26) from Broad River Road to US 378, and Interstate 126 (I-126) from I-26 to Colonial Life Boulevard. The purpose of the project is to improve mobility and enhance traffic operations by reducing existing traffic congestion within the I-20/26/126 corridor. The DEIS assesses two Reasonable Alternatives (RA1 and RA5) and a No-Build Alternative.</p> <p>The South Carolina Department of Natural Resources (SCDNR) accepted an invitation to serve as a participating agency for the proposed project in a letter dated November 17, 2015. SCDNR reviewed a preliminary suite of alternatives and provided comments in a letter dated November 18, 2016. SCDNR also reviewed several chapters of the DEIS in draft form and provided additional comments in a letter dated March 3, 2018.</p>

Response

On October 23, 2018, Mr. Henry Phillips of the SCDOT Environmental Services Office spoke with Mr. Landon Masters of the State Energy Office. The information Mr. Masters was seeking was within the DEIS. Mr. Phillips directed Mr. Masters to the information and this satisfied the request. In addition, the following written response was provided.

As noted in Chapter 2 of the DEIS, mass transit was assessed as part of the alternatives analysis for the CCR project. It was determined that implementation of mass transit alone would not be able to sufficiently reduce congestion or improve mobility within the project corridor. Additionally, the addition of mass transit would not enhance safety, nor improve freight mobility. For these reasons, the mass transit alternative was not advanced as a stand-alone preliminary alternative for the proposed Carolina Crossroads project. However, the CMCOG and COATS' inclusion of mass transit in the region's LRTP and other plans and studies ensure commitments to it in the future. If the COMET and/or other regional agencies advance additional analysis, such as updating the existing CMCOG Commuter Rail Assessment, SCDOT will participate as a stakeholder in any working groups or committees that are formed to help advance the initiative.

While mass transit alone would not meet the project purpose and need, various transit components were considered as part of the project including high-occupancy vehicle (HOV) lanes, bus on shoulder (BOS) and other congestion management tools to decrease vehicle miles traveled in the corridor. High-occupancy vehicle (HOV) lanes were considered as part of the proposed improvements, and it was determined that the inclusion of HOV lanes is not warranted. The Recommended Preferred Alternative would provide improved level of service, speeds, and travel times equal to or greater than those an HOV facility could provide. Additional information about this analysis is included in Chapter 2 of the Draft Environmental Impact Statement (DEIS) (see pages 2-61 through 2-62).

Though HOV lanes did not advance as a solution for the Carolina Crossroads project, SCDOT does realize that measures to decrease vehicle miles traveled is part of a larger mobility solution for the Midlands region. The project team studied existing Park-and-Ride facilities throughout the Carolina Crossroads corridor and developed a plan to identify and address existing and future needs to ensure a continuous and adequate supply of parking for rideshare commuters. You can read more about this in Chapter 2, Section 2.1.8.2 (pages 2-62 through 2-64) of the DEIS. Based on the study completed, SCDOT will work with CMRTA and CMCOG to develop two park and ride lots to improve mobility during construction and mitigate congestion resulting from the project. SCDOT will construct the two sites and maintain them during construction of the project. Engineering feasibility, timing and continued maintenance of the site(s) would be determined in coordination with CMRTA and the CMCOG prior to start of construction. In the event a permanent site cannot be developed, SCDOT will work with CMRTA and CMCOG to identify and provide funding for existing parking lots that could be leased for park and ride use.

In addition, SCDOT will provide funding for enhanced bus service during construction based upon an agreed upon framework with CMRTA and CMCOG. SCDOT will also implement a congestion management tool/commuter services application to improve mobility during construction and mitigate congestion by informing commuters of available options such as carpooling, ridesharing, transit and other commuting options. These details are published in Final Environmental Impact Statement (FEIS).

Relative to pedestrian and bicycle facilities, Chapter 1 of the DEIS acknowledges that there is a need for additional bicycle and pedestrian infrastructure within the study area. These were not considered as primary alternatives within the range of alternatives (see page 2-11 of the DEIS), the design of connections to pedestrian and bicycle facilities and the accommodations for planned facilities will be determined as design progresses on the Recommended Preferred Alternative. You can read more about this, as well as accommodations during construction, in Chapter 2 of the DEIS (see page 2-63) and Chapter 3.13 (see page 3-369).

With regards to the Saluda River floodplain and wetland impacts; increases to impervious surfaces and associated runoff has been considered for both reasonable alternatives. As noted in Chapter 3.6 of the Draft Environmental Impact Statement (DEIS) both reasonable alternatives would increase the amount of impervious surface in the project study area (see page 3-240); and as noted in Chapter 3.8, both alternatives would impact floodplains (see page 3-289). Stormwater runoff would be mitigated by discharging stormwater into detention basins and/or vegetated swales before it is released into receiving waters. This practice reduces peak-flow discharge into receiving waters (see Chapter 3.6, page 3-241). Additionally, neither alternative is expected to result in significant impacts to natural and beneficial floodplain values; and the project would be designed to be consistent with local floodplain development plans. Where regulatory floodplains are defined, hydraulic structures will be designed to accommodate a 100-year flood. Where no regulatory floodplain is defined, culverts and bridges will be designed to accommodate a 50-year magnitude flood event (See Chapter 3.8, page 3-292).

You can also read more about the indirect and cumulative effects of the proposed project in Chapter 3.15 of the DEIS (see Sections 3.15.1 and 3.15.2).

Table 1 Agency Comment/Response Matrix

Date	Agency	Comment
<p>September 24, 2018</p>	<p>SC Department of Natural Resources</p>	<p>SCDNR previously expressed concerns regarding proposed new alignment crossings of the Saluda and Broad Rivers as well as concerns regarding proposed impacts in the floodplain of the Saluda River. The DEIS indicates that some of these proposed impacts have been eliminated from further consideration, however, SCDNR remains concerned that Reasonable Alternative 1 (Preferred Alternative) and Reasonable Alternative 5 include alignments that parallel the Saluda River in the floodplain and wetlands adjacent to I-126 as well as significantly increase the footprint of the existing I-26 crossing. SCDNR finds that these alignments could significantly impact the water quality, aquatic habitat, scenic and recreational values of the river. SCDNR recommends that final plans avoid and minimize impacts to the Saluda River and adjacent resources to the greatest extent practicable. SCDNR looks forward to working with the project team and the other cooperating and participating agencies to move forward into the final design, permitting and mitigation phases of this project. Should you have any questions or need more information, please do not hesitate to contact me by email at mixong@dnr.sc.gov or by phone at 803.734.3282.</p>
<p>Local Municipalities and Agencies</p>		
<p>September 23, 2018</p>	<p>The COMET</p>	<p>Thank you for having your team work with the Central Midlands Regional Transit Authority (The COMET) as it relates to the inclusion of public transit and alternative transportation means in the upcoming Carolina Crossroads project. As I have read the Draft Environmental Impact Statement (DEIS) and the environmental commitments that are being made to transit, I have the following comments that I respectfully request that SCDOT take into consideration for the upcoming project:</p> <ul style="list-style-type: none"> • Regarding Park and Ride Lot, The COMET requests that SCDOT work with The COMET to provide park and ride lots at major interchanges along the corridor. These park and ride lots should be located at major shopping center and plazas and/or constructed by SCDOT for use by The COMET. Access to these park and ride lots would be critical to ensure that the bus can enter and exit the freeway easily with limited delay. The COMET has Route 82X between Palmetto Health Parkland and Downtown Columbia and proposed Route 93X between Newberry and Downtown Columbia that is due to start in May 2019. The COMET will be working on a comprehensive Short-Range Transit Plan that will include a component for a park and ride lot study. The COMET would like to collaborate on this matter. These park and ride lots whether constructed or through joint use agreements should be available to serve vanpools and carpools. Park and Ride Lots should be considered in Newberry, Chapin, Ballentine, at Broad River, Harbison, St. Andrews, Bush River and Colonial Life at the minimum. • Regarding transit bus stops and signal priority, bus stop improvements and the installation of transit signal priority along Broad River Road between Harbison Boulevard and Greystone Boulevard, along St. Andrews Road between Harbison Boulevard and Broad River Road, along Bush River Road between St. Andrews Road and Broad River Road, along Greystone Boulevard between I-126 and Broad River Road and along Elmwood Avenue between I-126 and Bull Street will be critical towards improving the flow of traffic, keeping buses on time and providing accessible amenities for increased public transit use based on this construction project. The COMET Routes 82X, 83L, 84, 93X and The 801 will benefit tremendously from transit signal priority and bus stop improvements. Bus stop improvements can include the pouring of a cement pad for loading and unloading with access to the sidewalk, and at popular bus stops, the placement a bench or shelter. The COMET could work with SCDOT on the identification of these bus stops.

Park-and-ride lots at major interchanges along the corridor: As noted in Chapter 2 of the Draft Environmental Impact Statement (DEIS), the project team would study existing Park-and-Ride facilities throughout the Carolina Crossroads Project area and develop a plan to identify and address existing and future needs to ensure a continuous and adequate supply of parking for rideshare commuters. You can read more about this in Chapter 2, Section 2.1.8.2 (pages 2-62 through 2-64) of the DEIS. The Park-and-Ride study includes two main phases: 1) service demand screening and 2) park-and-ride site identification including a recommendation for implementation. Based on the study completed, SCDOT will work with CMRTA and CMCOG to develop two park and ride lots to improve mobility during construction and mitigate congestion resulting from the project. SCDOT will construct the two sites and maintain them during construction of the project. Engineering feasibility, timing and continued maintenance of the site(s) would be determined in coordination with CMRTA and the CMCOG prior to start of construction. In the event a permanent site cannot be developed, SCDOT will work with CMRTA and CMCOG to identify and provide funding for existing parking lots that could be leased for park and ride use. These details are published in Final Environmental Impact Statement (FEIS).

Regarding transit bus stops and signal priority improvements: As noted in Section 2.1.2.2 of the DEIS, SCDOT is prepared to assist COMET/CMRTA efforts by accommodating bus stops at interchange locations. Improvements to the bus stops fall outside of the scope for the CCR project since the stops are already part of the existing environment. Regarding traffic signal priority (TSP), SCDOT has conducted an analysis of potential TSP upgrades in the Carolina Crossroads project area to help facilitate the movement transit vehicles. Installed at intersections near the CCR project, TSP does allow for improved bus on-time performance. However, current transit level of service at locations within the corridor is at hourly headway to and from downtown Columbia, with two of the three routes providing intermittent service during the day. In addition, TSP does not benefit all other commuters traveling within the CCR project area or those not traveling in transit vehicles such as carpools and vanpools near the project area. SCDOT has concluded that TSP will not be implemented as part of the project.

Bus on shoulder: Given the complexity of the construction within the CCR project area (e.g. lane closures, shifting, construction material holding areas, etc.) and the safety of personnel working on site, a bus on shoulder (BOS) pilot during project construction would not be feasible. In addition, following project construction, BOS would not be warranted since the Recommended Preferred Alternative (RPA) would result in travel time savings, acceptable level-of-service (LOS), and improved speeds. You can read more about the traffic and travel benefits of the RPA in Chapter 2 of the DEIS.

High occupancy vehicles and review of HOV feasibility: As detailed in Section 2.1.8.1 of the DEIS (page 2-61 through 2-62) high occupancy vehicle (HOV) lanes were considered as part of the proposed improvements for the CCR project. However, the benefits to LOS, travel time, and speeds derived from the planned improvements to the corridor via the reasonable alternatives are projected to offset the need or benefit of including an HOV lane at this time. Regarding the request of an ongoing five year review of the feasibility to implement HOV lanes in the corridors, this is a practice SCDOT already performs as part of ongoing corridor analyses.

Table 1 Agency Comment/Response Matrix

Date	Agency	Comment
September 23, 2018	The COMET	<p>In addition, The COMET would request consideration from SCDOT on the following concepts:</p> <ul style="list-style-type: none"> • Bus on shoulders demonstration project to allow The COMET buses to travel along shoulders during peak periods only, on weekdays along the I-26 and I-126 corridors, provided that it is safe for the implementation of this demonstration project. North Carolina has successfully implemented this program: https://www.ncdot.gov/divisions/public-transit/Pages/bus-on-shoulder-system.aspx and http://www.fdot.gov/Transit/Pages/Bus_on_shoulders_Guidance_013117.pdf • High Occupancy Vehicle (HOV) lanes in the future can provide value to The COMET, carpools, vanpools and zero emission vehicles. While the project recommends against HOV lanes today, in the next 10, 20 or 30 years, I-26, I-20 and I-126 could end up being coming significantly congested. The COMET would recommend that SCDOT review every 5 years the feasibility to implement HOV lanes along these corridors as a business practice and that the far-left lane is built with the intent to accommodate HOV in the future with appropriate stripping and signage. • Operational subsidy for Routes 82X, 83L, 84, 93X and The 801 will provide The COMET the ability to maintain the current level of service due to increased traffic conditions that Broad River Road, Bush River Road, St. Andrews Road, Greystone Boulevard and Elmwood Avenue are anticipated to have. The COMET would recommend a subsidy level that could allow for adding 30-minute service along Routes 84 and The 801 between 6 a.m. and 7 p.m., Monday-Friday, the additional 1 round trip added to Route 93X between Newberry and Downtown Columbia, Monday-Friday, 30-minute service on Route 82X between 6 a.m. and 9 a.m. and 4 p.m. and 7 p.m., Monday through Friday and the addition of midday service to Route 83L, seven days a week between 12 p.m. and 4 p.m. The estimated annual cost for this operational subsidy is \$750,000 with a 3.5% CPI and is requested only through the duration of the project. The COMET is not in a position to expand transit services without this mitigation funding to act as a mitigation for this project due to the limited local funding source available. • Update Central Midlands Council of Governments Commuter Rail Assessment will provide an updated assessment on how commuter and/or intercity rail could potential serve the Central Midlands region over the next 20 years. This assessment can evaluate demand, right-of-way, costs, equipment needs, corridor evaluation and how to fund the initial capital and ongoing operational costs. This assessment could provide value for if and when congestion increases in the I-26, I-20, I-1-126 corridor and there is a need to develop alternative solutions. • Support alternative transportation options – through public outreach, during the construction, as the general public would look for alternative ways to avoid the traffic congestion, SCDOT should include in its public awareness campaigns to encourage people to take advantage of alternative transportation measures – public transit, carpools, vanpools, walking and bicycling. The promotions of these alternatives could help increase awareness and provide some reduction to any potential traffic congestion that the project area may endure. The COMET will be implementing a vanpool program in conjunction with Enterprise Rideshare and this could be the perfect opportunity for those in the corridor to consider forming vanpools. • Construction updates and notifications to The COMET at least 24 hours in advance when detours, road closures or any changes in traffic patterns is very important, so that The COMET operations can make any necessary adjustments to transit service and to notify the riding public of such changes.

Response

Operational subsidy: Once initiated, construction would impact everyone traveling in the corridor, from freight to transit and beyond. SCDOT will work with CMRTA to monitor bus operations and capacity during construction and in the event that capacity is reached, SCDOT will provide support in determining funding for enhanced bus service, based upon a framework to be agreed upon with CMRTA. These details are published in Final Environmental Impact Statement (FEIS). Other necessary measures, such as early and frequent communication will be set in place to ensure that those traveling in the corridor during the construction phase are well informed. As noted in Section 3.13.3 of the DEIS, a comprehensive public information program would be implemented to inform the public about construction activities and to minimize impacts. Information would include the periods when construction is scheduled to take place, potential impacts to traffic operations, work hours, and alternate routes. Construction signs would be used to notify motorists about work activities and changes in traffic patterns, such as detours. In addition, night and weekend work could be scheduled to shorten traffic impacts during peak hours. COMET would be included in the dissemination of this information.

Update Central Midlands Council of Governments Commuter Rail Assessment: As noted in Chapter 2 of the DEIS, commuter rail was assessed as part of the alternatives analysis for the CCR project. It was determined that implementation of mass transit would not be able to sufficiently reduce congestion or improve mobility within the project corridor and would not meet the purpose and need of the project if implemented as a stand-alone alternative. Additionally, the addition of mass transit would not enhance safety, nor improve freight mobility. For these reasons, the mass transit alternative was not advanced as a stand-alone preliminary alternative for the proposed Carolina Crossroads project. However, the CMCOG and COATS' inclusion of mass transit in the region's LRTP and other plans and studies ensure commitments to it in the future. Though it would go beyond the CCR study limits, an update to the commuter rail assessment could be a worthwhile effort for the entire Central Midlands Region. If the COMET and/or other regional agencies advance additional analysis, please include SCDOT as a stakeholder in any working groups or committees that are formed.

Transportation demand management strategies: Encouraging effective transportation demand management (TDM) strategies before and during project construction would behoove all. SCDOT agrees that there should be close communication with COMET to share commute mitigating measures to the public. As noted above, a comprehensive public information program would be implemented to inform the public about construction activities and to minimize impacts. In addition, SCDOT will implement a congestion management tool/commuter services application to improve mobility during construction and mitigate congestion by informing commuters of available options such as carpooling, ridesharing, transit and other commuting options.

Construction updates and notifications: SCDOT is in agreement with the suggestion to keep the COMET informed well in advance for any potential service disruptions in order to take any necessary operational mitigation efforts during the project construction phase. We look forward to continue the conversation and identifying the key personnel that will be communicating during the construction phase.

Table 1 Agency Comment/Response Matrix

Date	Agency	Comment
Local Municipalities and Agencies		
September 24, 2018	Richland County	<p>Richland County staff recently attended two meetings - a stakeholder meeting and an open house - to hear updates on ongoing Carolina Crossroads project. After reading the Draft Environmental Impact Statement (DEIS), reviewing the website and speaking with members of the SCDOT Project Team, Richland County has several comments and concerns, as follows, the majority of which deal with the mobility goal and defining metrics, multimodal transportation, access management, and community impacts. In general, the conceptual improvements are expected to relieve congestion. Likewise, this congestion relief is also spoken of in terms of improving mobility. However, the means by which this term is being defined and the metrics used to measure it seems to fall short of true mobility. Mobility is about the movement of people via multiple/alternative transportation modes, rather than single-occupancy vehicles (SOYs) and, thereby, the reduction of traffic. Mobility enhancements typically focus on a reduction of dependence on SOY s and the introduction of bike, pedestrian, and mass transit infrastructure (and/or other multimodal measures). The mobility benefits provided under RA 1 (Representative Alternative 1, which is the Recommended Preferred Alternative) (and other alternatives in general) are substantiated via engineering and traffic metrics only, instead of being assessed for impacts on mobility as well, as the two-part project goal suggests they should be. These include engineering metrics such as level of service (LOS) improvements, geometric reductions and increase in speeds and decreases in travel times. These improvements look to increase the amount of SOY s, not people in general, and allow that automobiles move through the system as quickly as possible. The resultant benefits do not achieve high results in people’s mobility but in vehicles’ traffic metrics. This includes travel time savings, travel time reliability, vehicle operating costs, accident cost savings, emissions cost savings, freight inventory cost savings and pavement maintenance cost savings. As such, the core issue is with how mobility has been defined and the “mobility” metrics that have been used to determine the appropriateness of previous potential alternatives in earlier screening processes, along with which of and how RAI ‘s improvements will be undertaken. Multimodal uses for the system, such as transit infrastructure and access, are noted in part as why the project is needed. The DEIS describes that improving access to the existing transit system should take place. However, a limited scope has been used in addressing transit possibilities as an alternative, primarily due to not meeting the engineering and traffic metrics which have been utilized throughout the screenings. In the preliminary screening process, mass transit and transportation system management (TSM) options were evaluated. These were considered as stand-alone options, where they were assessed in a vacuum as one single implementable solution to the breadth of issues to be addressed. As such, the transit options and TSM did not meet the stated purposes of improved mobility, reduced congestion and subsequent needs. If the proposed mass transit and TSM options were evaluated in tandem with one another, or as part of additional alternatives, it is likely they would have been able to meet the project purpose and needs. Even though mass transit alternatives were precluded from advancing as viable alternatives, SCDOT has stated it will accommodate bus stops at interchanges and give them priority at signaling. Additionally, two express routes are being evaluated by the COMET/CMRTA which would utilize the system features. Further, park and ride services will be evaluated by SCDOT for the study area where potential service locations will be recommended. Access management and community impacts affect each other in turn. These two factors both deal with peripheral elements that will most directly affect adjacent neighborhoods and County citizens. The DEIS says little about access management and community impact mitigation.</p>

Prioritization of movement of people and goods and mobility metrics utilized: The Purpose and Need for the proposed Carolina Crossroads project is to reduce traffic congestion and improving mobility. In developing the Purpose and Need for the project, it is noteworthy that according to the 2035 Long Range Transportation Plan (LRTP) user survey, 97% of those in corridor travel by car, and the most important travel issue was congestion. Maintaining and improving existing roads is where respondents felt they would most support financial expenditure (see Purpose and Need Report – Appendix A to the DEIS). The 2040 LRTP notes that the interstate system is critical to emergency evacuation, tourist traffic, increasing reliance on motor freight carriers, and to the growth and international freight movements through the Port of Charleston. These points necessitate a holistic review of how the corridor is utilized. As such, the project team has focused on the users of the system, including personal automobiles, commercial vehicles, and freight carriers, giving priority and consideration to all three within the mobility metrics of the alternatives analysis. Multimodal features: SCDOT realizes that multi-modal options are part of a larger mobility solution for the Midlands region. While mass transit alone would not meet the project purpose and need, various transit components were considered as part of the project including high-occupancy vehicle (HOV) lanes, bus on shoulder (BOS) and other congestion management tools to decrease vehicle miles traveled in the corridor.

HOV lanes were considered as part of the proposed improvements, and it was determined that the inclusion of HOV lanes is not warranted. The Recommended Preferred Alternative would provide improved level of service, speeds, and travel times equal to or greater than those an HOV facility could provide. Additional information about this analysis is included in Chapter 2 of the DEIS (see pages 2-61 through 2-62). In addition, SCDOT will implement a congestion management tool/commuter services application to improve mobility during construction and mitigate congestion by informing commuters of available options such as carpooling, ridesharing, transit and other commuting options. These details are published in the Final Environmental Impact Statement (FEIS).

Mass transit was one of the alternatives identified and considered the current availability of public transit operators and services operating in the vicinity of the Carolina Crossroads Project. The data gathered for the Carolina Crossroads Project showed that mass transit alone would not sufficiently meet the purpose and need of the project to reduce congestion and improve mobility within the corridor. Commuter rail/mass transit would contribute a less than 2% reduction in vehicles. Additionally, the addition of mass transit would not enhance safety, nor improve freight mobility. See Section 2.1.3 in the DEIS (pages 2-14 and 2-15) for more detail.

As part of the Carolina Crossroads Project, the project team studied existing Park-and-Ride facilities throughout the Carolina Crossroads Project area to develop a plan to identify and address existing and future needs to ensure a continuous and adequate supply of parking for rideshare commuters. You can read more about this in Chapter 2, Section 2.1.8.2 (pages 2-62 through 2-64) of the DEIS. Based on the study completed, SCDOT will work with CMRTA and CMCOG to develop two park and ride lots to improve mobility during construction and mitigate congestion resulting from the project. SCDOT will construct the two sites and maintain them during construction of the project. Engineering feasibility, timing and continued maintenance of the site(s) would be determined in coordination with CMRTA and the CMCOG prior to start of construction. In the event a permanent site cannot be developed, SCDOT will work with CMRTA and CMCOG to identify and provide funding for existing parking lots that could be leased for park and ride use. These details are published in the FEIS. Additionally, as also noted in Section 2.1.2.2, SCDOT is prepared to assist COMET/CMRTA efforts by accommodating bus stops at interchange locations. As mentioned in Chapter 1 of the DEIS, there is a need for additional bicycle and pedestrian infrastructure within the study area. The design of connections to pedestrian and bicycle facilities and the accommodations for planned facilities will be determined as design progresses on the Recommended Preferred Alternative. You can read more about this, as well as accommodations during construction, in Chapter 2 of the DEIS (see page 2-63) and Chapter 3.13 (see page 3-369).

Access management features: During the alternatives development process, the project team evaluated a variety of interchange types at each interchange location. Each interchange type was evaluated to determine whether it would help meet the purpose and need of the project. Specifically, each was evaluated on its ability to: 1) Reduce the number of conflict points currently being experienced by users of the mainline and/or the crossing roadway; 2) Improve the operations on the mainline; 3) Improve the connections to/from the mainline; 4) Reduce geometric deficiencies currently on the mainline and/or crossing roadway; and 5) Provide adequate capacity in the future (2040). You can read more about the interchange types evaluated in Chapter 2 of the DEIS (see section 2.1.5.1) and the merits of each at each interchange in the Alternatives Development and Screening Report, Appendix C to the DEIS. Given the current stage of the proposed project, engineering design has not progressed enough to provide information on access management features. As the design progresses, the design-build contractor would be required to comply with SCDOT access management standards.

Mitigation: The proposed mitigation measures of the project has been publically shared with the public, stakeholders, and jurisdictions through dissemination of the DEIS and are documented as Environmental Commitments. As additional, or more detailed, mitigation measures are developed through final design, jurisdictions and stakeholders would continue to be included where warranted.

Table 1 Agency Comment/Response Matrix

Date	Agency	Comment
September 24, 2018	Richland County	<p>These are elements that will then be mitigated during the design-build phase of the projects. In general, the DEIS gives possible design features that may be included such as adding two-way turn lanes, driveway consolidations, raised medians and other traffic measures such as parking restrictions, speed measures (only mentioned as an increase and not decrease) and changing signals to roundabouts. There are two areas of concern when dealing with access management and the community. One location is the Broad River Rd. interchange at 1-20 and the other will be the new interchange at Colonial Life Blvd. interchange. Access management will be the biggest concern when it comes to the Broad River Rd. interchange, particularly keeping and extending sidewalks. The type of proposed interchange, single point urban interchange (SPUI), will have limitations on pedestrian crossings and any potential bike use because of longer signal phasing. The Penny Program is coordinating with SCDOT on future programming as it relates to the Broad River Road Corridor Neighborhood Master Plan improvements, which should limit discrepancies between Carolina Crossroads and Penny projects. For the Colonial Life Blvd. interchange, the primary concerns will be community impacts from higher speed travel. The new interchange is proximate to a residential neighborhood area. Colonial Life Blvd. will now be a focal point for traffic entering and exiting 1-126. Per conversations at the Carolina Crossroads open house, the lone traffic calming measure being considered for this new interchange will be a single traffic light. As this interchange's context is heavily residential, greater attention should be placed upon traffic calming and other TSM measures (emphasis added). Moreover, inclusion of pedestrian infrastructure needs to be addressed as the transition from interstate to neighborhood occurs quickly. SCDOT has stated it will work to create new connections regarding bike and pedestrian facilities. County staff has a particular interest in seeing this come to fruition and intends to remain engaged throughout the design-build process. Since, again, the Carolina Crossroads improvement project narrowly defines mobility within its scope of work, limited to SOVs and engineering metrics, alternatives development has been disadvantaged in what is able to be effectively evaluated and moved forward as potential solutions for improving true mobility. Multimodal and TSM options have not been adequately included, nor holistically considered, as adequate measures alongside other means for improving the corridor and study area. Access management and mitigation for traffic in transition areas need to be given greater priority and be addressed with context-based solutions. The "Environmental Commitments to Projects," which provides a list of environmental and community factors that SCDOT commits to as the project moves further along in the development process, is a particularly critical component of the DEIS and FEIS (Final Environmental Impact Study). This section is slated to include limited real mobility measures SCDOT plans to include as secondary features as part of the alternatives development process, such as bike-ped infrastructure, transit stop prioritization and park and ride service study and site recommendation. Critical to the successful implementation of the measures identified in this element will be the way mitigation for impacts is considered (which is not explicitly addresses within the DEIS). The guarantee of actionable methods for mitigation is warranted in order to make sure impacts are being properly addressed. General Comments for Moving Forward</p> <ul style="list-style-type: none"> • Prioritization of the movement of people and goods through various modes of transportation and not exclusively faster moving SOVs. • Use of mobility metrics beyond traffic and engineering criteria. • Multimodal features need to be moved forward into implementation as studies are completed. Priority should be given to expanding modal splits and reduction of trips within the corridor and study area as a means of congestion reduction.

Response

Accountability of Environmental Commitments: The “Contractor Responsible” measures listed in the Environmental Commitments section of the DEIS would be included in the contractor’s contract and must be implemented. It is the responsibility of the SCDOT Program Manager to make sure the commitments that are the responsibility of SCDOT are adhered to. This would be accomplished through tracking of environmental commitments through each stage of the proposed project – i.e., through final design, pre-construction, construction, and post-construction.

Traffic and Emergency Response Management: Once initiated, construction would impact everyone traveling in the corridor, from freight to transit and beyond. SCDOT will work with CMRTA to monitor bus operations and capacity during construction and in the event that capacity is reached, SCDOT will provide support in determining funding for enhanced bus service, based upon a framework to be agreed upon with CMRTA. These details are published in the FEIS. Other necessary measures, such as early and frequent communication will be set in place to ensure that those traveling in the corridor during the construction phase are well informed. You can read more about this in Section 3.3.13.3 - 3.13.4 of the DEIS.

Table 1 Agency Comment/Response Matrix

Date	Agency	Comment
<p>September 24, 2018</p>	<p>Richland County</p>	<ul style="list-style-type: none"> • Access management features developed during the design-build process need to include traffic calming measures beyond traffic signals. Priority should be given to measures which are context specific and look at safety, aesthetics and pedestrian friendliness. Access management features that allow for or increase traffic speeds should not be utilized in areas that quickly transition to residential in nature. For instance, smaller curb radii and similar features should be used near transition areas. • Sidewalk connections need to be kept and added where changes are being made to increase linkages and enhance pedestrian safety. Sidewalks should be included along new interchanges, and where SPUIs are implemented; signal phasing should allow for adequate timing for pedestrian or bike crossings. • Mitigation measures should be developed in concert with local jurisdictions and stakeholders as the design build process moves forward. This should include potential community impacts and environmental impacts. • Promises made as part of the Environmental Commitments need be upheld and accountability measures should be put in place with input from local jurisdictions and stakeholders. • Issues such as traffic and emergency response management during construction should be addressed, in detail, by the awarded design-build team. Further, all proposed plans pertaining to the aforementioned should be thoroughly vetted by impacted jurisdictions prior to starting of construction.
<p>Tribal</p>		
<p>August 20, 2018</p>	<p>Catawba Indian Nation</p>	<p>The Catawba have no immediate concerns with regard to traditional cultural properties, sacred sites or Native American archaeological sites within the boundaries of the proposed project areas. However, the Catawba are to be notified if Native American artifacts and/ or human remains are located during the ground disturbance phase of this project.</p> <p>If you have questions please contact Caitlin Rogers at 803-328-2427 ext. 226, or e-mail caitlinh@ccppcrafts.com.</p>

Response

In the event of inadvertent or post-review discoveries, the Federal Highway Administration (FHWA) and the South Carolina Department of Transportation (SCDOT) will ensure that your office and the appropriate state agencies will be notified immediately and all construction and ground disturbing activities within 200 feet of the discovery will be halted pending consultation with the concerned parties. Additionally, activities that have the potential to disturb cultural resources outside the areas specified in the reviewed documents are not approved and will not proceed until cultural resources review of the potential adverse effects in the new area have been completed.

We appreciate the Catawba Indian Nation Tribal Historic Preservation Office interest in the Carolina Crossroads project. If you have any further questions or concerns about the Project now or in the future, please do not hesitate to contact us.

Table 1 Agency Comment/Response Matrix

Date	Agency	Comment
Tribal		
September 12, 2018	United Keetowah Band of Cherokee Indians in Oklahoma	<p>Thank you for consulting with the United Keetoowah Band of Cherokee Indians in Oklahoma (UKB). Please accept this digital communication regarding: Carolina Crossroads 1-20/26/126 Corridor Improvement Project. Please be advised that the proposed undertaking lies within the traditional territory of the UKB. This opinion is being provided by Section 106 Projects Compliance Officer. The UKB is a Federally Recognized Indian Nation headquartered in Tahlequah, OK. We have no concerns with this project. As the project moves forward we request the following conditions be followed:</p> <p>Condition 1: Inadvertent Discoveries - In the event that human remains, burials, funerary items, sacred objects, or objects of cultural patrimony are found during project implementation, the proponent or his/her authorized agent shall cease work immediately within 200 ft of the find.</p> <p>They shall take steps to protect the find from further damage or disruption. They shall contact the THPO, Sheila Bird at (918) 871 -2852 [desk] or (918) 207-7182 [cell] to report the find. The THPO shall contact the appropriate law enforcement authority if human remains are found. No further work shall be allowed on the project until the THPO has approved a plan for managing or preserving the remains or items.</p> <p>Condition 2: Post Review Discoveries - In the event that pre-contact artifacts (i.e., arrowheads, spear points, mortars, pestles, other ground stone tools, knives, scrapers, pottery or flakes from the manufacture of tools, fire pits, culturally modified trees, etc.) or historic period artifacts or features (i.e., fragments of old plates or ceramic vessels, weathered glass, dumps of old cans, cabins, root cellars, etc.) are found during project implementation, the proponent or his/her authorized agent shall cease work immediately within 200 ft of the find. They then shall contact the THPO, Sheila Bird at (918) 871-2852 [desk] or (918) 207-7182 [cell] to report the find. No further work shall be allowed on the project until the THPO has approved a work plan for managing or preserving the artifacts or features.</p> <p>Condition 3: Activities that have the potential to disturb cultural resources outside the areas specified in the accompanying document(s) are not approved and will not proceed until cultural resources review of potential adverse effects in the new area has been completed.</p> <p>Please note that these comments are based on information available to us at the time of the project review. We reserve the right to revise our comments as information becomes available. If you have any questions or concerns, please contact our Section 106 Projects Compliance Officer, Charlotte.</p>

Response

In the event of inadvertent or post-review discoveries, the Federal Highway Administration (FHWA) and the South Carolina Department of Transportation (SCDOT) will ensure that your office and the appropriate state agencies will be notified immediately and all construction and ground disturbing activities within 200 feet of the discovery will be halted pending consultation with the concerned parties. Additionally, activities that have the potential to disturb cultural resources outside the areas specified in the reviewed documents are not approved and will not proceed until cultural resources review of the potential adverse effects in the new area have been completed.

We appreciate the United Keetoowah Band of Cherokee Indians in Oklahoma's (UKB) interest in protecting sites that are in the traditional territory of the UKB. If you have any further questions or concerns about the Carolina Crossroads I-20/26/126 Corridor Improvements Project now or in the future, please do not hesitate to contact us.



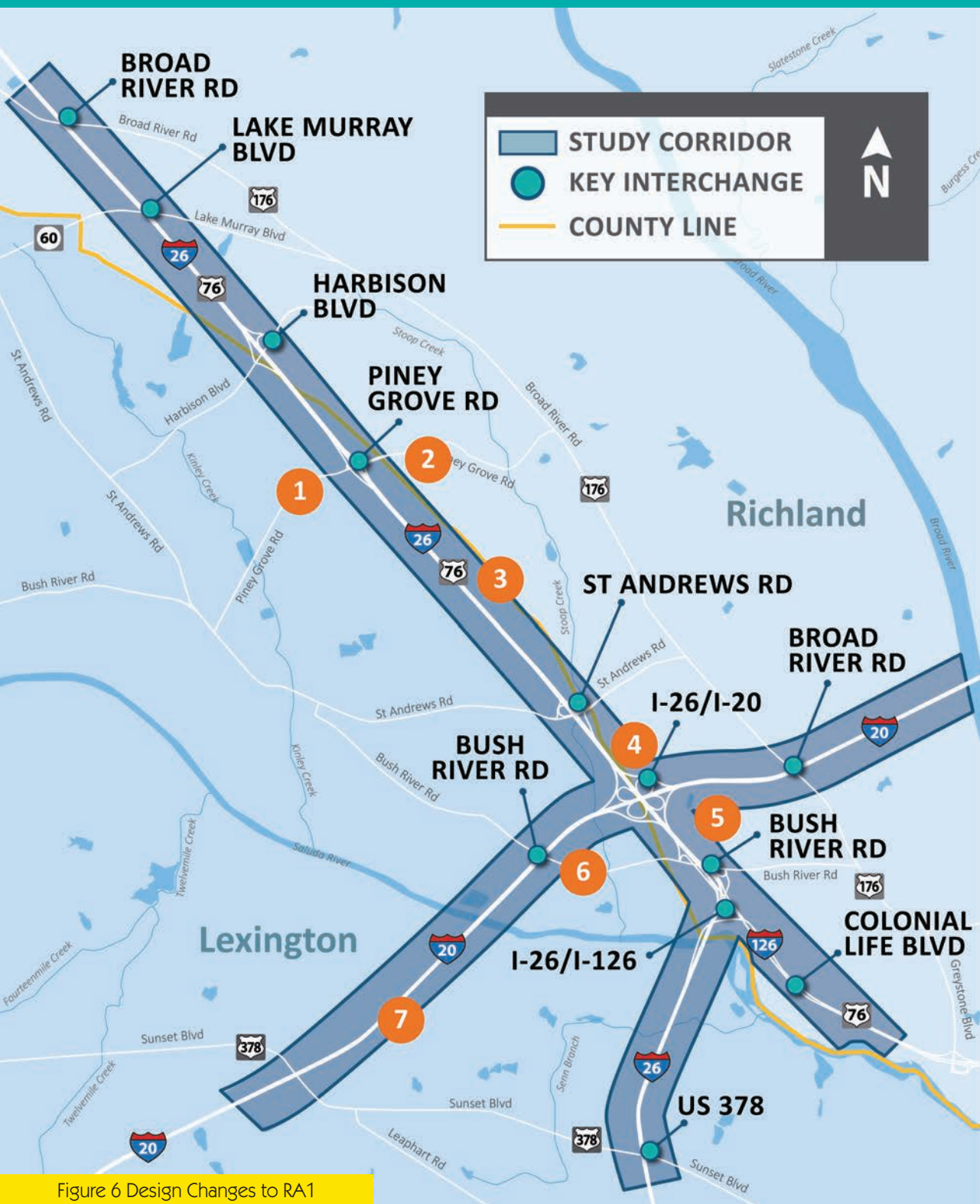
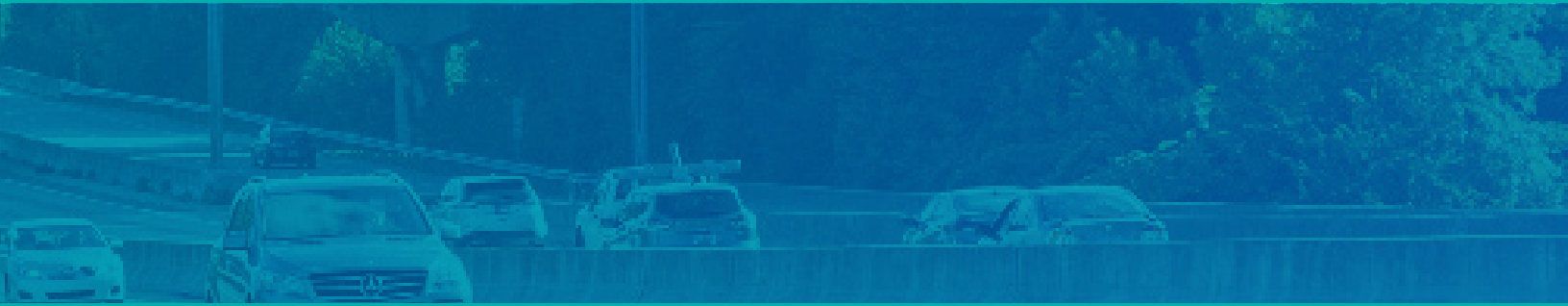
What changes were made to the Recommended Preferred Alternative since the Public Hearing?

In the early stages of the project, SCDOT received public comments requesting enhanced connectivity across I-26. To address these comments, the Tram Road and Beatty Road bridge was added to both RAs to provide a connection between Fernandina and Jamil frontage roads. In addition, this proposed bridge would have benefits for emergency response.

However, there was significant public feedback about the addition of the bridge during the public hearing and DEIS comment period indicating that the bridge was not desired by those living near the roadways it connected due to the potential for additional traffic in their neighborhoods. While the bridge does not affect the ability of the RPA to meet the primary purpose and need of the project, the removal of this feature would also not significantly affect the ability of this alternative to meet the purpose and need. Therefore, SCDOT elected to remove this bridge from the RPA.

Since the DEIS, the overall alignment and footprint of the RPA has not substantially changed. The most significant change is the removal of the Tram Road/Beatty Road overpass (Figure 7B). Other minor refinements have been made, primarily due to minor geometric revisions and updates to right-of-way lines. In some cases, these further refinements to design elements avoided, reduced, and/or minimized impacts to proposed right-of-way. Refinements include:

1. Harbison Boulevard: The following adjustments were made in the vicinity of the Harbison Boulevard Interchange (refer to Figure 7A):
 - a. Saturn Parkway: Saturn Parkway was shifted to the northeast towards I-26 to avoid relocation of the Comfort Suites Hotel at 750 Saturn Parkway.
 - b. Giles Parkway: With the RPA, Giles Parkway was moved farther west to accommodate the new travel lanes on I-26. This resulted in relocation of one strip mall containing up to five businesses at 735 Saturn Parkway, as well as two apartment buildings (20 units total) at the Country Walk Apartments, located between Giles Parkway and Saturn Parkway. In addition, there would be a drainage feature impacted as well as some relocation of utilities needed to maintain Giles Parkway. The purpose of maintaining Giles Parkway was to provide access to Giles Auto Repairs at 609 Giles Parkway. However, it was determined that removal of Giles Parkway would result in one less business and 20 less residential relocations overall, and access would be maintained to the strip mall at 735 Saturn Parkway and Country Walk Apartments via Saturn Parkway. Thus, the RPA was refined to remove Giles Parkway.



- 1 Minor alignment revisions to reduce impacts; Removal of Giles Parkway
- 2 Improvements to Piney Grove Road Minimized
- 3 Tram Road/Beatty Road Overpass Removed
- 4 Minor alignment revisions to reduce impacts
- 5 Gale Drive Realigned
- 6 Berryhill-Rockland Road connector bridge and Rockland Road realigned
- 7 Extended footprint to allow adequate space for lane tapering

Figure 6 Design Changes to RA1

- c. Fernandina Road: With the RPA, Fernandina Road was realigned and located between the Home Depot and the 34 Crestmont Apartments along Fernandina Court connecting to Woodcross Drive. However, there is a high-hazard dam adjacent to the intersection of the Fernandina Road with Woodcross Drive. To avoid any potential impacts to this high-hazard dam, the RPA was refined to keep Fernandina Road in its current location until it crosses west over and would impact some parking at Home Depot. This resulted in four less non-residential locations along Fernandina Court.
2. Piney Grove Road Interchange Adjustments: At the Piney Grove Road interchange (refer to Figure 7B), the RPA had proposed improvements on Piney Grove Road that extended past the I-26 on and off ramp intersections with Piney Grove Road. This included the addition of a second left turn lane for traffic going onto I-26 eastbound. In addition, due to access control, right-of-way acquisition was required on the northeast side of the interchange, requiring the relocation of both the Spinx Gas Station and Waffle House. After the public hearing, control of access was fully evaluated at the Piney Grove Road interchange and it was determined that access control was not needed, and the RPA was refined to remove the access control. This resulted in avoidance of relocating the Spinx Gas Station and Waffle House.
- 4. St. Andrews Road Interchange (refer to Figure 7C):
 - a. In the vicinity of the St. Andrews Road Interchange with I-26, Berryhill Road was realigned (refer to Figure 12). The RPA proposed realigning Berryhill Road further south from the I-26 mainline, resulting in right-of-way impacts to a business as well as Stoney Creek Apartments and Peachtree Place Apartments. With the Refined RPA, the Berryhill Road alignment would be shifted to the north closer to the I-26 mainline thus reducing the overall roadway footprint and impacts to land, parking lots, and other property features along on Berryhill Road.
 - b. Control of access limits and guidelines were applied to the interchange requiring a full access driveway for the Motel 6 parking lot in the southeast corner of the interchange to be revised to a right-in/right-out driveway. This, in conjunction with significant vertical differences between the surrounding roadways and the parking lot surfaces at the Motel 6, would likely result in significant impacts to the business. Therefore, it was determined that this property would be acquired.

5. I-20 Mainline in the eastbound direction (refer to Figure 7D):
 - a. The I-20 westbound alignment near the Broad River Road interchange was adjusted slightly to reduce impacts outside of the existing footprint. These minor shifts reduced actual property impacts but not with respect to relocations or access.
 - b. Gale Drive Realignment (refer to Figure 7E): With the RPA, Gale Drive would have been impacted by the widening of eastbound I-20, which would have eliminated connectivity between Fairhaven Drive, Luster Lane and Morninghill Drive. Gale Drive is being realigned in the Refined Recommended Preferred Alternative to maintain connectivity within the neighborhood road network.
 - c. Control of access guidance was applied to the interchange design resulting in additional property relocations. Specifically, access to two vacant gas stations on the southeast quadrant of the interchange would be restricted prohibiting access to Broad River Road. In addition, access to one vacant business in the northwest quadrant would also be restricted. Therefore, it was determined that these properties would be acquired.
6. I-20/Bush River Road interchange (refer to Figure 7E):
 - a. In the vicinity of the I-20/Bush River Road interchange area, the connection bridge between Berryhill and Rockland Road has been realigned to the west in order to provide better vertical and horizontal geometric alignment with Berryhill Road. Property impacts to businesses along Berryhill Road would be reduced based on potential vertical restrictions along parking areas and internal business park driveways.
 - b. Berryhill Road has been revised to provide a cul-de-sac near the current intersection with Bush River Road. This cul-de-sac is required based on geometric constraints with the proposed Bush River Road / I-20 interchange improvements, which would not permit access to Berryhill Road without significant property and relocation impacts to the businesses on the northeast side of the interchange. Traffic along Berryhill Road will now access Bush River Road by way of the Berryhill Road and Rockland Road connector bridge and be redirected to a full-access intersection on the southeast side of the interchange at Rockland Road and Bush River Road.
7. I-20 Mainline in the eastbound direction (refer to Figure 7F):
 - a. Adjustments to the interstate alignment and ramps between US 378 and I-26 along I-20 have been updated to provide better access to and from I-20. The construction limits within the Refined RPA right-of-way footprint along I-20 eastbound has been extended to provide for additional lane tapers and additional acceleration/auxiliary lane lengths in order to meet current design guidance. Although it does extend the overall construction footprint, no additional right-of-way impacts are associated with this revision.

Figure 7A Design changes to RA1 – at I-26/Harbison Boulevard Interchange



Figure 7B Design changes to RA1 – at I-26/Piney Grove Road Interchange

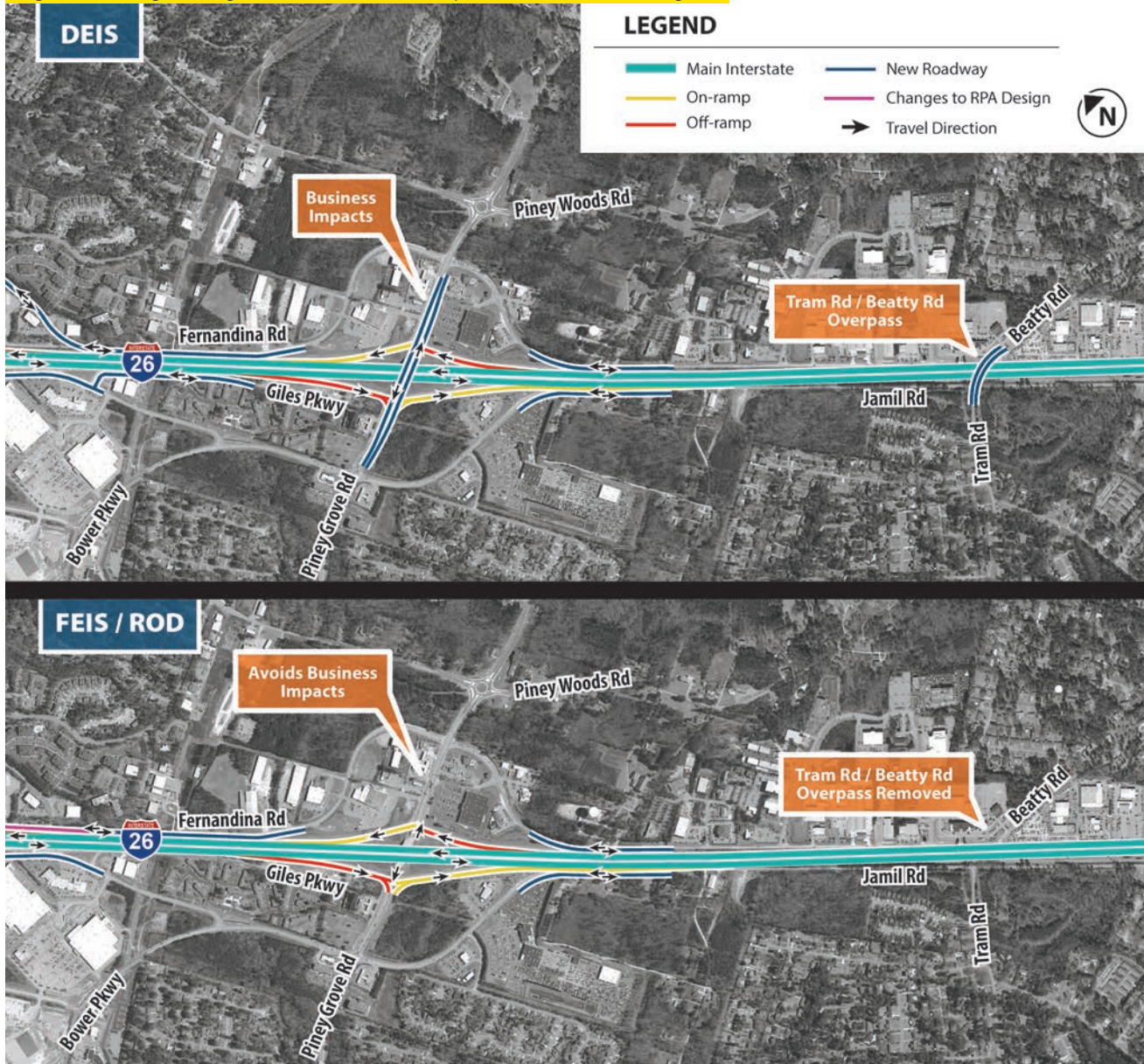


Figure 7C Design changes to RA1 – I-26/St. Andrews Road and Berryhill Road

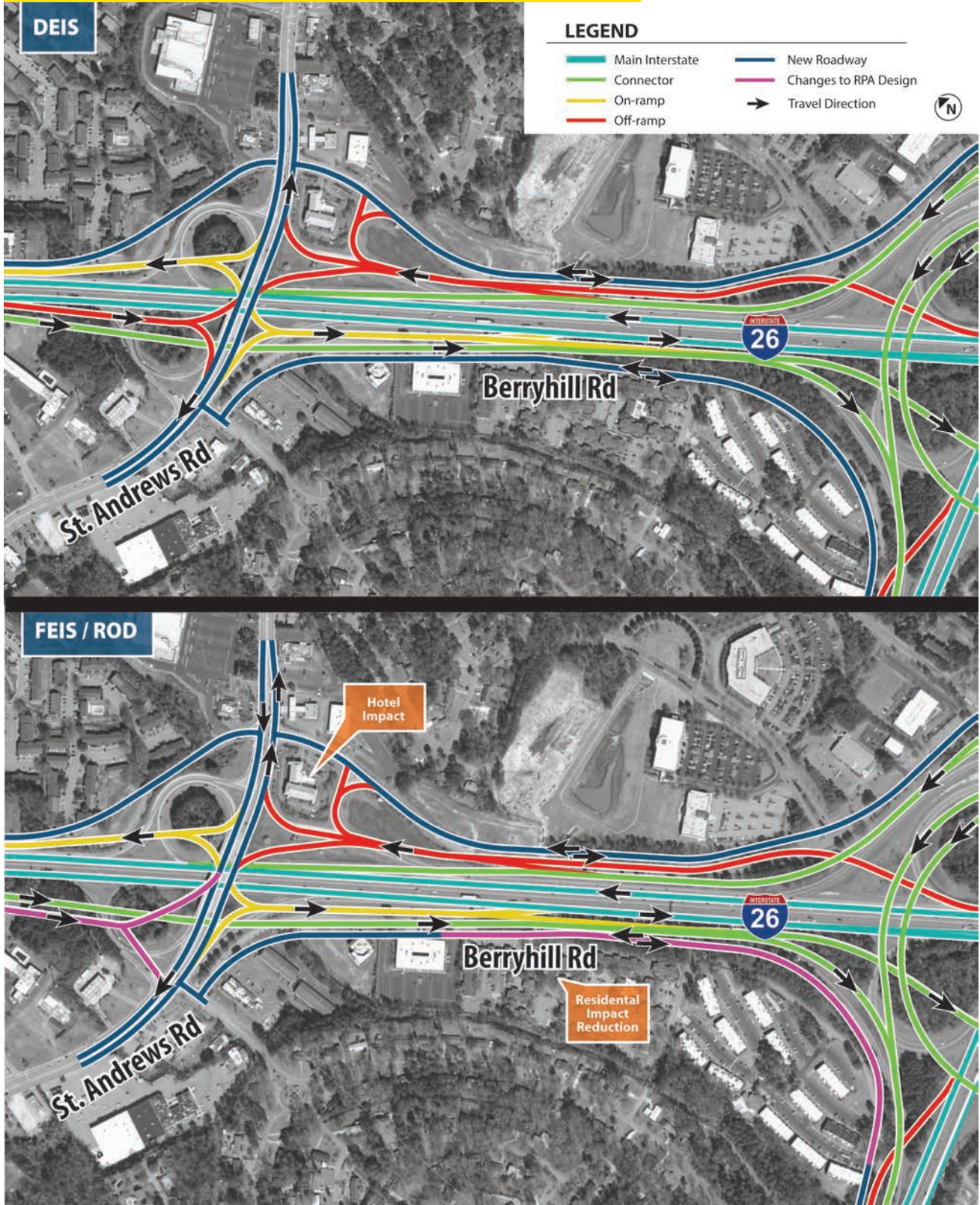


Figure 7D Design changes to RA1 – I-20/Broad River Road and Gale Drive Alignment



Figure 7E Design changes to RA1 – I-20/Bush River Road Interchange



Figure 7F Design changes to RA1 – I-20/US 378





What is the Selected Alternative?

Minor adjustments have been made to refine the RPA presented in the DEIS and at the Public Hearing. Based on public input and additional technical analysis, the changes to the RPA – resulting in the Refined RPA – are not substantial and the general alignment and function remain the same. Having considered the environmental records (i.e., the Carolina Crossroads DEIS and all associated technical reports), the mitigation measures and the written and oral comments offered by agencies and the public, it has been determined that the Refined RPA presented in the FEIS is the Selected Alternative. The Selected Alternative best meets the purpose and need of the project and has been chosen based on its overall benefits to traffic flow

throughout the region and on findings of a comprehensive environmental impact evaluation. The design process from the RPA to the Selected Alternative avoided, reduced, and/or minimized impacts to residences and businesses by adjusting roadway alignments, interchange configurations, and refinement of other geometric elements.

The Refined Recommended Preferred Alternative presented in the FEIS is the Selected Alternative.



**Reduced
Travel Time**



**Minimized
Impacts**



**Lowest
Construction
Cost**



What impacts are anticipated with the Selected Alternative?

The National Environmental Policy Act (NEPA) requires SCDOT and FHWA to evaluate the potential social, economic and natural environmental impacts for the no-build and reasonable alternatives considered for a proposed project.

The Council on Environmental Quality (CEQ) and FHWA NEPA Implementing Regulations, along with FHWA Technical Advisory T.6640.8A, provides guidance with respect to NEPA requirements and on the preparation and processing of environmental and Section 4(f) documents. In addition, the proposed project must also comply with other federal and state laws and regulations, including, but not limited to Section 4(f) of the Department of Transportation Act, the National Historic Preservation Act (16 U.S.C. 470), and the Clean Water Act (33 U.S.C. 1251).

Environmental resources are the elements of the natural and built (man-made) resources. A DEIS and FEIS provides an inventory of the existing conditions of the environmental resources within the project study area. The DEIS analyzes how the reasonable alternatives could affect those resources, while the FEIS analyzes how the Refined Recommended Preferred Alternative could affect those resources in comparison to the RPA. The resulting potential effects of the project on the environmental resources are referred to as the “Environmental Consequences.” The environmental resources described in the FEIS include:

- 01. Land Use**
- 02. Farmlands**
- 03. Socioeconomics & Communities**
- 04. Air Quality**
- 05. Noise**
- 06. Water Quality**
- 07. Water Resources**
- 08. Floodplains**
- 09. Natural Resources**
- 10. Cultural Resources**
- 11. Section 4(f)**
- 12. Hazardous Materials**
- 13. Construction**
- 14. Energy**
- 15. Indirect and Cumulative Effects**
- 16. Short-Term Uses versus Long Term Productivity**
- 17. Irreversible and Irretrievable Commitment of Resources**
- 18. Permits**

This FEIS provides a description of the current conditions in the project study area, a description of the impacts to the human and natural environment that could be expected from the Refined Recommended Preferred Alternative in comparison to the Recommended Preferred Alternative in the DEIS, and the mitigation measures that would be implemented to address the impacts. This ROD/Summary discusses impacts from the Selected Alternative compared to the RPA from the DEIS.



The potential environmental effects presented in the FEIS are based on refined conceptual engineering designs. A study area was identified for each environmental resource. The study area for each resource includes the anticipated construction footprint to determine direct impacts, as well as other factors such as travel patterns, geographical boundaries of neighborhoods, and others. The project team utilized these boundaries to quantify

the impacts of the Selected Alternative on the environmental resources previously noted. A summary of the analysis that was conducted for each resource is included on the following pages, with references made to pertinent sections of the FEIS where additional details can be found. A summary of impacts of the Selected Alternative compared to the RPA is included in the table on page 44.

Table 2 Level 3 Screening Criteria

Minimize Environmental Impacts

		No-Build	Recommended Preferred Alternative from DEIS	Selected Alternative
Property Impacts				
Full Acquisitions	Single Family		20	21
	Multi-Family (# of units)	-	90	74
	Retail/Commercial/Office/Industrial	-	46	47
	Storage (business/units)	-	2 / 1,050	2 / 1,050
	Institutional	-	4	3
	Billboards	-	4	27
Partial Acquisitions	Residential	-	36	36
	Commercial	-	190	190
Section 4(f) Sites Impacted		-	0 (de minimis)	0 (de minimis)
Historic Impacts		-	None	None
Wetland Impacts*	Fill (acres)	-	6.55	6.88
	Ponds	-	0.02	0.01
Stream Impacts* (linear feet)		-	15,750	16,251
Floodplains** (acres)	Zone AE	-	15.94	17.18
	Zone AE - Floodway	-	6.97	7.37
Water Quality*	High Quality Streams (linear feet)	-	2,182	2,567
	Wetlands (acres)	-	2.38	2.39
Hazardous Material Sites		-	18	18
Community Impacts				
Columbiana				
Seven Oaks				
Saluda				
Riverbanks				
Harbison				
St. Andrews				
Broad				
Environmental Justice	-	No	No	
Census Blocks (# of blocks)	-	20	19	

*Wetland and stream calculations made using preliminary jurisdictional determination

**Wetland and stream calculations reflect impacts from proposed project and do not include existing impacts

**Floodplain impacts in Level 3 Screening are based on proposed project construction limits + 30' buffer at Saluda and 20' buffer in all other locations

■ Low Impact Mobility, Access and Safety Visual/Aesthetics Neighborhoods
■ Medium Impact Land Use Community Services

What are the impacts of the proposed project?

01.

Land Use

Local jurisdictions, including Richland and Lexington counties, and the CMCOG, are responsible for land use planning within the Carolina Crossroads corridor. These entities address existing and future land use in comprehensive plans and other planning documents.

Overall, the proposed project will directly convert existing non-transportation land uses to transportation uses, and the conversion will be the same between the RPA and the Selected Alternative at the corridor level (Refer to Table 3.) Anticipated land use changes will be compatible with existing uses and will be consistent with regional and local land use plans.

Refer to: Chapter 3, Section 3.1

02.

Farmlands

The Farmland Protection Policy Act (FPPA) of 1981 is intended to minimize the impact federal programs have on the unnecessary and irreversible conversion of farmland.

The Selected Alternative is located within land that is currently, or is intended to be, developed with transportation, residential, and commercial uses; therefore, the project is exempt from the FPPA and no impacts are anticipated.

Refer to: Chapter 3, Section 3.2

Table 3 Direct Land Use Impacts at Interchanges

Interchange	Land Use	RPA	Selected Alternative
I-20 / Bush River Road	Acres Converted	18.6	18.6
I-20 / I-26	Acres Converted	35.2	35.2
I-20 / Broad River Road	Acres Converted	5.5	5.5
I-26 / Broad River Road	Acres Converted	3.2	3.2
I-26 / Lake Murray Blvd	Acres Converted	1.4	1.4
I-26 / Harbison Blvd	Acres Converted	11.3	11.3
I-26 / Piney Grove Road	Acres Converted	7	7
I-26 / St. Andrews Road	Acres Converted	15.7	15.7
I-26 / Bush River Road	Acres Converted	20.7	20.7
I-26 / I-126	Acres Converted	20.8	20.8
I-26 / Sunset Blvd	Acres Converted	1.2	1.2
I-126 / Colonial Life Blvd	Acres Converted	14.9	14.9
Total		155	155

Existing Land Use:

Existing land use in the project study area is predominately residential.



03.

Socioeconomic & Communities

Community impacts are anticipated with the proposed improvements of the Carolina Crossroads. These impacts will result primarily from increased noise levels along the corridor, changes to access/travel patterns and from right-of-way needs resulting in displacements of residential and commercial properties. The Selected Alternative would reduce the number of relocations within the project area. The RPA would have 110 residential relocations and 1,106 non-residential relocations (including personal property relocations of 1,050 storage units and 4 billboards), whereas, the Refined RPA (Selected Alternative) would have 95 residential relocations and 1,129 non-residential relocations (including personal property relocations of 1,050 storage units and 27 billboards). The overall reduction in residential relocations is due to design modifications made to the RPA. Pages 31-40 have a summary of these design revisions. The impacts will affect all populations equally. Impacts to minority and low-income populations will not be disproportionately high and adverse. Benefits resulting from the proposed project are expected to be equitably distributed throughout the communities. Land acquisitions of properties, residential, and businesses will be conducted in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (49 CFR Part 24). Relocation resources are available to all residential and business relocates without discrimination. Written translations of vital documents will be provided for Spanish language-speaking populations, as well as other measures determined by SCDOT to ensure meaningful access to project information. Translators will also be available to Limited English Proficiency (LEP) populations during the ROW acquisition process.

SCDOT will coordinate with local jurisdictions to accommodate bicycle/pedestrian facilities where appropriate.

Additionally, traffic that normally would have used Bush River Road at I-26 will use the interchange at Colonial Life Boulevard that will be reconfigured to provide access to each direction of I-126. Appropriate signage will be placed to direct drivers accordingly.

During construction, the contractor(s) will develop a maintenance-of-traffic plan that outlines measures to minimize construction impacts on transportation and traffic. A requirement of this plan will be that access to businesses and residences be maintained, to the extent practicable, and that existing roads be kept open to traffic unless alternate routes are provided. Efforts will continue to be made to ensure meaningful opportunities for public participation and outreach during construction. Additional meetings will be held when warranted to address community concerns. In addition, during construction, the contractor will employ a community outreach program to keep the community informed of closures to expect (i.e., temporary, long-term), when to expect them, and who to contact, if needed.

Refer to: Chapter 3, Section 3.3

04.

Air Quality

The U.S. Environmental Protection Agency (EPA) has established the National Ambient Air Quality Standards (NAAQS) for atmospheric pollutants that are considered harmful to public health and the environment in accordance with the Clean Air Act of 1970, amended (CAA). As part of the NEPA process, transportation projects are evaluated for consistency with state air quality goals found in the State Implementation Plan (SIP). The study area is in attainment with the NAAQS. The Selected Alternative is not anticipated to put the region into non attainment or maintenance for any of the NAAQS.

The project will result in increased exposure to MSAT emissions in certain locations, but the Selected Alternative will not have an appreciable impact on regional MSAT levels.

Refer to: Chapter 3, Section 3.4

validate the traffic noise model. Once validated, the traffic noise model was used to predict the noise levels at noise-sensitive receptors for the existing condition, the No-Build condition in 2040, as well as the for the reasonable alternatives in 2040.

For the DEIS, a preliminary noise analysis was performed which determined that for the Recommended Preferred Alternative noise levels would approach or exceed the established FHWA Noise Abatement Criteria (NAC) for 1,892 receivers most of which are residential. Based on the preliminary noise analysis for the project, a total of 10 potential noise barriers were recommended for noise abatement mitigation.

As part of the FEIS, a detailed noise barrier analysis was completed to make a final determination on which of the potential barriers meets the SCDOT's feasible and reasonable criteria for the project. A total of 2,772 individual noise receptors were identified in the project area. More receptors were identified than in the preliminary analysis due to changes to the study area associated with the refinement in design. However, fewer impacts were identified in the detailed noise analysis than in the preliminary noise analysis, primarily due to the inclusion of elevation and obstacles such as jersey barriers and building rows, which tended to lower sound pressure levels at the receptors. Based on the detailed noise analysis

05.

Noise

Noise is sound that is undesirable because it interferes with communication and sleep, or is otherwise disturbing. Nearly 2,500 noise-sensitive receptors – e.g., residences and schools – were identified in the project study area. Noise readings were taken of the existing conditions to

Table 4 Summary of Impacts of Detailed Noise Analysis for the Existing Condition, No-build Alt, and Selected Alt

Noise Activity Category (NAC)	Existing	Future No-Build	Selected Alternative
Residential (NAC B)	539	546	651
Places of Worship, Playgrounds, Parks, Hospitals, etc. (NAC C & D)	99	99	123
Commercial (NAC E)	2	2	1
Total	640	647	775

for the Selected Alternative, noise levels would approach or exceed the Noise Abatement Criteria established in the SCDOT Traffic Noise Abatement Policy for 775 receivers. The majority of the impacts are to residences.

The use of structural barriers (freestanding walls) was considered for impacted receivers. There are feasibility and reasonableness criteria that must be met for construction of noise walls. Noise walls are assessed under the feasibility criteria first, and if all conditions are met are then considered for reasonableness. A third criterion the opinion of benefited residents and owners is then considered if the noise wall meets the first two criteria.

Based on the detailed noise analysis of the Selected Alternative, two barriers were determined to be feasible and reasonable. Ballots were sent to the residents and owners of each of the receivers benefited by the two barriers that were found to be feasible and reasonable (Barriers O and S) to solicit their opinion on the construction of those barriers. These barriers are located on the south side of I-20 from the Saluda River extending approximately 2,300 feet west (Barrier O), and on the south side of I-20 from the Broad River Road exit extending approximately 4,380 feet east towards the Broad River (Barrier S). Neither of the barriers received a majority of ballots expressing opposition to the barrier, so both barriers are still considered feasible and reasonable. Since there are residences located on the opposite side of the interstate adjacent to Barriers O and S, sound absorption materials will be added to the barriers to minimize noise reflectivity of the barriers towards receptors on the opposite side of the interstate.

Refer to: Chapter 3, Section 3.5

06.

Water Quality

The Clean Water Act (CWA) of 1972 regulates the discharge of pollutants into our state's waters. Many factors can affect water quality, including pesticides, heavy metals, livestock waste, litter, oils and grease, and other chemicals. Water from rain and runoff collect these pollutants and carry them into creeks and rivers.

The project study area is serviced by public water utilities, rather than private wells. Therefore, impacts to ground water resources are not anticipated. Likewise, impacts to drinking water treatment facilities will not occur. Both the RPA and the Selected Alternative would increase the amount impervious surface in the project study through the addition of travel lanes, collector-distributor roadways, and other improvements but would also remove some existing pavement, converting it back to a pervious surface. The RPA would increase the amount of impervious surface by approximately 602 acres, whereas, the Selected Alternative would increase the impervious surface by approximately 595 acres resulting in the potential for additional stormwater flowing into streams. This is an increase of 164 acres and 157 acres for the RPA and Selected Alternative respectively, over the acreage of impervious surfaces with the existing condition.

Stormwater modeling will be completed as design progresses for the recommended preferred alternative.

SCDOT will mitigate stormwater runoff by discharging stormwater into detention basins and/or vegetated swales before it is released into receiving waters.

SCDOT and FHWA best management practices guidelines will be followed during design and construction to minimize the amount of runoff pollution into streams.

Refer to: Chapter 3, Section 3.6



07.

Water Resources (Streams and Wetlands)

Water resources is a broad term that includes the water that can be seen on the Earth's surface such rivers, creeks, lakes, ponds, and wetlands. It also includes water that exists in the soil and rock below the surface of the Earth. Protection of water resources is important to maintaining the quality of life of the communities that rely on them.

Surficial ground water aquifers will be affected by pollutants associated with the construction and subsequent use of the project. Potential pollutants include sediment, petrochemicals, herbicides, fertilizers, oil, grease, heavy metals, and other hazardous materials. There are no critical aquifer protection areas or sole-source aquifers that will be affected by the proposed project.

Streams, wetlands, and ponds located within the proposed project limits would be impacted by the RPA, and Refined RPA through crossing, piping, or fill of these resources. The RPA would impact approximately 6.55 acres of potentially jurisdictional wetlands, 0.02 acre of ponds, and 15,750 linear feet of streams. The Refined RPA would impact approximately 6.88 acres of potentially jurisdictional wetlands, 0.01 acre of ponds, and 16,251 linear feet of stream.

Compensatory mitigation will be required to offset these impacts and a mitigation plan will be developed during the Section 404 permitting process.

The Saluda River is listed on the Nationwide Rivers Inventory and is a state designated Scenic River. Since the proposed crossings of the Saluda River will be located in the same locations as existing bridges, the Selected Alternative will not be in conflict with these goals.

Refer to: Chapter 3, Section 3.7





08.

Floodplains

Floodplains are low-lying areas adjacent to rivers, streams, and other waterbodies that are susceptible to inundation during rain events. These areas provide important functions in the natural environment such as providing storage for flood waters, protecting the surrounding environment from erosion, and providing habitat for wildlife. As such, agencies are required to take actions that reduce the risk of impacts to floodplains and their associated floodway, or main channel of flow.

The RPA and Selected Alternative will cross floodplains associated with the Saluda River, Broad River, Senn Branch, Stoop Creek, Moccasin Branch, and unnamed tributaries to Kinley Creek. Floodplain crossings predominantly occur near the Saluda River and the I-20/I-26 interchange.

The Selected Alternative will impact approximately 24.55 acres of floodplains, which is slightly more than the 22.91 acres of floodplains that would have been impacted under the RPA in the DEIS.

While all of the floodplain crossings will occur in areas of existing crossings, detailed flood studies of stream and river crossings will be required as part of the final roadway design. The bridges will be designed to FEMA standards

and will provide clearances above the flood elevation, and therefore, an increase in flooding is not anticipated.

A hydraulic analysis will be conducted for any encroachment of a FEMA-regulated floodplain.

The project will be designed in an effort to meet “No-Rise” requirements. In the event a “No-Rise” condition cannot be achieved, coordination with FEMA will require the preparation of a CLOMR (Conditional Letter of Map Revision)/ LOMR (Letter of Map Revision) package for the encroachment.

The Saluda River is also under the jurisdiction of the Federal Energy Regulatory Commission (FERC) because of its function as a hydroelectric power facility. As such, the project will require coordination with FERC due to the bridge crossings over the Saluda River. The coordination will occur during final design once specific impacts are identified.

Ongoing design efforts and coordination with resource and regulatory agencies will minimize floodplain impacts during the final design process.

Refer to: Chapter 3, Section 3.8

09.

Natural Resources

Natural resources include landforms and soils, natural habitat communities and wildlife, and federal and/or state protected species. Much of the project study area has been developed for residential and commercial land uses leading to the loss, alteration, and/or fragmentation of natural habitats including upland forests and wetlands and streams. However, natural habitat communities do exist within the project study area, including: mixed pine/hardwood forest, pine forest, bottomland hardwood forest, scrub-shrub, freshwater wetland, freshwater stream/tributary, and open water/pond. The project study area is also home to many terrestrial and aquatic species, including eight species protected under the Endangered Species Act.

Due to the current land use and high levels of development present, impacts to natural habitat communities and wildlife associated with the Selected Alternative will be relatively minor and primarily contained to existing fragmented or

disturbed upland habitats located adjacent to existing roadway interchanges. The Selected Alternative will impact approximately 230 acres of forest and scrub-shrub habitat community types, which is approximately 8 acres more than would have been impacted by the RPA.

It has been determined that the proposed project would have 'no effect' on six federally protected species, and 'may affect but not likely to adversely affect' two federally protected species. The US Fish and Wildlife Service concurred with these determinations; refer to Appendix B, Agency Coordination. Migratory birds and Bald Eagles would not be impacted by the proposed project.

Impacts to areas providing significant wildlife habitat, such as river floodplains and other large riparian buffers, will be minimized to the extent practicable through avoidance and minimization design measures.

Refer to: Chapter 3, Section 3.9



10.

Cultural Resources

Cultural resources include archaeological sites, isolated artifacts, historic architectural resources, and historic districts. A cultural resources survey was completed to identify and evaluate cultural resources that may be affected by the proposed Carolina Crossroads project.

One archaeological resource – the Saluda Canal – was identified in the corridor and recommended eligible for inclusion in the National Register of Historic Places (NRHP). The Selected Alternative will have no adverse effect on the Saluda Canal. The State Historic Preservation Office concurred with this finding. No additional properties proposed for, eligible for, or listed in the NRHP were identified within the study area. There are also no National Historic Landmarks or historic bridges located within the study area.

Refer to: Chapter 3, Section 3.10



11.

Section 4(f)

Section 4(f) of the U.S. Department of Transportation Act of 1966 (23 USC 138) applies to the use for transportation purposes of publicly owned parks, recreation areas, and wildlife and waterfowl refuges; and historic/archaeological sites listed on or eligible for listing on the NRHP regardless of ownership.

The Selected Alternative will impact the Saluda Riverwalk Extension, just as the RPA would. By constructing a bridge over the trail with a minimum height of approximately 17 feet, which will maintain adequate clearance for users of the facility. The long-term access and use of the trail will not be impacted by the project. However, construction of the project over the trail will require the temporary closure of the trail for safety reasons. These temporary closures will be coordinated with the City of Columbia Recreational Department and trail users will be notified with signage along the trail. When construction is complete, the condition of the trail will be equal to existing conditions. Since the project impacts will be temporary use and no permanent use to the trail or its access are anticipated, the proposed project is consistent with the use of the property and will not cause harm to the recreational value of the trail. A de minimis finding was proposed. FHWA sought public review and comment on this de minimis finding to provide the public an opportunity to review and comment of the Section 4(f) determination. No comments were received. FHWA approved the 4(f) de minimis finding for the project; refer to Appendix P. In addition, it was determined there would be no constructive use to the trail due to noise; refer to Appendix P for the Constructive Use Checklist.

Refer to: Chapter 3, Section 3.11



12.

Hazardous Materials

Hazardous materials are defined as any material that has or will have, alone or when combined with other materials, a harmful effect on humans or the natural environment. They may be characterized as reactive, toxic, infectious, flammable, explosive, corrosive, or radioactive.

The Selected Alternative will directly impact 18 properties with potential hazardous materials or contamination. The RPA in the DEIS directly impacted the same 18 properties.

Prior to construction, the project contractor(s) will perform Phase II Environmental Site Assessments (ESAs) on the properties identified within the footprint, potentially or on the adjoining properties or the ROW. Ultimately, the Phase II ESA will include environmental sample collection (e.g. soil, soil gas, and groundwater), specifically, in areas where a potential for disturbance of soil and/or groundwater exists. Hazardous materials will be treated and disposed of in accordance with state and federal laws and regulations.

Refer to: Chapter 3, Section 3.12

13.

Construction

Temporary impacts to the human and natural environments will occur during the construction of the Selected Alternative. Impacts for the Selected Alternative are the same as those impacted by the RPA in the DEIS.

Construction impacts will be temporary and intermittent and will come from disturbing the ground and operating construction equipment. Construction could affect both the human environment (e.g., businesses, noise environments, and traffic flow) and the natural environment (e.g., wetlands and streams). Most construction-related impacts will be associated with travel delays on the interstate and local streets. Mitigation techniques, which are discussed in Section 13.3.4 of the FEIS, will be used to minimize impacts during construction.

Refer to: Chapter 3, Section 3.13



14.

Energy

Transportation accounts for approximately 29 percent of U.S. energy demand and for more than 90 percent of all the oil used each year.

The Selected Alternative will increase overall energy consumption during peak periods as a result of more trips being taken within the corridor when compared to the No-build alternative. This is a direct result of achieving the purpose and need to reduce congestion and improve mobility within the corridor. The RPA in the DEIS would have resulted in the same overall energy consumption as well.

Refer to: Chapter 3, Section 3.14

15.

Indirect and Cumulative

This chapter assesses the indirect (secondary) and cumulative (incremental) effects of the proposed Carolina Crossroads project. Indirect impacts are caused by the proposed project and occur later or farther away (off site) but are still reasonably foreseeable. Cumulative impacts are a total result, including both direct and indirect impacts, of a proposed project when added to other past, present, and reasonably foreseeable future actions.

Under both the RPA and Selected Alternative, there will be only insignificant and incremental indirect and cumulative impacts to communities, water quality, and natural resources, given appropriate best management practices are employed during construction. The Selected Alternative will incrementally increase environmental effects (impacts) to water quality, water resources, and natural resources, while providing much needed transportation benefits. These effects are relatively small in the context of the entire corridor as well as the localized impact sites.

Refer to: Chapter 3, Section 3.15

16.

Short-term Uses versus Long-Term Productivity

The Carolina Crossroads project will provide several long-term productivity enhancements for the local area including a more efficient transportation network and expected employment growth in the region. Instead of being used for its natural productivity (i.e., wildlife, vegetation, wetlands), the land within the road right-of-way will be used for the Selected Alternative. There would be no difference in short-term uses or long-term productivity between the RPA and Selected Alternative. This use of the environment will be consistent with local land-use and transportation plans that demonstrate a need for the Carolina Crossroads project.

Refer to: Chapter 3, Section 3.16

18.

Permits

Federal and State permits and certification will be required for activities related to construction of the Selected Alternative. These same permits/certifications would also have been needed for the RPA. The agencies issuing these permits are either cooperating or participating agencies and have been involved during the project development process. Necessary permits include:

- Section 404 of the Clean Water Act
- Section 401 of the Clean Water Act
- Section 402 of the Clean Water Act
- Section 10 of the Rivers and Harbors Act
- Construction in State Navigable Waters

Refer to: Chapter 3, Section 3.18

17.

Irreversible and Irrecoverable Commitment of Resources

Implementing the Selected Alternative will involve a commitment of a range of natural, physical, human, and fiscal resources. There would be no substantive differences between the Selected Alternative and the RPA to the commitment of these resources. The commitment of these resources is based on the premise that residents in the area, the region, and the state will benefit from the improved quality of the transportation system. These benefits will consist of improved mobility and savings in travel time, both of which are anticipated to outweigh the commitment of these resources.

Refer to: Chapter 3, Section 3.17

19.

Sustainability

FHWA and SCDOT have established sustainability goals for the Carolina Crossroads project and are utilizing the Institute for Sustainable Infrastructure's Envision sustainability rating system and FHWA's Infrastructure Voluntary Evaluation Sustainability Tool (INVEST) during the development, design, and construction of the Selected Alternative.

Refer to: Chapter 3, Section 3.19



What measures will be incorporated to avoid, minimize, and mitigate impacts due to the Selected Alternative?

SCDOT and FHWA have committed to the following mitigation measures to offset the impacts summarized in Table 5 and detailed in the FEIS. The Environmental Commitment form with all commitments is attached to this ROD/Summary.

Table 5 - Mitigation Summary

Impact Areas	Selected Alternative
Land Use	None
Farmlands	None
Socioeconomics & Communities	<ul style="list-style-type: none"> • The acquisition and relocation process would be conducted in accordance with the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act and the SCDOT Right-of-Way Manual. • Written translations of vital documents will be provided for Spanish language-speaking populations, as well as other measures determined by SCDOT to ensure meaningful access to project information. • SCDOT will coordinate with local jurisdictions to evaluate the inclusion of bicycle/pedestrian facilities in the project, including during construction. • SCDOT will coordinate with local EMS services, Local Fire Departments, the SC Highway Patrol, and school districts to minimize effects during and after construction. • A signing plan would be prepared that meets the requirements and guidelines of the 2009 Manual on Uniform Traffic Control Devices. • Outreach to special populations, including Environmental Justice and Limited English-Speaking Proficiency communities to inform of construction updates..
Air Quality	<ul style="list-style-type: none"> • Shut off construction equipment when not in use; water areas of exposed soil; cover trucks transporting materials to and from construction sites; reroute truck traffic away from residential communities when possible; repave or replant exposed areas as soon as possible; prohibit construction and delivery trucks or other equipment from idling for extended periods of time.
Noise	<ul style="list-style-type: none"> • Noise barrier walls will be constructed at two locations along the corridor.
Water Quality	<ul style="list-style-type: none"> • Stormwater modeling will be completed for the final design • Stormwater runoff will be discharged into detention basins and/or vegetated swales before it is released into receiving waters. • Implementation of construction best management practices during construction • Develop project specific stormwater pollution prevention plan (SWPPP).
Water Resources	<ul style="list-style-type: none"> • Further minimize impacts as design progresses. • Implementation of best management practices during construction. • Compensatory wetland/stream mitigation through Section 404 permitting.
Floodplains	<ul style="list-style-type: none"> • Complete hydraulic analyses at each cross-drain/floodplain feature. • Design project to meet “No-Rise” requirements, or coordinate with FEMA for a Conditional Letter of Map Revision / Letter of Map Revision package for the encroachment. • Design hydraulic structures to accommodate a 100-year flood where regulatory floodplains are defined. • Design hydraulic structures to accommodate a 50-year flood event where no regulatory floodplain is defined.

Table 5 - Mitigation Summary

Impact Areas	Selected Alternative
Natural Resources	<ul style="list-style-type: none"> • Implementation of construction best management practices. • Review and assess potential borrow areas to be used for fill dirt for the project for the presence of any jurisdictional features • Conduct construction activities within the disturbed footprint of the existing roadway and utility rights-of-way to the maximum extent practicable. • Consider planting trees (native species) within the rights-of-way adjacent to new or improved interchanges and roadways outside of required clear safety zones. • Cease construction in the area if any endangered or threatened species are observed during construction. • Avoid taking of individual migratory birds and the destruction of their active nests. Notify the Resident Construction Engineer (RCE) prior to the construction, demolition, or maintenance of any artificial habitat structures including bridges and box culverts. Coordinate with the U.S. Department of Agriculture (USDA) Animal and Plant Health Inspection Service (APHIS) to conduct inspections for migratory birds. Implement use of deterrents in an effort to prevent birds from nesting after project activities have commenced.
Cultural Resources	<ul style="list-style-type: none"> • Archaeological professional present during any ground disturbing activities related to sensitive sites. • Protect sensitive sites from indirect effects, including borrow sites and equipment staging. • Construction workers to watch for the presence of any prehistoric or historic remains. If any remains are encountered, notify the Resident Construction Engineer (RCE) and cease work in the vicinity of the discovered materials. • Clearly plot the Saluda Canal (Site 38RD59) on all construction plans along with an appropriate buffer of 95 feet. Clearly mark this zone in the field.
Section 4(f)	<ul style="list-style-type: none"> • Notification to the City of Columbia Parks and Recreation Department at least 48 hours in advance as to when Saluda Riverwalk trail will be temporarily closed. • Notify trail users of closures during construction.
Hazardous Materials	<ul style="list-style-type: none"> • Perform Phase II ESAs for 18 properties containing hazardous materials. • Assess Asbestos Containing Material, test for Lead Based Paint, and dispose of properly at a permitted facility. • Prepare a hazardous waste management plan and health and safety plan. • Dispose waste materials in approved landfills. • Inform SCDHEC if soils that appear to be contaminated are encountered during construction. Employ measures to avoid, reduce, or otherwise mitigate environmental impacts associated with the project. • Test and remove tanks and other hazardous materials in accordance with USEPA and SCDHEC requirements. • Prepare a spill prevention, control, and countermeasures (SPCC) plan for the handling of oils or oil-based products during construction.
Construction	<ul style="list-style-type: none"> • Develop a maintenance-of-traffic plan that outlines measures to minimize construction impacts on transportation and traffic. • Coordinate with the local municipalities to post information on temporary sidewalk or bicycle facility closures or detours. • Develop community outreach program during construction. • Coordinate with emergency service providers. • Aim construction lights directly at the work area and/or shield the lights to avoid disturbing nearby residences. • Maintain access to properties to the extent practicable. • Limit utility service interruptions and coordinate with utility providers.
Energy	None



What monitoring and enforcement measures will be in place for the construction of the Selected Alternative?

All project commitments documented in the ROD are mandatory. Tracking of the mitigation commitments and associated activities will be the responsibility of SCDOT. SCDOT's Environmental Compliance Division ensures all environmental commitments are adhered to

during the construction phase and monitoring commitments are met post-construction. A mitigation commitments tracking document will be utilized during final design, pre-construction, construction, and post-construction phases of the project.





What permits and approvals will be needed?

Federal and State permits or certifications will be required for activities related to construction for the Selected Alternative. The agencies issuing these permits and certifications are either cooperating or participating agencies and have been involved during the project development

process. The Contractor(s) will be responsible for preparing and obtaining the necessary permits which will be submitted based on final design. The types of permits that will be needed include:

Table 6 - Permits			
Permits	Issuing Agency	When	Key Details
Section 404 of the Clean Water Act - Individual Permit	U.S. Army Corps of Engineers	Following Final Design, Prior to Construction	<ul style="list-style-type: none"> Includes a public review and comment period prior to issuance. Requires a compensatory mitigation plan.
Section 401 of the Clean Water Act Certification	South Carolina Department of Health and Environmental Control	Prior to issuance of the Section 404 permit	<ul style="list-style-type: none"> Requires mitigation for potential water quality impacts. Jointly administered during the Section 404 permitting process.
Section 402 of the Clean Water Act (NPDES) Permit	South Carolina Department of Health and Environmental Control	Following Final Design, Prior to Construction	<ul style="list-style-type: none"> Requires that measures be implemented to control stormwater runoff prior to discharging into receiving waters. A Stormwater Pollution Prevention Plan must also be developed.
Construction in State Navigable Waters Permit	South Carolina Department of Health and Environmental Control	Following Final Design, Prior to Construction	
Section 10 of the Rivers and Harbors Act Permit	U.S. Army Corps of Engineers	Prior to issuance of the Section 404 permit	<ul style="list-style-type: none"> Administrated during the Section 404 permitting process.



How will the project be funded?

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 Statewide Transportation Improvement Program (STIP) have sufficient financial information for demonstration that a project in the Multimodal Transportation Plan (MTP), TIP, and STIP can be implemented using committed, available, or reasonably available revenue sources. With the passage of Act 98 in 2013, the proposed Carolina Crossroads project was included in the

STIP as an interstate upgrade project with \$10.0 million of State Infrastructure Bank (SIB) funding allocated for engineering and the development of the EIS. The proposed Carolina Crossroads project is estimated to cost \$1.603 billion. As the number one statewide interstate priority, SCDOT is funding the proposed project through construction using a combination of federal and state funds.

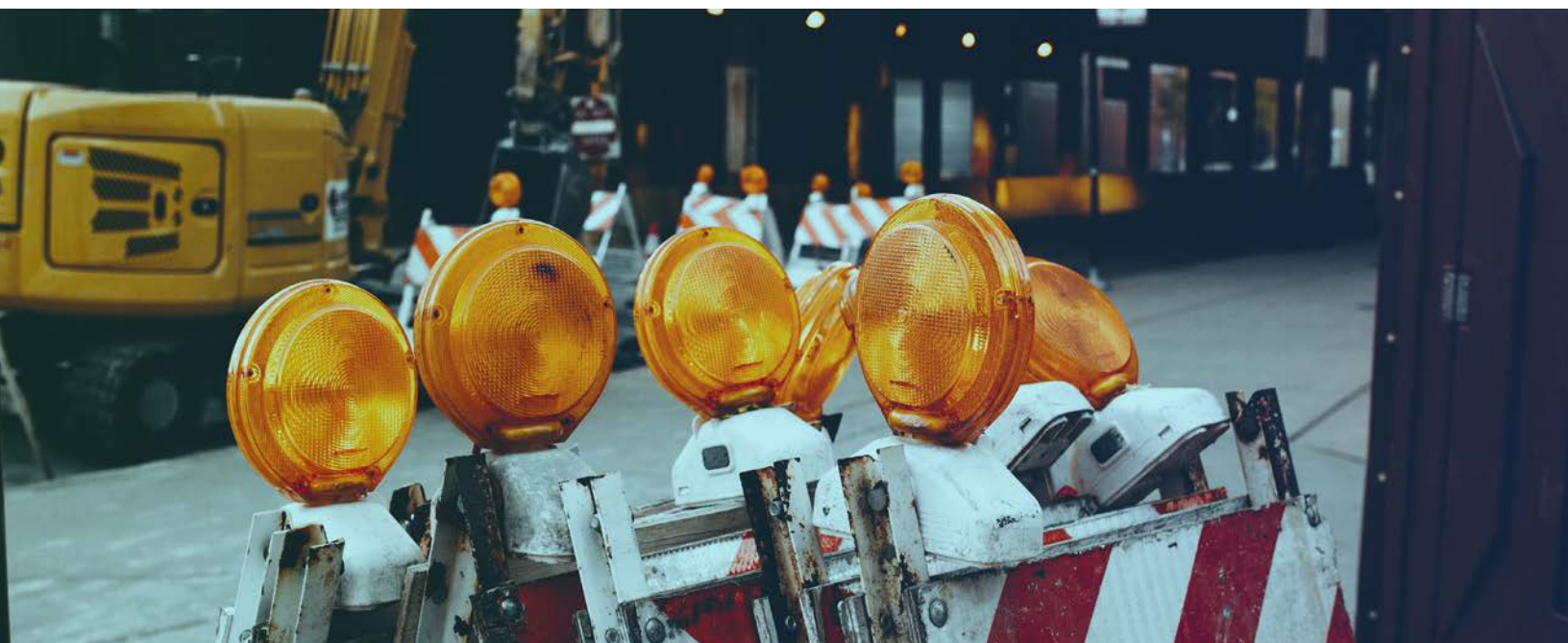




What is FHWA's final decision on the Carolina Crossroads Project?

In combining the FEIS and ROD to meet the provisions of 23 CFR §771.124 on expediting project delivery, FHWA has considered the facts and circumstances relevant to the EIS process. FHWA has determined that the FEIS does not make substantial changes to the proposed action that are relevant to environmental or safety concerns and there are no significant new circumstances or information relevant to environmental concerns and that bear on the proposed action or the impacts of the proposed action. In addition, FHWA has determined the following:

- there are no coordination activities that are more effectively completed after the FEIS is available;
- there are no unresolved interagency disagreements over issues that need identification in the FEIS under 23 CFR 771.125(a)(2);
- there is no substantial degree of controversy;
- the DEIS identified the recommended preferred alternative from among the comparatively evaluated reasonable alternatives; and,
- there are no compliance issues with substantive requirements that must be resolved before issuance of the ROD, or that FHWA wants to resolve before signing the ROD, but that do not merit deferring issuance of the FEIS.





Based on the analysis and evaluation documented in the EIS, and after careful consideration of all social, economic, and environmental factors, including comments received on the DEIS, it is FHWA's decision to adopt the Selected Alternative contained therein as the proposed action for this project. FHWA's approval of this ROD is indicated by the signature on the cover of this combined FEIS and ROD document.

The FHWA intends to publish a notice on limitation of claims on the ROD in the Federal Register. Pursuant to 23 CFR §771.139, notices announcing decisions by FHWA or by other federal agencies on a transportation project may be published in the Federal Register indicating

that such decisions are final within the meaning of 23 U.S.C. 139(l). Claims arising under Federal law seeking judicial review of any such decisions are time barred unless filed within 150 days after the date of publication of the limitations on claims notice by FHWA. These time periods do not lengthen any shorter time period for seeking judicial review that otherwise is established by the Federal law under which judicial review is allowed. This provision does not create any right of judicial review or place any limit on filing a claim that a person has violated the terms of a permit, license, or approval.



What are the next steps?

With a Selected Alternative and issuance of the Record of Decision, property acquisition is scheduled to begin. SCDOT anticipates awarding a contract or contracts to a contractor(s) beginning in 2020. SCDOT and the contractor(s) will have the flexibility to determine the appropriate construction phasing to best complete the project.

SCDOT will continue to engage with the public, and a comprehensive public information program will be implemented to inform the public about construction activities and to minimize impacts. Information will include the periods when construction is scheduled to take place, work hours, and alternate routes. Construction signs will be used to notify motorists about work activities and changes in traffic patterns, such as detours.

Key Project Milestones

1 Project Initiation March 2015	2 Community Kick-off Meeting May 12, 2015	3 Scoping & Initial Environmental Studies — Notice of Intent July 2015	4 Public Scoping Meeting September 10, 2015	5 Preliminary Interchange Alternatives 2015-2016	6 Begin Development of Draft Environmental Impact Statement (DEIS) July 2016	7 Alternatives Public Information Meeting October 4, 2016
8 Development and Screening of Representative Alternatives October 2016 - Summer 2017	9 Reasonable Alternatives Public Information Meeting Fall 2017	10 Public Hearing on DEIS and Recommend Preferred Alternative Summer 2018	11 Final Environmental Impact Statement (FEIS) — Record of Decision (ROD) Spring 2019 We are here	12 Procurement of Contractor & Begin Right of Way Acquisition 2019	13 Project Delivery/ Construction 2020 & beyond	

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