

Summary

What is the Carolina Crossroads Project?

The South Carolina Department of Transportation (SCDOT), in cooperation with the Federal Highway Administration (FHWA), is proposing to upgrade and redesign a key section of interstate corridor in Lexington and Richland Counties that spans from I-20 near US-378 to the Broad River crossing; I-26 from Broad River Road to US-378; and I-126 from I-26 to Colonial Life Boulevard. The primary purpose of the project, known as the Carolina Crossroads I-20/26/126 Corridor Improvement Project (Carolina Crossroads), is to reduce congestion and improve mobility within the corridor.

What is the Final Environmental Impact Statement?

This Final Environmental Impact Statement (FEIS) is the culmination of technical studies and reports, inter-agency coordination, and community outreach and feedback. It is a document for you – the public, stakeholders, and decision makers. The FEIS documents the purpose and need for the project; presents a discussion of the alternatives and the analysis of them; describes the affected environment, assessment of environmental, transportation, social, and economic impacts; identifies appropriate mitigation measures to offset impacts; and presents a recommended preferred alternative. It also incorporates analysis and feedback from public and agency sources gathered during the various phases of the Draft Environmental Assessment (DEIS) and FEIS development. The FEIS was prepared in accordance with requirements of the National Environmental Policy Act (NEPA), 40 Code of Federal Regulations (CFR) Parts 1500–1508, and 23 CFR Part 771.

What is the Purpose of the Proposed Project and why is it Needed?

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 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.

The following paragraph summarizes the need for the proposed project. However, detailed information about the purpose and need can be found in Chapter 1 of this FEIS or in Appendix A.

As an interstate corridor initially developed in the 1950s and 1960s and improved during the 1970s and 1980s, 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). It experiences heavy traffic congestion due to increases in vehicular traffic, vehicle weaving, and above average crash rates (I-26 experiences more traffic crashes than the state average); due to this, access ramps to and from each interstate consistently become congested. Finding an up-to-date solution has become a statewide priority. The need for this proposed project is a result of the following:

Summary

- Population and employment growth in the Midlands' region
- Decreased mobility and increased traffic congestion in the peak travel hours (inadequate roadway capacity) resulting in increased user delay
- Inadequate interconnection of transportation modes
- Safety concerns

Based on the needs for the corridor, the following metrics were established to measure the effectiveness of possible solutions (known as alternatives):

- Reduce conflict points at/near interchanges
- Improve traffic operations on mainline and local roads
- Improve connections separate from mainline
- Reduce/eliminate geometric deficiencies

What are the Alternatives for the Project and how were they Evaluated?

An alternatives development and screening process was used to identify a set of reasonable alternatives that best satisfies the purpose and need for the project while minimizing impacts on the human and natural environment. Detailed information about the development of alternatives can be found in Chapter 2 of this FEIS as well as Appendix C. Furthermore, the screening process stipulates reasons why an alternative might be determined as not reasonable and eliminated from further consideration. Namely:

- 1) The alternative does not satisfy the purpose of and need for the project.
- 2) The alternative is determined to be not practical or feasible from a technical and/or economic standpoint.
- 3) The alternative substantially duplicates another alternative.

Preliminary Alternative Development and Screening

SCDOT identified and developed alternatives through information derived from previous traffic studies, stakeholder working groups, public meetings and comments to identify and develop a range of alternatives.

Preliminary Screening included evaluating the range of alternatives against the primary purpose and need. In addition, a detailed traffic analysis was conducted on three options suggested by the public: the construction of a new location roadway known as the Northern Alignment, the widening of Broad River Road, and the widening of St. Andrews Road.

The only alternatives to advance through this preliminary screening process included improvements in the existing corridor and the no build alternative, which is required for evaluation under NEPA. Refer to Sections 2.2.3 and 2.2.4 of Chapter 2 of the FEIS for further information.

Summary

Level 1A Screening

The next step in the alternative development screening process, known as the Level 1A Screening, included the evaluation of 54 different interchange accessory option designs that could improve operations at each of the 12 interchanges located in the corridor. Information about the Level 1A Screening can be found in Section 2.2.5 of the Chapter 2 of the FEIS, and Appendix C of the FEIS. Level 1A Screening evaluated whether each interchange access option would accomplish the following:

- Reduce conflict points
- Improve operations on the mainline
- Improve connections on the mainline
- Reduce or eliminate geometric deficiencies
- Result in the interchange being under, at, or over capacity in the design year of 2040

As a result of the Level 1A screening, 16 interchange access options were eliminated and 38 were carried forward for further evaluation.

Level 1B Screening

Using the various interchange accessory options that passed the Level 1A screening, SCDOT developed nine Representative Alternatives (RA) that holistically encompassed the entirety of the project corridor, including the widening of the I-26 corridor. These can be found in Table 2.1 of Chapter 2 of the FEIS and discussed in detail in Appendix C. A traffic modeling was completed for these nine Representative Alternatives as well as the No-build Alternative. The results were analyzed to determine on how well each of the Representative Alternatives would do the following:

- Improve traffic operations (Improve the level of service within the corridor)
- Improve through travel times in the corridor
- Improve through speeds in the corridor
- Reduce and/or eliminate geometric design deficiencies

From this analysis, only four Representative Alternatives were carried forward into Level 2 Screening. The alternatives advanced through this screening process were RA1, RA5, RA7, RA8 and the No-build Alternative. Refer to Table 2.2 in Chapter 2 of the FEIS for a summary of the results of this analysis, and Appendix C for a detailed discussion.

Level 2 Screening

In the Level 2 screening process, each of the four remaining Representative Alternatives were evaluated in comparison to each other for property impacts, wetland impacts, stream and river impacts, floodplain impacts, the degree to which the primary purpose and need was met, consistency with the city, county, or regional transportation or land-use plans, and overall project costs. RA1, RA5, and the No-build Alternative were recommended to be carried forward into Level 3 Screening and the DEIS. Further information about the Level 2 screening process can be found in Section 2.2.6 of Chapter 2 of the FEIS.

Summary

Level 3 Screening

Following the October 2017 public meeting, RA1 and RA5 were further evaluated in consideration of public and agency comments. In addition, RA5 was refined in an attempt to further enhance traffic operations and minimize impacts. RA5 was adjusted to include a diverging diamond interchange design at the I-20/ Bush River Road interchange instead of a partial cloverleaf design and to add a bridge over I-26 connecting Tram Road and Beatty Road. These adjustments resulted in a new alternative known as RA5 Modified. Through this process, RA5 Modified was advanced because it outperformed RA5. The addition of a bridge over I-26 connecting Tram Road and Beatty Road was found to be beneficial for improved travel access and circulation, and was also added to the design for RA1. Further information about the Tram Road/Beatty Road overpass connection can be found in Section 2.2.6.1 of Chapter 2 of the FEIS. RA1 and RA5-Modified were designated as the Reasonable Alternatives for the proposed project. Below is a brief description of both. The detailed description and maps can be found in Chapter 2 of the DEIS and Appendix C.

REASONABLE ALTERNATIVE 1 (RA1) – TURBINE INTERCHANGE

- Proposed turbine interchange at the I-26 and I-20 junction, eliminating all loop ramps (Figure 1).
- Widen I-26 with one additional lane in each direction from US 176/Broad River Road to I-126.
- Add new collector-distributor lanes.
- Relocate the existing interchanges at I-26 and Bush River Road to eliminate traffic conflict points and weaving between Bush River Road and the I-20/I-26 interchange.
- Reconfigure Colonial Life Boulevard interchange to a full interchange to provide access to Bush River Road from direction of I-126.
- Improve each interchange from Harbison Boulevard to I-126 on I-26; from Bush River Road to Broad River Road on I-20; and from I-26 to Colonial Life Boulevard on I-126.
- Lengthen the I-26 eastbound exit ramp on I-26 south of I-126, separating the exit ramp from mainline traffic lanes and providing an additional exit lane on I-26 eastbound to US 378 to provide additional queuing storage (dual lane exit).
- Improve Tram Road by providing overpass of I-26.

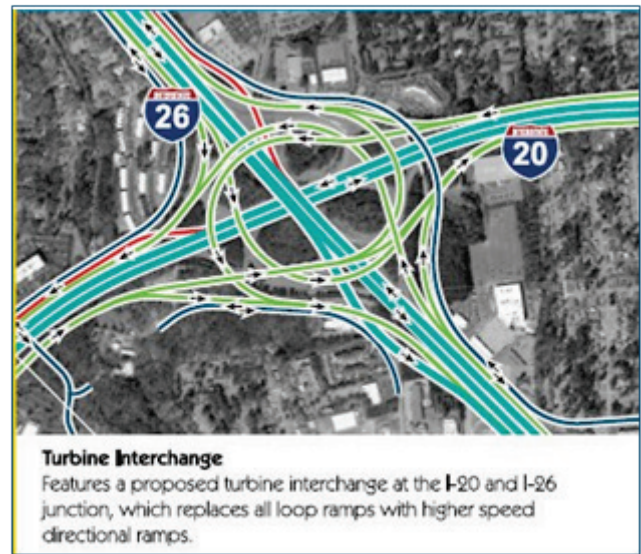


Figure 1 Reasonable Alternative 1 (RA1)

Summary

REASONABLE ALTERNATIVE 5 MODIFIED (RA5 MODIFIED) –DIRECTIONAL INTERCHANGE WITH DIVERGING DIAMOND AT I-20/BUSH RIVER ROAD

- Proposed directional interchange at the I-26 and I-20 junction, eliminating two loop ramps and reconfiguring the other loop ramps in the interchange. The interchange consists of three roadway levels around a central bridge. The third level is the directional ramps from I-26 to I-20. (Figure 2)
- Widen I-26 with one additional lane in each direction from US 176/Broad River Road to I- 126.
- Add new collector-distributor lanes.
- Improve each interchange from: Harbison Boulevard to I-126 on I-26; from Bush River Road to Broad River Road on I-20; and from I-26 to Colonial Life Boulevard on I-126.
- Improve Tram Road by providing overpass of I-26.
- Relocate the existing interchange at I-26 and Bush River Road and instead provide access to Bush River Road from the full-access interchange at Colonial Life Boulevard. Remove the direct connection between Bush River Road and I-26, eliminating traffic conflict points and weaving between Bush River Road and the I-20/I-26 interchange.



Figure 2 Reasonable Alternative 5 (RA5 Modified)

RA1, RA5 Modified and the No-Build Alternative were further evaluated based on:

- Traffic operation metrics
 - Improved travel time
 - Improved average speed through corridor
- Environmental impacts including:
 - Socioeconomics and community impacts
 - Section 4(f) impacts
 - Displacements
 - Environmental justice impacts
 - Historic impacts
 - Noise impacts
 - Water quality
 - Wetland/stream impacts
 - Floodplains
 - Hazardous material sites

When comparing the detailed traffic analysis, detailed environmental analysis, input from the public and stakeholders, input from resource and regulatory agencies, constructability factors, and construction costs, RA1 best satisfied the purpose and need while minimizing impacts to the human and natural environment, which is

Summary

why RA1 was the Recommended Preferred Alternative in the DEIS at the public hearing. Information about the Level 3 screening analysis can be found in Section 2.2.7 of the FEIS. A summary of the Level 3 Screening results can be found in Table 2.6 of Chapter 2. The DEIS was issued on July 26, 2018, and a public hearing was held on August 23, 2018.

What changes have been made to the Recommended Preferred Alternative since the DEIS and Public Hearing?

There was significant public feedback opposing the overpass bridge connecting Tram Road to Beatty Road during the public hearing comment period. Those who were opposed to the bridge did not want it due to the potential for bringing additional traffic in their neighborhoods. While the bridge does not affect the ability of the Recommended Preferred Alternative to meet the primary purpose and need of the project to reduce congestion and improve mobility in the corridor, 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 refine the Recommended Preferred Alternative and remove the Tram Road/Beatty Road overpass.

Since the DEIS, the overall alignment and footprint of the Recommended Preferred Alternative has not substantially changed. Besides the removal of the Tram Road/Beatty Road overpass, minor refinements have been made, primarily due to minor linework and geometrics 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. Section 2.4 of Chapter 2 contains additional information about these changes.

Although minor adjustments have been made to refine the Recommended Preferred Alternative since the DEIS based on public input and additional technical analysis, the changes are not substantial and the general alignment and function remain the same. Having considered the environmental records, the mitigation measures, the written and oral comments offered by agencies and the public, and the written responses to the comments, it has been determined that RA1, the Recommended Preferred Alternative in the DEIS, with the aforementioned minor refinements is the Refined Recommended Preferred Alternative in the FEIS. The Refined Recommended Preferred 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.

Summary

What are the Environmental Consequences for the Recommended Preferred Alternative and the Refined Recommended Preferred Alternative?

NEPA requires that federal project sponsors (e.g., the FHWA) evaluate the potential impacts to the natural and human environment in detail for the Reasonable Alternatives and the No-build Alternative. Chapter 3 of the FEIS has a description of the following:

- The existing conditions of the project study area;
- The potential impacts to the human and natural environment that could be expected from the Recommended Preferred Alternative and the Refined Recommended Preferred Alternative; and,
- the mitigation measures that would be implemented to address the impacts.

Based on the results of the evaluation of resources and potential impacts, neither alternative would have impacts to historic resources, farmlands, Section 6(f) resources, coastal zones or coastal barriers, or affect air quality attainment status in the region. In addition, both alternatives are in conformance with local and regional land use plans.

Both the Recommended Preferred Alternative and the Refined Recommended Preferred Alternative would have a temporary use of a Section 4(f) property, the Saluda Riverwalk. However, a *de minimis* finding has been made for this use.

The proposed project would have impacts to socioeconomics, communities, water quality, wetlands and streams, floodplains, and indirect and cumulative impacts. In addition, noise impacts are anticipated to residences and businesses along the corridor with both alternatives. The footprints of the alternatives contain 18 potential hazardous material sites. Both alternatives would have *no effect* or impact to seven federally-protected species, and *may affect, but not likely to adversely affect* two federally-protected species. For further information about the specific impacts to the aforementioned resources, please refer to Chapter 3 of the FEIS as well as the supporting technical memoranda in the FEIS Appendices

Due to the nature of the project study corridor and surrounding environment in the project study area, complete avoidance of all impacts was not possible. Mitigation measures are proposed that would minimize or mitigate the potential impacts from the Recommended Preferred Alternative or the Refined Recommended Preferred Alternative. A list of these can be found in the discussion of each resource in Chapter 3 of the FEIS.

Summary

How were the Public and Agencies Involved?

Public and agency participation has been an important part of the Carolina Crossroads project, and the project team made a commitment at the beginning of the project to actively encourage and solicit public and agency participation and feedback. The public and agency involvement process was comprehensive in nature, using the media, mailers, websites, and meetings to ensure that all stakeholders who could be affected were aware of the project and understood the methods for providing input.

Please refer to Chapter 4 for a summary of the activities implemented during scoping, development of the purpose and need (Chapter 1), alternatives development (Chapter 2), and the DEIS and FEIS development. Chapter 4 also describes the communication tools used throughout all phases of the project to date.