





### Welcome

# On behalf of the Carolina Crossroads project team we thank you for taking the time to attend this meeting.

Located in the heart of South Carolina, the I-20/26/126 Corridor is the crossroads of the state economy and serves as the major hub for the Midlands' commuters, travelers, and commerce. In addition to being a main route in and out of Columbia, I-26 is a thoroughfare for travelers headed to the coast and mountains for recreation, and a major cargo route between Lowcountry ports and Upstate manufacturers. The I-20/26/126 Carolina Crossroads project is the number one interstate priority in South Carolina. SCDOT is planning to have a contractor ready to work on the construction of the project starting in 2019.

In the fall of 2016, the Carolina Crossroads project team presented 49 design options at each of the 12 different interchanges along the corridor and three off-alignment alternatives. These preliminary alternatives were being evaluated on the ability to meet the primary purpose and need of this project by improving local mobility and enhancing traffic operations. The purpose of this meeting is to provide an update on the results of this analysis and get your input on the holistic representative alternatives that are being recommended for further development as Reasonable Alternatives in the Draft Environmental Impact Statement.

### **Project Benefits:**



**Travel time savings** 



**Emissions cost savings** 



Travel time reliability



Freight inventory cost savings



Vehicle operating cost savings



Pavement maintenance cost savings



**Accident cost savings** 

### Purpose and Need:

Primary Purpose and Need



Secondary Needs



Improve freight mobility



Improve safety in the corridor



Improve system linkages

### Schedule:

Key Project Milestones													
Project Initiation	Community Kick-off Meeting	Scoping & Initial Environmental Studies Notice of Intent	Public Scoping Meeting	Preliminary Interchange Alternatives	Begin Development of Draft Environmental Impact Statement (DEIS)	Alternatives Public Information Meeting	Development and Screening of Representative Alternatives	We are here  Reasonable Alternatives Public Information Meeting	Public Hearing on DEIS and Recommend Preferred Alternative	Final Environmental Impact Statement (FEIS) Record of Decision (ROD)	Procurement of Contractor & Begin Right of Way Acquisition	Project Delivery/ Construction	
March 2015	May 12, 2015	July 2015	September 10, 2015	2015- 2016	July 2016	October 4, 2016	October 2016 - Summer 2017	Summer 2017 We are here	Early 2018	Fall 2018	2019	2019 & beyond	
Anticipa	Anticipated Date												

# Screening Process

The project team has identified and developed alternatives through information derived from previous traffic studies, stakeholder working groups, public meetings and comments to identify and develop the alternatives.



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# Preliminary & Level 1A Screening:

# Preliminary Screening included evaluating the range of alternatives:











nprovements in existing corridor



alignment

Improvements to arterial roadways



Do Nothing

Not all of these options have moved forward for additional analysis. Transportation System Management, Transportation Demand Management and additional Mass Transit Options did not move forward. As a standalone alternative, these options would not meet the primary purpose and need of improving local mobility and enhancing traffic operations. However, elements of these strategies may be incorporated into the recommended Preferred Alternative.

A detailed traffic analysis was conducted for the following three options suggested by the public:

1 construction of the Northern alignment; 2 widening of Broad River Road; and, 3 widening of St. Andrews Road.

None of these options would effectively reduce traffic congestion on I-26 or improve mobility. These alternatives also would not result in improved safety, improved freight mobility, or improved system connections.

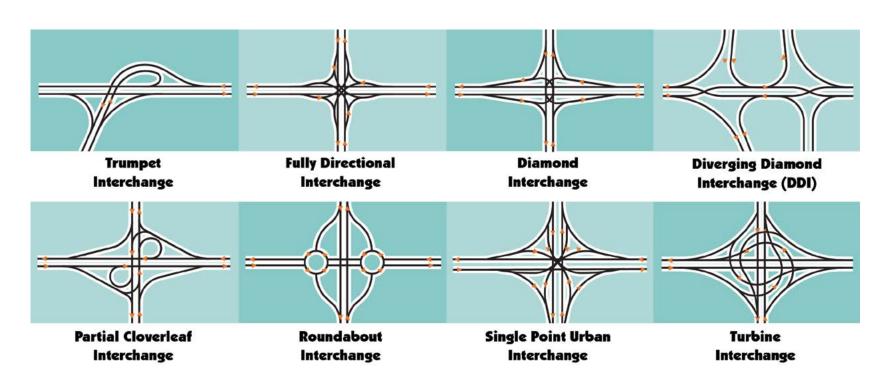
That leaves the "make changes to the existing I-20/26/126 corridor" and "no build alternative" as the only alternatives that were carried forward from the preliminary range of alternatives.



#### Level 1A Screening evaluated 49 Different Interchange Designs:

The next step in the screening process included the evaluation of the 49 different interchange design options that were presented to the public in the fall of 2016. Since the majority of the traffic congestion and safety concerns occur at or near the interchange locations along the I-20/26/126 corridor, the Project Team opted to initially focus on the interchange locations by developing potential interchange improvement options for each of the 12 interchanges located in the corridor.

The Project Team developed potential interchange alternatives from common interchange types. These include the following, or variations of the following:



# Level 1A Screening uses five screening criteria. Namely, would the interchange design option:

- 1 Reduce the number of conflict points being experienced by users of the mainline and/or the crossing roadway?
- 2 Improve the Level-of-Service operations on the mainline?
- 3 Improve the connections from the mainline?
- 4 Reduce geometric deficiencies currently on the mainline and/or crossing roadway?
- 5 Result in the interchange being under, at, or over capacity in the design year of 2040?

In addition, using the criteria above and public input helped to determine which interchange designs made it through to the next step of the alternative screening process.

# So, which interchange design alternatives have been selected to move forward and how were they analyzed together in one system?

Using the various interchange options that passed the Level 1A screening, the Project Team developed holistic alternatives so that interchange options could be analyzed together in one system improvement alternative. These are called "Representative Alternatives". Nine Representative Alternatives that encompass the entirety of the project corridor were developed and evaluated in the Level 1B screening process against the no build alternative.

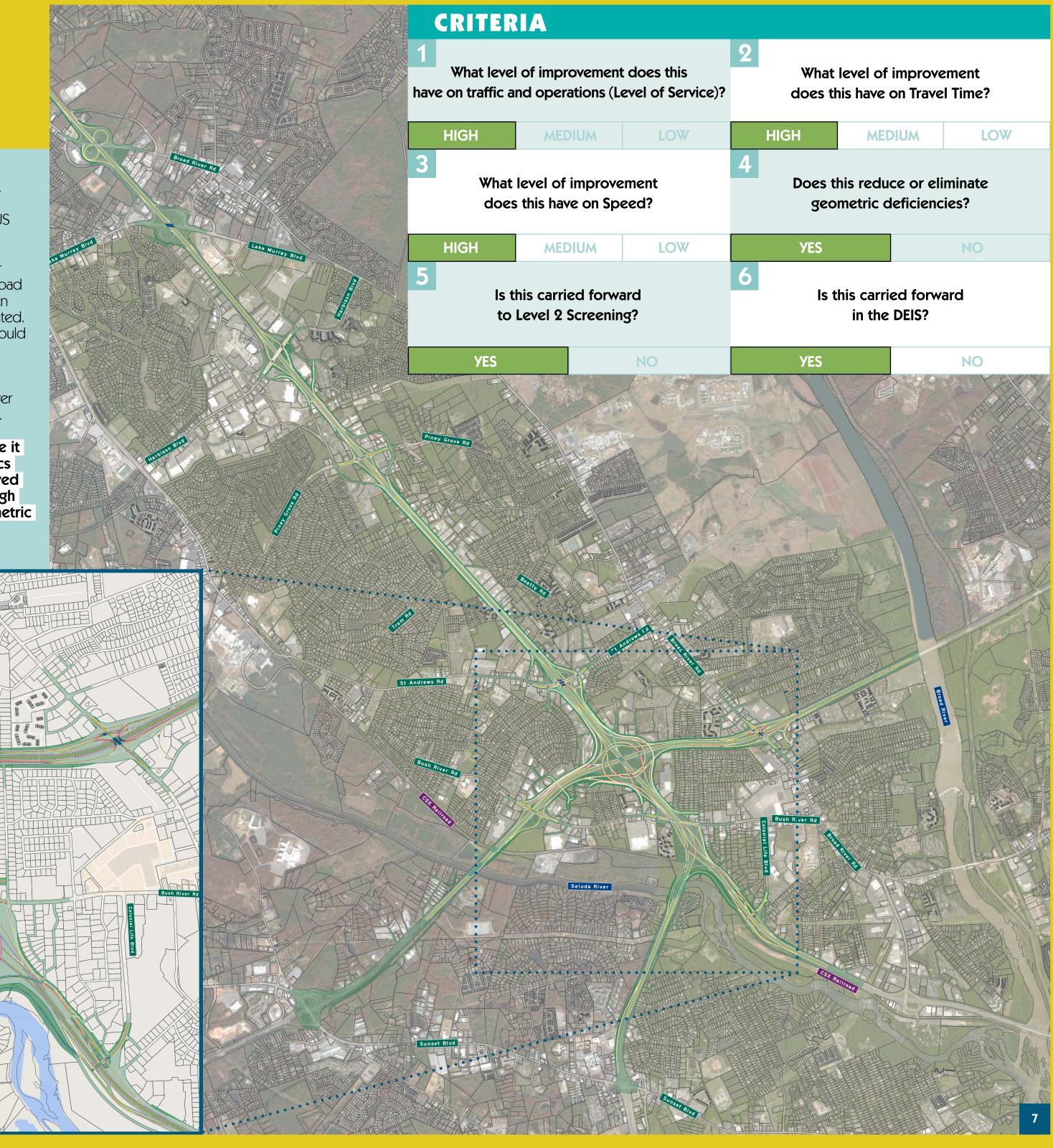
Let's explore the nine Representative Alternatives and the Level 1B screening results in more detail:

01

#### **Key Features Include:**

- The proposed turbine interchange at the I-26 and I-20 junction, which eliminates all loop ramps in the interchange.
- Widening I-26 with one additional lane in each direction from US 176/Broad River Road to I-126.
- New collector-distributor lanes.
- The elimination of the existing interchange at I-26 and Bush River Road. By removing the direct connection between Bush River Road and I-26, traffic conflict points and weaving maneuvers between Bush River Road and the I-20/I-26 interchange would be eliminated.
- Traffic that normally would have used Bush River Road at I-26 would now use the interchange at Colonial Life Boulevard that will be reconfigured to provide access to each direction of I-126.
- Interchange improvements at each interchange from Harbison Boulevard to US 378 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.

This alternative was retained for additional analysis because it reported one of the greatest improvements in traffic metrics over the no build alternative. It shows overall highly improved level of service, reduced travel times, higher average through speeds within the corridor and eliminates dangerous geometric deficiencies such as weaving movements, left exits, and substandard ramps.



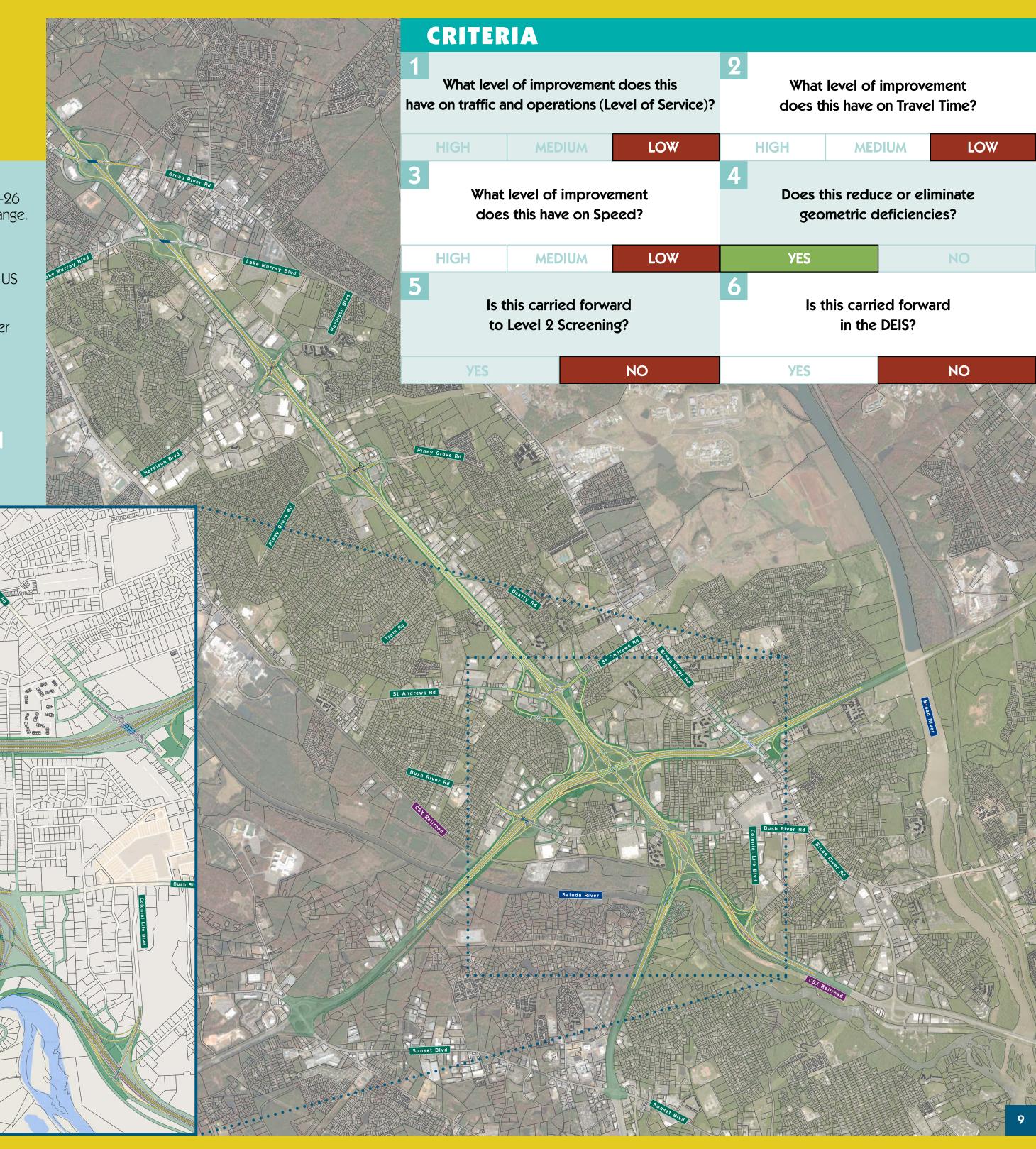




#### **Key Features Include:**

- The proposed directional interchange with interior rights at the I-26 and I-20 junction, which eliminates all loop ramps in the interchange.
- Includes the widening of I-26 with one additional lane in each direction from US 176/Broad River Road to I-126.
- New collector-distributor lanes
- Proposed new local roadway connections between I-126 and US 176/Bush River Road
- Interchange improvements at each interchange from: Harbison Boulevard to US 378 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.
- Proposed new local roadway connections would be provided between I-126 and US 176/Bush River Road.
- The elimination of the existing interchange at I-26 and Bush River Road.

This alternative was eliminated because it showed the least improvement in level of service and performance when compared to the no build alternative.

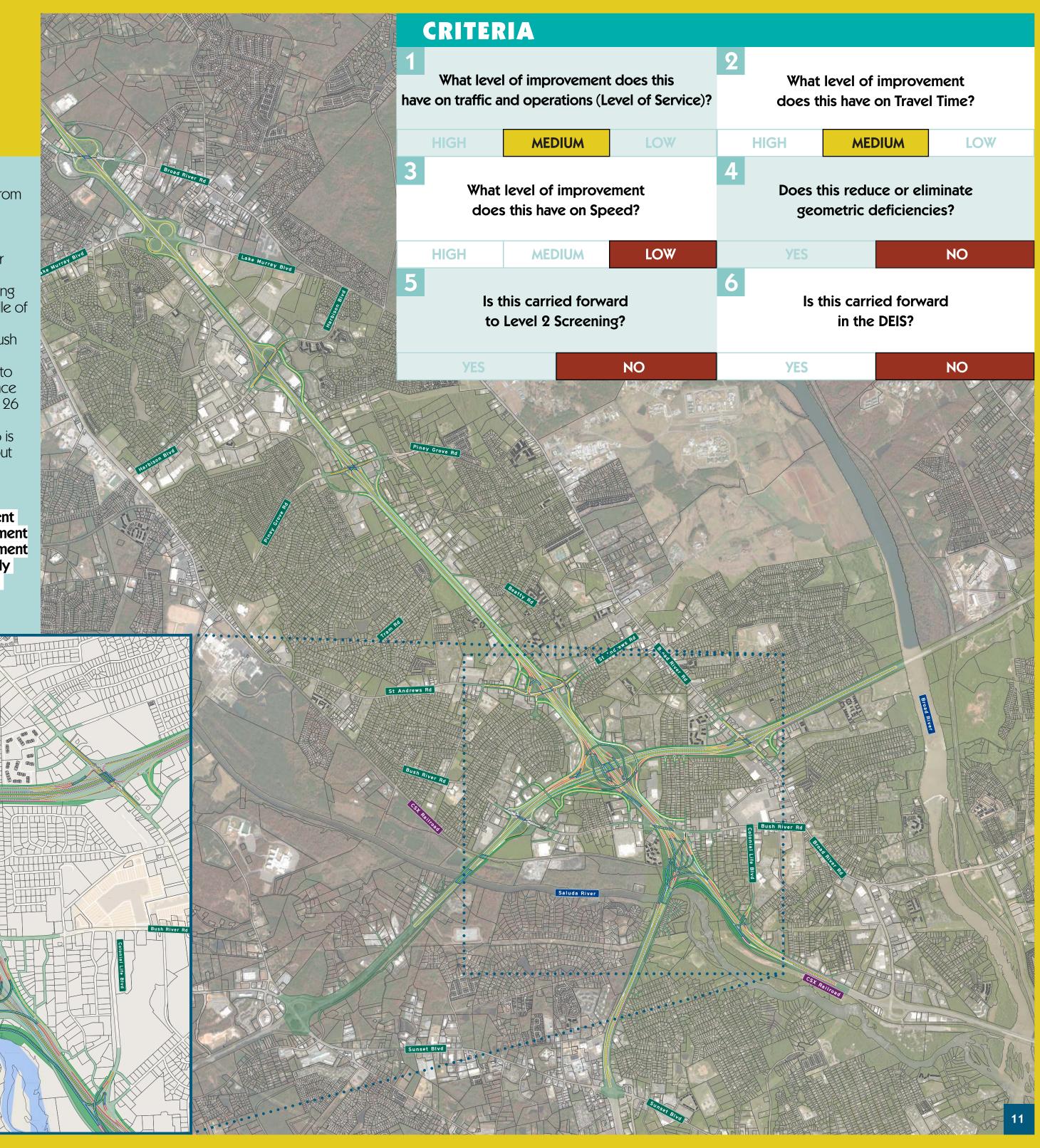




#### **Key Features Include:**

- The widening of I-26 with one additional lane in each direction from US 176/Broad River Road to I-126
- New collector-distributor lanes.
- Interchange improvements at each interchange from: Harbison Boulevard to US 378 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.
- A proposed turbine interchange at the I-26 and I-20 junction along with braided ramps that cross over each other through the middle of the proposed turbine interchange.
- The complete re-design of the existing interchange at I-26 and Bush River Road.
- The existing I-26 interchange at Broad River Road would convert to a diverging diamond interchange and this alternative would replace the existing I-20 and I-26 bridges over the railroad line and on I-126 approaching the Riverbanks Zoo.
- A connector bridge over I-20 between Bush River Road and I-26 is proposed to provide local network connectivity over I-20 without direct access to the freeway.

This alternative was eliminated because it had a moderate improvement over the no build and below average improvement when compared to the other alternatives. Travel time improvement projections through the corridor are marginal. Speed improvement through the corridor is moderate and traffic projections actually show a decrease in average travel speeds on I-20 and stay the same on I-126 resulting in a worsened overall condition.

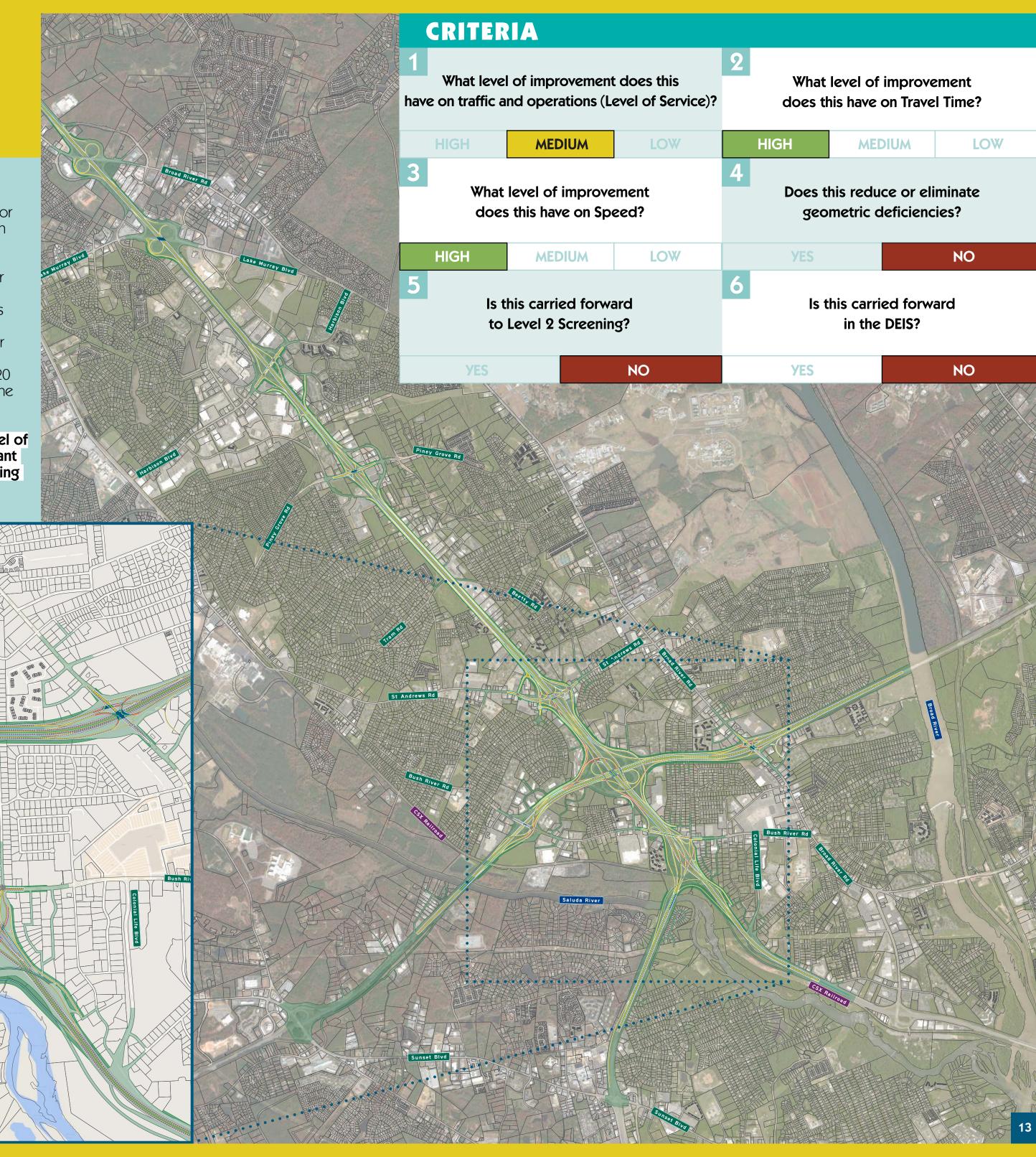


04

#### **Key Features Include:**

- The widening of I-26 with one additional lane in each direction from US 176/Broad River Road to I-126, new collector-distributor lanes, new local roadway connections between I-126 and Bush River Road.
- Interchange improvements at each interchange from: Harbison Boulevard to US 378 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.
- The proposed semi-directional interchange with two loop ramps at the I-26 and I-20 junction.
- The modification of the existing interchange at I-26 and Bush River Road. Instead, the existing flyover would be re-constructed from I-126 westbound to I-26 eastbound, and access to I-26 from I-20 would be provided by the I-20/Bush River Road interchange to the proposed I-26 and Bush River Road interchange.

While this alternative operates above average for overall level of service and performance, it was eliminated because significant safety and weaving issues, experienced today, with the existing condition would not be resolved.

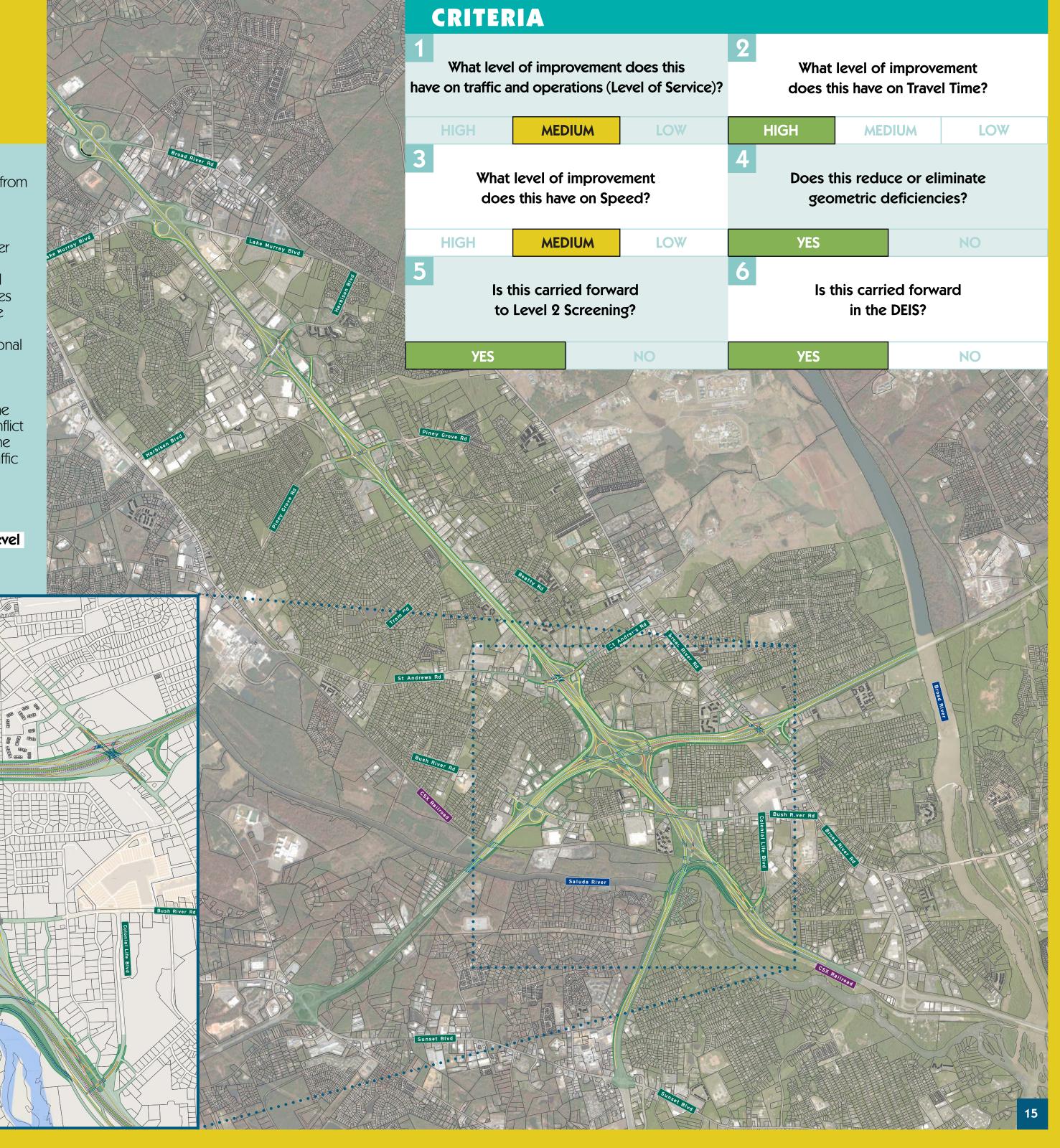




#### **Key Features Include:**

- The widening of I-26 with one additional lane in each direction from US 176/Broad River Road to I-126.
- New collector-distributor lanes.
- Interchange improvements at each interchange from: Harbison Boulevard to US 378 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.
- The proposed turbine directional interchange at the I-26 and I-20 junction, which eliminates 2 loop ramps and reconfigures the other loop ramps in the interchange. A proposed turbine directional interchange consists of three roadway levels that traverse around a central bridge. The third level is the directional ramps from I-26 to I-20.
- The elimination of the existing interchange at I-26 and Bush River Road and instead providing access to Bush River Road from the full-access interchange at Colonial Life Boulevard. By removing the direct connection between Bush River Road and I-26, traffic conflict points and weaving maneuvers between Bush River Road and the I-20/I-26 interchange would be eliminated, thereby reducing traffic congestion/disruption and improving traffic flow on I-26.

This alternative was retained for additional analysis because it shows significant improvement to travel time and corrects geometric deficiencies while moderately improving overall level of service and speed through the corridor.

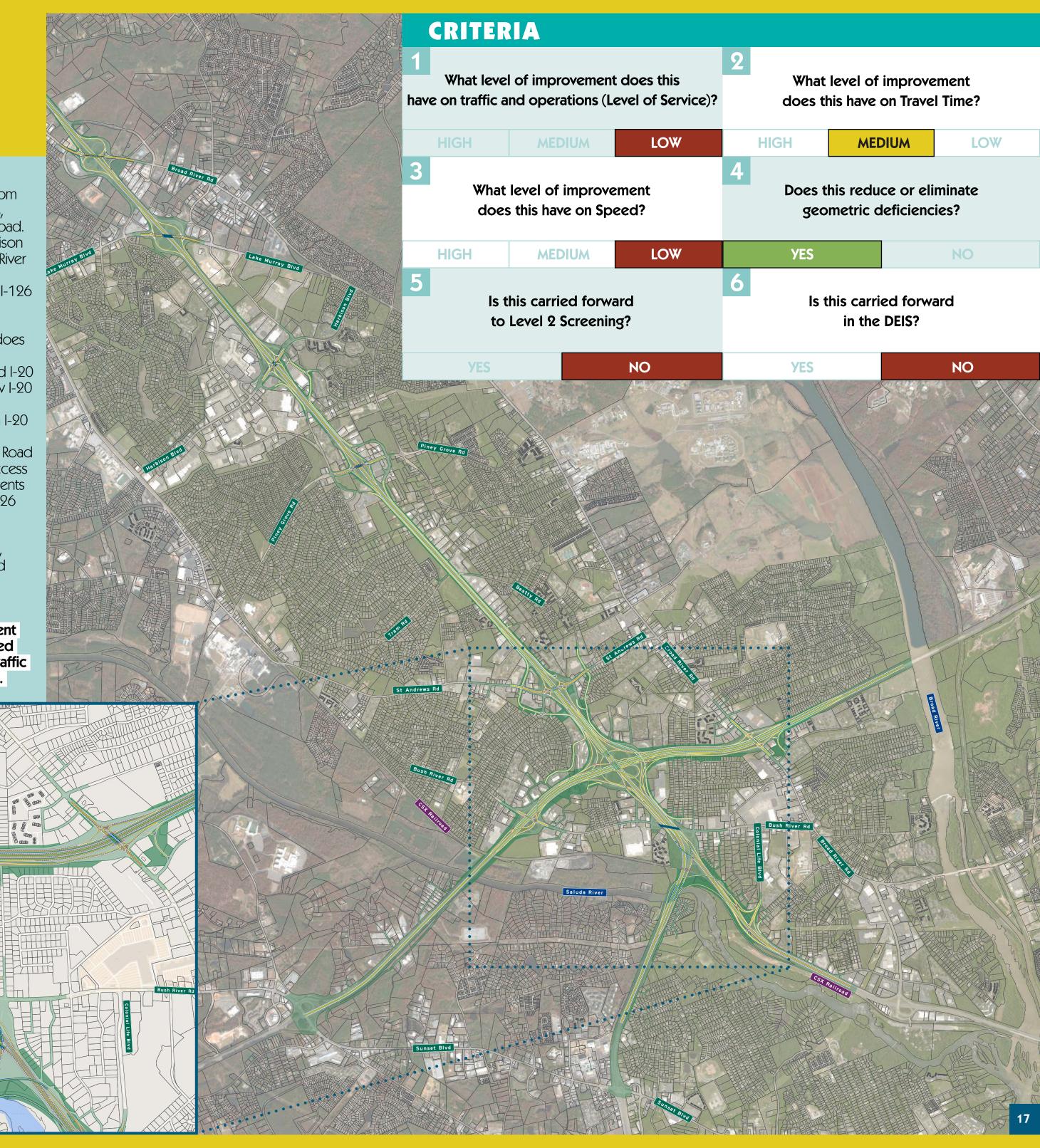




#### **Key Features Include:**

- The widening of I-26 with one additional lane in each direction from US 176/Broad River Road to I-126, new collector-distributor lanes, new local roadway connections between I-126 and Bush River Road.
- Interchange improvements from at each interchange from: Harbison Boulevard to US 378 on I 26; west of Bush River Road to Broad River Road on I-20; and from I-26 to Colonial Life Boulevard on I-126. Additionally, a proposed new interchange would be added at I-126 and Colonial Life Boulevard.
- Proposed new local roadway connections would be provided between St. Andrews Road and Bush River Road so that traffic does not need to travel through the interchange of I-26 and I-20.
- The proposed collector-distributor lanes on I-20 eastbound and I-20 westbound west of Bush River Road would require a wider new I-20 bridge over the Saluda River.
- A proposed directional interchange with a loop and ramp from I-20 westbound to I-26 eastbound at the I-26 and I-20 junction.
- The elimination of the existing interchange at I-26 and Bush River Road and instead providing access to Bush River Road from the full-access interchange at Colonial Life Boulevard. The proposed improvements to the existing I-26 and I-126 interchange, would require new I-26 bridges over the Saluda River.
- The elimination of the loop ramps for left-turning vehicles and conversion of three existing I-26 interchanges (Broad River Road, Piney Grove Road, and St. Andrews Road) to diverging diamond interchange (DDI) configurations.

This alternative was eliminated because it had a moderate improvement over the no build and below average improvement when compared to the other alternatives. Travel time and speed improvement projections through the corridor are marginal. Traffic projections actually show a decrease in average travel speeds.

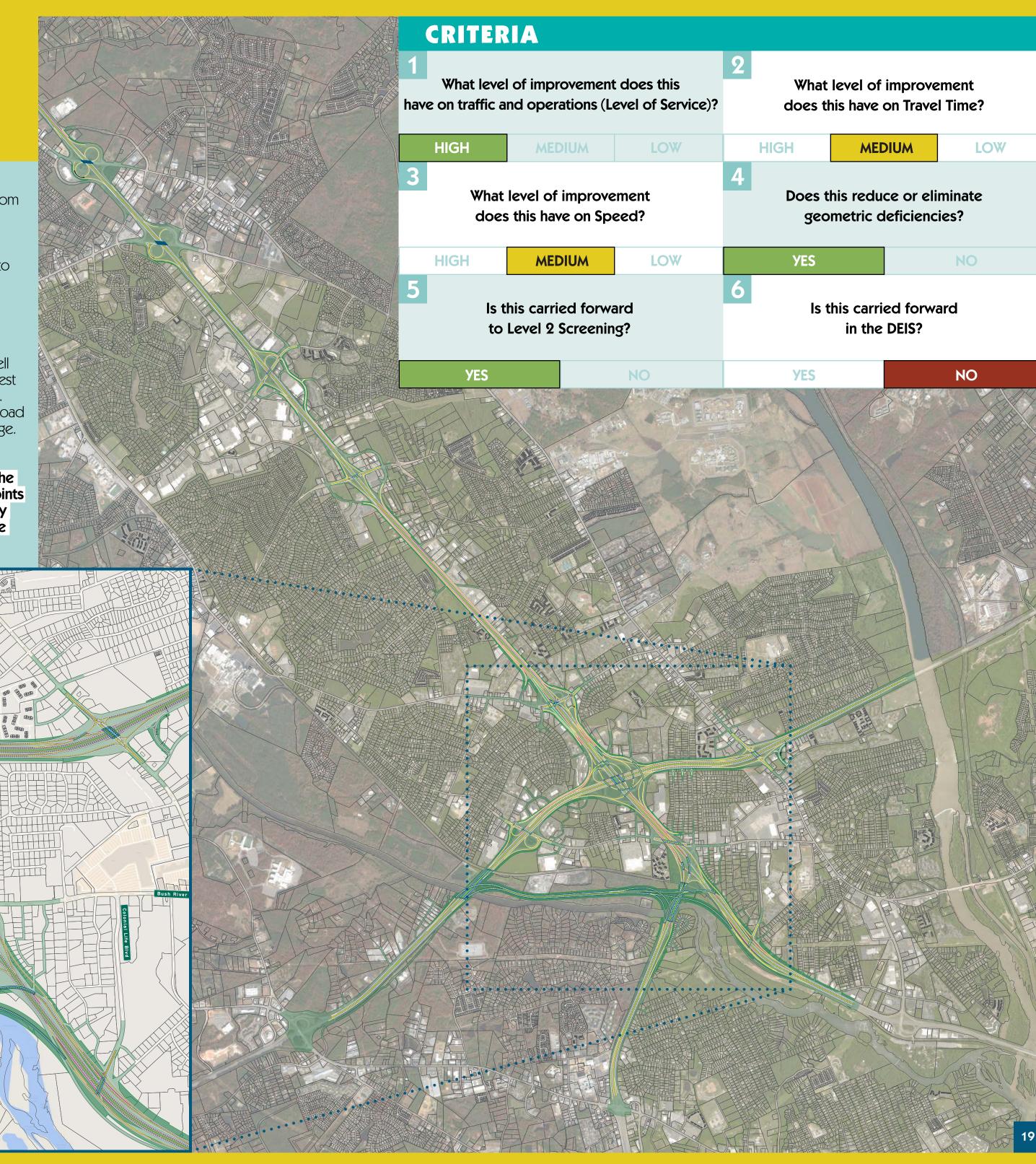


07

#### **Key Features Include:**

- The widening of I-26 with one additional lane in each direction from US 176/Broad River Road to I-126.
- New collector-distributor lanes, and interchange improvements at each interchange from: Harbison Boulevard to US 378 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.
- A proposed new interchange would be added at I-126 and Colonial Life Boulevard and a new offset interchange via ramp highway would be proposed paralleling the Saluda River.
- The proposed directional interchange with a loop from I-20 westbound to I-26 eastbound at the I-26 and I-20 junction as well as a new location four-lane ramp highway extending from I-20 west of Bush River Road to I-26 just south of the I-26/I-126 interchange.
- The elimination of the existing interchange at I-26 and Bush River Road providing access to a revised I-126 at Colonial Life Blvd interchange.

This alternative was retained for additional analysis because it significantly improves overall operational performance due to the direct connection of I-126 with I-20; reduced merge/diverge points on I-26; improved the existing roadway with more driver friendly designs; it deviates traffic volumes from portions of the mainline and intersections; and minimizes traffic disruptions.

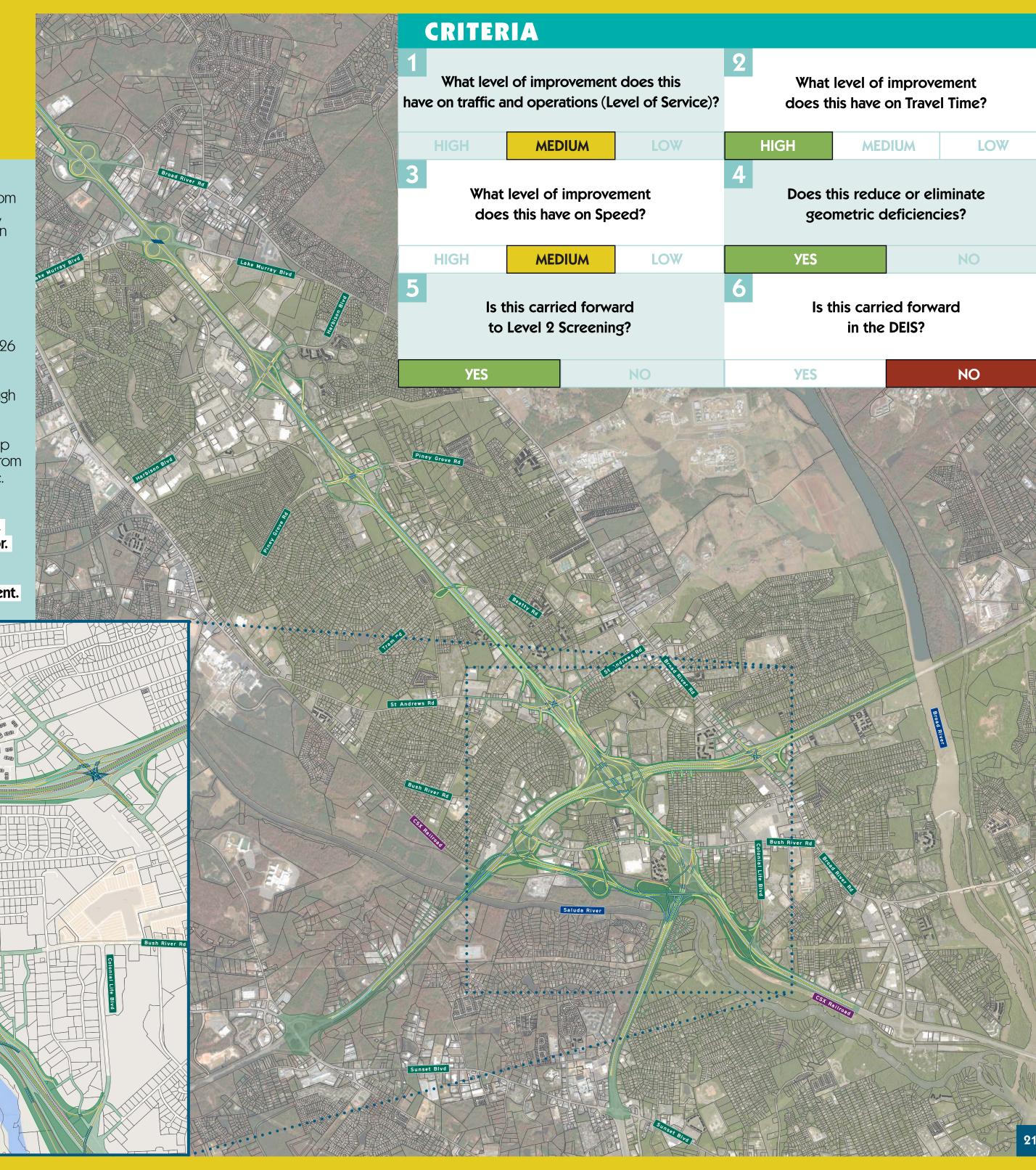


08

#### **Key Features Include:**

- The widening of I-26 with one additional lane in each direction from US 176/Broad River Road to I-126, new collector-distributor lanes, and interchange improvements at each interchange from: Harbison Boulevard to US 378 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.
- A proposed new interchange would be added at I-126 and Colonial Life Boulevard and a new offset interchange via ramp highway would be proposed paralleling the Saluda River.
- Includes a new location four-lane roadway (east-west) extending from I-20 west of Bush River Road to I-26 just south of the I-26/I-126 interchange with a new interchange at Bush River Road. The new location east-west roadway parallel to the Saluda River provides connections between I-20 and I-26 without having to travel through the proposed directional interchange at I-20 and I-26.
- The modification of the existing interchanges of Bush River Road at I-26 and I-20. The existing I-26 westbound to I-126 eastbound ramp would be relocated south of its current location. Access to I-126 from I-20 would be provided by the new location roadway interchange.

This alternative was retained for additional analysis because it provides a moderate improvement to operational performance, significant improvement to the overall travel through the corridor. The addition of a connection to Bush River Rd as a feature of the new alignment connecting I-126 and I-20, and removal of connections to the mainlines, are contributors to the improvement.

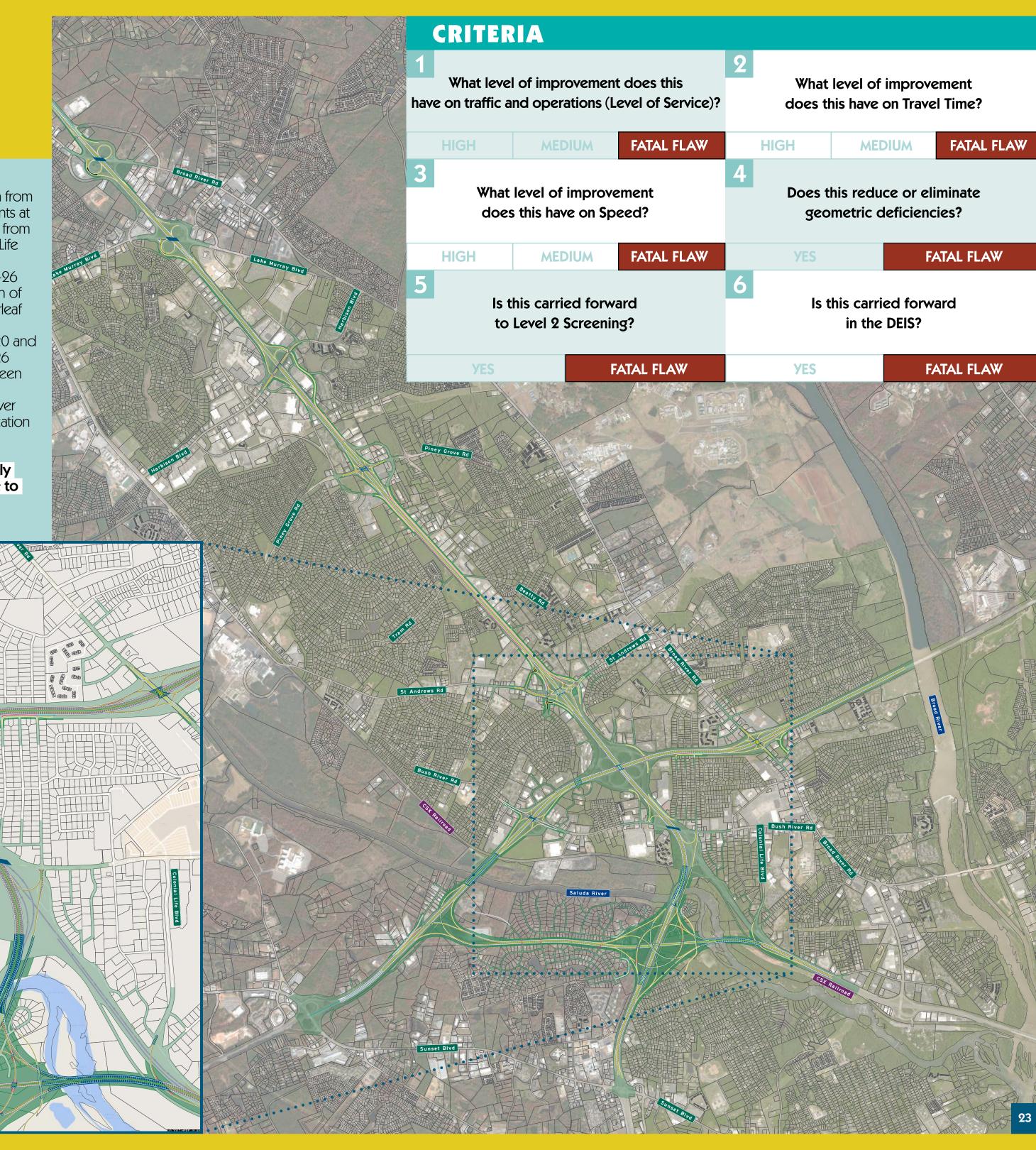


09

#### **Key Features Include:**

- The widening of I-26 with one additional lane in each direction from US 176/Broad River Road to I-126 and interchange improvements at each interchange from: Harbison Boulevard to US 378 on I-26; from US 378 to Broad River Road on I-20; and from I-26 to Colonial Life Boulevard on I-126.
- A proposed new interchange would be added at I-126 and I-26 and a new location I-126 would be proposed paralleling south of the Saluda River along with the elimination of the existing cloverleaf interchange at the I-20 and I-26 junction.
- The elimination of the existing cloverleaf interchange at the I-20 and I-26 junction and proposed new interchange at I-126 and I-26 along with a proposed new location four-lane freeway between I-20 and I-126.
- The modification of the existing interchange at I-26 and Bush River Road. Additionally, I-20 traffic can access I-126 via the new location east-west roadway.

This alternative was eliminated because it was deemed fatally flawed in terms of its ability to meet purpose and need due to critical traffic choke points in the design that could not be resolved.



### Screening:



These four representative alternatives were carried forward in the Level 2 screening process. See the table below for details.

MEDIUM LOW HIGH Level 2 RA 01 RA 05 RA 07 RA 08 **Screening Results Full Acquisitions** 61 properties does this **Partial** alternative impact? 245 251 237 228 **Acquisitions** 12.67 3.35 3.13 9.7 Total Acres How many acres of wetlands does this alternative impact? 22% 24% 32% 39% % High Quality 15,084 14,859 15,477 18,116 **Total Linear Feet** How many liner feet of streams are impacted? % High Quality 9% 14% 19% 8% **Total Acres** 50.05 50.33 98.19 88.14 How many acres of floodplains are crossed? % Zone AE 36% 35% 34% 47% Floodway What is the estimated project cost? \$1.46 \$1.54 \$1.95 \$1.97 (billions) How many acres of public open 0.4 0.35 0.65 1.3 space and parks are impacted? Does this meet local/ regional land **YES** YES NO NO use plans? Improvement on Traffic HIGH **MEDIUM** and Operations (Level of Service) HIGH HIGH HIGH Improvement to Through Travel Time LOW Improvement to Through Speed HIGH **MEDIUM** MEDIUM **MEDIUM Reduces or Eliminates Geometric** YES YES YES YES Deficiencies Carried Forward to Level 3 Screening YES YES NO NO

> Representative Alternative 1 moves forward, see page 6-7

Representative Alternative 5 moves forward, see page 14-15

Representative
Alternatives 7 and 8
are eliminated

In summary, a total of nine Representative Alternatives were compared against the No Build and five representative alternatives were eliminated. Four representative alternatives (RA1, RA5, RA7, and RA8) were carried forward into Level 2 screening for additional analysis.

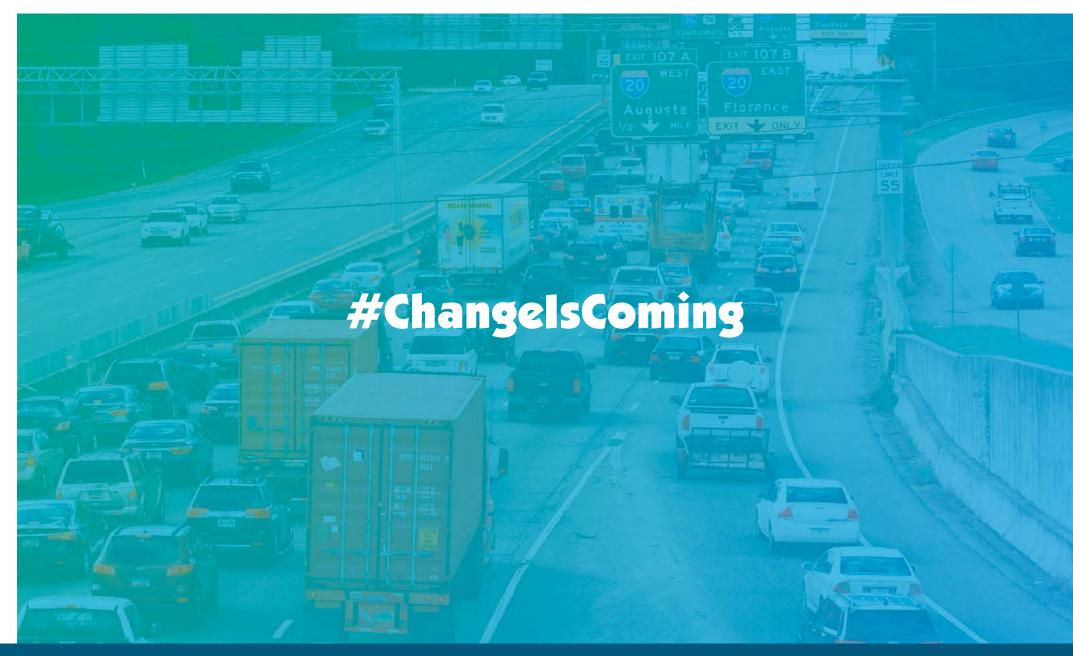
In the level 2 screening process each of the remaining Representative Alternatives were then evaluated in comparison to each other for property impacts, wetlands impacts, stream/river impacts, floodplain impacts, the degree for which the primary purpose and need was met, consistency with city, county, or regional transportation or land-use plans, and overall project costs.

Following completion of Level 2 screening and review of the outputs, natural breaks in the data were apparent. Specifically:

Representative Alternative 7 – Highest property impacts, highest wetlands impacts, second highest impacts to streams/rivers, highest impacts to floodplains from construction of new alignment alternative within the Saluda River floodway, second most expensive.

Representative Alternative 8 – Second highest property impacts including significant impact to businesses along Bush River Road, second highest wetlands impacts, highest impacts to streams/rivers, second highest impacts to floodplains from construction of new alignment alternative within the Saluda River floodway, most expensive.

Based on the impact results, Representative Alternatives 7 and 8 have been eliminated. Reasonable Alternatives recommended to be carried forward into the DEIS are Representative Alternatives 1, 5, and the No Build Alternative. The next steps will be to get input from the public, stakeholders, and agencies on these Representative Alternatives, and develop the Reasonable Alternatives that will be studied in greater detail in the DEIS.



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### FAQ:

### **NEPA - Environmental Impact Statement (EIS)**

#### Step 1 Step 2 Step 3 Step 4 Step 5 Step 6 Analyze **Publish Final EIS Initiate EIS Collect Data** Alternatives **Publish Draft EIS Make Decision** Release Draft EIS Develop purpose · Analyze existing Begin alternatives Review and Prepare and develop responses analysis to comments on the · Collect baseline environmental **Draft EIS** data Begin preparation · Conduct agency impacts of Prepare Final EIS of the Draft EIS and public scoping alternatives comment period addressing Present Reasonable public/agency meetings Hold public Alternatives comments Hold public comment period Start developing reviewing period We are here Decision **Opportunity for Public Comment** Announced

NEXT STEPS: SCDOT plans to complete the Draft Environmental Impact Statement (DEIS) in early 2018. An Environmental Impact Statement (EIS) is a document required by the National Environmental Policy Act (NEPA) to promote informed decision-making by federal, state and local agencies by making "detailed information concerning significant environmental impacts" available to both agency leaders and the public. The DEIS will evaluate how well each of the reasonable alternatives meets the purpose and need of the project. Impacts to homes or businesses will not be fully determined until a Preferred Alternative has been selected. Reasonable Alternatives will be evaluated in the Draft Environmental Impact Statement (DEIS). A public hearing on the DEIS is anticipated for early 2018 and a Preferred Alternative will be presented.

### **Project Quick Facts:**



19 Bridges



12 Interchanges





166 Roadway
(Lane miles)



### **Public Participation Stats**

Public Meetings

03

Participants for Online Meetings 13,900

Online Meetings

03

Attendees for In-Person Meetings 430

Comments Total
Between All Meetings
1,545

### Are you going to impact my home or business?

Right-of-way (ROW) acquisition is not anticipated to begin until late 2019. At that time, should ROW be required, SCDOT will work with affected property owners based on third-party property valuations and according to the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 http://www.fhwa.dot.gov/real\_estate/uniform\_act/). Fair market value is the estimated

http://www.fhwa.dot.gov/real\_estate/uniform\_act/). Fair market value is the estimated value of a property based on what a reasonable person would pay in a voluntary transaction. Also, our online brochure, Highways and You, can help answer questions about the process if property acquisition is needed.

(http://www.scdot.org/doing/technicalPDFs/rightOfWay/HighwaysandYou.pdf).

In extraordinary cases or emergency situations, SCDOT may request and the Federal Highway Administration (FHWA) may authorize the acquisition of a particular property or a limited number of properties within the proposed highway corridor prior to completion of processing the final EIS. These requests will be handled on a case by case basis.

# Why are you proposing the removal of the Bush River Road interchange at I-26 in both of the Representative Alternatives?

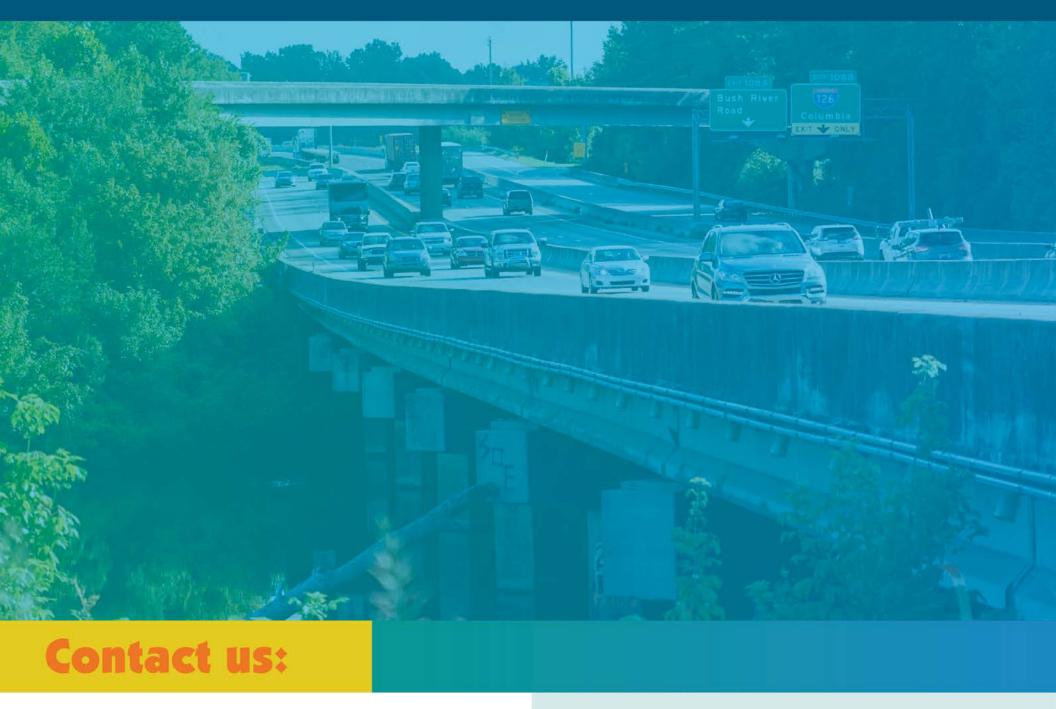
By removing the direct connection between Bush River Road and I-26, traffic conflict points and weaving maneuvers between Bush River Road and the I-20/I-26 interchange would be eliminated, thereby reducing traffic congestion/disruption and improving traffic flow on I-26. However, people will have an improved access to destinations along Bush River Road through the proposed full Colonial Life Boulevard interchange with I-126 and at the existing interchange of Bush River Road and I-20.

### What is the cost of the project?

As the #1 statewide interstate priority, SCDOT plans to fund this project for construction using a blended funding approach that combines a Federal-Aid Interstate Program, as well as leveraging new revenue streams approved by the Legislature in 2016. On June 8, 2016, Act 275 was signed which will provide essential funding to roadway and bridge projects throughout the state, including funding to deliver the Carolina Crossroads I-20/26/126 Corridor Project. The project is expected to cost between \$1.3 and \$1.5 billion. The project budget was estimated using a detailed cost and schedule risk assessment. As alternatives are refined and analyzed, the project team will continue to monitor risks and project cost estimates.



# #ChangelsComing





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#### Title VI of the Civil Rights Act of 1964

SCDOT will take reasonable steps to ensure that no person shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefit of, or be subjected to discrimination under any program or activity receiving federal financial assistance.





