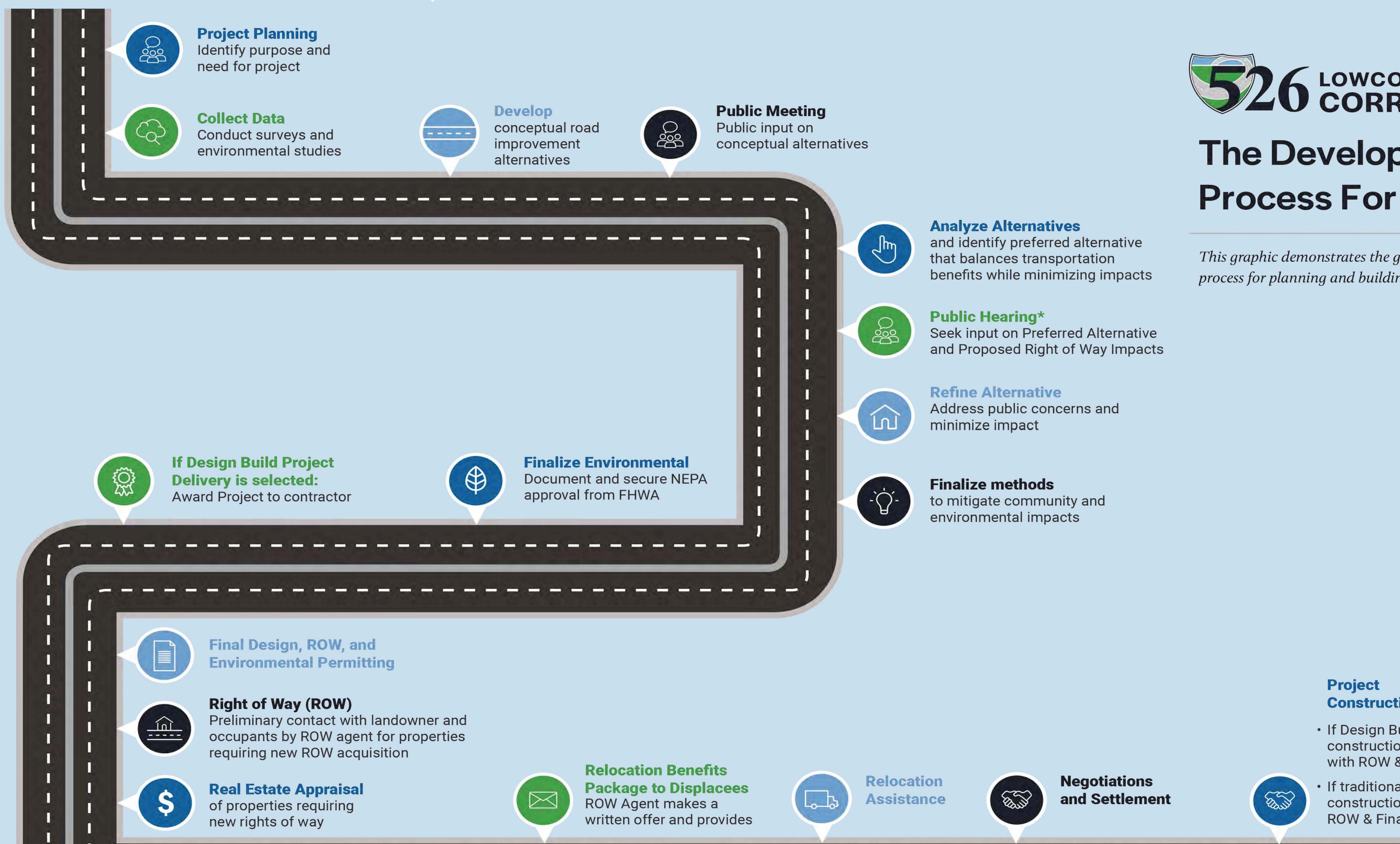


# PROJECT DEVELOPMENT PROCESS





### The Development Process For Highways

This graphic demonstrates the general project development process for planning and building highways.

#### Construction

- If Design Build delivery construction activities can overlap with ROW & Final Design.
- If traditional Design-Bid-Build, construction will not begin until ROW & Final Design is complete.

\*Process depicted on this graphic is for projects being developed under an Environmental Assessment or Environmental Impact Statement; smaller projects developed under a Categorical Exclusion do not require a Public Hearing.







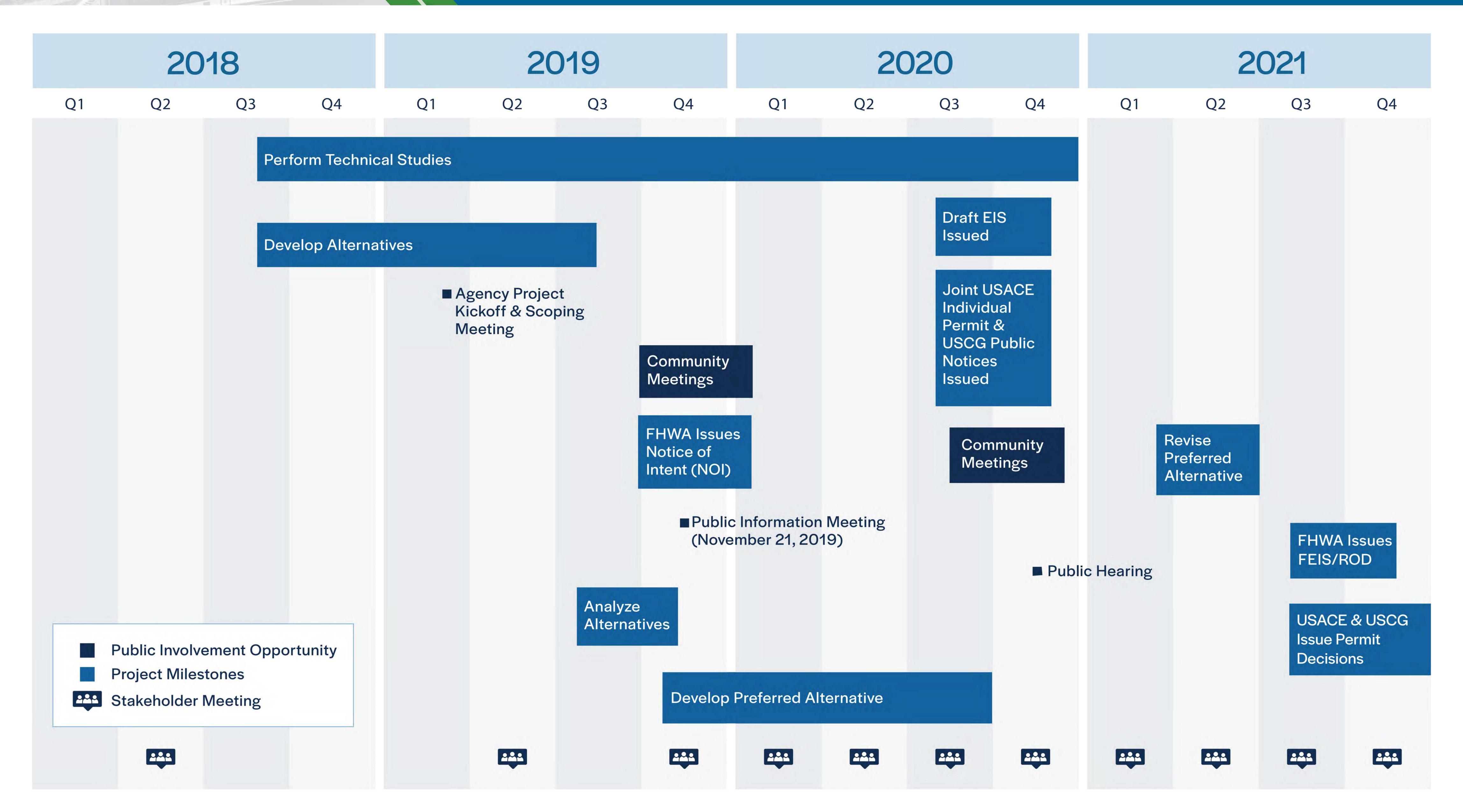
# PROJECT PURPOSE

The purpose of this project is to increase capacity and improve operations at the I-26/I-526 interchange and along the I-526 mainline from Paul Cantrell Boulevard to Virginia Avenue.





# PROJECT SCHEDULE

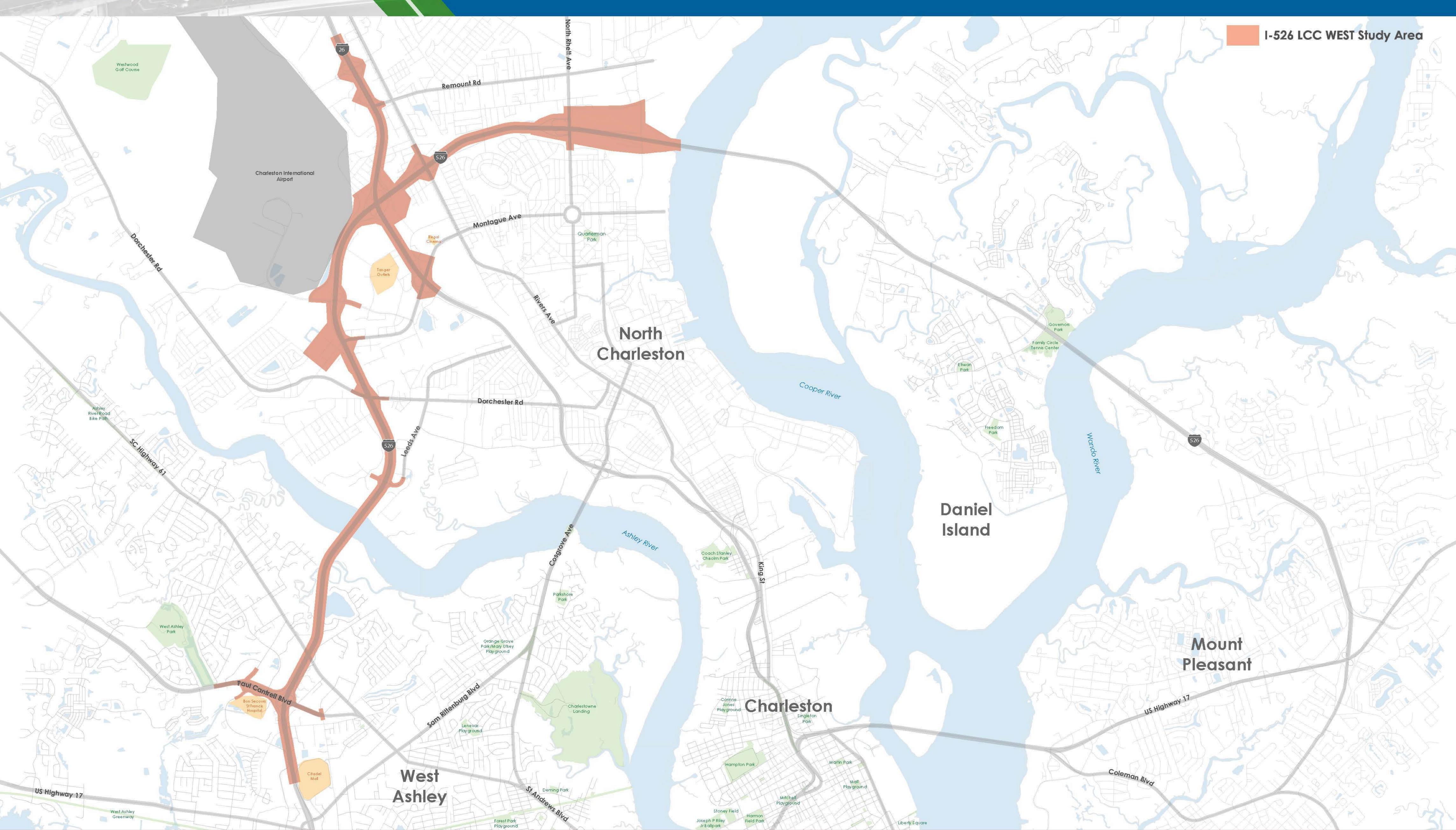








# PROJECT STUDY AREA





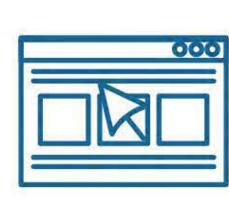




# ALTERNATIVES EVALUATION



 Lowcountry GO Program & Mobile App



Virtual Public Meeting November 2016

1-526 Corridor Analysis Planning Study

2013



- Flex Hours
- Compressed Work Week
   Stagger Start/End Time at Major Employers

Preliminary Range of Alternatives 2016

Evaluation on Purpose & Need and Traffic Analysis 2016 - 2019



Public Information Meeting November 21, 2019

Proposed Reasonable Alternatives 2019

Detailed Impact Evaluation 2020



Preferred Alternative 2020

#### **Alternatives** Eliminated

- 6 Lane Widening
- Managed Lanes
   Transportation System Management & Transportation Demand Management\*
- Mass Transit\*

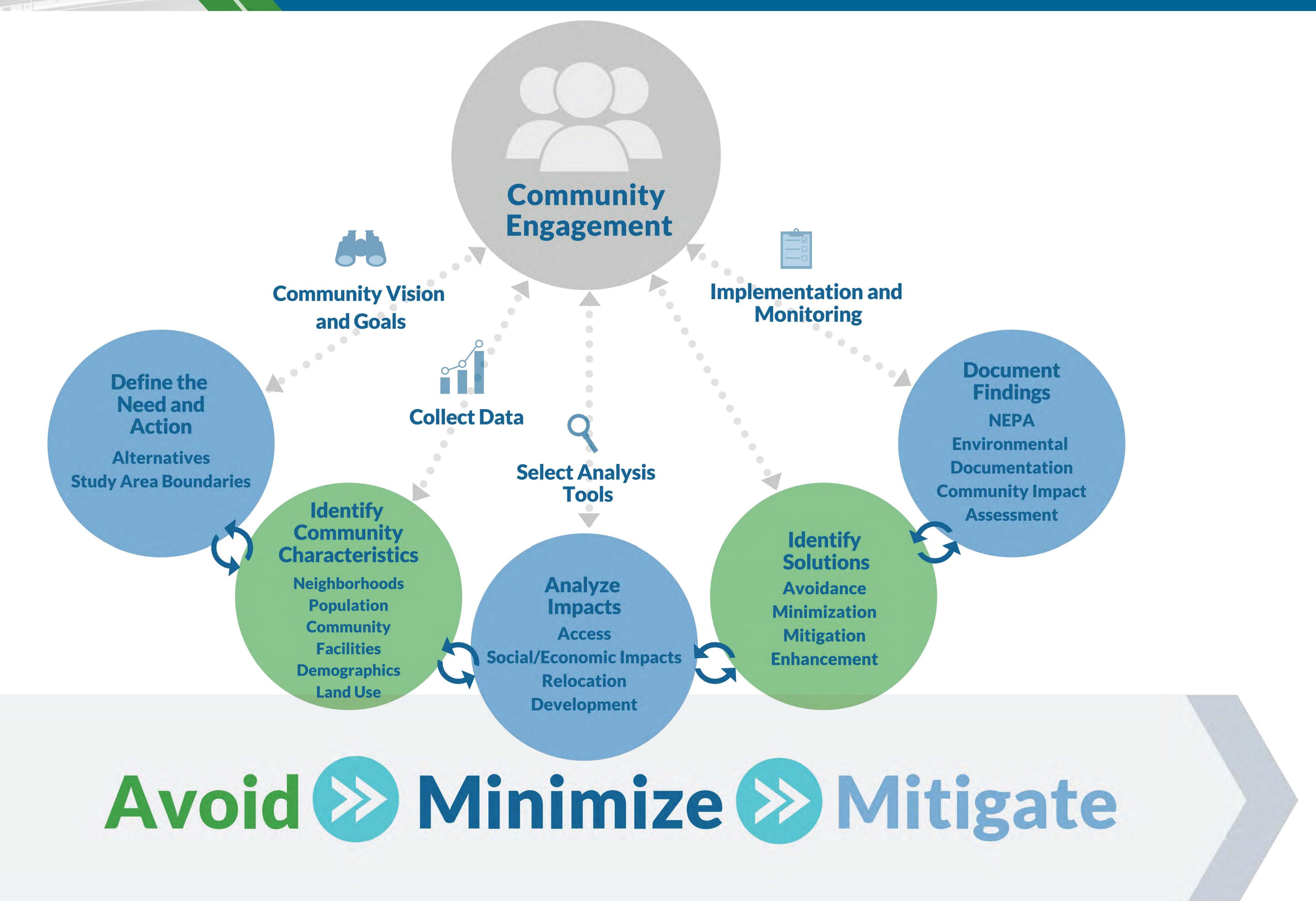
\*as stand-alone alternatives







# COMMUNITY IMPACTS





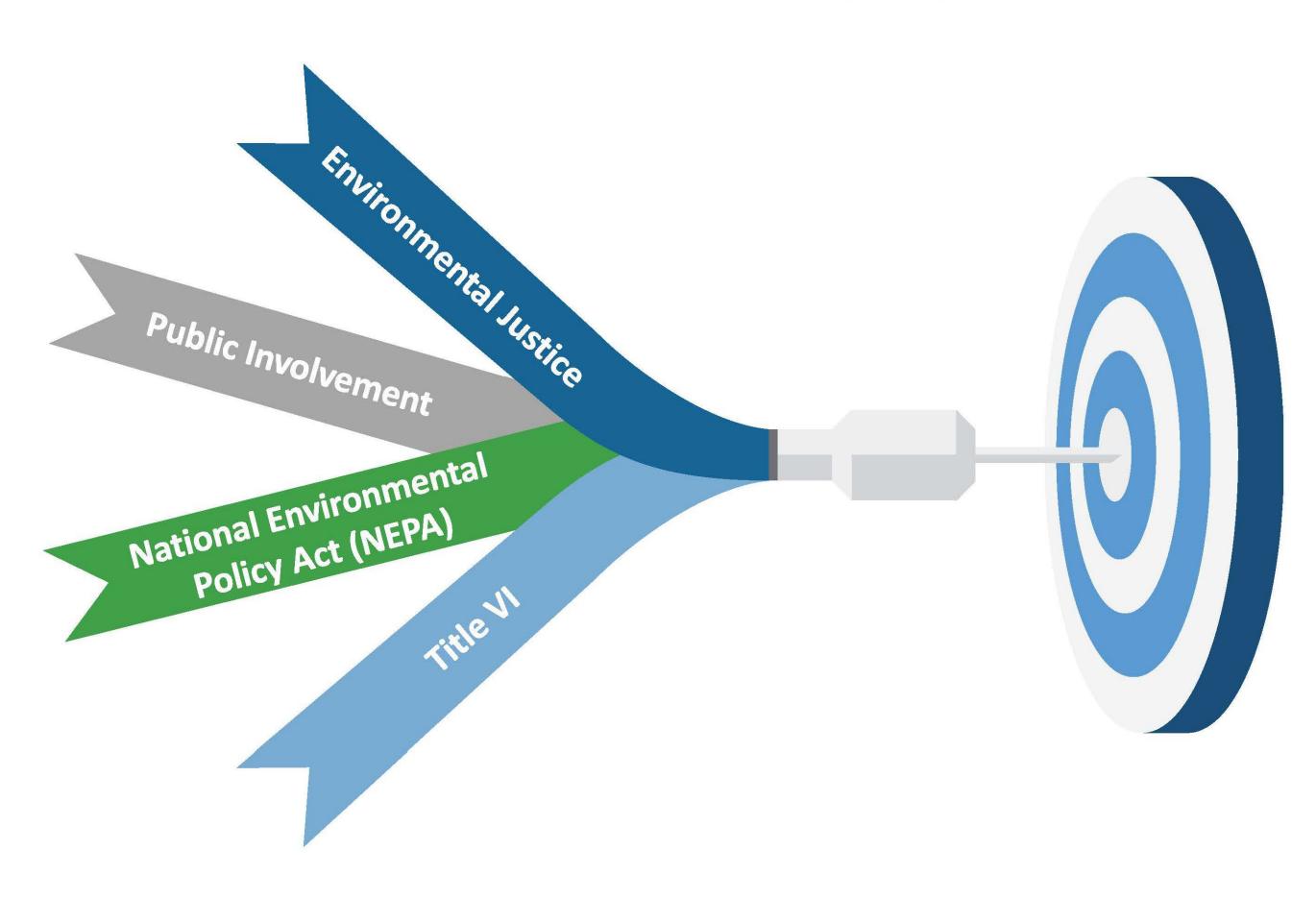




# ENVIRONMENTAL JUSTICE

#### Equity is our AIM in the Project Development Process

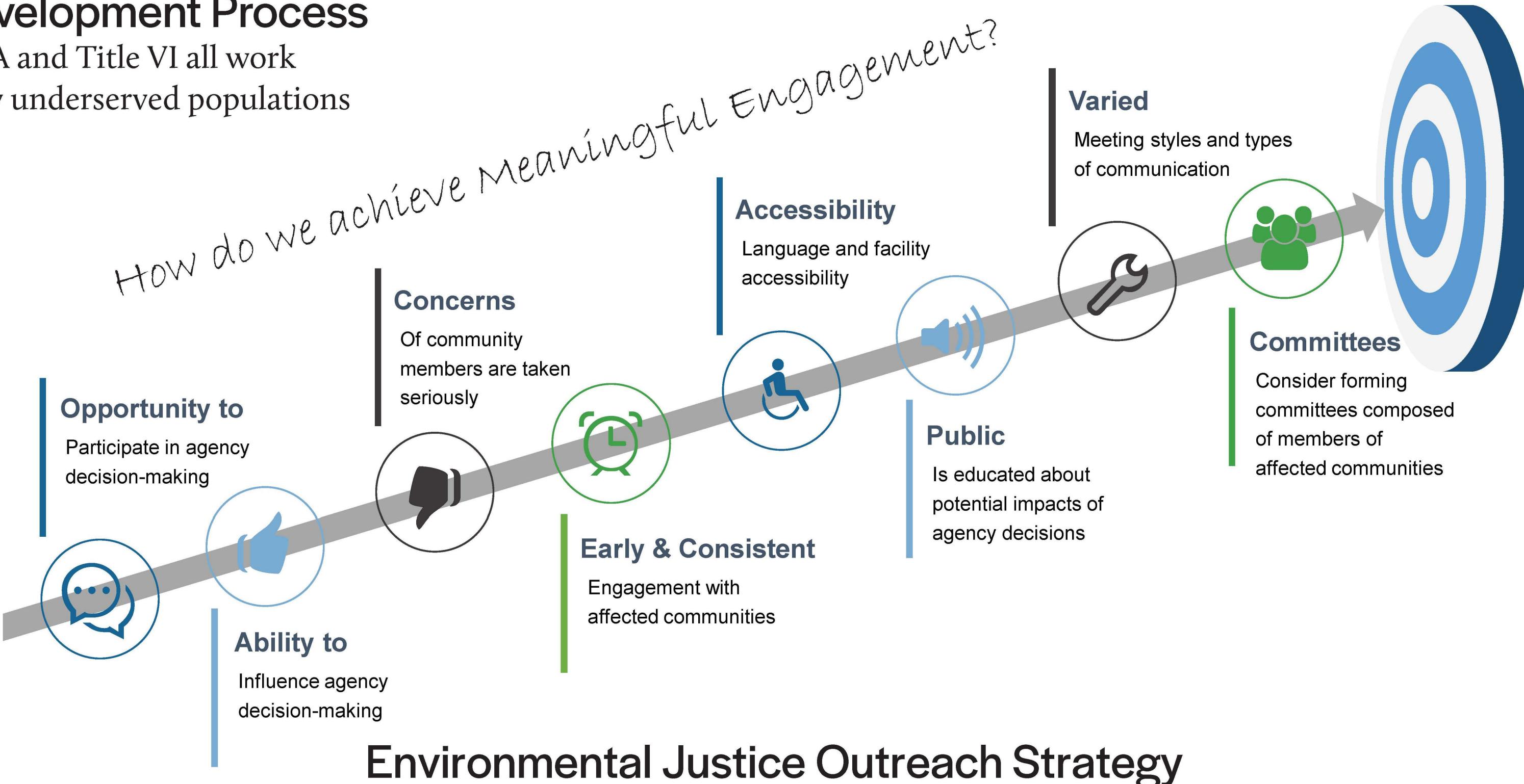
Environmental Justice, Public Involvement, NEPA and Title VI all work together in order to ensure equity to traditionally underserved populations



#### Environmental Justice is...

Both the *fair treatment* and *meaningful involvement* of all people regardless of race, color, national origin, or income with respect to the development, implementation and enforcement of environmental laws, regulations and policies





O1
Small Group
Meetings

O2
Meet on Your
Schedule

03
Walkable Office
Location

O4
Community
Liaisons

O5
Right-of-Way
Specialists

06
Project
Hotline

07
Community
Council

08
Subject Matter
Experts



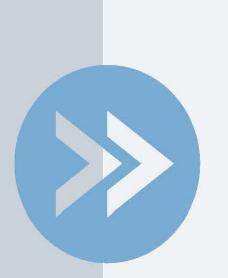




# OTHER ALTERNATIVES EVALUATED

2013

Corridor Analysis - For I-526 Between North Charleston and West Ashley



2019

I-526 LCC WEST

#### "No-Build" Alternatives Evaluated

Strategies and Traffic Reduction Potential









Bus Rapid Transit

J 3.4%



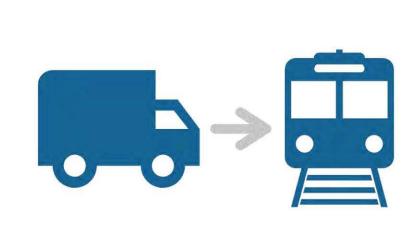
Bike/ Walk Enhancements

J 0.1%



Education/
Promotion

1%



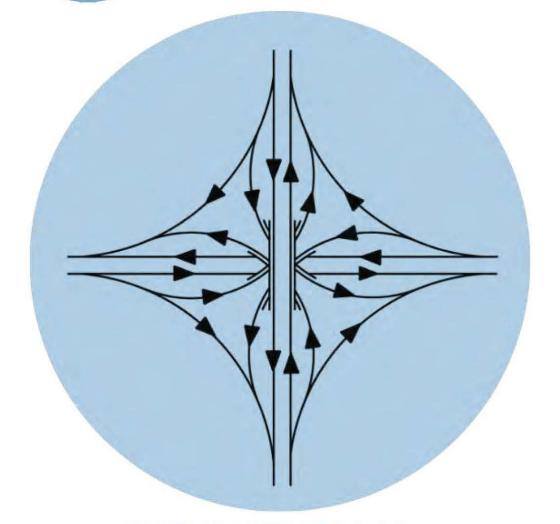
Shift to Rail Freight

3.5%

# Alternate Alignments Evaluated \*\*Constant No. \*\*Constant No.

#### Alternate Interchanges Evaluated

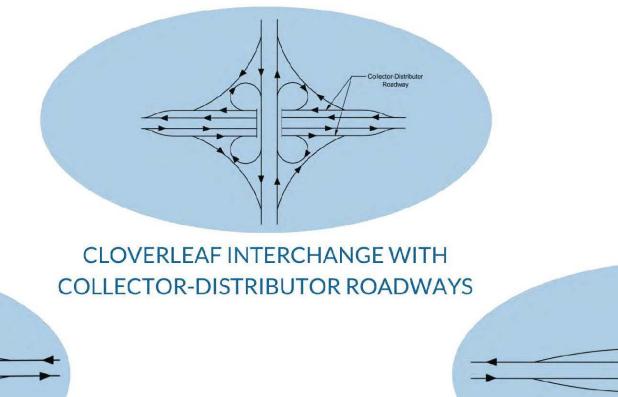
**TURBINE** 



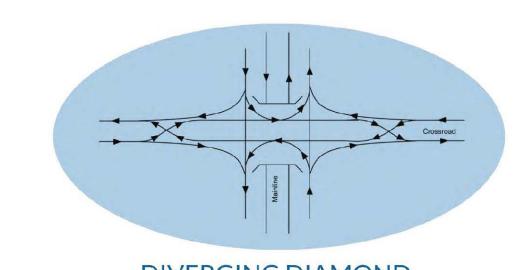
DIRECTIONAL INTERCHANGE WITH DIRECT CONNECTIONS



DIRECTIONAL INTERCHANGE
WITH DIRECT AND SEMIDIRECT CONNECTIONS
AND LOOP RAMPS



DIAMOND INTERCHANGE



DIVERGING DIAMOND
INTERCHANGE

SINGLE-POINT DIAMOND INTERCHANGE

I-526 LCC WEST

Proposed Reasonable Alternatives Presented



# I-526/I-26 Interchange Improvements

- Alternative 1
- Alternative 1a
- Alternative 2
- Alternative 2a

#### I-526/N. Rhett Avenue Interchange Improvements

- Alternative 1
- Alternative 2

I-526/Paul Cantrell
Boulevard Interchange
Improvements







# MANAGING TRAFFIC NOISE

#### How is Traffic Noise Evaluated?

- Using complex computer modeling, we predict expected noise changes at noise-sensitive locations along the project corridor for future traffic conditions
- We must determine which noise-sensitive locations were permitted before the Date of Public Knowledge and, therefore, are eligible for noise reduction
- If the anticipated noise increase is more than the level defined by SCDOT policy, we begin to consider possible ways to reduce the noise, such as with noise walls and earth berms, at all eligible locations

# What is the "Date of Public Knowledge?"

This is the date that the public (and local government) is notified of the future path of the road and is the date of approval of the Categorical Exclusion, the Finding of No Significant Impact, or the Record of Decision

Detailed noise analysis information can also be found at www.scdot.org/business/environmental-toolshed.aspx

#### Measures to Reduce Traffic Noise

#### When do Noise Walls Work?

Sounds travels very much like water or light. It follows the easiest path over, under, and around things in its path. The further away from the source of the sound, the lower the noise.

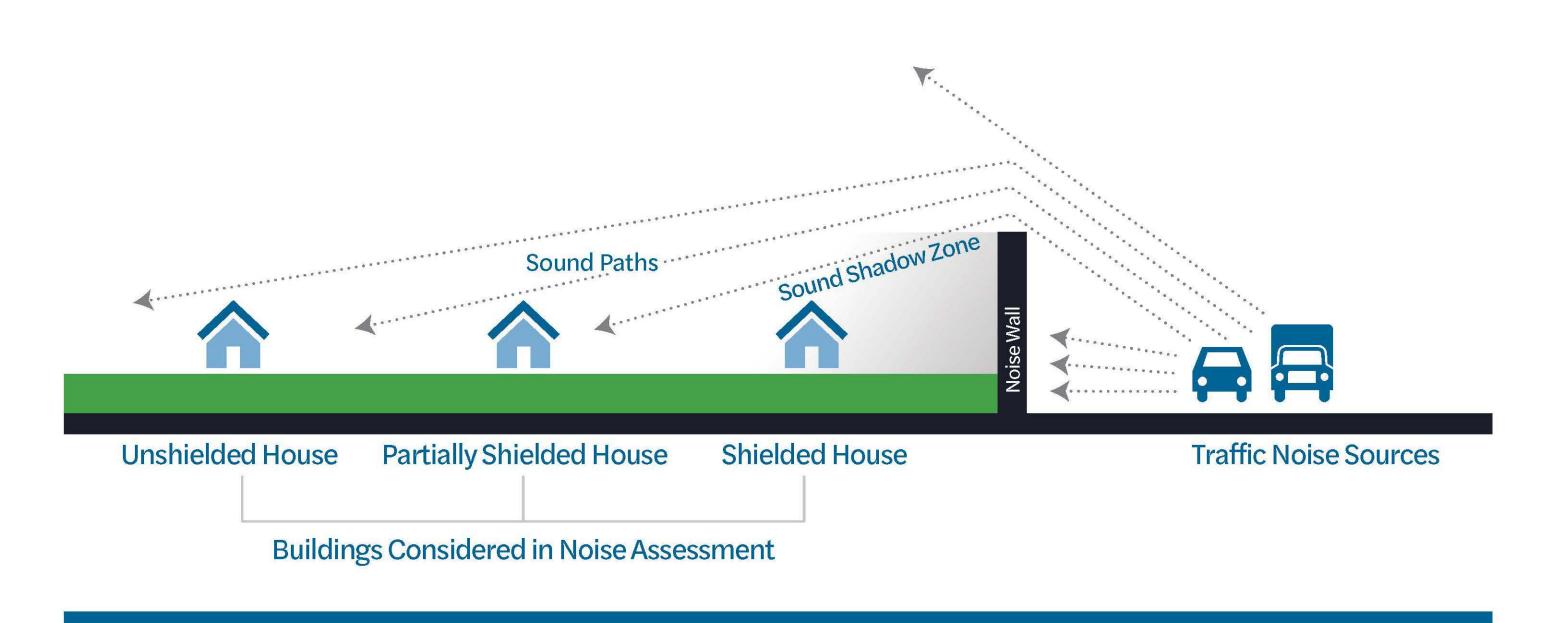
Noise walls do not work if the source of the noise can be seen. The noise will simply travel through that opening much like water will flow through a crack in a dam. If a building is located higher than a noise wall, the noise will flow over the wall to the building.



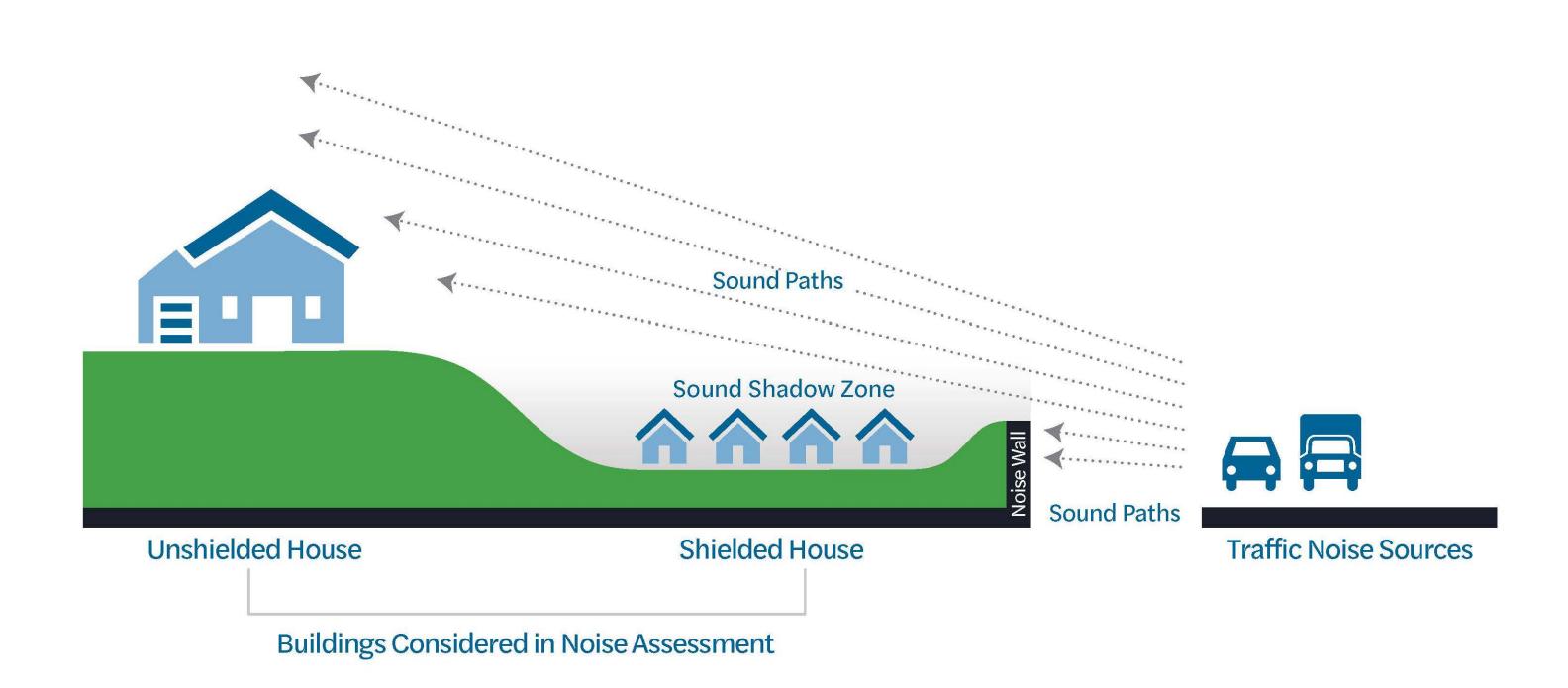


Examples of Noise Walls in South Carolina

#### How Sound Travels with Noise Walls



Flat Area Example



#### Hilly Area Example

The graphics above show two examples of noise walls located between buildings and a road. In both cases, the wall will shield one of the houses but will not shield them all. Noise walls do not completely eliminate all noise.







# SAFETY ANALYSIS

#### **Total Crashes Per Mile**

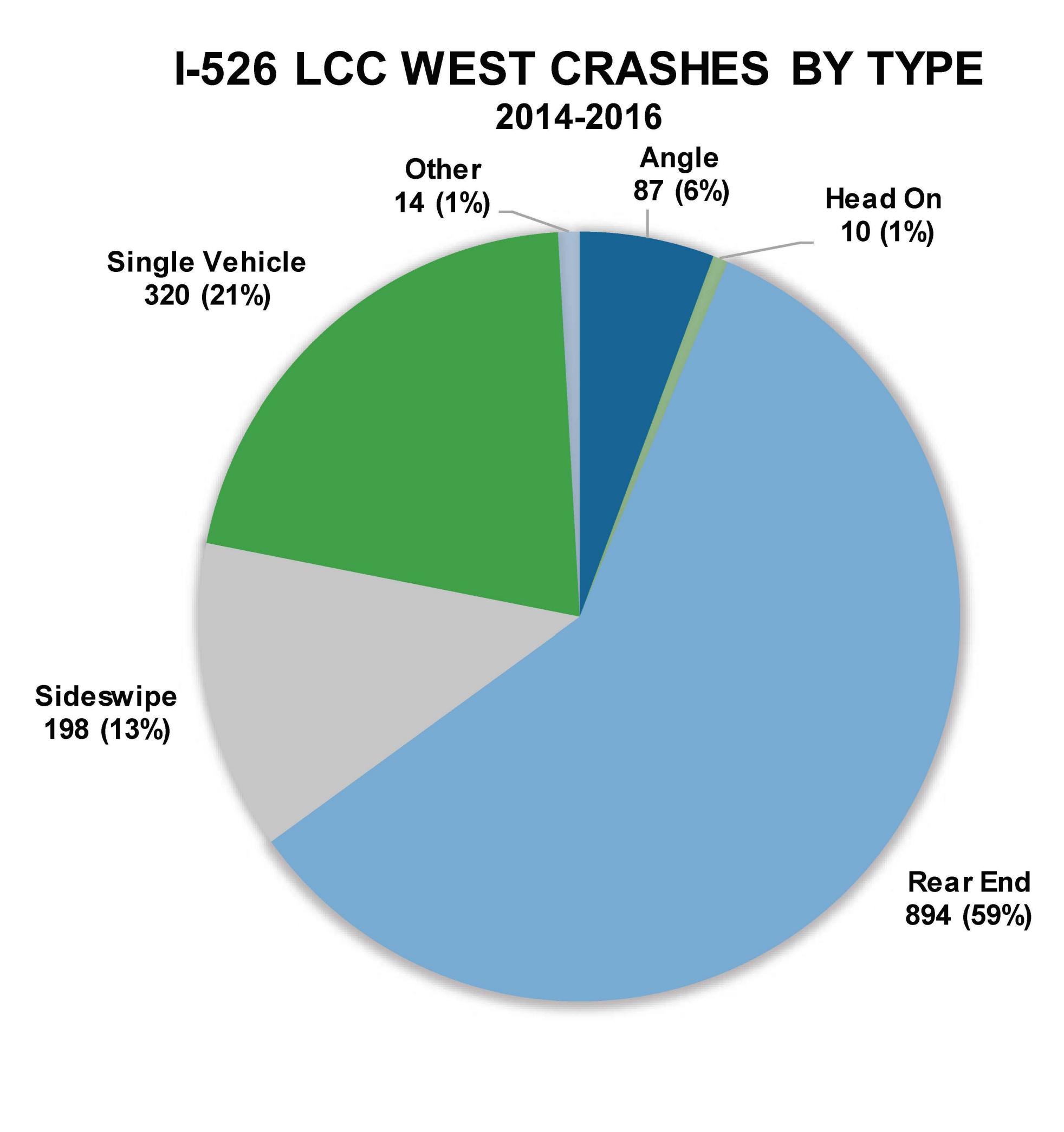
# 26 78 International Blvd W Montague Ave Dorchester Rd **Ashley River** Ashley River Rd Paul Cantrell Blvd Legend

Total Crashes per Mile

0 - 50

2014-2016

#### Types of Crashes



Source: South Carolina Department of Public Safety



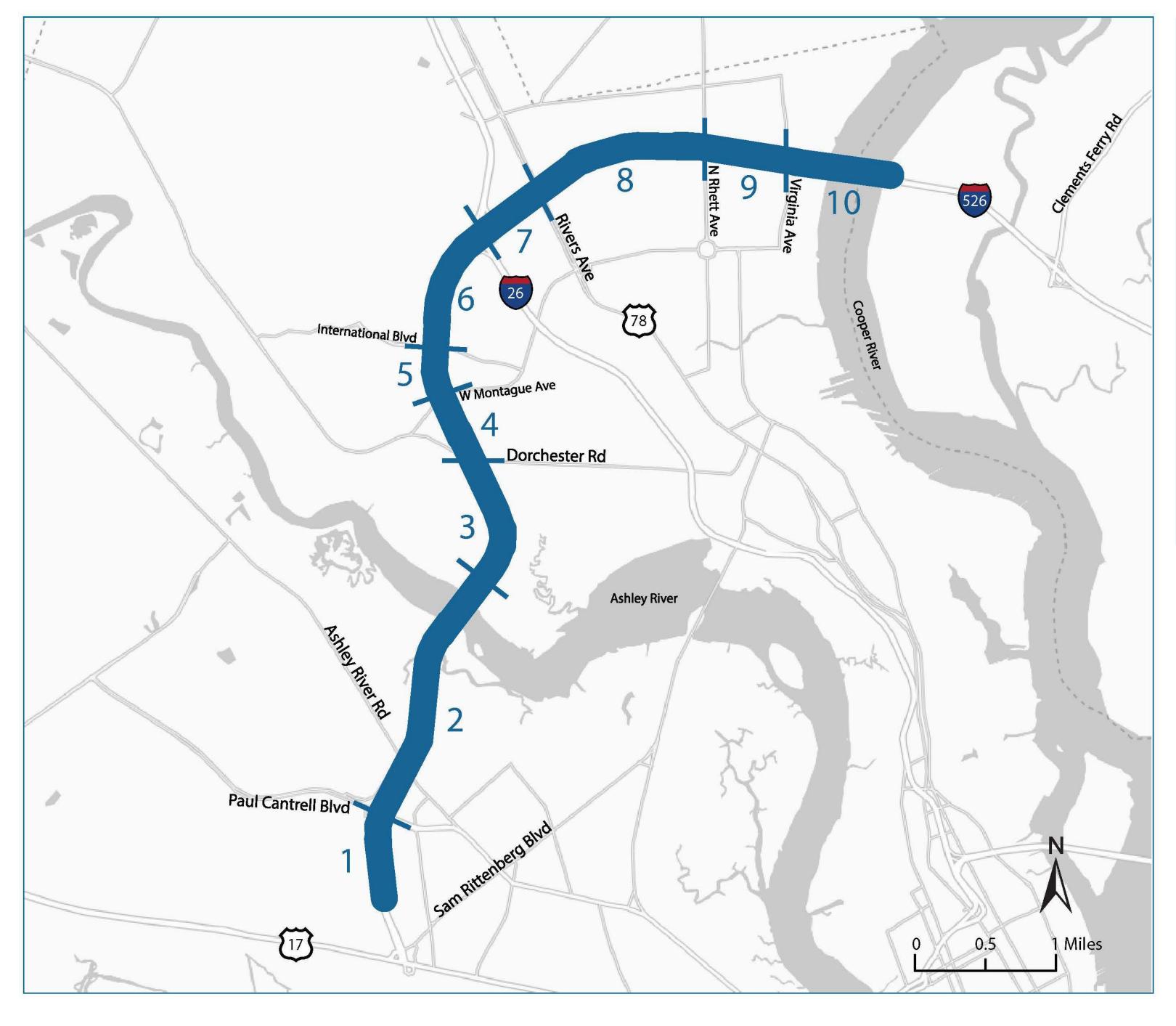
101 - 150

1 Miles



# UNDERSTANDING TRAFFIC

#### I-526 LCC WEST Segments



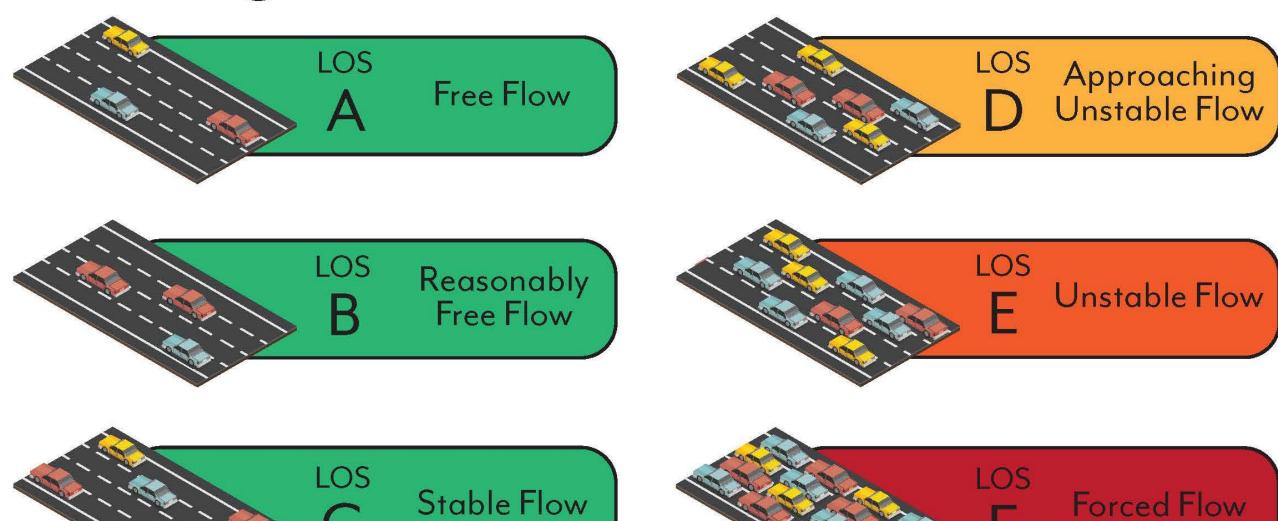
#### Level of Service (LOS)

#### **Definitions**

- AADT Annual Average Daily Traffic
- Volume to Capacity Ratio (V/C) a measure which compares actual or forecast traffic to the available roadway capacity (vehicles per hour)
- A V/C ratio greater than 1.0 indicates that the roadway capacity has been exceeded
- Travel Demand Management Strategies to reduce the overall travel demand or shift demand out of peak travel periods

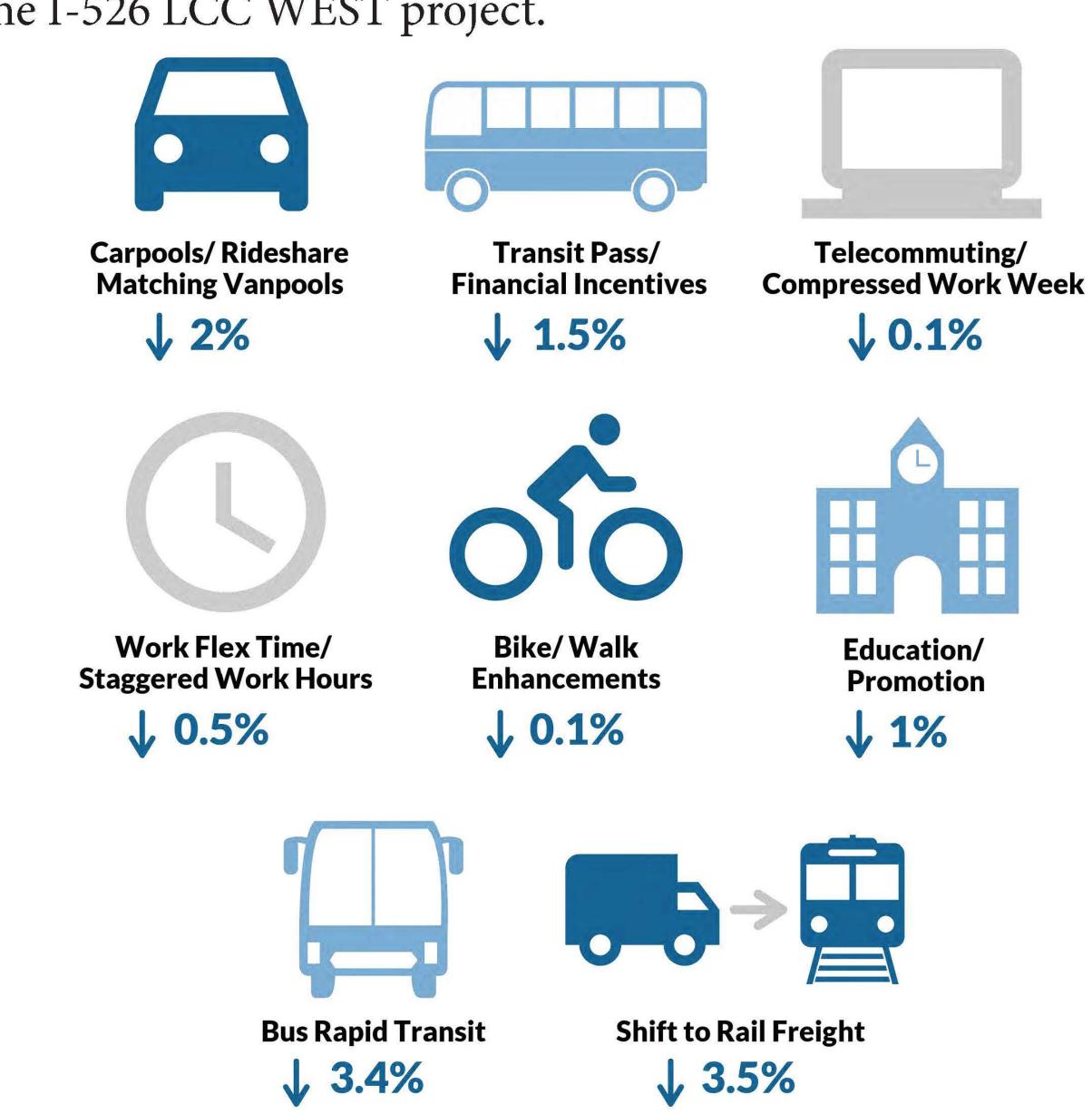
Source: Highway Capacity Manual

#### Measuring Level of Service



#### **Traffic Reduction Potential**

The following Travel Demand Management and Modal Strategies were evaluated in the 2013 I-526 Corridor Study as potential methods to reduce traffic. This was the planning study that lead to the I-526 LCC WEST project.



Source: Adapted from "I-526 Corridor Analysis Between North Charleston and West Ashley", Table ES3

Segment	Segment Description	2015 Annual Average Daily Traffic (AADT)	No Build 2050 AADT	Volume/ Capactiy (V/C)	Level of Service (LOS)	Build 2050	V/C		LOS	
Jeginene						AADT	6-Lane	8-Lane	6-Lane	8-Lane
1	North of SC 7 (Sam Rittenberg Blvd) to Paul Cantrell Blvd	39,400	59,800	0.67	С	68,500	0.52	0.39	В	В
2	Paul Cantrell Blvd to Leeds Ave	79,200	106,900	1.2	F	136,900	1.03	0.78	F	D
3	Leeds Ave to Dorchester Rd	78,800	106,400	1.19	F	134,000	1.01	0.76	F	D
4	Dorchester Rd to Montague Ave	80,700	108,900	1.22	F	127,300	0.96	0.72	Е	С
5	Montague Ave to International Blvd	67,400	91,000	1.02	F	109,600	0.83	0.62	D	С
6	International Blvd to I-26	89,000	120,200	1.34	F	126,700	0.95	0.72	Е	С
7	I-26 to Rivers Ave	77,200	104,200	1.17	F	116,100	0.87	0.66	D	С
8	Rivers Ave to North Rhett Ave	75,600	104,400	1.17	F	126,700	0.95	0.72	Е	C
9	North Rhett Ave to Virginia Ave	80,500	122,200	1.37	F	148,400	1.12	0.84	F	D
10	East of Virginia Ave	68,900	110,100	1.23	F	133,800	1.01	0.76	F	D





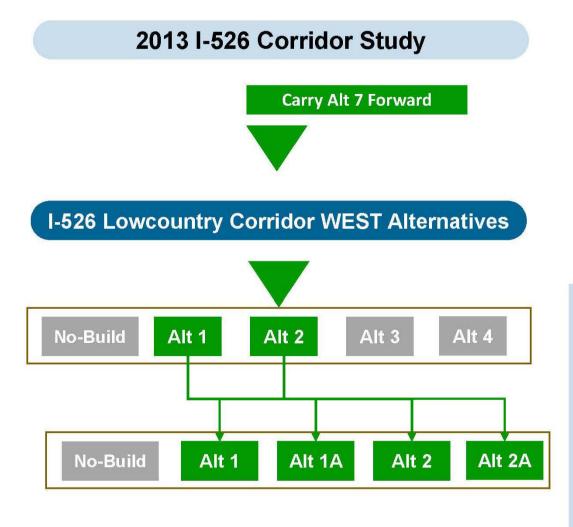


#### **Preliminary Alternatives**

**Evaluation Process** 



#### I-26/I-526 System-to-System Interchange Alternatives



#### Highlights:

- 4 Preliminary Alternatives carried forward from the 2013 Corridor Study Alternatives, with updated traffic forecasts
- All produce an acceptable level of service
- Alternatives 1 and 2 = Comparable impacts
- Alternative 3: Eliminated because of significant impacts to US Government and Airport flight pathways
- Alternative 4: 3-Level interchange Eliminated because of significantly higher costs and constructability challenges with no added benefit over Alternatives 1 and 2

#### Proposed Reasonable Alternatives:

- **No-Build**, **Alternatives 1 and 2** will be carried forward in the NEPA Alternatives Analysis.
- Each has 1 Variant:
  - 1. Alt 1 and 2 **No added ramps** at Rivers Avenue to maintain direct access to I-26
  - 2. Alt 1A and 2A **New ramps** maintaining direct access to I-26 at Rivers Avenue (as it is today)





#### 2013 I-526 Corridor Study Preliminary Alternatives







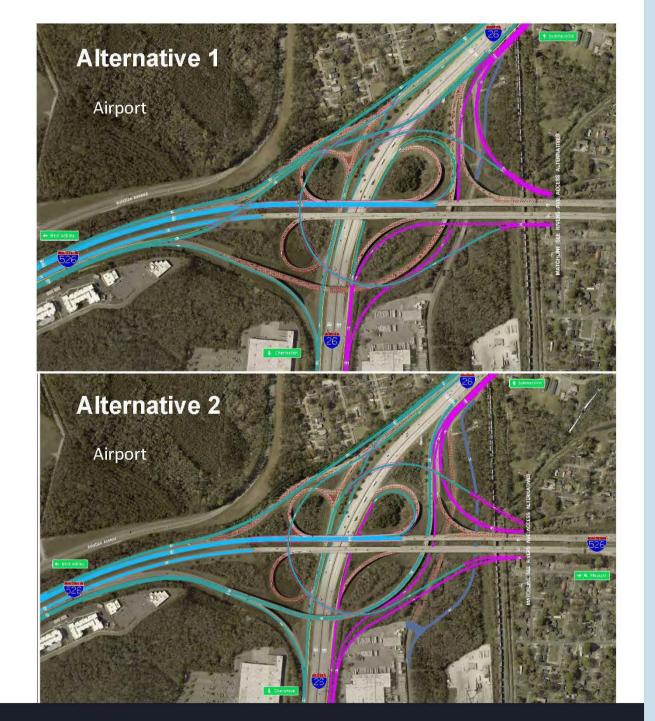








Recommended Alternative Carried Forward



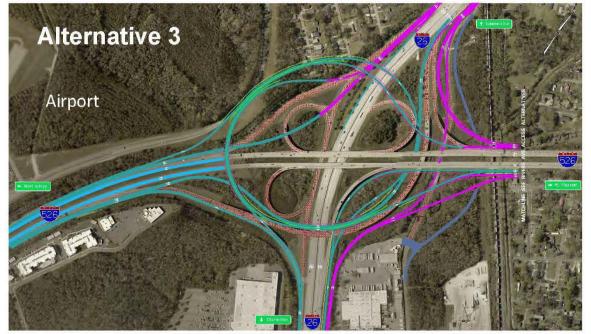
#### I-526 Lowcountry Corridor WEST Preliminary Alternatives

#### I-526 WEST LCC Alternative 1 – Semi-Directional Interchange

- Similar to Alternative 4 from 2013 Corridor Study
- Collector Distributor roads added to north and south side of I-526 through Rivers Ave interchange
- Westbound I-526 to westbound I-26 uses existing directional ramp
- Eastbound I-526 to westbound I-26 directional ramp moved to cross over I-26 north of I-526

#### I-526 WEST LCC Alternative 2 – Semi-Directional Interchange with 1 Loop Ramp Retained

- Similar to Alternative 4 from 2013 Corridor Study
- Collector Distributor roads added to north and south side of I-526 through Rivers Ave interchange
- Westbound I-526 to westbound I-26 uses existing directional ramp





#### I-526 Lowcountry Corridor WEST Preliminary Alternatives

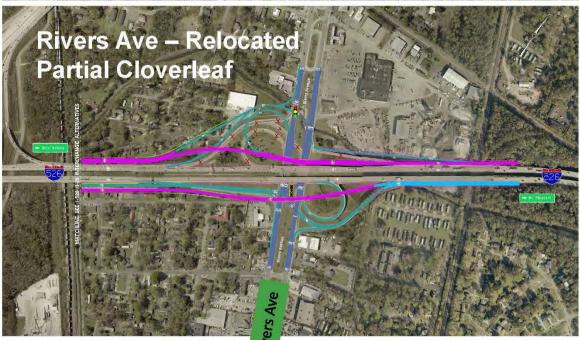
#### I-526 WEST LCC Alternative 3 – Semi-Directional Turbine Interchange

- Alternative 7 from 2013 Corridor Study
- Eastbound I-526 auxiliary lanes between International Boulevard and I-26 replaced with braided ramps

#### I-526 WEST LCC Alternative 4 – Semi-Directional with 3 Levels of Ramping

- Similar to I-526 LCC WEST Alternative 2
- Westbound I-26 to westbound I-526 loop ramp replaced with a directional ramp, creating a 3-level-high interchange





#### I-526 Lowcountry Corridor WEST Preliminary Alternatives

#### Rivers Ave Interchange Alternatives – Basic Build

- New I-526 Collector Distributor (CD) system is constructed over the existing Rivers Ave interchange
- Direct Access from Rivers to I-26 via I-526 is removed; drivers will now access I-26 from the I-26 @ Remount Interchange to the north or at I-26 at Montague to the south

#### Rivers Ave Interchange Alternatives – Relocated Partial Cloverleaf

- New CD system over Rivers Ave
- Additional ramps constructed between Rivers and Collector Distributor system to maintain access to I-26 via I-526 from Rivers Ave

#### Alternative 1 Airport Walmart / Tanger

#### I-526 LCC WEST Reasonable Alternatives

Alternative 1 Semi-Directional Interchange with Advance EB I-526 to WB I-26 Flyover Ramp

- New CD system over Rivers Ave
- Access maintained to existing lanes I-526
- Access between Rivers Ave and I-26 via I-526 removed
- I-26 WB to Remount Rd and Aviation Ave utilizes a portion of the existing directional ramp

#### **Alternative 2** Semi-Directional Interchange

- Similar to Alternative 1
- Utilizes existing directional ramp for eastbound I-526 to westbound I-26







#### Alternative 2A Semi-Directional Interchange

- Similar to Alternative 2 with the same interchange design at I-526/I-26
- Alterations at Rivers Ave to add ramps to allow access to I-26 from Rivers Ave via I-526





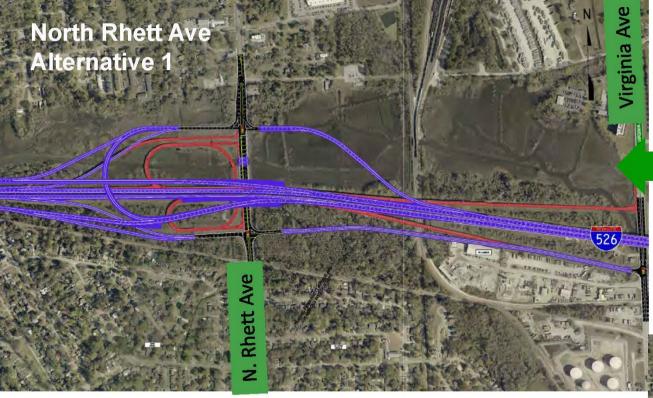
#### I-526 LCC WEST Reasonable Alternatives



Alternative 1A Semi-Directional Interchange with Advance EB I-526 to WB I-26 Flyover Ramp

- Similar to Alternative 1 with the same interchange design at I-526/I-26
- Alterations at River Ave to add ramps to allow access to I-26 from Rivers Ave via I-526





#### North Rhett Ave Alternative 2

- Entrance ramps begin at separate intersections for eastbound & Westbound I-526
- Provides separate, 1-way frontage roads on either side of I-526 connecting N Rhett Ave to Virginia Ave
- Exit ramps from Eastbound & Westbound I-526 terminate at intersections on the south and north sides of I-526



#### I-526 LCC WEST Reasonable Alternatives

#### North Rhett Ave Alternative 1

- Provides access from one intersection on N. Rhett Ave to Eastbound & Westbound I-526
- Provides separate, 2-way frontage road between N Rhett & Virginia Avenues
- Exit ramps from Eastbound & Westbound I-526 terminate at intersections on the south & north sides



#### I-526 LCC WEST Reasonable Alternatives

#### **Paul Cantrell Alternative 1**

- New bridge will carry the Westbound lanes of Paul Cantrell Blvd over the intersection with Magwood Dr
- Westbound exit ramp from I-526 to Westbound Paul Cantrell Blvd will be widened and utilize this new bridge to bypass the Magwood intersection







**Project Development Process** 

Alternatives

Right-of-Way

**Community Impacts** 

Noise

Comment Form



Watch this brief video for an overview and introduction to the I-526 Lowcountry Corridor WEST project.



Welcome to the I-526 Lowcountry Corridor WEST (I-526 LCC WEST) virtual public meeting. The purpose of this meeting is to provide you with an update on the development and analysis of alternatives to improve the I-526 project corridor between Paul Cantrell Boulevard in West Ashley and Virginia Avenue in North Charleston. All materials that will be shown in-person at the public information meeting on November 21, 2019 can be found here.

The I-526 LCC WEST project's purpose is to increase capacity and improve operations at the I-26/I-526 interchange and along the I-526 mainline from Paul Cantrell Boulevard to Virginia Avenue. The need for this project was identified in several regional and state-level planning efforts. Please take the time to watch this brief video to learn more about the project background.

Project Development Process

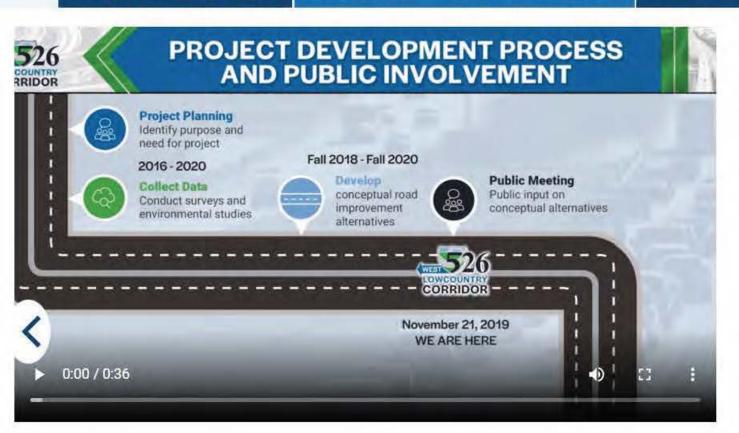
**Alternatives** 

Right-of-Way

**Community Impacts** 

Noise

Comment Form



View this video to learn how SCDOT is navigating the I-526 WEST project development process.





The need for the I-526 LCC WEST project was identified in several planning documents:

- I-526/I-26 Interchange: #2 project, 2035 CHATS Long Range Transportation Plan
- SCDOT's ACT 114 Interstate Capacity List: #6 project
- I-526 Corridor Analysis study
- SCDOT's 2014 Multimodal Transportation Plan: 4 segments within this project corridor are listed in the top 20 most congested interstate segments.

The South Carolina Department of Transportation (SCDOT) is following the project development process used for developing large-scale roadway projects for the I-526 LCC WEST project. This process begins with early efforts to identify the purpose and need of a project, followed by the collection of data used to understand that need and the related potential impacts and benefits of

**Project Development Process** 

**Alternatives** 

Right-of-Way

Community Impacts

Noise

Comment Form



Learn how the project team arrived at the proposed reasonable alternatives using evaluation criteria by watching this video.



As part of the National Environmental Policy Act (NEPA) process, the project team used the criteria outlined below in the Alternatives Evaluation Funnel to evaluate the preliminary range of alternatives and arrive at the proposed reasonable alternatives. Various improvements for the mainline and specific interchanges within the project area were analyzed. Please review the materials below on this webpage to learn more about the evaluation criteria and process used.

Public involvement is an integral component of this process. Your feedback helps the project team identify significant environmental resources and is key in understanding how proposed alternatives may impact various communities.

The alternatives evaluation process has resulted in the following proposed reasonable alternatives, designed to increase capacity and improve operations along I-526 between Paul Cantrell Boulevard in West Ashley and Virginia

Avenue in North Charleston. The proposed reasonable alternatives, presented

**Project Development Process** 

Alternatives

Right-of-Way

**Community Impacts** 

Noise

Comment Form





SCDOT roadway projects are planned and developed through an extensive environmental review process, in accordance with the National Environmental Policy Act (NEPA). During this environmental review process, SCDOT performs environmental and community surveys and evaluates all the potential alternatives that could be considered to meet the purpose and need of the project. SCDOT seeks to find the alternative that strikes the best balance between meeting project needs and minimizing the impacts to the natural and human environments.

Community impacts such as right-of-way impacts and property owner relocations are considered as a part of the NEPA process. The public and potentially impacted communities will be engaged throughout the NEPA process to gather input on the proposed project alternatives. All Right-of-way will be acquired in conformance with the Uniform Act.

**Project Development Process** 

Alternatives

Right-of-Way

**Community Impacts** 

Noise

Comment Form

## COMMUNITY IMPACTS AND MITIGATION CORRIDOR Engageme

Watch this short introductory video to Environmental Justice to learn how SCDOT identifies and assesses Community Impacts.



#### **Community Impacts**

After the initial evaluation of the preliminary alternatives, it was determined that an environmental impact statement, or EIS, should be prepared for the I-526 LCC WEST project. An EIS is a full disclosure document detailing the process through which a transportation project is developed which includes consideration of a range of reasonable alternatives and analyzing the potential impacts resulting from the alternatives while demonstrating compliance with other applicable environmental laws and executive orders. Potential impacts to people, communities, and the natural environment are all evaluated. The project team will be identifying potential impacts during the design of the project and is seeking input on those impacts to communities within the project area.

Environmental justice is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws,

Project Development Process

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Right-of-Way

Community Impacts

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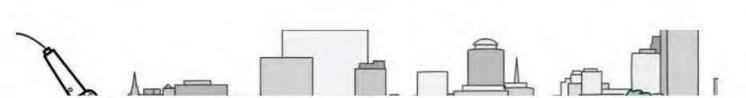


Watch this short video for an update on how the I-526 LCC WEST project is evaluating potential traffic noise.



SCDOT recognizes the impacts that highway traffic noise may have on citizens and will do what is reasonable and feasible to lessen these effects. Our team has been conducting noise readings within the project study area to understand the current noise levels. As part of the project development process, we will be performing noise studies on each of the proposed reasonable alternatives presented today. These studies will assist us in determining if noise abatement, such as noise walls, are needed. That information will be presented at the public hearing, tentatively set for the end of 2020. In the meantime, please watch the Highway Traffic Noise video to learn more about this process or read the SCDOT policy on Highway Traffic and Noise.

- Noise Handout (PDF: English | Spanish)
- Frequently Asked Questions



Project Background | Project Development Process

Alternatives

Right-of-Way

Community Impacts

Noise

Comment Form



While the official public comment period for this Virtual Public Information Meeting closed as of January 31, 2020, we will continue to accept comments throughout the project development process.

We encourage you to participate and follow the project progress. If you would like to receive email updates, please ensure the box is checked below when nitting a comment. Please make sure to follow us on Facebook and Twitter ic. regular project updates.

We value your input, so please take a few moments to share your thoughts, questions and concerns. Thank you for joining our virtual public information meeting.

Name *	
First	Last
Email *	Phone *
Address *	
Street Address	
Address Line 2	
City	State / Province / Region