



# Appendix A – Purpose and Need Report

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# **Purpose and Need Report**

*May 7, 2019*

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# 1.0 Introduction

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To accommodate an increase in traffic volume, Charleston County, the Town of Mount Pleasant, and South Carolina Department of Transportation (SCDOT) are partnering to improve roadway capacity and ease traffic congestion along an approximate 5.6-mile stretch of Highway 41 (SC 41) (Figure 1). This section of SC 41 serves as a minor arterial that has experienced an increase in traffic due to regional growth, and currently sustains operations that exceed capacity and are projected to worsen over time. As a designated hurricane evacuation route and key corridor in and out of Mount Pleasant, SC 41 will continue to experience significant use and increased traffic congestion.

In order for the SC 41 Corridor Improvements project to receive required federal permits to construct, the project's design scope must be established in accordance with the National Environmental Policy Act (NEPA) process. Under the NEPA process, an extensive environmental review must take place in order to complete a rigorous analysis of the project area and to examine reasonable alternatives for the improvements. The environmental review is done in order to avoid, minimize or mitigate environmental impacts and to ensure public participation is incorporated into the decision-making process.

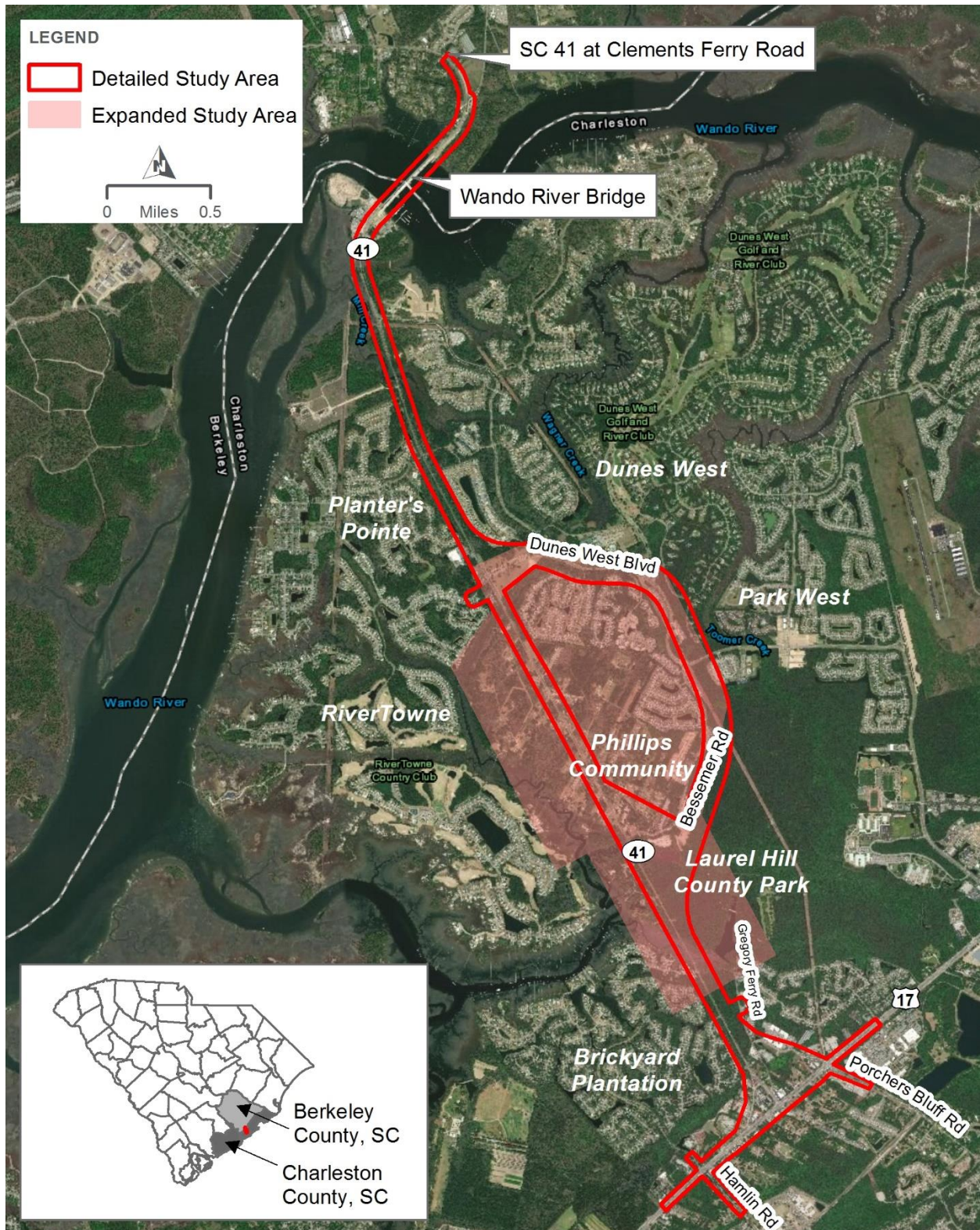
The Purpose and Need Report for the SC 41 Corridor Improvements project was prepared according to the provisions of the NEPA and corresponding regulations and guidelines of the U.S. Army Corps of Engineers (USACE), the lead federal agency (33 Code of Federal Regulations [CFR] Appendix B to Part 325). The USACE requires the establishment of a project purpose for permit applications in order to evaluate "practicable" alternatives that may have impacts on wetlands and waters of the U.S. under the Clean Water Act. When considering USACE's purpose and need for issuing a permit, USACE looks to the need for and purpose of the project in terms of benefits to society based on public interest factors.

A Letter of Intent (LOI) was distributed on July 13, 2017, to stakeholder agencies to notify them of the commencement of the proposed project. The LOI provided general project information and requested comments on potential environmental issues and concerns within the project study area. In September 2017, Charleston County hosted community and stakeholder meetings to introduce the project and discuss the upcoming planning process. Public information meetings were held on November 13, 2017 and May 16, 2018 in Mount Pleasant, SC, and a virtual public information meeting was held August 13 – September 11, 2020 on the project website.

Input from local communities, stakeholders, and agencies, coupled with field research and traffic analysis, has helped Charleston County, SCDOT, and USACE develop the purpose and need of the proposed SC 41 Corridor Improvements project. The purpose and need explains why a project is necessary and what it should achieve. Most importantly, it serves as the criteria for determining and evaluating the range of project alternatives, and ultimately selecting the proposed alternative for the project.



Charleston County  
Transportation Development



**Figure 2. Project Location and Study Areas**

## 1.1 USACE Determination of Purpose and Need

USACE is responsible for compliance with Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act, as well as NEPA. Under Section 404(b)(1) of the Clean Water Act, the Environmental Protection Agency, in conjunction with USACE, developed “Guidelines” to ensure compliance with Section 404 of the Clean Water Act when evaluating permit applications (40 CFR §230) for the placement of fill in wetlands or waters of the U.S. There are four “restrictions on discharge” outlined in the 404(b)(1) Guidelines. The first “restriction” is that no discharge of dredged or fill material shall be permitted if there is a “practicable” alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem. USACE considers an alternative “practicable” if it is available and capable of being done after taking into consideration cost, existing technology, and logistics in light of the overall project purpose (40 CFR §230.10(a)(2)). Therefore, in order to determine compliance with this “restriction”, USACE must determine the overall project purpose. When reviewing the proposed project, USACE must evaluate each alternative, always considering whether each of the alternatives really meets the project’s purpose.

### 1.1.1 What is the responsibility of USACE to review the Statement of Need?

USACE has general policies that guide the review of Department of the Army permits. One such policy is the public interest review. The concept of public and private need for the proposed project is important to the balancing process of USACE’s public interest review. 33 CFR §320.4(a)(2) states that part of the public interest review in the evaluation of every application is to consider the relative extent of the public and private need for the proposed structure or work. A public sector applicant’s project is presumed to address some public need and USACE can defer to a state or other government entity’s decision to spend public money. However, regulations indicate that USACE should make an independent review of the public need for a project from the perspective of the overall public interest. This independent review is relevant to USACE’s permit decision. USACE will question the public need for a project if the proposed project appears to be unduly speculative. In the public interest review, USACE has the responsibility to balance public interest need or benefits against public interest detriments. The decision of whether to authorize the proposed project and the conditions under which it will be allowed are determined by the outcome of the general balancing process.

## 2.0 Project Limits

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The project study area has been defined as SC 41 from US 17 in Mt. Pleasant across the new Wando River Bridge to Clements Ferry Road in Berkeley County. SC 41 within the study area is an existing two-lane roadway with grassed shoulders and roadside ditches. Signalized intersections are located at SC 41 and US 17, SC 41 and Bessemer Road, SC 41 and Rivertowne Parkway/Dunes West Boulevard, and SC 41 and Clements Ferry Road.

The project proposes to improve SC 41 for a total of approximately 5.6 miles from US 17 across the Wando River Bridge to Clements Ferry Road, located in Berkeley and Charleston Counties, South Carolina. The proposed project would also include improvements to the intersection of SC 41 and US 17, a new tie-in road between SC 41 and Winnowing Way, and 1.3 mile new location roadway, Laurel Hill Parkway, between SC 41 and Park West Boulevard.

Along SC 41, the proposed typical section is 4-lane curb and gutter with a planted median between US 17 and Joe Rouse Road, and from Dunes West Boulevard to Clements Ferry Road, with a 5-foot sidewalk on the west side and a 10-foot wide multi-use path on the east side. On SC 41 between Joe Rouse Road and Dunes West Boulevard, the proposed typical section is a three-lane curb and gutter section with one travel lane in each direction, a center two way left turn lane, and 5-foot sidewalks on both sides. The proposed typical section along Laurel Hill Parkway is two lanes with curb and gutter and a 10-foot multi-use path on the east side.

Residential communities along SC 41 include the Phillips Community, Dunes West, Park West, Rivertowne, Planter's Pointe, The Colonnade, Brickyard Plantation, and Horlbeck Creek (Figure 2). Additionally, the project study area includes crossings over Horlbeck, Mill, and Wagner Creeks. While the study corridor includes the Wando River, no construction is anticipated within or directly adjacent to the river since the SC 41 bridge was recently replaced in 2017.

## 3.0 Regional Transportation Planning

### 3.1 CHATS Long-Range Transportation Plan

The Berkeley-Charleston-Dorchester Council of Government's (BCDCOG) Charleston Area Transportation Study (CHATS) 2040 Long-Range Transportation Plan (LRTP) (BCDCOG, 2018a) addresses regional transportation needs through continuous coordination with representatives of numerous stakeholders, including:

- CHATS Metropolitan Planning Organization
- Cities of Charleston, Hanahan, North Charleston, Goose Creek, Isle of Palms, and Folly Beach
- Towns of Mount Pleasant, Moncks Corner, Sullivan's Island, Summerville, Lincolnville, James Island, Kiawah Island, Rockville, and Seabrook Island
- Berkeley, Dorchester, and Charleston Counties
- Various local, regional, state, and federal agencies, including the local transit authorities (CARTA and TriCounty Link), SCDOT, FTA, and FHWA

The LRTP identifies specific and general transportation system improvement recommendations and strategies to accommodate future transportation demands while promoting safety and efficiency. This plan supports a multimodal transportation system that addresses the economic, social, and environmental needs of the BCD Region by assessing not only automobile accessibility, but also freight, bicyclist, pedestrian, and transit components of the system.

The LRTP identifies the SC 41 Corridor Improvements, the Gregory Ferry Connector, the Clements Ferry Road Widening (Phase 2), and the Park West Boulevard Widening projects on its list of committed roadway improvement projects. The Gregory Ferry Connector is a proposed road connecting Colonnade Drive (at SC 41) to Emma Lane (at Gregory Ferry Road). The Clements Ferry Road Widening (Phase 2) involves widening Clements Ferry Road from Jack Primus Road to SC 41 from two lanes to four lanes. The Park West Boulevard Widening involves widening Park West Boulevard from Bessemer Road to the entrance to the Mount Pleasant Recreation Complex (south of Turgot Lane) from two lanes to four lanes. The LRTP also recommends the following transportation improvement projects near the project study area: All-American Boulevard Extension and US 17/Porcher's Bluff Road intersection improvement. All-American Boulevard serves as a frontage to US 17 to provide access to local businesses and neighborhoods. Its proposed extension involves three phases. Phase 1 involves improvements from the

existing termini of All-American Boulevard to George Browder Boulevard at the Church at LifePark. Phase 2 would extend from the intersection of George Browder Boulevard and the termini of Phase 1 and connect to Park West Boulevard via the existing leg of the roundabout (Town of Mount Pleasant, 2018). Phase 3 would extend from the existing termini and connect to Silent Harbor Court (BCDCOG, 2018a).

The LRTP identifies a number of recommended pedestrian trails and bicycle lanes in the project study area on SC 41 across the Wando River Bridge to Clements Ferry Road and along the entire length of Bessemer Road between SC 41 and Park West Boulevard. *Walk+Bike BCD-Planning for a Walkable and Bikeable Region*, the regional active transportation master plan for the tri-county area, provides the basis for identifying where walking and biking investments should be directed in the CHATS planning area (BCDCOG, 2017).

## 3.2 Charleston County Comprehensive Plan

The 2018 Charleston County Comprehensive Plan (Charleston County Council, 2018) covers the project study area south of the Wando River. The plan presents particular elements designed to accomplish the county's vision regarding the pattern, quality, and intensity of land uses; the provision of public facilities and services; economic development; availability of housing; and preservation of natural and cultural resources. Future land uses identified by the plan in the study area vicinity consist of urban/suburban cultural community protection, urban/suburban mixed use, parks/recreation/open space, residential/special management, planned development, commercial, and sweetgrass basket stand special consideration area. The project study area is within the county's designated Urban Growth Boundary (UGB). The plan encourages compact growth in already developed areas, redevelopment, and infill of existing vacant sites inside the UGB, particularly where employment and residential density are the greatest, and discourages development in low-growth areas.

The SC 41 Corridor Improvement Project is identified as a project of local significance in the 2016 Charleston County sales tax referendum, which was approved by Charleston County citizens to fund the costs of highways, roads, streets, bridges, and other transportation-related projects and drainage facilities.

## 3.3 Berkeley County Comprehensive Plan

The 2010 Berkeley County Comprehensive Plan (Berkeley County, 2010) covers the project study area north of the Wando River. The plan was intended to identify the positive attributes and components that define Berkeley County, while guiding growth and development for the next 15 to 20 years. The plan identifies the future land use in the immediate vicinity of the project study area as moderate density suburban. The moderate density suburban designation encourages compatible mixed-use development and a general land use pattern that includes a variety of housing types, retail, service, employment, civic, and compatible industrial uses, as well as public and open spaces and linkages to public transit in a walkable environment. Proposed developments adjacent to the project study area include Wando Village, a mixed-use development combining retail/commercial uses with 416 units of various residential types; and Rivers Bend, a retail center including a gas station and other retail spaces such as a hardware store, bank, fast-food restaurant, garden center, etc. A 9,000-acre master-planned, mixed-use development known as Cainhoy Plantation is proposed near the study area on Clements Ferry Road in Berkeley County. Two schools have already been constructed as part of the development.

### **3.4 Town of Mount Pleasant Comprehensive Plan**

The 2019 Town of Mount Pleasant Comprehensive Plan (Town of Mount Pleasant, 2019) identifies future land uses in the immediate vicinity of the project study area as recreation/open space, conservation/marsh/wetlands, settlement community, mixed neighborhood, conventional residential neighborhood, traditional residential neighborhood, rural residential, community scale commercial, neighborhood scale commercial, business and industry, community facilities, and marine/waterfront gateway. The marine/waterfront gateway designation at the Wando River Bridge at the entrance to the Town of Mount Pleasant on SC 41 is intended to provide an integrated district with a network of pedestrian paths and streetscapes, including walks along the waterfront.

Most of the Town's growth in recent years has been outwards or northwards along US 17 and SC 41. For a number of reasons, infill and redevelopment have become more compelling as a policy issue for the Town. The plan recommends that infill and redevelopment should occur in such a way as to preserve the character of nearby residential areas, with buffers and transition zones where appropriate.

### **3.5 Mount Pleasant Way**

The Mount Pleasant Way bicycle and pedestrian network continues the efforts of its predecessor, the 2013 Town of Mount Pleasant Bicycle and Pedestrian Master Plan. The Mount Pleasant Way was conceived as an effort to create a safe, viable, functional network that can serve Town citizens and visitors as both a recreational amenity and transportation alternative. This facility would function as a linear park, expanding outdoor recreation opportunities to the citizens and visitors, and connecting destinations throughout town (Town of Mount Pleasant, 2019). The Mount Pleasant Way recommends improving large-scale connectors in the project study area, such as SC 41, to provide citizens with the ability to use alternative modes of transportation for a greater percentage of their traveling needs. Bicycle and pedestrian facilities in the project study area include 1.3 miles of sidewalks along SC 41 between Virginia Rouse Road and Joe Rouse Road, sidewalks along US 17, a four-foot shoulder on the new Wando River Bridge, and several miles of biking trails in Laurel Hill County Park.

### **3.6 2040 Mobility Plan**

The 2040 Mobility Plan continues the efforts of its predecessor, the 2006 Town of Mount Pleasant LRTP. In addition to the recommendations included in the above-mentioned BCDCOG CHATS LRTP, the 2040 Mobility Plan recommends the following transportation improvement projects near the project study area: SC 41 Extension, Billy Swails Boulevard Widening, and New Parallel Road (West of US 17). The SC 41 Extension would involve extending the southern terminus of SC 41 at the intersection of US 17 to Billy Swails Boulevard via a 2 lane divided road. The Billy Swails Boulevard Widening would widen Billy Swails Boulevard from 2 lanes to 4 lane divided between the Isle of Palms Connector and Porcher's Bluff Road. The New Parallel Road (West of US 17) would be a new 2 lane roadway from Long Point Road to SC 41 (Town of Mount Pleasant, 2019).

### **3.7 Charleston County Parks and Recreation Commission People 2 Parks**

The 2016 Charleston County People 2 Parks Plan (CCPRC, 2017a) objectively prioritizes bicycle and pedestrian network recommendations throughout Charleston County, provides cost estimates, and recommends project implementation strategies. The plan identifies a potential bicycle and pedestrian

corridor in the project study area along SC 41 between Harper's Ferry Way and US 17 and along the entire length of Dunes West and Park West Boulevards.

### 3.8 Cultural Corridor

The 2019 Town of Mount Pleasant Comprehensive Plan (Town of Mount Pleasant, 2019) identifies Boone Hall, Six Mile, Seven Mile, and Hamlin Settlement Communities as a cultural corridor. This includes the Sweetgrass Basket Overlay District. This corridor contains the last remaining concentration of agricultural land and activities in Mount Pleasant. This area is also primarily unincorporated and regulated by Charleston County zoning. The Town's recommendations include undertaking a joint study with Charleston County and representatives of landowners in the area to create a Special Area Plan for the future of the cultural corridor and to address future land use needs; a cultural arts facility to blend the history and culture of Mount Pleasant with the contemporary arts for the enrichment and education of the Mount Pleasant community; and designing and constructing, in conjunction with the Mount Pleasant Way, historic trails and markers to tie these historic sites together, as well as to nearby parks and recreation facilities.

## 4.0 Project Purpose

The primary purpose of a project is the "driver" of the project. It reflects the fundamental reason why the project is being pursued. The secondary purpose (or other desirable outcome) is an additional purpose(s) that is desirable, but not the core purpose of the project.

The primary purpose of the proposed SC 41 Corridor Improvements project is to reduce traffic congestion within the SC 41 corridor to accommodate future traffic projections. The secondary purposes of the proposed SC 41 Corridor Improvements project are to enhance safety throughout the corridor, improve transportation system and community connections, and provide bicycle and pedestrian accommodations, while minimizing community and environmental impacts.

## 5.0 Project Need

The proposed project is needed to address anticipated local and regional growth, increased traffic congestion, safety and emergency response concerns, and inadequate interconnections of transportation

### Purpose and Need Statement

The primary purpose of the proposed SC 41 corridor improvements project is to **reduce traffic congestion within the SC 41 corridor to accommodate future traffic projections**. The secondary purposes of the proposed SC 41 corridor improvements project are to:

- enhance safety throughout the corridor,
- improve transportation system and community connections,
- provide bicycle and pedestrian accommodations,
- minimize community and environmental impacts.

The proposed project is needed to address anticipated local and regional growth, increased traffic congestion, safety and emergency response concerns, and inadequate interconnections of transportation modes, including pedestrian and bicycle facilities.

modes, including pedestrian and bicycle facilities.

## 5.1 Growth Trends

South Carolina as a whole is growing, as is the Charleston metropolitan area. Population growth and employment growth are expected in all census tracts within the study area between 2015 and 2040 (Table 1). The anticipated population growth ranges from 24.7 percent to 31.4 percent in the Charleston County census tracts, while the anticipated population growth in the Berkeley County census tracts ranges from 74.6 percent to 484.4 percent.

Anticipated population growth is high in the study area, but the greatest potential for population increase affecting the SC 41 corridor is expected in two census tracts just north of the study area in the Cainho community of Berkeley County. An approved master plan development called Cainho Plantation is located on Clements Ferry Road just north of the study area. Much of Berkeley County's population growth is due to the development of new communities, including Cainho Plantation. It is anticipated that the Cainho Plantation will have 9,000 homes by 2045 (The Post and Courier, 2016).

**Table 1. Study Area Socioeconomic Trends**

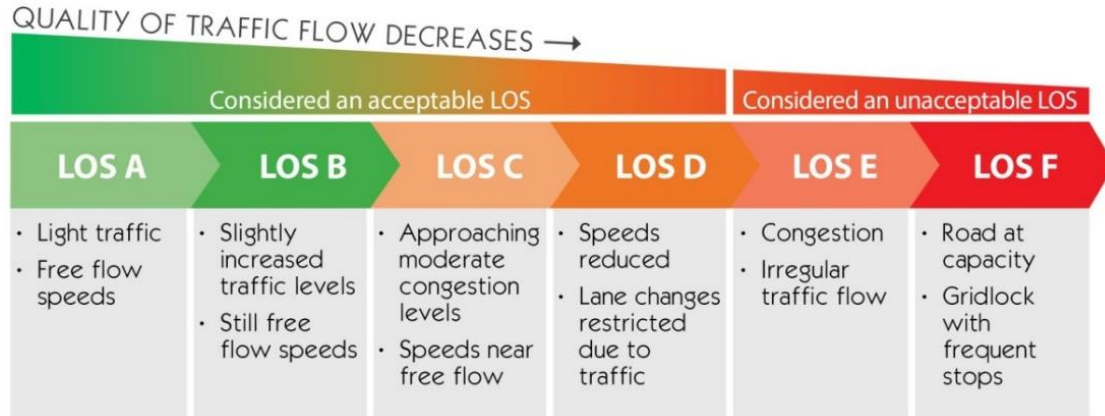
Census Tract	2015 Pop.	2040 Pop.	% Change	2015 House-holds	2040 House-holds	% Change	2015 Employment	2040 Employment	% Change
<b>Charleston County</b>	365,512	480,661	31.5%	160,496	206,799	28.8%	235,338	308,125	30.9%
<b>46.08</b>	23,194	28,919	24.7%	8,130	10,310	26.8%	2,127	6,675	214%
<b>46.09</b>	6,914	9,087	31.4%	2,738	3,791	38.4%	1,900	2,743	44.4%
<b>Berkeley County</b>	167,509	359,311	114.5%	65,533	141,096	115.3%	71,650	125,335	74.9%
<b>204.04</b>	4,324	25,270	484.4%	1,755	10,051	472.7%	3,687	7,003	89.9%
<b>204.05</b>	2,853	4,982	74.6%	1,126	1,918	70.3%	1,874	2,213	18.1%

## 5.2 Increased Traffic Congestion

A preliminary traffic analysis was conducted on various segments along SC 41 and the major cross-streets (Bessemer Road, Dunes West Boulevard, and Park West Boulevard). Traffic volume data was measured in September 2017 and compared to 2015 SCDOT traffic data and the CHATS Travel Demand Model. The CHATS Travel Demand Model (CHATS model) was calibrated using the 2015 and 2017 traffic data, and adjusted for planned future growth near the corridor.

The CHATS model predicts the distribution of new trips that are generated by growth, throughout the roadway network. The existing measured traffic volumes, as well as the future 2040 traffic volumes predicted by the model, expressed as average annual daily traffic (AADT), were used to evaluate the current and future level of service (LOS) for each roadway segment in the study area). Table 2 shows the AADT and LOS for each evaluated segment of roadway. LOS is a method of measuring the vehicle-carrying capacity of a street or freeway (Figure 3). When the capacity of a road is exceeded, the result is congestion, delay, and a poor level of service. LOS is represented by a letter "grade" ranging from A for excellent conditions – that is, traffic is light and free-flowing – to F for failure conditions – that is, extremely congested, gridlock traffic. LOS B through LOS E describe progressively worse traffic conditions. Typically, LOS E and F are considered to be unacceptable operating conditions and LOS D and above are generally considered acceptable.

This capacity evaluation shows that certain segments within the SC 41 corridor operate near or over capacity (Table 2). By 2045, the congestion on these roads is expected to increase, and the projected increase in traffic is likely to exacerbate this.



**Figure 3. Definition of Level of Service**

**Table 2. Existing and Projected Traffic Conditions**

Segment Description		2017 AADT	Existing LOS	2040 AADT	2040 LOS (No-Build)
SC 41	US 17 to Joe Rouse Rd	21,400	F	32,300	F
	Joe Rouse Rd to Dunes West Blvd	15,400	C	26,800	E
	Dunes West Blvd to Wando River	13,100	C	26,200	E
Bessemer Road	SC 41 to Park West Blvd (E–W)	4,200	C	6,400	B
Park West Boulevard	Bessemer Rd to Park West Blvd (N–S)	4,150	C	13,700	C
Dunes West Boulevard	Park West Blvd to SC 41	7,800	C	14,100	E

## 5.3 Safety Concerns

### 5.3.1 Traffic Collisions

Seven years of crash data (2011 to 2017) provided by the South Carolina Department of Public Safety (DPS) was used to analyze the location, type, and crash severity within the project corridor. Types of crashes can include head on, rear end, single vehicle, sideswipe, or angle collisions. Crash severity is classified as property damage, injury, or fatality.

Within the study area, a total of 575 crashes were reported to DPS during the seven-year study period. Of the total crashes, DPS reported 272 accidents south of Joe Rouse Road, 107 accidents between Joe

Rouse Road to Dunes West Boulevard, and 196 accidents north of Dunes West Boulevard. Table 3 provides a summary of the type of crashes.

**Table 3. Crashes by Year and Type**

Year	Angle	Head On	Rear End	Single Vehicle	Sideswipe	Total
2011	7	2	24	9	1	43
2012	6	3	18	20	4	51
2013	13	3	43	12	5	76
2014	18	0	49	5	4	76
2015	23	2	71	10	4	110
2016	27	3	56	13	3	102
2017	25	1	74	12	5	117
<b>Total</b>	<b>119 (21%)</b>	<b>14 (2%)</b>	<b>335 (58%)</b>	<b>81 (14%)</b>	<b>26 (5%)</b>	<b>575</b>

The types of crashes were evaluated by segments of SC 41. The number of crashes is greatest on SC 41 between US 17 and Joe Rouse Road. Table 4 provides a summary by the type and location of crashes.

**Table 4. Crashes by Type in Segments of SC 41 (between 2011 and 2017)**

Segment	Angle	Head On	Rear End	Single Vehicle	Sideswipe	Total
SC 41 between US 17 and Joe Rouse Rd.	42	5	173	35	17	205
SC 41 between Joe Rouse Rd. and Dunes West Blvd.	10	1	83	11	2	90
SC 41 between Dunes West Blvd. and Wando River	67	8	79	35	7	160
<b>Total</b>	<b>119</b>	<b>14</b>	<b>335</b>	<b>81</b>	<b>26</b>	<b>575</b>

The number and type of crashes is comparable to surrounding highways, such as US 17. The most frequent collisions were rear-end collisions (58 percent) with angle accidents and single vehicle accidents making up 21 and 14 percent of the total collisions, respectively. Volume of traffic and traffic congestion are usually contributing factors to these types of collisions. The growth of angle crashes may be attributable to increased intersection and driveway movements. The number of collisions annually in the SC 41 corridor has increased by 172 percent over the seven years studied. Thirty-three percent (33%) of these accidents resulted in 3 fatalities and injuries to 272 people.

In addition to safety concerns, crashes often cause unavoidable congestion, and when they occur during the rush hours, they worsen the congestion that already exists from travel demand during those time periods.

### 5.3.2 Emergency Responsiveness and Hurricane Evacuation Route

South Carolina's coastline is vulnerable to hurricanes and both the South Carolina Emergency Management Division's (SCEMD) Hurricane Plan and the BCDCOG CHATS LRTP mention that SC 41 within the project area is designated as a hurricane evacuation route (SCEMD, 2017a) (SCEMD, 2017b) (BCDCOG, 2018b). During stakeholder meetings, emergency responders expressed concerns about responsiveness to incidents along SC 41 because of traffic congestion. Reducing congestion along SC 41 is critical to providing access for hurricane evacuations and emergency responders.

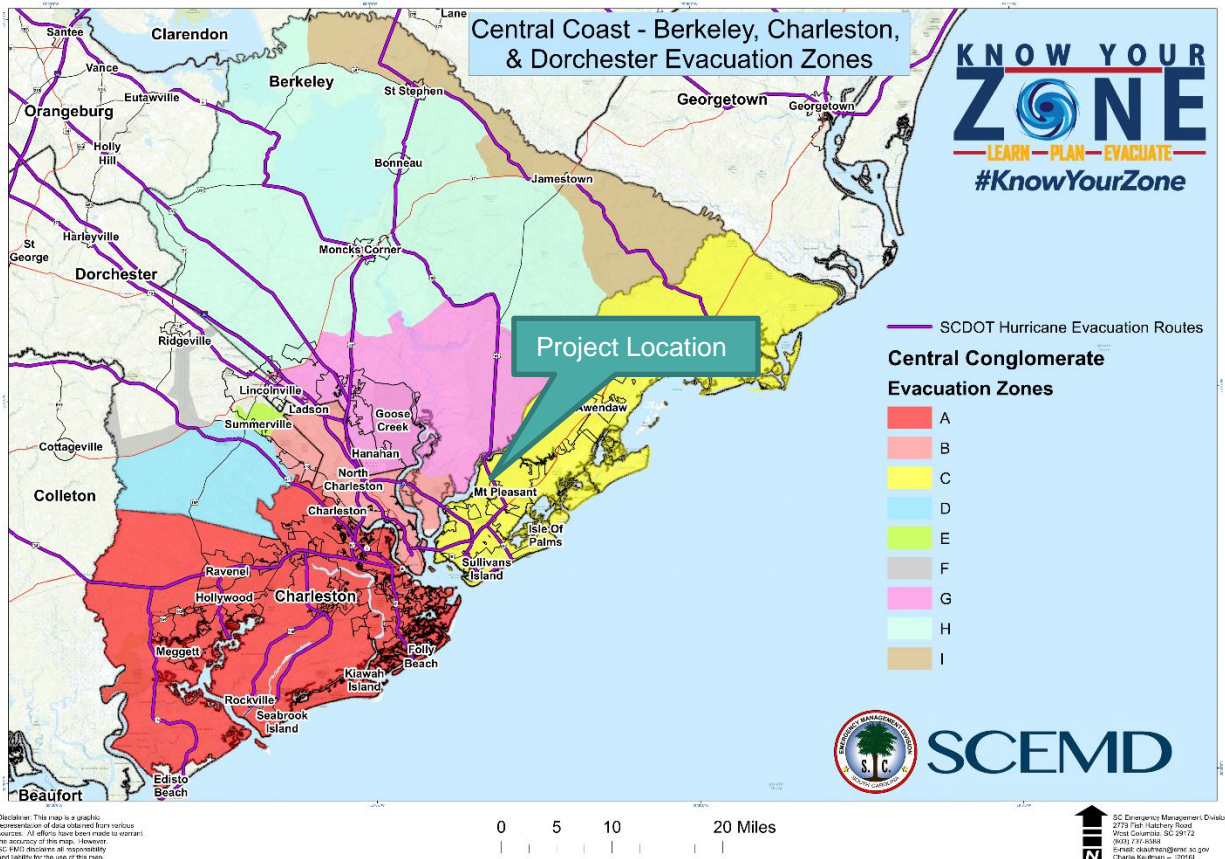


Figure 4. Hurricane Evacuation Zones and Routes

## 5.4 Inadequate Interconnection of Transportation Modes

### 5.4.1 Pedestrian and Bicycle Facilities

SC 41 within the study area is a two-lane roadway with grassed shoulders and roadside ditches. Bicycle and pedestrian facilities in the project study area include 1.3 miles of sidewalks along SC 41 between Virginia Rouse Road and Joe Rouse Road, sidewalks along US 17, a four-foot shoulder on the new Wando River Bridge, and several miles of biking trails in Laurel Hill County Park. Laurel Hill County Park is a 745-acre park owned by Charleston County Parks & Recreation Commission (CCPRC) that abuts SC 41 and the Park West, Ivy Hall, and Carol Oaks subdivisions. This park features several miles of running, walking, or biking trails (CCPRC, 2017b). In a response to the LOI, the CCPRC provided comments supporting bicycle and pedestrian access to Laurel Hill County Park.

The Mount Pleasant Way bicycle and pedestrian network recommends improving large-scale connectors such as SC 41 to provide citizens with the ability to use alternative modes of transportation for a greater percentage of their traveling needs (Town of Mount Pleasant, 2019).

The Town of Mount Pleasant's Comprehensive Plan and Charleston County's People 2 Parks Plan identifies a potential bicycle and pedestrian corridor along SC 41 between Harper's Ferry Way and US 17 and along the entire length of Dunes West and Park West Boulevards. CCPRC recommends implementing this bicycle and pedestrian corridor concurrently with the proposed project. The BCDCOG CHATS LRTP identifies additional potential bicycle and pedestrian lanes on SC 41 across the Wando River Bridge to Clements Ferry Road and along the entire length of Bessemer Road between SC 41 and Park West Boulevard (Town of Mount Pleasant, 2019) (CCPRC, 2017a) (BCDCOG, 2018a).

The Mount Pleasant Way bicycle and pedestrian network would implement multiuse paths parallel to existing roads and bike lanes or wider sidewalks adjacent to the roadway where appropriate, connecting to parks and recreation facilities along the way. Mount Pleasant Way would exist along the SC 41 corridor between Dunes West Boulevard and US 17 and along the entire length of Dunes West and Park West Boulevards, connecting to Laurel Hill County Park. From Park West Boulevard, it would continue heading southwest along US 17, down Porcher's Bluff Road, and continue southwest along the entire length of Rifle Range Road. Mount Pleasant Way would continue northwest along Coleman Boulevard, connecting to Shem Creek Park, Patriots Point, and Memorial Waterfront Park. From Memorial Waterfront Park, it would continue northeast along Harry M. Hallman Jr Boulevard/Wingo Way, Mathis Ferry Road, and Long Point Road, connecting to Palmetto Islands County Park and Boone Hall Plantation before reconnecting to Rifle Range Road. Mount Pleasant Way is also proposed along Billy Swails Boulevard, Sweetgrass Basket Parkway, and Hungry Neck Boulevard (Town of Mount Pleasant, 2019).

#### 5.4.2 Transit Infrastructure and Access

Public and mass transit options are growing in interest in the BCD region. The region's two transit providers, Charleston Area Regional Transportation Authority (CARTA) and TriCounty Link, coordinate their routes and scheduling to provide an interregional transit connection for transit patrons in and around the SC 41 area. The SC 41 segment between the Wando River and US 17 is a vital link in making this collaborative effort feasible. The TriCounty Link transit agency operates fixed-route services that connect transit patrons from communities north of the Wando River to the Charleston urbanized area. This includes a route that provides service along this section of SC 41, from Cainhoy/Clements Ferry Road to the SC 41/US 17 junction, where it connects with CARTA service. While CARTA does not operate buses along this section of SC 41, it does have a stop at the SC 41/US 17 junction that connects with the TriCounty Link service. In addition, there is a CARTA Park-and-Ride facility located within one-half of a mile from the SC 41/US 17 junction (BCDCOG, 2014).

The BCDCOG Regional Transit Framework Plan, completed in September 2018, sets the foundation for transit investment as part of the overall multi-modal transportation system. This plan encourages community and stakeholder engagement, identifies the region's transit needs and ideals (including the US 17 corridor and SC 41/US 17 junction), incorporates existing regional plans and priorities, and prioritizes transit improvements and solutions (BCDCOG, 2018c).

## 6.0 Alternatives Screening Process

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The primary purpose of the project – to reduce traffic congestion within the SC 41 corridor to accommodate future traffic projections – will be used as criteria to screen or eliminate alternatives that are not reasonable or practicable. In other words, if an alternative does not achieve the project's primary purpose, it will be eliminated from further consideration. The team will then use the secondary purposes to further compare alternatives. A range of alternatives has been developed that includes:

- Making changes to the existing highway corridor SC 41 and/or existing arterial streets such as Dunes West Boulevard and Bessemer Road,
- Establishing parallel transportation corridors, and
- No-Build alternative.

Alternatives that achieve the project's primary purpose will be evaluated against environmental constraints; construction feasibility, cost, and secondary need components including the ability to improve safety, improve system linkages, while minimizing community and environmental impacts. Reasonable alternatives will be evaluated in detail in the Environmental Report and USACE permit application with the ultimate goal of determining a Proposed Alternative that would meet the purpose and need of the proposed project.

## 7.0 Public and Agency Involvement

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The development of project's purpose and need also incorporates input from the public and agencies received in response to the LOI, community meetings, stakeholder meetings, and public information meetings. The initial public information meeting was held on November 13, 2017. Numerous commenters said that roads in the study area are congested and were supportive of roadway improvements to alleviate the congestion. General comments related to purpose and need were received during this information meeting. Feedback received included:

- Traffic and safety
- Bicycle and pedestrian accommodations
- Accommodating future development in the region
- Address noise impacts
- Concerns about historic and cultural resource impacts
- Concerns about floodplain impacts

Charleston County also hosted a meeting with SCDOT and USACE to further develop the purpose and need for the project on April 13, 2018. Stakeholder Working Group meetings were held on September 26, 2017, April 26, 2018, November 14, 2018, and March 6, 2019. Additional meetings included four meetings with leadership from community, neighborhood and business groups on April 25-26, 2018, the Public Information Meeting for Alternatives on May 16, 2018, and a series of community/HOA meetings on March 5-6, 2019. There have not been additional comments regarding the purpose and need, but the feedback themes received during the additional meetings are consistent with those from the initial public information meeting.

## 8.0 References

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