

The Federal Highway Administration (FHWA) is required by the National Environmental Policy Act (NEPA) to evaluate potential impacts to the social, economic, and natural environments for the proposed Reasonable Alternatives discussed in Chapter 3. The best available information is provided to decision-makers, members of the public, stakeholders, and agencies to make informed decisions. This Draft Environmental Impact Statement (DEIS) is being developed in accordance with NEPA and provides an evaluation of potential effects on the natural and physical environment.

This chapter defines the existing conditions of the project study area and explains the impacts anticipated for each of the Proposed Reasonable Alternatives. Potential mitigation strategies are also proposed to address the associated impacts of the project.

As previously discussed in Chapters 2 and 3, the project study area extends along the I-526 mainline from Paul Cantrell Boulevard to Virginia Avenue. The project proposes upgrades/changes to five interchanges along I-526: the I-526 at Paul Cantrell Boulevard interchange, the I-26/I-526 system interchange, the I-526 at Rivers Avenue interchange, the I-526 at N Rhett Avenue interchange, and the I-526 at Virginia Avenue interchange. Please refer to Chapter 1, Figure 1.2 for the I-526 Lowcountry Corridor (LCC) WEST project study area.

Based on the input received from the public and agencies during the scoping process and alternatives development, this DEIS addresses the following resource topics in detail:

- Land Use, Section 4.1
- Farmlands, Section 4.2
- Communities, Section 4.3
- Socioeconomics, Section 4.4
- Environmental Justice Analysis, Section 4.5
- Relocations, Section 4.6
- Considerations for Bicycles and Pedestrians, Section 4.7
- Air Quality, Section 4.8
- Noise, Section 4.9
- Water Quality, Section 4.10
- Water Resources, Section 4.11
- Floodplains, Section 4.12
- Natural Resources, Section 4.13
- Cultural Resources, Section 4.14
- Section 4(f) Resources, Section 4.15
- Section 6(f) Resources, Section 4.16
- Hazardous Materials, Section 4.17
- Construction, Section 4.18
- Energy, Section 4.19
- Short-Term Uses Versus Long-Term Productivity, Section 4.20
- Irreversible and Irrecoverable Commitment of Resources, Section 4.21
- Permits, Section 4.22
- Sustainability, Section 4.23
- 404(b)1 Guidelines, Section 4.24

The objective of the DEIS is to focus on the potential impacts which may affect the quality of the human and natural environment. Therefore, if the resource is not present in the project area, it does not warrant evaluation and is not included in this DEIS. Those topics include:

- Water Body Modification and Wildlife Impacts
- Joint Development
- Coastal Barriers

Each resource considered in this chapter of the DEIS is addressed under four primary subsections:

1. **Introduction** - The introduction section includes a discussion of the evaluated resource and the details of the analysis methodology. When relevant, regulatory authority for a resource is defined, and how the resource is managed in a regulatory setting is described.
2. **Affected Environment** - The affected environment section describes the existing conditions of the resource and gives a detailed description of the physical setting and surrounding area.
3. **Environmental Consequences** - The environmental consequences section discusses potential impacts to the subject resource for each of the Reasonable Alternatives.
4. **Mitigation Measures** - The mitigation measures section describes feasible mitigation measures to reduce potential impacts.

4.1 Land Use

This section outlines the existing and future land uses within the project study area, the consistency of the project with local and regional land use plans, as well as anticipated growth in population and employment in the area. These factors are used to evaluate the potential impacts associated with the No-Build and the proposed Reasonable Alternatives. The I-526 LCC WEST project study area is divided between the City of North Charleston and the Charleston suburb of West Ashley. The following sections describe the land use of each geographical area.

4.1.1 Who is Responsible for Land Use Plans within the Project Study Area?

Local jurisdictions, including the City of Charleston, City of North Charleston, and Charleston County are responsible for land use planning within the proposed I-526 LCC WEST project study area. These organizations address existing and future land use in comprehensive plans and other planning documents. The public has opportunities to participate in the development of these documents prior to approval. It is important to note that the Berkeley Charleston Dorchester Council of Governments (BCDCOG) is the designated Metropolitan Planning Organization (MPO) for this area responsible for guiding and facilitating plans among local entities.

4.1.2 What Methodology was used for Analysis of Land Use?

The community boundaries established in the Community Impact Assessment (CIA) study area were used for continuity of land use related discussions. Regional and local plans were used to identify existing and future land use and evaluate potential land use effects for the CIA study area. The CIA study area includes portions of Berkeley, Dorchester, and Charleston Counties, extending between the Ashley River in West Ashley eastward across the Cooper River into North Charleston. Refer to Figure 4.1.

Census block groups containing neighborhoods likely to be affected by the proposed project are being reviewed, and notable community features along the project corridor and within the immediate vicinity are also being identified. The CIA study area is bounded by census block groups as many of the boundary lines follow local streets, railroads, and waterways and provide natural boundary lines. The use of census boundaries provides insight into demographics and identification of special populations within the CIA study area.

The CIA study area within West Ashley is divided into eight areas with a total of 29 neighborhoods and within North Charleston is divided into 12 areas with a total of 35 neighborhoods.

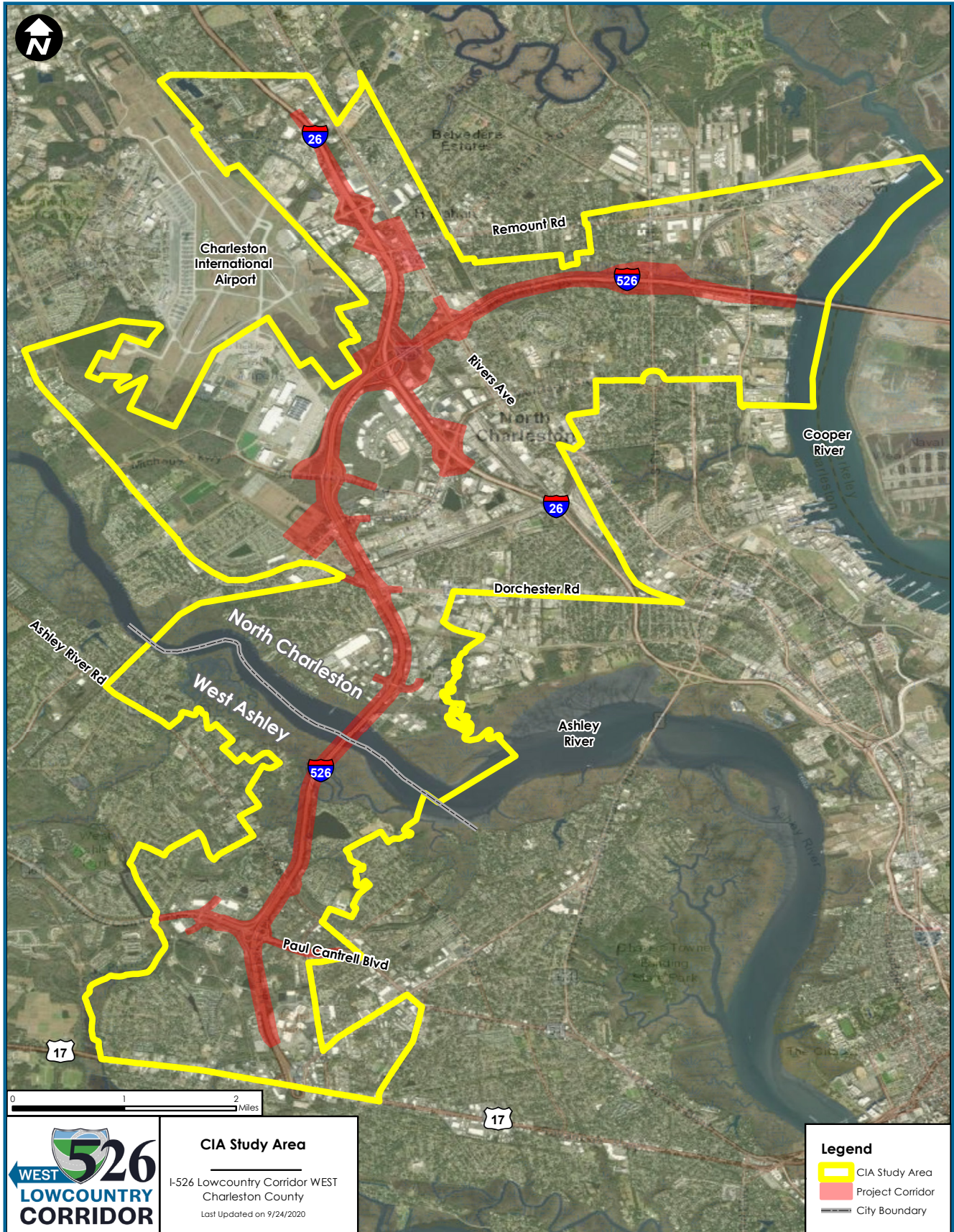


Figure 4.1 CIA Study Area

4.1.3 What is the Affected Land Use within the Project Study Area?

4.1.3.1 Existing Land Use

The I-526 LCC WEST is divided between West Ashley and the City of North Charleston. West Ashley is a suburb of the City of Charleston and is characterized by a mixture of residential and commercial land use with limited undeveloped/available land. Primary zoning uses in West Ashley include Planned Unit Development (PUD), Conservation (C), General Business (GB), and Single-family Residential (SR). The North Charleston area is characterized by residential, industrial, and commercial land use with limited undeveloped/available land. Primary zoning uses in North Charleston include Single-Family Residential (R-1), Light Industrial (M-1), Multi-family Residential (R-2), Planned Development District (PDD), and General Business (B-2). Land use in West Ashley and North Charleston is summarized below and can be studied in detail in Appendix D, the CIA.

West Ashley

Immediately south of the Ashley River, I-526 is bordered by residential development, denoted as “Suburban Edge” land use. Land use transitions into higher density residential development east of I-526, denoted as “Suburban” land use and commercial uses west of I-526, denoted as “Highway” land use. Magwood Drive is flanked by a number of regional destinations for medical care including the West Ashley Medical Center, Essex Medical Park, and NHC Healthcare Charleston as well as commercial destinations that include many retail shops and restaurants. Land uses south of Glenn McConnell Parkway/Paul Cantrell Boulevard are similar to those along Magwood Drive, including the Bon Secours St. Francis Hospital and associated facilities plus retail shops and restaurants. For more specific information on the communities in West Ashley please refer to the CIA in Appendix D.

The West Ashley portion of the CIA study area is south of the Ashley River. Land use is generally a mix of residential and commercial uses.

North Charleston

Along Virginia Avenue, industrial use is the primary land use. To the west, land uses include single-family, multi-family, and mobile home residential uses in the area between N Rhett Avenue and Rivers Avenue. Commercial use is located east of I-526, that includes Tanger Outlets, the North Charleston Coliseum and Performing Arts Center, and the Charleston Area Convention Center. In this area, the Charleston International Airport and Boeing facilities border I-526 to the west, which are classified as industrial use. I-526 then crosses a large rail yard where industrial use is the predominant land use. South of Dorchester Road, there is some residential use to the west, mixed with a larger amount of commercial industrial uses to the east.

Land use within the North Charleston portion of the CIA study area is predominantly comprised of residential uses.

4.1.4 What Area Planning Documents Regulate Land Use?

4.1.4.1 West Ashley

The proposed I-526 LCC WEST project between the Ashley River and Paul Cantrell Boulevard is located within the West Ashley, the City of Charleston, Charleston County, and the BCDCOG, which is the designated MPO for this area. Each of these entities has planning documents to help guide the growth of the overall Charleston area. The proposed project's compatibility with these planning documents is being evaluated based on a comparison of existing and future land use plans. The following reference documents were used to evaluate the potential impacts to existing and future land use in West Ashley:

- [2017 Plan West Ashley](#)
- [2010 Century V City Plan](#)
- [2018 Charleston City Transportation Plan](#)
- [2018 Charleston County Comprehensive Plan](#)
- Charleston Area Transportation Study Long Range Transportation Plan ([CHATS LRTP](#))

Geographic information system (GIS) data from these reference documents was verified by conducting field surveys and reviewing digital aerial mapping of the CIA study area.

4.1.4.2 North Charleston

The section of the project corridor between Virginia Avenue and the Ashley River is located within the jurisdiction of the City of North Charleston, Charleston County, and the BCDCOG. Each of these entities are responsible for developing plans to guide growth. The proposed project is being evaluated to determine its consistency with local planning documents. The 2018 Charleston County Comprehensive Plan, CHATS LRTP, and PRIME North Charleston 2020 (DRAFT) were consulted regarding the existing and future land use in North Charleston.

GIS data from these three plans are being verified by conducting field surveys, collaborating with the Community Advisory Council (CAC), and reviewing digital aerial mapping of the CIA study area. For more information about the input received from the CAC refer to Chapter 6.

4.1.5 Where is Development Activity Expected within the Study Area?

4.1.5.1 West Ashley

As described in Section 4.1.3.1, the West Ashley area is a suburb of Charleston and North Charleston and is characterized by a mixture of residential and commercial land use with limited undeveloped/available land. Commercial retailers such as Costco and Target are located along Sam Rittenberg Boulevard. I-526 and I-26 are utilized as commuter corridors serving traffic beyond West Ashley communities. Because the CIA study area is already developed, any growth is anticipated to occur with redevelopment, and induced land use changes associated with the proposed project are not anticipated in West Ashley. According to the Century V City Plan, several areas have been identified for economic development. Consistent with future land use plans, West Ashley will have areas designated for high intensity mixed uses, which would most likely include vehicle-dependent commercial development. In addition, the Century V plan includes an urban growth boundary that expands West Ashley and Johns Island further west.

4.1.5.2 North Charleston

According to mapping provided by the City of North Charleston (February 2020), future land use for North Charleston will remain consistent with existing land use: primarily single-family residential, commercial, and light industrial, refer to Figure 4.2. One notable exception is a proposed change in land use for the Russelldale neighborhood. The neighborhood is currently zoned for single-family residential use with some multi-family residential and commercial uses on the periphery of the neighborhood. According to the City’s future land use mapping, Russelldale would be zoned as “Light Industrial District” (M-1) together with areas to the south along Mall Drive and East Montague Avenue. M-1 zoning provides areas for commercial, warehousing, transportation, and certain light manufacturing activities; this change in land use is not consistent with current land uses and would make the neighborhood inhospitable to residential use and would be a barrier to reestablishing any form of community cohesion. Charleston and surrounding municipalities have pro-growth policies as evidenced by the future redevelopment of Palmetto Commerce Park and the Volvo car factory in Ridgeville.^{1,2}

A “Catalyst Area” is located near the North Charleston Environmental Justice neighborhoods. Catalyst areas are central points of the “community and places where regional or local services are concentrated. They are the hubs where transportation networks converge to create a high level of accessibility and where people gather for social interaction” (Partnership for Prosperity, 2014).³ Many catalyst areas focus on supporting existing neighborhoods and could provide future opportunities for consistent economic growth. The catalyst area near the Russelldale neighborhood would focus development efforts on the Mall Drive district to expand growth from the existing commercial small lot and big box retail, hotels, and restaurants.

In the Russelldale area where affordable housing, and housing in general, is scarce and at a premium already, the conversion from residential to industrial uses would contribute to cumulative effects, as discussed in Section 4.3.6.

Refer to the CIA in Appendix D for more details on land use and future development in the project study area.

1 The Post and Courier. “Retail center planned for industry-laden Palmetto Commerce Park in North Charleston.” July 1, 2019. Web. https://www.postandcourier.com/business/real_estate/retail-center-planned-for-industry-laden-palmetto-commerce-park-in/article_53d612ce-9925-11e9-9a25-5bc6603c1597.html

2 Volvo Cars. South Carolina Factory. Web. <https://www.volvocars.com/us/about-volvo/our-story/south-carolina-factory>

3 Berkeley-Charleston-Dorchester Council of Governments (BCDCOG) “A Master Plan for the Neck Area of Charleston and North Charleston.” 2014 http://www.neckprosperity.org/uploads/2/5/0/5/25050083/draftreport_131206_web.pdf

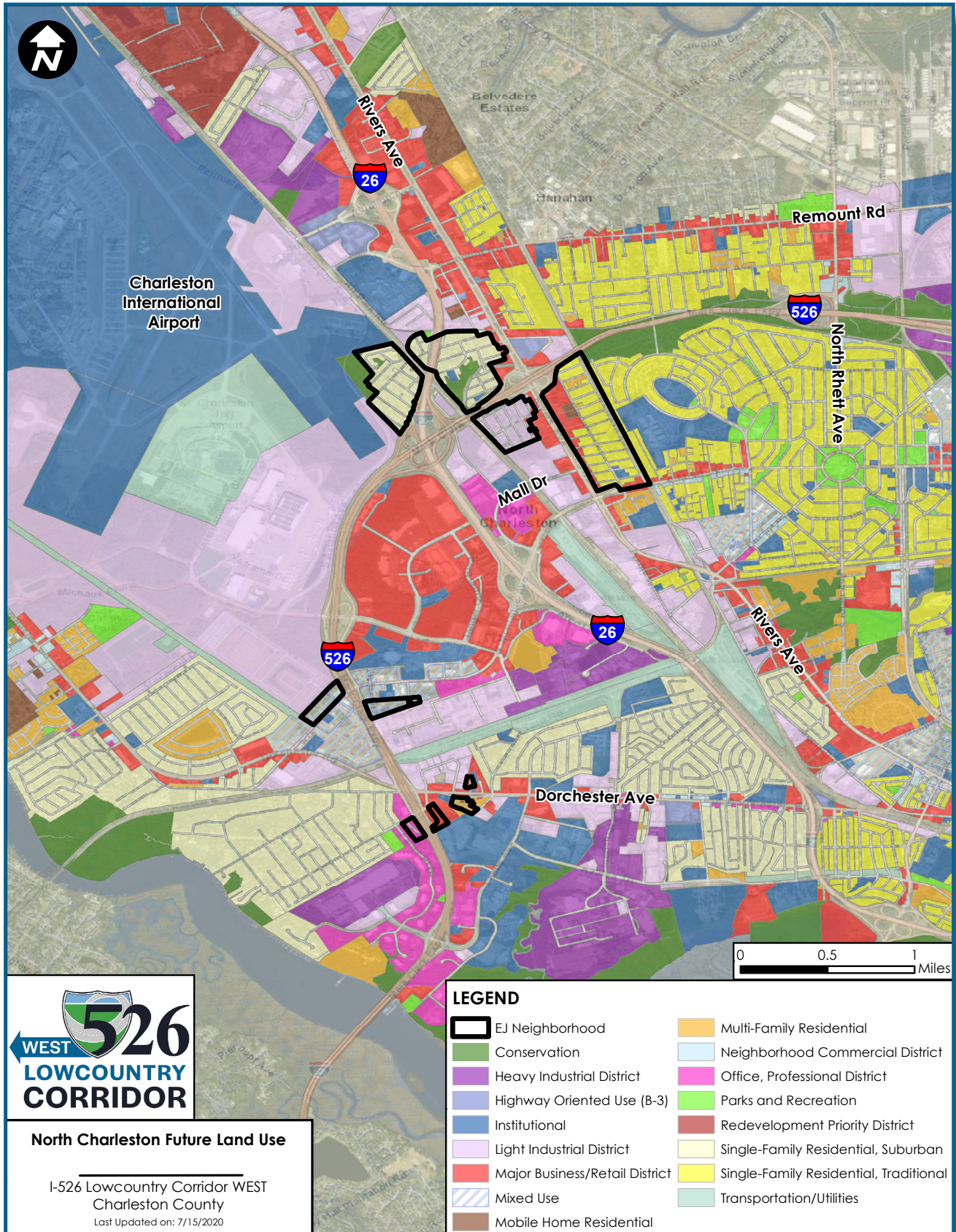


Figure 4.2 North Charleston Future Land Use

4.1.6 What are the Potential Environmental Consequences to Land Use?

4.1.6.1 How would the No-Build Alternative Impact Land Use?

As noted in Section 4.1.6.2, regional population growth and development trends; pro-growth policies; and availability of water, sewer, schools, and other infrastructure indicate that growth and development will continue to occur in the broader Charleston region regardless of the proposed project. As such, no substantial differences to land use are anticipated between the No-Build and Proposed Reasonable Alternatives.

4.1.6.2 How would the Proposed Reasonable Alternatives Impact Land Use?

The proposed project would affect land use by converting existing land uses to transportation Right-of-Way. Given the similarities of the Proposed Reasonable Alternatives, direct impacts to land uses would be similar for all Proposed Reasonable Alternatives. In the area of the I-526/I-26 interchange, Alternatives 1A and 2A have a slightly wider footprint than Alternatives 1 and 2 and would convert more areas of multi-family residential, mobile home residential, and general business land use than would be converted by Alternatives 1 and 2. Table 4.1

Table 4.1 Direct Land Use Impacts of the Recommended Preferred Alternative

Zoning Designation	No-Build (acres)	Recommended Preferred Alternative* (acres)
North Charleston		
Residential	0.0	71.7
Business	0.0	12.2
Industrial	0.0	43.3
Commercial Redevelopment District	0.0	17.2
Planned Development District	0.0	1.8
Neighborhood Office	0.0	0.5
West Ashley		
General Office	0.0	1.5
Business	0.0	7.2
Single Family Residence	0.0	8.0
Diverse Residential	0.0	1.2
Conservation	0.0	1.3

*The table above shows impacts to land uses based on the proposed Right-of-Way of the Recommended Preferred Alternative. In the I-526/I-26 interchange area, Alternatives 1A and 2A would impact approximately 1.0-acre of multi-family residential, 2.0-acre of general business, and 0.6-acres of mobile home residential land uses more than the Recommended Preferred Alternative.

shows direct impacts to land use associated with the Recommended Preferred Alternative. Since the area surrounding the project corridor is already developed, any changes outside the direct conversion of land to transportation Right-of-Way would occur as part of local planning initiatives rather than induced land use changes associated with the proposed project.

Regional population growth and development trends; pro-growth policies; and the availability of water, sewer, schools, and other infrastructure indicate that growth and development will continue to occur in the broader Charleston region regardless of the proposed project.

The improved mobility associated with the proposed improvements would not create indirect land use effects across the broader region as growth and development will continue to occur regardless of the proposed project.

4.1.7 How will Land Use Impacts be Mitigated?

The land uses within the project study area are consistent with regional and local land use plans. Although coordination between South Carolina Department of Transportation (SCDOT) with local officials is ongoing, the local jurisdictions have the responsibility for land use planning. Development of land would require obtaining the necessary approvals and permits from local, state, and federal agencies, which may include, but are not limited to Section 401, Section 402, and Section 404 permits/approvals, as well as mitigation for any fill of wetlands or Waters of the U.S.

SCDOT will also fund the construction of replacement recreational facilities to mitigate land use impacts associated with partially or fully displacing the Highland Terrace-Liberty Park and Russelldale Community Centers. SCDOT will acquire parcels located within the affected neighborhoods and construct one large, centrally located community center complex and two pocket parks within the EJ neighborhoods. As part of the plans for the recreational facilities, SCDOT will also identify and construct infrastructure improvements necessary to facilitate the safe travel for residents between the replacement community centers, the surrounding communities, and transit stops on Rivers Avenue. SCDOT has coordinated with the City of North Charleston and will develop an intergovernmental agreement to ensure long term mitigation efforts are fulfilled. For additional information on the proposed mitigation, please refer to Appendix D for the Environmental Justice Community Mitigation Plan.

4.2 Farmlands

The Farmland Protection Policy Act (FPPA) of 1981 was created to prevent and lessen the irreversible conversion of farmland to non-agriculture use by federal agencies. When federal projects have the potential to impact farmlands an assessment must be completed to evaluate if the farmland will be converted to a non-agriculture use. The FPPA exempts certain activities, including projects within an urban development area or land utilized for water storage and/or construction within an existing Right-of-Way purchased on or before August 4, 1984.

The No-Build Alternative would have no effect on farmlands since existing conditions would remain unchanged.

Each Proposed Reasonable Alternative is located on land that is currently, or is intended to be, developed with transportation, residential, and commercial uses or is designated as urban land; therefore, the project is exempt from the FPPA and no impacts to farmland are anticipated.

4.3 Communities

The community characteristics discussed in this section include population, household, community services and facilities, and visual aesthetics. This section also discusses the demographic profile, including low-income, minority, elderly, and Limited English Proficient (LEP) populations, as well as information on transportation equity.

4.3.1 Why Do We Evaluate Communities?

NEPA specifically requires the consideration of social and economic impacts to ensure that potential effects to people and communities are integrated into the decision-making process of the proposed project. The Proposed Reasonable Alternatives are studied in the DEIS, which analyzed the economic factors anticipated to result from the construction of this project. Socioeconomic factors are discussed in [Section 4.4](#).

A Community Impact Assessment (CIA) was developed to determine possible cultural, social, economic, historical, and physical impacts of the proposed I-526 LCC WEST project. This process involved fully comprehending the goals of the local and regional planning groups, understanding the values that are important to the impacted communities, and taking the needs and wants of the citizens into account throughout the entirety of the planning and construction process. Input from the community ultimately helps shape the outcome of the transportation project and helps planners to make socially responsible and efficient decisions.

The CIA provides a procedure to document and understand possible effects of the project in order to determine quality of life for the nearby communities before, during, and after construction.

Refer to [Section 4.3.6](#) for an overview of the potential impacts evaluated as a part of the I-526 LCC WEST project including relocations (residential, community, and business), isolation, environmental, community cohesion, Environmental Justice, agriculture, and recreation. Access, mobility, employment and income are detailed in [Section 4.4](#) as part of the socioeconomics discussion. Additional details on these topic can be found in the CIA, [Appendix D](#).

4.3.2 What Communities are in the CIA Study Area?

The CIA study area includes portions of Berkeley, Dorchester, and Charleston Counties, extending between the Ashley River in West Ashley eastward across the Cooper River into North Charleston. The CIA study area within West Ashley is divided into eight areas with a total of 29 neighborhoods, and the CIA study area within North Charleston is divided into 12 areas with a total of 36 neighborhoods. Figure 4.3 shows the locations of the West Ashley neighborhoods within the CIA study area.

1. Mulberry Place at Westborough, Dogwood Road, Beechwood Mobile Homes
2. The Arboretum, Oasis at West Ashley, Ashley River Apartments, Hawthorne Westside Apartments, Middleton Cove Apartments, Planters Trace Apartments, Plantation Oaks Apartments, Ashley Crossing Lane
3. Ashley Harbor
4. Marsh Cove, Ricefield Townhomes
5. Colonial Village at Westchase, Radius at West Ashley, Ashley Oaks, 1800 Ashley West
6. San Miguel Road, Savage Road, Brighton Place, Able Street, Richmond Street
7. Abberly at West Ashley
8. Etiwan Garden Apartments, Melrose Park, Shaftesbury Woods, Castlewood Townhouses

Figure 4.4 shows the location of the North Charleston neighborhoods within the CIA study area.

North Charleston Neighborhoods

1. Oak Grove, Oak Grove West, Singing Pines, Boland Park, Fair Haven Trailer Park
2. Charleston Farms
3. Liberty Park, Highland Terrace, Joppa Way, Russelldale, Ferndale
4. Morningside, Liberty Hill, Oak Terrace Preserve, Cameron Terrace West
5. Park Circle, Oak Park, Cameron Terrace, Cameron Terrace Manor, Palmetto Gardens
6. Glyn Terrace, Northpointe, Oak Ridge, Oak Ridge Two, Firestone Road, Ozark Street
7. Wando Woods
8. Plantation Isles, Reverie on the Ashley
9. West Ada Avenue, East Ada Avenue, Highpoint Road
10. Brentwood, Waylyn
11. Centre Pointe
12. Camps

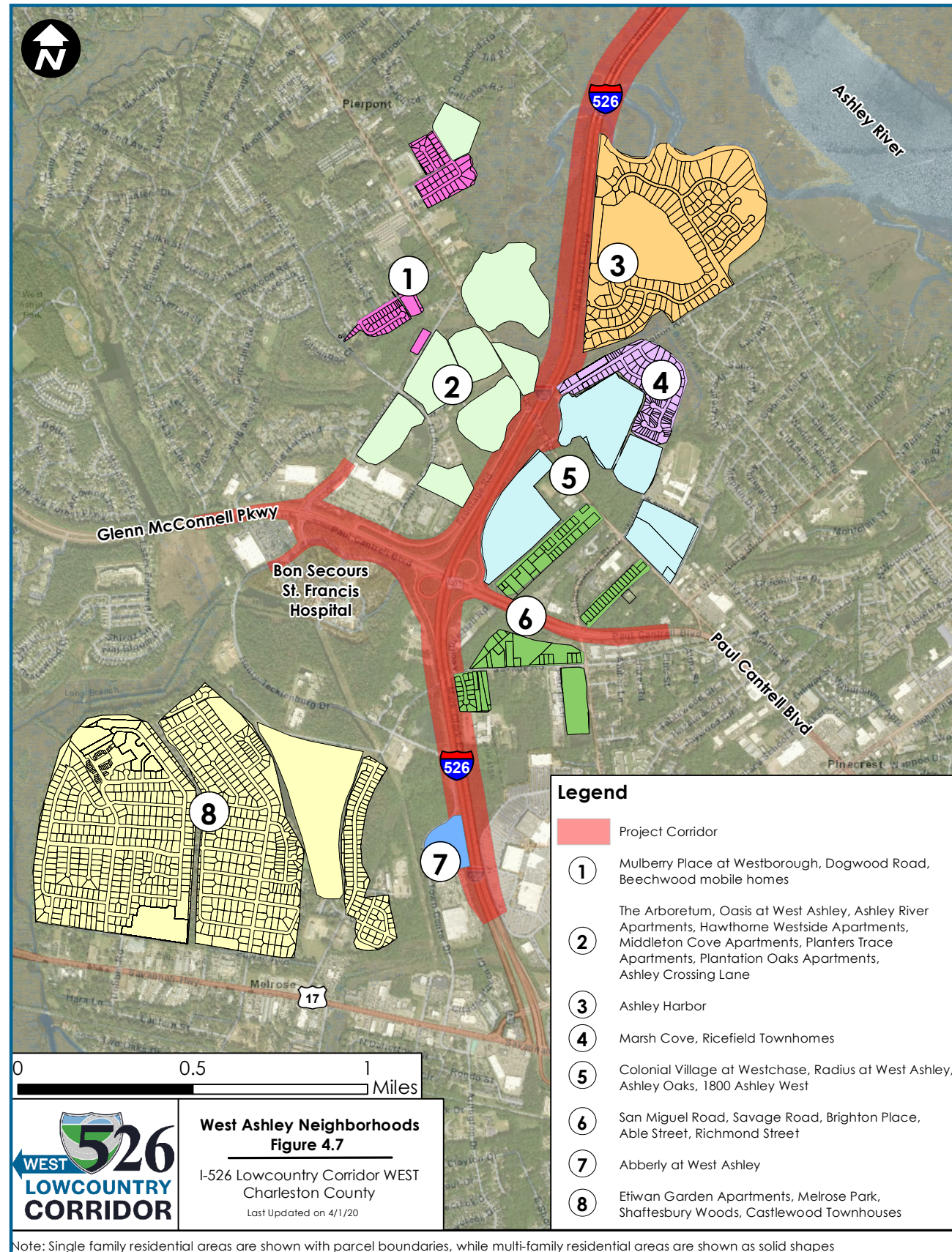


Figure 4.3 West Ashley Neighborhoods

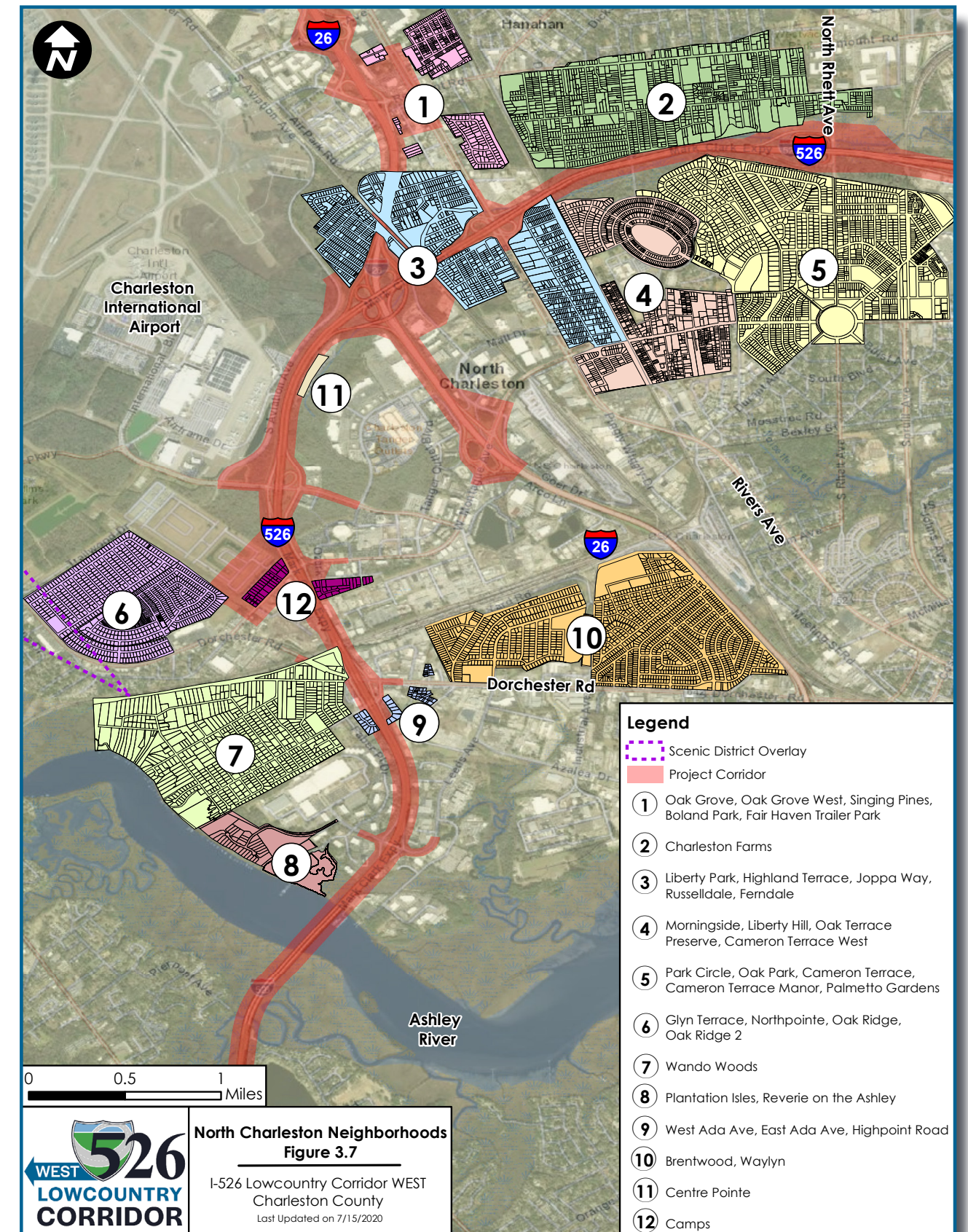


Figure 4.4 North Charleston Neighborhoods

4.3.3 What Methodologies and Data Sources were used to Characterize Communities?

4.3.3.1 Methodology

The CIA study area was developed to include all areas that could experience direct, indirect, and/or cumulative effects from the proposed project. The area of potential direct impacts was determined based on the proposed Right-of-Way for each proposed Reasonable Alternative. Notable community features along the project corridor and within the immediate vicinity were also identified. The census block groups follow local streets, railroads, and waterways and provide natural boundary lines. The CIA study area was also evaluated to identify smaller, or hidden, EJ populations within the larger geographic area of each block group, but none were identified. As such, the CIA study area uses census block group boundaries to identify special populations and provide insight into the demographics of residents. Refer to Figure 4.5 for the CIA study area and block groups.

The block group data are being verified by conducting field surveys and reviewing aerial mapping of the CIA study area to identify the exact geographic location of special populations within each block group.

4.3.3.2 Data Sources

Data sources for the CIA include US Census 2012-2016 American Community Survey (ACS) data, field surveys, aerial mapping and GIS data, I-526 LCC WEST CAC input, information provided by the City of North Charleston, stakeholder group feedback, and public comments received at public meetings held in November 2019. The CAC not only provided the project team with valuable insight into neighborhood values and goals, but also helped create the Environmental Justice Community Mitigation Plan to offset project impacts by helping address the social needs and priorities of neighborhood residents. Refer to Chapter 6 for more information about the input and feedback received from the CAC.

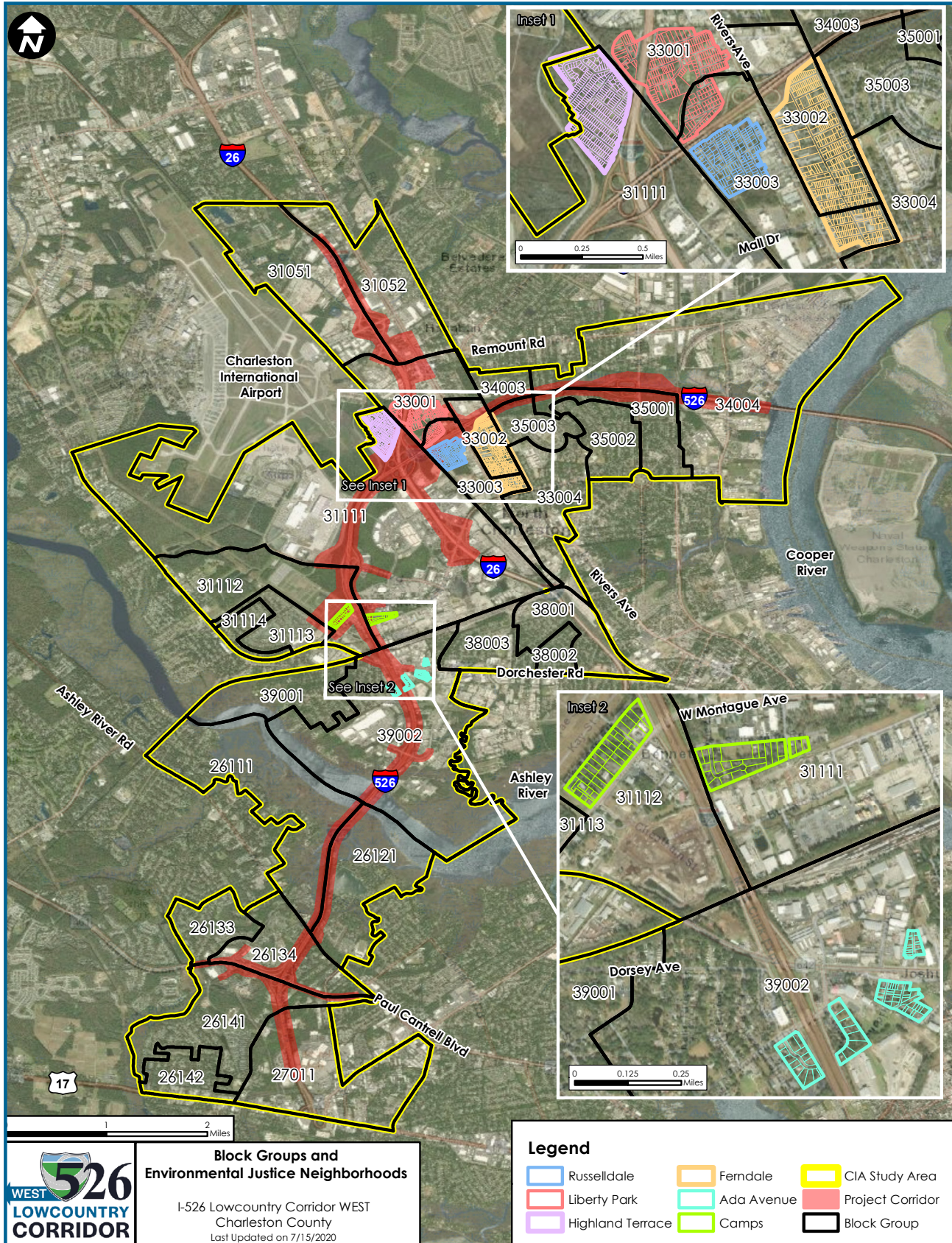


Figure 4.5 CIA Study Area, Block Groups, and EJ Neighborhoods

4.3.4 What are the Existing Characteristics of the CIA Study Area Communities?

4.3.4.1 Study Area

Table 4.2 shows that the minority population percentage of the CIA study area varies considerably and ranges anywhere from nine percent to 94 percent. For households over 65 in the block group neighborhoods, the percentage ranges from three percent to 26 percent. Inversely, the percentage of households with children under 18 ranges from nine percent to 50 percent. Households with Limited English Proficiency (LEP) range from zero percent to the highest percentage of 26 percent.

Table 4.2 Demographic Characteristics

	Total CIA Study Area	CIA Study Area - West Ashley	CIA Study Area - North Charleston
Population	61,715	28,527	33,188
Percent Minority	9-94%	19-53%	9-94%
Percent Low-Income	9-76%	9-51%	16-76%
Percent over 65	3-26%	7-24%	4-26%
Percent under 18	7-50%	7-32%	9-50%
Percent LEP	0-26%	0-25%	0-26%
Unemployment Rate	0-27%	2-12%	0-27%
Median Household Income	\$16,378-\$60,137	\$28,000-\$60,137	\$16,378-\$57,788
Percent Below Poverty Level	14-87%	20-53%	14-87%

4.3.4.2 Communities

West Ashley

West Ashley Population

According to the United States Census, the population in West Ashley in 2018 was approximately 75,385. As one of the largest suburbs of Charleston, West Ashley accounts for over half of the city's 120,000 residents and its overall population has grown by about 17 percent since 2000.

West Ashley Housing

Home prices have increased in recent years and many of the single-story brick homes built in the 1960s value around \$200,000. The median home values in the West Ashley CIA study area vary substantially. On the lower end of the range are homes at an average of \$165,500. The homes on the upper end of the median value range are approximately \$387,100 and the higher end peaks in the \$2 million range, refer to Figure 4.6.

A large demand for rental properties has led to rental price increases, making West Ashley less affordable. The rent increased by 28 percent from 2011-2016. These differences are significant as they play a key role in the demographic makeup of each area.

According to the 2017 Plan West Ashley document, inner West Ashley has historically housed a larger concentration of African American residents. The rising cost of housing threatens neighborhood diversity because higher property taxes and housing prices may force low-income and minority families from their homes through gentrification.

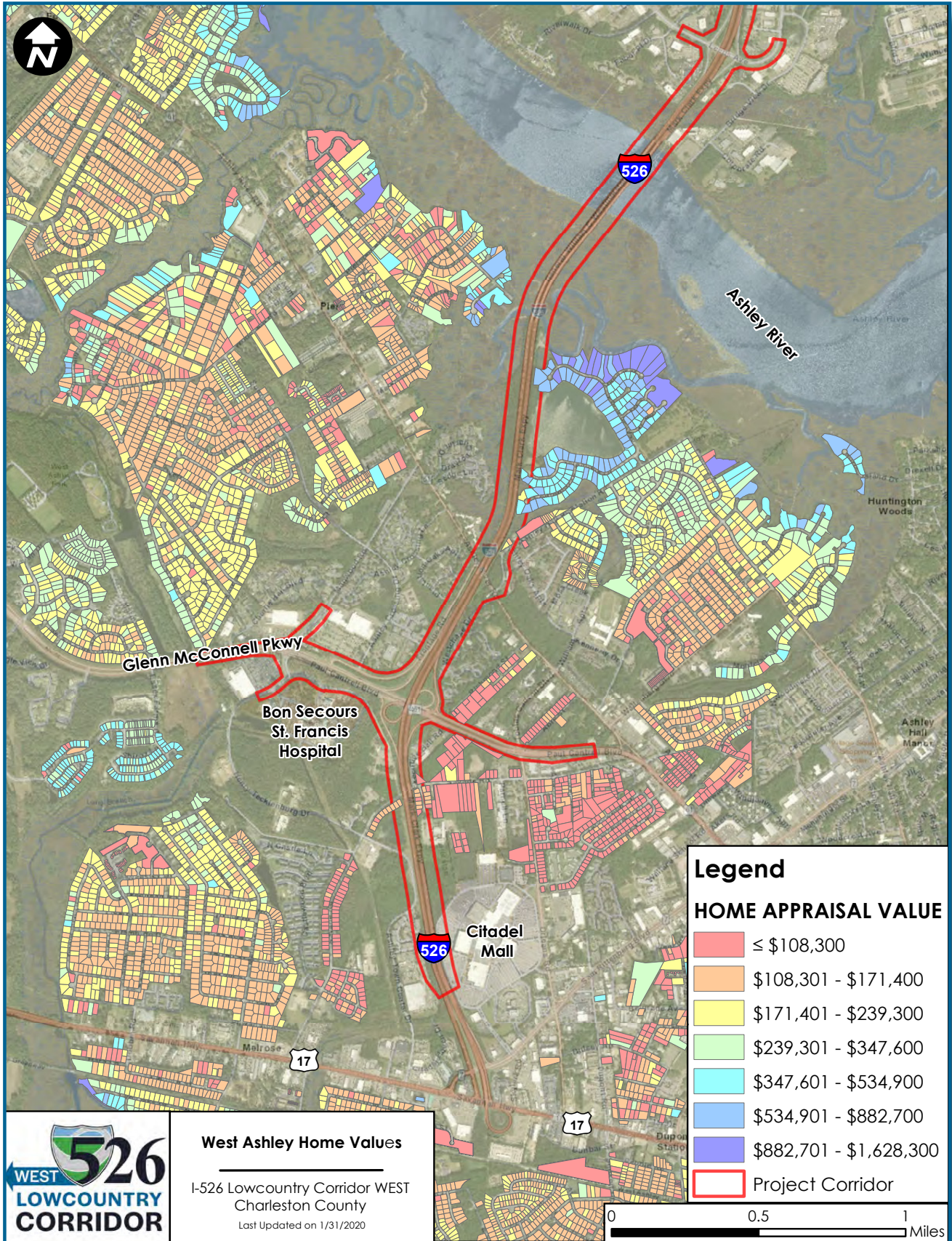


Figure 4.6 West Ashley Home Values

West Ashley Community Services and Facilities

Charleston County Public Library operates branches throughout the county including branches in West Ashley located at the West Ashley Library (45 Windermere Blvd) and the Cynthia Graham Hurd/St. Andrew's Regional Library (1735 N Woodmere Dr) and a planned branch on Bees Ferry Road.

Healthcare services in West Ashley are provided by the Medical University of South Carolina (MUSC), Bon Secours St. Francis Hospital, Roper St. Francis Health Care, and Health First. The Charleston County Emergency Medical Service Department provides emergency medical services. The West Ashley CIA study area includes five fire stations: two operated by West Ashley and three operated by St. Andrews. The closest available police station is located across the Ashley River in the City of Charleston.

West Ashley's public schools are served by Charleston County School District 10. There are two private schools, seven elementary, two middle, one high, and two charter schools in West Ashley. Religious facilities in the CIA study area include churches and synagogues. There are many religious facilities located in West Ashley, with approximately 19 located within the CIA study area, refer to Figure 4.7.

Although West Ashley does not have community centers available for individual neighborhoods, it has various parks and facilities for recreation. Bees Landing Recreation Center, Charles Towne Landing State Historic Site, the West Ashley Park, the West Ashley Greenway, and the West Ashley Bikeway are all popular recreation spots in West Ashley.

There are many places of historic and archaeological importance in West Ashley due to the area's history as part of the City of Charleston. Among many others, the National Register of Historic Places (NRHP) lists the following districts or buildings found within West Ashley: St. Andrews Episcopal Church, Ashley River Road from Church Creek to SC 165, Drayton Hall, Magnolia Plantation and Gardens, and the Site of Old Charles Towne.

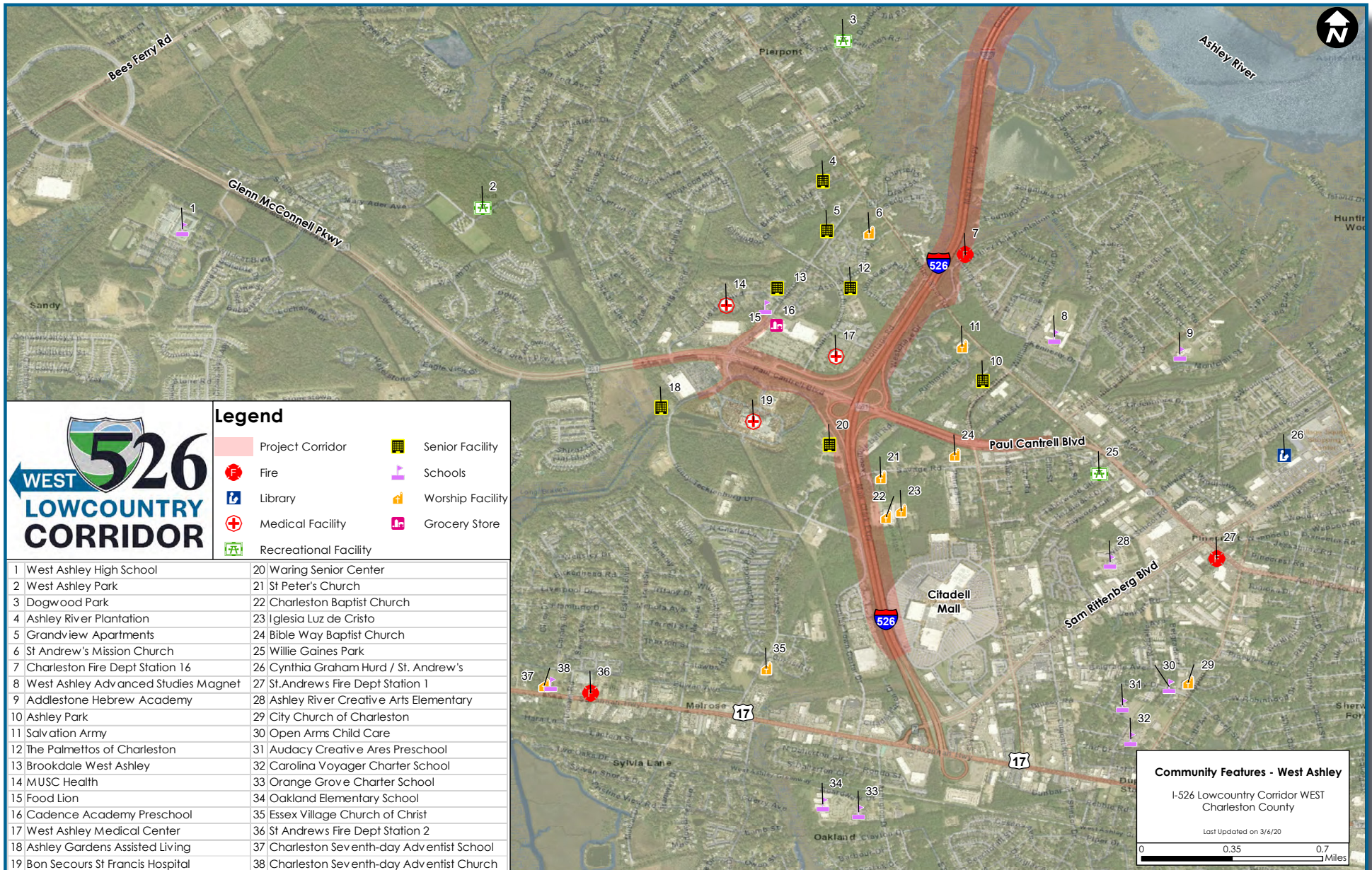


Figure 4.7 West Ashley Community Features

West Ashley Visual and Aesthetics

Although the majority of the study area includes residential neighborhoods and commercial facilities, there are some other natural and cultural resources along the I-526 corridor which make up the visual quality of the area. The southern end of the corridor has open views of the Ashley River and surrounding wetlands on both sides of the roadway. This resource increases the scenic integrity values along the I-526 corridor. The project goes through suburban and urban residential areas and several commercial districts.

Significant visual resources related to the cultural environment include historic structures, government facilities, and other notable buildings. Cultural environment visual resources include the Rivers Edge Marina, a dry storage facility with amenities, including a fuel dock, ship's store, captain's lounge, and picnic area. For more detail refer to Appendix E, Abbreviated Visual Impact Assessment (VIA).

West Ashley Environmental Justice Neighborhoods

There are small areas that would qualify as Environmental Justice (EJ) communities in West Ashley, see Section 4.5.

North Charleston

North Charleston Population

According to the United States Census, the population in North Charleston in 2018 was approximately 113,237 and the average household income is \$34,813.88. North Charleston's overall population has grown by almost 40 percent since 2000, but the African American population in the area has fallen by two percent during the same time period.

American Community Survey (ACS) 2016 data shows that 62 percent of the North Charleston population is minority. Compared to statewide and national averages of 36 percent and 39 percent respectively, North Charleston has a notably high minority population. North Charleston's low-income population comprises 46 percent of the total population. Comparatively, South Carolina's low-income population comprises 37 percent of total residents and nationally, low-income residents comprise 33 percent of the total population. As such, North Charleston has a notable low-income population. Detailed information on low-income and minority demographics in the impacted study area can be studied in Appendix D.

North Charleston Housing

Most houses in North Charleston were built 1980–2000, but an increasing number of houses are currently under construction or recently built. The City of North Charleston Housing Authority manages housing for families with Low to Moderate Income (less than \$33,000 for a family of four). Currently, there are not enough units to accommodate the demand. Approximately 20 percent of residents located in the Russelldale and Highland Terrace Communities rely upon the Section 8 housing program for assistance. The median home values across the CIA study area in North Charleston also vary. The lower end of the range is an average of \$21,400. With the higher end of the range over \$1 million. Gentrification appears to be a main factor as this trend continues to move west of the Cooper River. Figure 4.8 shows North Charleston home values.

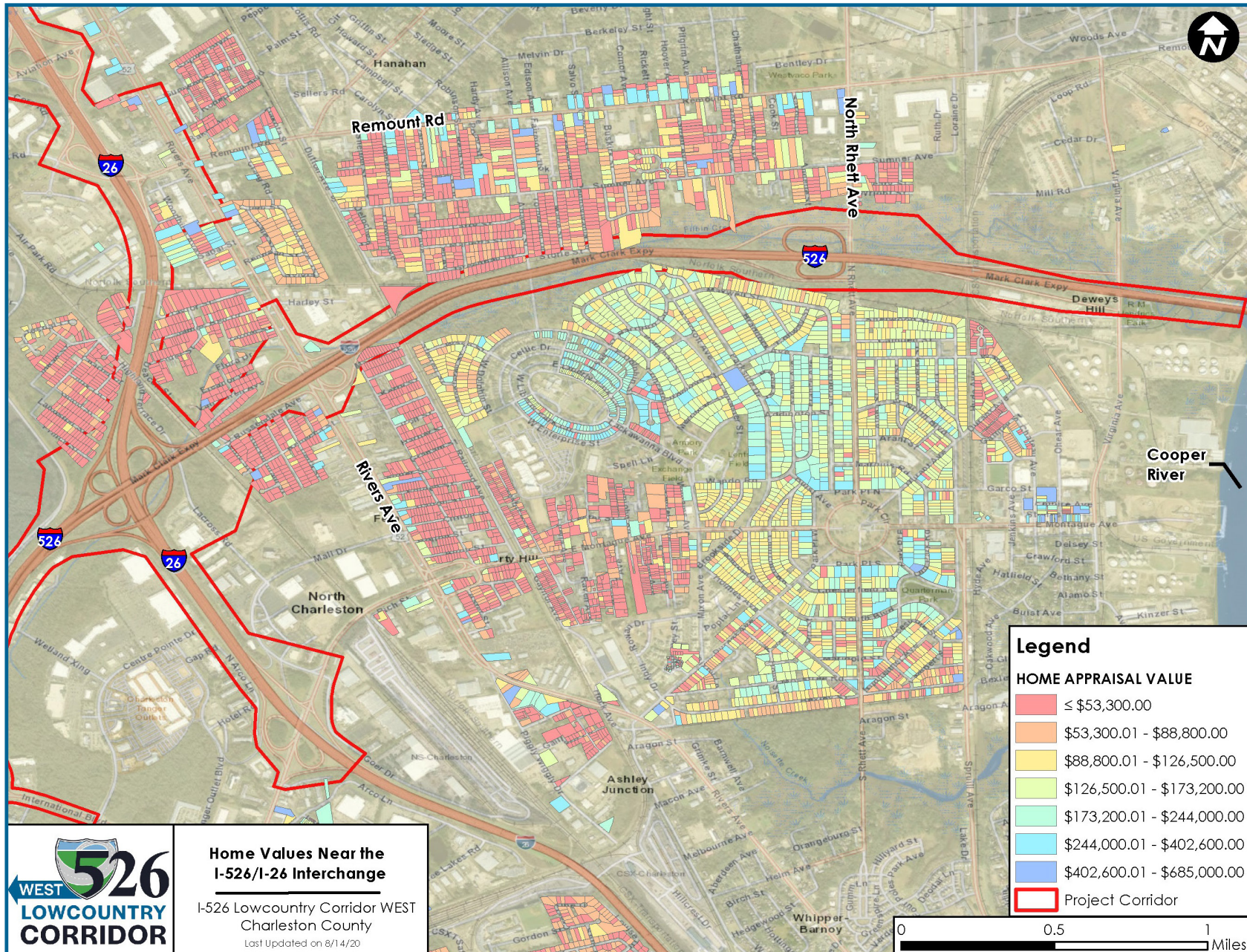


Figure 4.8 North Charleston Home Values

North Charleston Community Services and Facilities

The library system in this area is operated by the Charleston County Public Library. These branches include the Otranto Regional Library and the Cooper River Memorial Library. The R. Keith Summey North Charleston Library is planned to replace the Cooper River Memorial Library located at the corner of Rivers Avenue and Dorchester Road. Its opening date has not been announced.

Healthcare in North Charleston is provided by many private practices including Trident Medical Center and MUSC Health. Both medical facilities are in the northern region of North Charleston. Emergency services are provided by the North Charleston Fire Department, Charleston County Sheriff, and the Charleston Volunteer Rescue Squad. In total, there are approximately five EMS Medic locations, 15 Charleston County Fire Stations, and ten police departments throughout North Charleston.

Public schools located in North Charleston are part of Charleston County's District Four. There are 17 elementary schools, five middle schools, one high school and two charter schools with the majority located near the southern portion of the city. There are also five universities or colleges.

There are many religious institutions located in North Charleston, including churches, with approximately 33 that serve the neighborhoods within the CIA study area.

There are also 21 community center facilities throughout North Charleston.⁴ These centers are run by the city and provide nearby communities with facilities such as basketball courts, event rooms for renting, playgrounds, picnic areas, and bathrooms. The different community centers allow distinct neighborhoods to have a place for community gathering.

Section 8 is a federally funded rental assistance program that pays private landlords the difference between what a low-income household can afford and the fair market rent

North Charleston has numerous places of historic and archaeological importance due to the area's rich history and national importance as a port. Among many others, the NRHP lists the following districts or buildings found within North Charleston: General Asbestos & Rubber Company, Charleston Navy Yard Officers' Quarters, Charleston Navy Yard Historic District, Charleston Naval Hospital, and the Ashley River Historic District.

⁴ North Charleston, City of. 2015. North Charleston Comprehensive Plane Review: Chapter 7 – Community Facilities. <https://northcharleston.org/wp-content/uploads/Ordinance-2016-031-Chapter-7-Community-Facilities.pdf>. Web accessed: 1/21/2020.

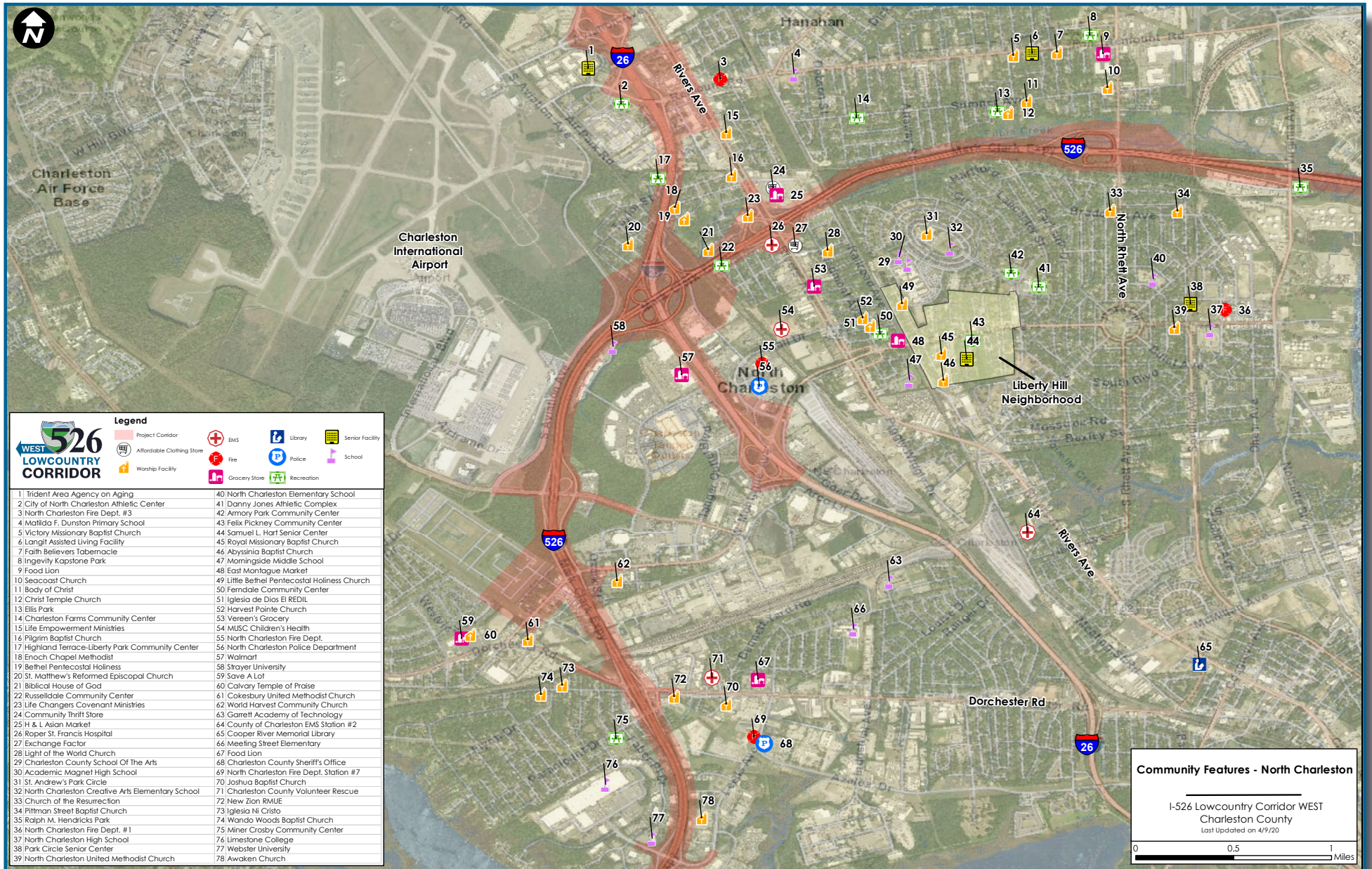


Figure 4.9 North Charleston Community Features

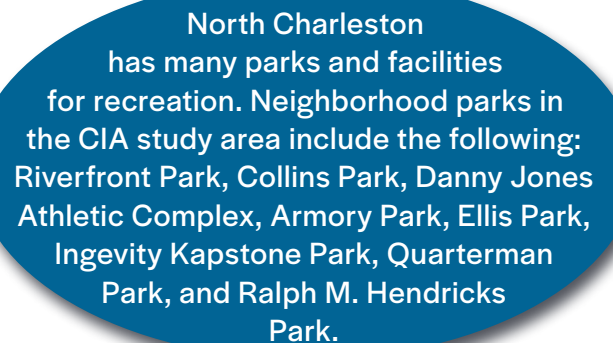
North Charleston Visual and Aesthetics

The majority of the study area includes residential neighborhoods and commercial facilities, there are some other natural and cultural resources along the I-526 corridor which make up the visual quality of the area. Moving north from Paul Cantrell Boulevard across the Ashley River transitions from suburban to urban in nature, with both residential and commercial uses along the route.

Roadway geometrics are flat and curvilinear to the west of the Ashley River, while the interstate is raised above the landscape from I-26 to Virginia Avenue. The roadway includes bridging at Bull Creek, the Ashley River, Paramount Drive, Dorchester Road, Montague Avenue, International Boulevard, and I-26. The roadway provides an unobstructed view of the river in the vicinity of the crossing. The immediate vegetation surrounding the highway consists of landscaped grasses and wooded areas, except in the vicinity of the Ashley River where estuarine and marine wetland areas are present. Throughout the corridor, highway structures include multiple overpasses and underpasses, five railroad bridge crossings, one river bridge crossing, and eight interchanges which add to the visual character of the project's highway environment. For more detail, see Appendix E - Abbreviated Visual Impact Assessment (VIA).

North Charleston Environmental Justice Neighborhoods

There are four areas in North Charleston that are considered Environmental Justice communities, including Russelldale, Highland Terrace, Liberty Park, and Ferndale. In addition, several homes on West and East Ada Avenue in the Wando Woods neighborhood and on Ozark Street and Seiberling Road in the Camps neighborhood in North Charleston are also Environmental Justice communities, refer to Section 4.5. Appendix D contains additional information about population, housing, and community services and facilities for these neighborhoods.

A blue oval callout box with white text.

North Charleston has many parks and facilities for recreation. Neighborhood parks in the CIA study area include the following: Riverfront Park, Collins Park, Danny Jones Athletic Complex, Armory Park, Ellis Park, Ingevity Kapstone Park, Quarterman Park, and Ralph M. Hendricks Park.

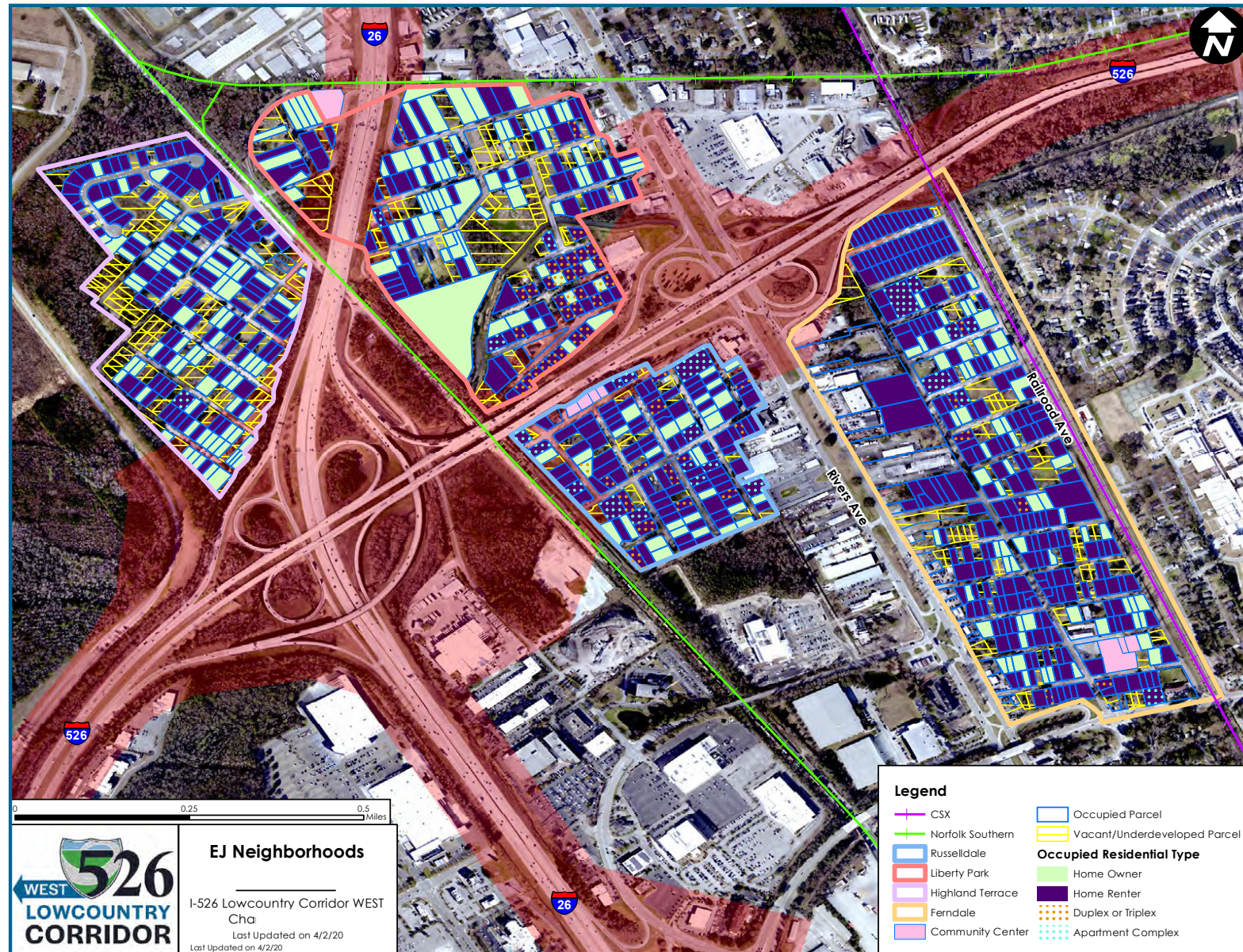


Figure 4.10a EJ Neighborhoods

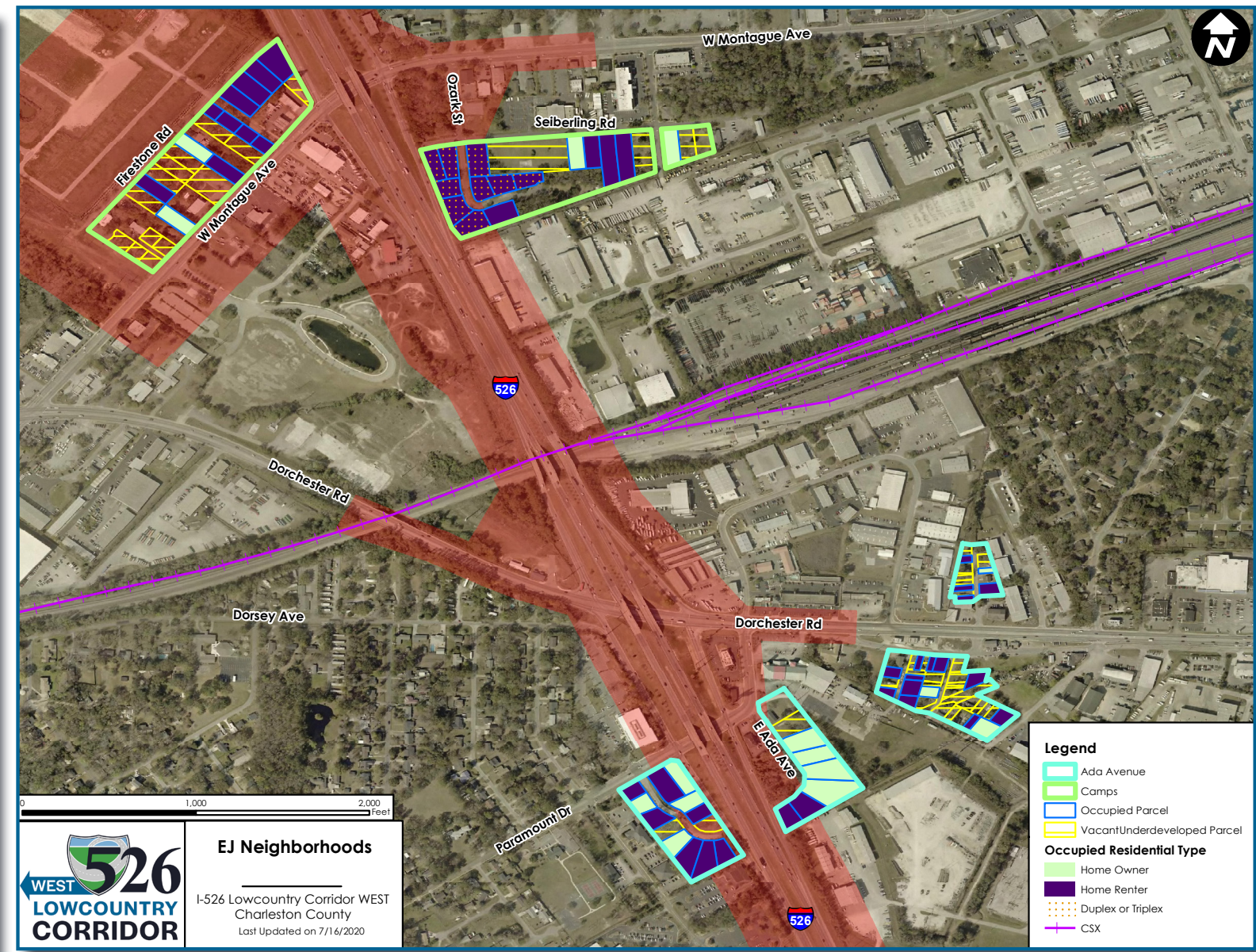


Figure 4.10b EJ Neighborhoods

Per SCDOT's guidance, home owner and renter status were determined by comparing physical addresses with mailing addresses from Charleston County parcel data. The home owner and renter numbers below were compared to block group and block data for confirmation.

Neighborhood	Owner	Renter
Russelldale	21%	79%
Highland Terrace	39%	61%
Liberty Park	46%	54%
Ferndale	31%	69%
Camps	22%	77%
West/East Ada	47%	53%
Average Overall	34%	66%

4.3.4.3 Other Special Populations

Disabled Individuals

The definition of disability varies; however, it is generally used to describe conditions that affect an individual’s interaction with their environment. A disability may include a physical disability but can also include barriers that prohibit movement and social interaction. As such, the goals of programs supporting disabled persons emphasize actions that promote independence and social involvement.⁵ Census disability questions focus on the following six themes: hearing, seeing, cognitive abilities, ambulatory ability (walking/climbing stairs); self-care, and independent living. Table 4.3 shows estimates of disabled persons at the national, state, and county level. Charleston County’s disabled population percentage is below state and national averages.

Table 4.3 Population of Disabled Persons

Geographic Area	Total Population with a Disability	Disabled Persons as a Percent of the Total Population
United States	39,272,529	12.5%
South Carolina	691,835	14.6%
Charleston County	40,958	11.0%

NOTE: Disability data is not available for recent ACS datasets

There are several state and county programs in North Charleston providing services and support for disabled persons. None of these facilities are located within the CIA study area and the proposed project is not proposing to relocate or otherwise adversely affect any facilities that provide services for the disabled.

Elderly Individuals

Within the CIA study area, elderly populations vary widely. In the West Ashley portion of the CIA study area, there are three assisted living centers, which contribute to the high percentage of elderly. The Palmettos of Charleston is located west of I-526, just north of Paul Cantrell Boulevard on Ashley Crossing Drive. Brookdale West Ashley is located just west of The Palmettos on Charlie Hall Boulevard. Ashley River Plantation is located along Ashley River Road to the north of Brookdale West Ashley. None of these facilities are adjacent to or within proximity to the project corridor.

In North Charleston, the highest percentage of residents over 65 years of age (26 percent) is within the neighborhoods of Wando Woods, Oak Park, Cameron Terrace, Palmetto Gardens, Singing Pines, Boland Park, Fair Haven Trailer Park, and the southern portion of Liberty Park.

No planned active-adult (55+) neighborhoods are located along the project corridor. The Trident Area Agency on Aging is located on the west side of I-26 on the north side of Remount Road. This organization provides guidance related to caregiving for seniors and resources to support independent living. This facility is not adjacent to nor within proximity to the project corridor.

5 <https://www.census.gov/topics/health/disability/about.html>

Limited English Proficiency Populations

Executive Order 13166 “Improving Access to Services for Persons with Limited English Proficiency” (LEP) requires all recipients of federal funds to provide meaningful access to persons who are LEP. The US Department of Justice defines LEP individuals as those “who do not speak English as their primary language and who have a limited ability to read, write, speak, or understand English” (67 FR 41459).

The Department of Justice’s “Safe Harbor” LEP threshold is met when either 1,000 adults or five percent of the CIA study area population speak English “less than very well” as documented by Census Bureau survey results. 2013-2017 ACS data was evaluated to determine if the number of LEP individuals within the CIA study area would exceed the LEP Safe Harbor threshold. There are nine block groups with LEP populations exceeding five percent of the total block group population. When the number of LEP individuals are tallied in those block groups, the total is 1,886 which meets the 1,000 Safe Harbor Threshold (in this instance for Spanish-speaking populations) and necessitates additional actions to ensure that all members of the public are provided with an equitable opportunity to participate in public outreach and engagement. The project team has intentionally provided outreach and engagement opportunities to the LEP population, whose primary speaking language within the EJ communities is Spanish. Details on LEP engagement efforts can be further studied in the EJ Analysis and the EJ Outreach Strategy, located in Appendix G and X, respectively.

Spanish-versions of all public meeting materials continue to be developed for the duration of the public engagement process and Spanish translation services are provided at all public informational meetings.

Written Translations of public involvement documents will be provided for Limited English Proficiency populations, as well as other measures determined by SCDOT to ensure meaningful access to project information during construction. Efforts will be made to ensure meaningful opportunities for public participation during construction. Additional meetings will be held when warranted to address community concerns.

4.3.5 Transportation Equity

Properly designed transportation systems can provide exercise opportunities, improve safety, lower emotional stress, link poor people to opportunity, connect isolated older adults and people with disabilities to crucial services and social supports, and stimulate economic development and create transportation systems that benefit everyone.⁶ To ensure that systems are designed with all populations in mind, a project is assessed for transportation equity.

Transportation equity addresses inequities in the transportation system itself and promotes social equity through improved means of transportation.

Transportation equity practices support the goals of NEPA as well as Executive Order 12898 - Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations and the Americans with Disabilities Act (ADA). Transportation equity strives to address systemic, structural inequities, such as segregation, discrimination, automobile dependency, and tolling and the effects they have on an individual due to race, ethnicity, income, ability, gender, age, and/or place of residence⁷ by assessing whether the benefits and

⁶ Healthy, Equitable Transportation Policy Recommendations and Research. PolicyLink. <https://www.policylink.org/resources-tools/healthy-equitable-transportation-policy-recommendations-and-research>

⁷ Advancing Transportation Equity: Research and Practice Final Report. Center for Transportation Studies University of Minnesota. February 2019. <https://www.dot.state.mn.us/planning/program/advancing-transportation-equity/pdf/CTS%2019-08.pdf>

burdens created by transportation policies, plans, and projects are equally distributed, so that no one group is unduly burdened or receives less benefit than others.

Transportation equity also ensures an inclusive public participation process that listens to participants, overcomes barriers to engagement, and conveys to under served/underrepresented populations (for example, low-income, minority, seniors, disabled persons, and rural residents) that their voices are being heard and fairly considered in the decision-making process. Transportation equity goals are focused on developing multimodal transportation systems that are affordable, sustainable, convenient, efficient, safe, and accessible to all populations within an inclusive decision-making process that responds to the needs of under served and underrepresented populations.

The proposed project encompasses a number of transportation equity goals and objectives, including:

- An inclusive, community-driven project development process that engages under served/underrepresented populations through a wide range of high-touch/low-touch engagement strategies (see EJ Outreach Plan, Appendix X).
- An Environmental Justice Community Mitigation Plan (Appendix H) was developed in coordination with a Community Advisory Council to address the needs of the community as identified through a social needs assessment survey (including the mitigation of cumulative effects associated with the proposed project and mitigation that helps increase access to social and economic opportunities).
- Incorporation of project elements and mitigation measures that support active transportation and increase accessibility through alternate modes of transportation (i.e., improved pedestrian connectivity and better access to transit on Rivers Avenue and improved bike route connectivity through the development of a multi-use path).
- Project elements and mitigation measures that provide benefits to under served/underrepresented populations such as elderly and disabled populations by enhancing multimodal transportation options that provide a sense of independence and reduce travel costs.⁸

There is also a social equity aspect to congestion management as it affects travel costs, commute times, housing, and accessibility; however, in general congestion management favors people who most often drive on congested roads over people who seldom or never use such facilities. According to 2018 American Community Survey data, 94% of employed North Charleston residents drive to work with an average commute time of is 28.5 minutes, with many residents utilizing main interstates such as I-526 or I-26. As such, there is an overarching benefit from congestion management that extends to all users, including under served/underrepresented populations, by improving travel costs, commute times, and access to educational and employment centers. For more information on how impacts to low-income and minority residents were evaluated, see Section 4.5.

4.3.6 What are the Potential Environmental Consequences to Communities?

4.3.6.1 How would the No-Build Alternative Impact Communities?

The No-Build Alternative would result in increased traffic by 2050. This increase would likely create increased congestion, making it more difficult to access community facilities and services. As noted previously, the study area is currently experiencing a loss of affordable housing, a trend anticipated to continue under the No-Build Alternative. For more detailed information, please refer to the CIA in Appendix D.

⁸ Evaluating Transportation Equity: Guidance for Incorporating Distributional Impacts in Transportation Planning. Victoria Transport Policy Institute. June 5, 2020. <https://www.vtpi.org/equity.pdf>

4.3.6.2 How would the Proposed Reasonable Alternatives Impact Communities?

The proposed project would reduce congestion and improve mobility along the project corridor through the construction of additional travel lanes, provide wider shoulders to allow vehicles involved in crashes to be moved out of travel lanes, and provide an improved interchange between I-26 and I-526.

Capacity improvements and improved travel times would result in the potential to expand markets for commercial businesses in the Charleston area and help improve productivity and competitiveness for production-related businesses. Improved travel times can also create other economic benefits such as reduced vehicle operating costs from less stress on vehicles due to traffic.

Construction of the proposed project would temporarily affect the traveling public and those living along the project corridor. In general, construction of the proposed project would have minor, temporary effects on emergency response times due to possible delays caused by construction and traffic related to construction. Upon completion, the proposed project would aid in the reduction of emergency response times within portions of the project study area and vicinity.

West Ashley

Impacts to West Ashley Community Cohesion

Transportation projects can impact community cohesion by bisecting neighborhoods and/or isolating a portion of a neighborhood. Other affects include the subsequent generation of new development, property value changes, or creating barriers that separate residents from community facilities.

The term community cohesion is used to describe the social connections within a community.

The CIA, Appendix D, explains that there is a high number of renters within the CIA study area neighborhoods, largely due to the high cost of homeownership. The ratio of renters to homeowners can sometimes indicate less cohesion as there is a transience to renting that could preclude making strong ties with neighbors. However, many long-time renters would likely feel similar levels of cohesion as homeowners given their time living in the neighborhood.

There is a mix of apartments, townhomes, mobile homes, and single-family homes in the West Ashley community. Community cohesion is likely to be higher in owner-occupied homes and townhomes. The proposed project would relocate single family homes and townhomes. Given the relatively small number of relocations in comparison to the size of the affected neighborhoods, no adverse effects on community cohesion are anticipated in the West Ashley area. For more detailed information about potential community impacts please refer to the CIA in Appendix D.

West Ashley Visual and Aesthetic Impacts

An Abbreviated VIA was completed for the proposed project, Appendix E. The visual and aesthetic character of the West Ashley neighborhoods within the CIA study area would not be directly altered by the Proposed Reasonable Alternatives. A flyover ramp into the median is proposed at Glenn McConnell Parkway, which will result in several new retaining walls. However, the proposed improvements are not anticipated to provide notable changes to the visual setting of the project area as the corridor was in place prior to most development in the area and is being widened versus new location construction. There are no preserved park lands and open spaces where the proposed project would create incompatible visual effects. Temporary visual impacts, in the form of construction equipment along the project corridor, may occur during project construction but would be short-

term in nature.

Noise walls are preliminarily recommended in neighborhoods such as March Cove and various apartment complexes along I-526 in West Ashley. However, the noise walls would alter views of the road from the impacted receptors, but this change would not be a departure from the character of the highly developed and urbanized project setting.

West Ashley Environmental Justice Neighborhoods

While there are small areas that would qualify as Environmental Justice (EJ) communities in West Ashley, there are no areas within the CIA study area that would be affected by direct, indirect, or cumulative effects associated with the proposed project. For more detail, see Section 4.5 Environmental Justice Analysis.

North Charleston

North Charleston Community Cohesion

Due to the bisection of the Russelldale, Ferndale, Liberty Park, and Highland Terrace neighborhoods during the original construction of I-526 and I-26 and subsequent relocations, these neighborhoods appear to have a lower amount of community cohesion than the other North Charleston neighborhoods such as Park Circle or Brentwood. This is evidenced by the lack of regular neighborhood association meetings, public feedback on crime in the neighborhoods, and the sparseness of residents observed out of doors during field surveys.

Except for identified Environmental Justice neighborhoods, none of the Reasonable Alternatives would affect community cohesion in North Charleston neighborhoods.

Despite past impacts, CAC members who live in these neighborhoods have expressed that community cohesion is still an important value to the residents living there. Additional evidence of continued community cohesion values stem from the various multi-generational families who have lived in these neighborhoods for decades and from residents who often utilize the existing community centers for gatherings and events.

Further impacts to community cohesion in the EJ neighborhoods are anticipated due to the direct impacts that will arise from the proximity these neighborhoods have to I-526 and I-26, and from future land use plans. The I-526 LCC WEST improvements are anticipated to impact the existing community centers in Liberty Park and Russelldale. Because these centers are used for community programs such as after-school care and summer camp, community cohesion in these neighborhoods will be negatively impacted by the project. In addition, the Russelldale neighborhood is currently zoned for single-family residential use with some multi-family residential and commercial uses on the periphery of the neighborhood. Russelldale's future land use mapping (see Figure 5.1 in Appendix D) is shown as "Light Industrial District" which is not consistent with current land use. This change would contribute to cumulative impacts experienced by this EJ neighborhood, further fragmenting residences from each other and creating a barrier to reestablishing any form of community cohesion.

The neighborhoods identified with EJ populations typically have a mix of renters and homeowners, although the composition varies by neighborhood. The EJ neighborhoods appear to have the least amount of community cohesion of all neighborhoods evaluated in this CIA, as evidenced by the lack of regular neighborhood association meetings, public feedback on crime in these neighborhoods, and the sparseness of residents observed out of doors during field surveys. These neighborhoods also experienced adverse community cohesion effects during the original construction of I-526 and I-26. The cumulative effects of past highway projects are discussed further

in the Indirect and Cumulative Effects Assessment, Appendix F and in the EJ Analysis, Appendix G.

With the exception of the identified effects on EJ neighborhoods, none of the Proposed Reasonable Alternatives would affect community cohesion in North Charleston neighborhoods. Community cohesion impacts to EJ neighborhoods are discussed in detail in the EJ Analysis, Appendix G.

North Charleston Visual and Aesthetic Impacts

The visual and aesthetic character of many of the North Charleston neighborhoods within the CIA study area would not be directly altered by the Proposed Reasonable Alternatives. The EJ neighborhoods would experience a low level of permanent visual changes to the existing environment because the existing road already sits above many of the affected communities. Visual and aesthetic impacts to EJ neighborhoods and proposed mitigation are discussed in detail in the Visual Impact Assessment, Appendix E.

The design of the highway generally follows the existing grade, however, in some areas there will be minor grade changes and braided ramps, which will not create substantial visual changes. The widening of the highway and creation of collector-distributor roads would result in a minor change in the visual experience for motorists and residents due to additional pavement. Most of the bridges over the highway and the interchanges along the corridor are proposed to be reconstructed at approximately the same heights of existing structures minimizing changes to the existing visual character.

None of the identified visual resources nor the visual character of the urban area will be substantively altered due to the proposed project, and the proposed project will not alter the viewers' (including residents and travelers) experience in the area. The proposed project will not create adverse impacts of visual quality. No adverse changes to the natural, cultural, or project environments and viewer exposure or awareness are anticipated. The Highland Terrace-Liberty Park Community Center is in the Area of Visual Effect (AVE) and would be impacted by the proposed project, but the visual change would be minimal as existing I-26 is already visible from the area. There are no preserved park lands and open spaces where the proposed project would create incompatible visual effects. Temporary visual impacts, in the form of construction equipment along the project corridor, may occur during project construction but would be short-term in nature.

Noise walls are preliminarily recommended for Area 11: Centre Pointe Apartments. While the noise walls would alter views of the road from the impacted noise receptors this change would not be a departure from the character of the highly developed and urbanized project setting. Additional details on the noise impacts and noise walls are described in Appendix K.

The proposed project would create a low level of permanent visual changes to the existing environment in the EJ neighborhoods because the existing road already sits above many of the affected communities. The EJ neighborhoods proximity to I-526 and I-26 would result in disproportionate visual impacts as compared to the remainder of the study area with the proposed project's widening of each facility, further encroaching on the EJ neighborhoods viewshed. In comparison, I-526 was present in West Ashley before a majority of development occurred, and thus a larger buffer exists between the facility and residences. A planting plan is included as part of potential project mitigation which may contribute to beautification or other aesthetic improvements, and is anticipated to offset any further visual impacts from the widening of I-526 and I-26 on the EJ neighborhoods.

Table 4.4 Relocation Impacts within EJ Neighborhoods for the Proposed Reasonable Alternatives between International Blvd and Rivers Ave

Type of Impact	No-Build	Alternative 1	Alternative 1A	Alternative 2 (Recommended Preferred Alternative)	Alternative 2A
Russelldale					
Community Facilities and Services	-	1 Community Center	1 Community Center, 1 Church	1 Community Center	1 Community Center, 1 Church
Residential Acquisitions	-	4 Apartment Buildings (19 units), 1 Single-Family Home	5 Apartment Buildings (25 units), 2 Single-Family Homes, 1 Duplex (2 units), 1 Triplex (3 units)	4 Apartment Buildings (19 units), 1 Single-Family Home, 1 Mobile Home	5 Apartment Buildings (25 units), 2 Single-Family Homes, 1 Duplex (2 units), 1 Triplex (3 units)
Business Acquisitions	-	-	1	-	1
Highland Terrace					
Community Facilities and Services	-	1 Community Center	1 Community Center	1 Community Center	1 Community Center
Residential Acquisitions	-	11 Single-Family Homes	12 Single-Family Homes, 1 Mobile Home	13 Single-Family Homes, 1 Mobile Home	12 Single-Family Homes, 1 Mobile Home
Liberty Park					
Community Facilities and Services	-	1 Community Center*, 1 Church	1 Community Center*, 2 Churches	1 Community Center*, 1 Church	1 Community Center*, 2 Churches
Residential Acquisitions	-	23 Single-Family Homes, 3 Mobile Homes, 11 Duplexes (22 units)	26 Single-Family Homes, 3 Mobile Homes, 11 Duplexes (22 units)	19 Single-Family Homes, 3 Mobile Homes, 8 Duplexes (16 units)	26 Single-Family Homes, 3 Mobile Homes, 11 Duplexes (22 units)
Ferndale					
Residential Acquisitions	-	12 Mobile Homes	12 Mobile Homes	6 Mobile Homes	12 Mobile Homes
Wando Woods: West Ada Avenue & East Ada Street					
Residential Acquisition	-	-	-	1 Single-Family Home	-
Camps: Ozark Street & Seiberling Road					
Residential Acquisition	-	-	-	4 Apartment Buildings (9 units)	-
Total EJ Displacements	-	94	114	92	114
Non -EJ Business Displacements				16	
Non-EJ Residential Displacements				5	
Total Project Displacements in Entire Study Area				113	

Note: cells with “-” indicate no impact anticipated.

* The proposed project would relocate the Highland Terrace/Liberty Park Community Center. This relocation is shown in the table for both neighborhoods as both neighborhoods would experience adverse effects associated with the community center’s relocation. This relocation is only counted once in the Total EJ Displacement number.

North Charleston EJ Communities

The Right-of-Way corridor acquired for the highway in the late 1980's was very narrow, leaving many homes and businesses located near the existing interstate structures. As a result, there are several communities along the corridor that would be directly impacted with any improvements or changes to the interstate corridor. Construction of the West Ashley portion of I-526 preceded development in that area and as such, development accommodated the I-526 corridor and grew around the freeway.

The availability of land and a larger offset from I-526 in the West Ashley area are other contributing factors to the disproportionately high number of relocations in the area surrounding the I-526 and I-26 interchange.

The proposed freeway widening, improved I-26/I-526 interchange, and associated improvements on Rivers Avenue at Aviation Drive would not alter existing land use within affected EJ neighborhoods or within the immediate vicinity.

All six affected EJ neighborhoods would experience land use changes associated with the displacement of single-family homes, apartments, mobile homes, and community centers, refer to Table 4.5. There are four areas that will likely face substantial impacts with the implementation of the I-526 LCC WEST project including Russelldale, Highland Terrace, Liberty Park, and Ferndale. In addition, several homes on West and East Ada Avenue in the Wando Woods neighborhood and on Ozark Street and Seiberling Road in the Camps neighborhood in North Charleston are likely to be impacted by the I-526 LCC WEST project. Descriptions of each impacted EJ residential area are detailed in the EJ Analysis found in the Appendix G.

4.3.7 What are the Indirect Effects on Communities?

Indirect and cumulative effects of the project were analyzed using an eight-step framework created for transportation projects (NCHRP 2002). An indirect and cumulative effects (ICE) study area is established as the first step. Through the next three steps, the ICE study area is defined and described and then impact causing activities are identified. For steps five through seven, the indirect effects along with the cumulative reasonably foreseeable actions are identified and analyzed. The final step involves an assessment of consequences and the development of mitigation strategies. Additional details can be found in the Indirect and Cumulative Effects Assessment, Appendix F.

Indirect community impacts from transportation projects are typically associated with land use changes that occur as a result of the project. In these cases, the transportation project may provide additional capacity resulting in shorter commutes from surrounding areas. Because the project corridor and vicinity are already developed, land use changes along the project corridor and vicinity are occurring as part of city-led development and local planning initiatives rather than induced land use changes associated with the proposed project.

The improved mobility associated with the proposed improvements would not create indirect land use effects across the broader region as growth and development will continue to occur regardless of the proposed project. Regional population growth and development trends, pro-growth policies, and the availability of water, sewer, schools, and other infrastructure, indicate that growth and development will continue to occur in the broader Charleston region regardless of the proposed project.

The proposed modification of the Paul Cantrell Boulevard/Magwood Drive intersection and upgrades to existing interchanges would create travel pattern changes for those accessing I-526 or adjacent roadways. All Build Alternatives propose access management modifications at I-26 and West Montague Avenue. Changes in travel patterns and access in West Ashley include the modification of the I-526/Paul Cantrell Boulevard interchange. These modifications include a new bridge carrying westbound lanes of Paul Cantrell Boulevard over Magwood

Drive and widening of the I-526 westbound exit ramp to accommodate the new bridge bypassing the Magwood Drive intersection. These changes in access and circulation patterns are anticipated to decrease travel time.

4.3.8 What are the Cumulative Effects on Communities?

The original construction of I-526 in the 1980's resulted in the bisection of neighborhoods and therefore disruption of community cohesion. The original construction of I-26 impacted 25 residences and one mobile home in Highland Terrace, and 22 residences, three stores, and one church in Liberty Park, refer to Figure 4.11 and Figure 4.12. The original construction of I-526 impacted 17 residences, 12 likely residences, two apartments, two mobile homes, one motel, two restaurants, and nine stores. This physical barrier constructed between homes in neighborhoods divided communities and disrupted existing community cohesion. Additional cumulative effects to communities along the I-526 corridor are anticipated with the potential displacement of approximately 150 residences. Further residential displacements associated with the proposed project serve to further divide the communities. Most of these residential displacements are located in North Charleston due to the predominantly commercial nature of land use along the West Ashley portion of the project corridor and the fact that most development in West Ashley occurred after I-526. Feedback from the I-526 West Community Advisory Council has indicated that residents displaced or encroached upon by the previous I-526 and I-26 projects were not compensated fairly or justly.⁹

The original construction of I-526 and I-26 through the North Charleston communities and construction and subsequent expansion of the Charleston International Airport, generated a substantial increase in highway and air traffic noise.

Following the original construction of I-526 and I-26, the expansion of the Charleston Airport in 2005 further reduced the amount of affordable housing in the area. Combined with industrial growth in North Charleston and surrounding areas, prior and present growth patterns reduce the amount of available land, and availability of affordable housing.

As noted previously, the Russelldale neighborhood is currently zoned for single-family residential use with some multi-family residential and commercial uses on the periphery of the neighborhood. Russelldale's future land use mapping is shown as "Light Industrial District" which is not consistent with current land uses. This change would contribute to the cumulative impacts experienced by this EJ neighborhood, further fragmenting residences from each other and creating a barrier to reestablishing any form of community cohesion.

The proposed improvements would result in an increase in traffic noise levels in 15 of the 49 Noise Study Areas (NSAs). The increase in sound levels as a result of the proposed improvements is not substantial, and in some cases the proposed improvements result in a decrease in sound levels due to parapets on elevated sections. Many locations in the project study area are currently above Noise Abatement Criteria (NAC). As Charleston and the surrounding areas have increasingly developed, traffic levels and infill development has increased, resulting in an additional increase in noise levels in the communities. The proposed improvements in combination with future projects will contribute to the cumulative noise levels in these communities. Refer to Sections 4.1.5.1, 4.1.5.2, and Appendix F for more details on future development and programmed projects. Refer to Appendix K for the Detailed Noise Analysis and further information on traffic noise level impacts.

In addition to cumulative effects contributed by past highway projects, there are a number of adverse cumulative/

9 Community Advisory Council Meeting No. 4, Meeting Minutes. January 4, 2020.

recurring EJ effects broadly experienced by low-income/minority residents in the North Charleston area. Typical adverse cumulative/recurring EJ effects experienced by low-income/minority residents in the North Charleston area include:

- Intergenerational poverty;
- Segregation and isolation;
- Surface transportation projects;
- Changing job markets;
- Lack of affordable housing;
- Exposure to environmental pollutants;
- Exposure to flooding;
- Limited access to transit;
- Lack of sidewalks and bike facilities; and;
- Language barriers (LEP)

One example of a cumulative/recurring effect is exposure to environmental pollutants. Minority and low income neighborhoods in North Charleston are more exposed to toxins from the area's industrial facilities than the City of North Charleston's predominantly white, non-Hispanic neighborhoods which are located away from those facilities. Industrial facilities in the Charleston metro area produce approximately 26% of the state's toxic chemical releases. Air quality effects are compounded by the proximity of minority and low-income communities to the I-526 and I-26 corridors and rail corridors. A study that tracked the number of children treated for asthma at the Medical University of South Carolina (MUSC) over a 40-year period found a 20-fold increase of asthma instances among African-American children; four times the instances of asthma in white children over the same period.¹⁰ The Air Quality Impact Analysis can be reviewed in Appendix J.

Disproportionate impacts refers to situations of concern on a project where there exists significantly higher and more adverse health and environmental effects on minority populations, low-income populations, or indigenous peoples.

The EJ neighborhoods of Russelldale, Liberty Park, Highland Terrace, and Ferndale are most likely to be most affected by the project due to their proximity to the existing interstate corridor. Without mitigation, the anticipated residential and recreational facility displacements are considered to be disproportionately high. The same is true for anticipated adverse impacts such as residential displacements, exposure to environmental pollutants, and others bulleted above, as there are no comparable burdens placed upon other neighborhoods in the broader vicinity of the proposed project.

4.3.9 How would Community Impacts be Mitigated?

The draft Environmental Justice Community Mitigation Plan has been developed and is being coordinated with the CAC and local officials. The plan is still in draft form and will be developed further with a final detailed plan to be included in the Final EIS. The plan is still in draft form and will be developed further with a final detailed plan to be included in the Final EIS. The draft Environmental Justice Community Mitigation Plan is summarized below, and additional details can be reviewed in Appendix D.

The draft Environmental Justice Community Mitigation Plan was developed based off impacts from the project, input from residents via a social needs assessment survey, and direct input from the I-526 LCC WEST Community Advisory Council (CAC). The CAC is comprised of 20 members of the impacted neighborhoods and was developed as a part of the draft Community Mitigation Plan to gather input and feedback on project actions. SCDOT will provide support for training the CAC as it transitions to a Project Oversight Committee (POC). The goal of the POC will be to ensure the implementation of final mitigation measures that will be outlined in the Final EIS. A community office was established in the Gaslight Square Shopping Center on Rivers Avenue in North Charleston

¹⁰ <https://www.charlestoncitypaper.com/charleston/is-pollution-poisoning-charlestons-african-american-and-low-income-communities/Content?oid=5790876>

to serve as a meeting place for the CAC/POC and provide a location for residents to meet with community liaisons and Right-of-Way agents.

- The mitigation to address impacts related to community enhancement include funding a centrally located community center and two pocket parks within the impacted EJ neighborhoods. The new recreational facilities will help to address impacts related to displacement of two Section 4(f) properties, including the Russelldale Community Center and the Highland Terrace-Liberty Park Community Center. Additional details on the Section 4(f) and 6(f) recreational resource mitigation can be found in Section 4.11.7.
- Connectivity and bicycle and pedestrian improvements are included in the draft Community Mitigation Plan to provide safe travel between the community center and packet parks, and the surrounding communities.
- A Community History Preservation Study will be funded to capture the history and culture of the EJ communities and provide recommendations for cultural exhibits to be incorporated into the proposed centralized replacement community center.
- To address community cohesion impacts, the new community center will include the City of North Charleston approved programs that have been requested by the CAC or the EJ residents. Residents will also be given priority for the programs provided at the new community center and employment opportunities will include a preference for residents of the EJ neighborhoods.
- SCDOT will develop Community Infrastructure Enhancement Plan that will identify a set of improvements to address bicycle and pedestrian safety, access to community centers, enhanced street aesthetics, project-related stormwater improvements, and traffic calming measures that would be implemented as part of the project.
- To foster community revitalization, construction of additional affordable housing is proposed to provide an opportunity for residents who will be displaced by the project to relocate within their neighborhoods. Early acquisition of parcels will be conducted prior to the Right-of-Way phase to ensure adequate parcels are available for the implementation of the housing program.
- SCDOT will also provide up to \$50,000 to fund a scholarship program for high school and college students living in the EJ neighborhoods and will develop a school-to-work program with the goal of enhancing employment opportunities for residents within the fields of construction and engineering.
- Additionally, financial literacy and first-time home buyer training will be offered to assist first time home buyers in securing loans and transitioning from renters to homeowners. Refer to Appendix D for additional details on proposed mitigation for community impacts.

4.4 Socioeconomics

As noted in Section 4.3, NEPA specifically requires the consideration of social and economic impacts to ensure that potential effects to people and communities are integrated into the decision-making process of the proposed project. The economic factors anticipated to result from the construction of this project include government finances; economic output, involving employment and income; and the impacts on the local economy, including business access. These items are discussed below.

4.4.1 What is the Business Community Profile in the CIA Study Area?

4.4.1.1 West Ashley

West of the Ashley River, the project corridor travels through residential development to the southern terminus at Paul Cantrell Boulevard. There is some commercial development on the north side of I-526 including a shopping center with a Kohl's, Food Lion, Joann Fabrics, and several fast food restaurants. The West Ashley Medical Center and NHC Healthcare Rehabilitation Center are also located in this area.

4.4.1.2 North Charleston

In the North Charleston portion of the CIA study area, I-526 traverses industrial, residential, and commercial land uses. At the Cooper River, the project corridor is initially flanked on both sides by port-related facilities and industrial uses. Traveling westward, the project corridor is surrounded by residential development, except for the Rivers Avenue commercial corridor. Rivers Avenue is a typical commercial corridor with a large amount of strip development containing restaurants, retail, and services. Commercial uses extend west from Rivers Avenue across I-26 north of I-526 via Remount Avenue, but also include several manufacturing companies such as Miller Signs and Warren Fastenings South, as well as auto and hydraulic repair services such as Fenix Automotive and Hydradyne. This area also includes several shipping and supply services, likely located here to be near freight, air, and port distribution avenues.

Between I-26 and International Boulevard, businesses along the project corridor are primarily retail, restaurants, and entertainment-related. This portion of the CIA study area includes Tanger Outlets, the Charleston Area Convention Center, North Charleston Coliseum and Performing Arts Center, and many restaurants and hotels.

Farther west and south, commercial uses are present between West Montague Avenue and Dorchester Road. These businesses include several building material suppliers and a trucking company.

Businesses surrounding the I-526 interchange with Leeds Avenue area are largely office and service related, including Aerotek (an employment agency) and Select Health SC (health insurance agency). This area includes the academic institutions of Limestone College and Cummins Technical Center and is the central location for government offices including Charleston County government and the Internal Revenue Service.

West of the I-26 interchange, I-526 is bordered to the north by Boeing Company, the Charleston International Airport, and Joint Base Charleston (JBC). Boeing and JBC are top local employers, with 7,000 and 22,000 employees respectively.

4.4.2 What does Employment and Income Look Like in the CIA Study Area?

4.4.2.1 Existing Conditions

West Ashley

The largest public sector employers in Charleston County include Joint Base Charleston and MUSC, while the largest private sector employers include The Boeing Company and Roper St. Francis Healthcare. MUSC-Rheumatology and Immunology clinic is in West Ashley, as well as MUSC Health West Campus, which is in the Citadel Mall. Roper St. Francis Healthcare operates multiple facilities in West Ashley, including Bon Secours St. Francis Hospital, primary care clinics, and several specialty clinics.

According to the ACS 2016 data, unemployment rates in the West Ashley CIA study area range from 2 percent to 12 percent as compared with the South Carolina average, which is 5.3 percent. The median household income for block groups ranges from \$28,000 to \$96,184. Only two block groups have a median household income at or above the South Carolina median of \$54,336. The percent of persons below poverty level ranges from 4 percent to 40 percent (Appendix D).

North Charleston

According to the 2000 U.S. Census data, the North Charleston area primarily employs workers in the construction/manufacturing, retail, accommodations, and health care/social assistance sectors. These industries are supported by the Port of Charleston, the Charleston International Airport, and the multiple railroad lines (Palmetto Railways, Norfolk Southern and CSX Transportation), which move goods to and from the North Charleston area. The Boeing Company and Roper St. Francis Healthcare are the largest private employers in Charleston County.

46% of the population in North Charleston is considered low-income, which is also considerably higher than the average in South Carolina at 37% and the United States average at 33%.

Joint Base Charleston is located near the Charleston International Airport and is one of 12 joint bases that were formed in 2005 as part of the US Department of Defense Base Realignment and Closure (BRAC) process. The Joint Base of Charleston supports over 60 Department of Defense and Federal Agencies and provides service and support to over 90,000 military members. The base also maintains \$7.5 billion in property and capital assets making it a large economic driver in the area.

According to the ACS 2016 data, unemployment rates in North Charleston range from 0 percent to 27 percent for an average rate of approximately 8 percent. In 2016, the average unemployment rate in South Carolina was 5.3 percent, while the United States average was 4.7 percent - both lower than the North Charleston rate.^{11 12} The median household income for block groups ranges from slightly over \$16,300 to \$57,788 with an average of \$34,813 for the North Charleston CIA study area, which is lower than that for South Carolina of \$54,336. The percent of persons below poverty level ranges from 14 percent to 87 percent, with an average of 44 percent which is significantly higher than South Carolina at 16.7 percent in 2016.

¹¹ <https://fred.stlouisfed.org/series/SCUR>

¹² <https://www.thebalance.com/unemployment-rate-by-year-3305506>

4.4.2.2 Potential Environmental Consequences

Capacity improvements and improved travel times associated with the proposed I-526 LCC WEST project would result in the potential to expand markets for commercial businesses in the Charleston area and help improve productivity and competitiveness for production-related businesses. Improved travel times can also create other economic benefits such as reduced vehicle operating costs from less stress on vehicles due to traffic.

Although congestion incurs time and money costs, it is a challenge to quantify the economic costs of congestion partly due to the fact that some businesses benefit by locating in high-density commercial corridors, which offsets adverse economic costs associated with traveling to and parking in those areas.¹³ Construction of the proposed project would create multi-year (short-term) employment within Charleston County. First round employment (a direct job) includes all jobs created by the hiring of construction firms that execute the projects, or by firms that provide direct inputs (e.g., paving materials, steel, lighting, etc.) to the project. Second round employment (an indirect job) includes employment in companies that provide products to the companies that provide project inputs (e.g., a company that manufactures guardrail is a first round employer, the firm producing sheet metal for the guardrail company is a second round employer). Third round employment (an induced job) includes all jobs generated by incremental customer expenditures due to wages paid for first and second round employees. Given the strong local work force available, it is reasonable to assume that a majority of the first and third round employment would be created in North Charleston and the immediate region by the proposed I-526 LCC WEST project. A portion of second round employment may also occur in the region, especially as some manufacturers find it economically beneficial to set up manufacturing near the project site to reduce transportation costs.

4.4.3 What does Access and Mobility Look Like in the CIA Study Area?

4.4.3.1 Existing Conditions

West Ashley

Within the CIA study area, major roads include Ashley River Road, Paul Cantrell Boulevard, and Sam Rittenberg Boulevard. According to SCDOT, the 2017 Annual Average Daily Traffic (AADT) on I-526 from Paul Cantrell Boulevard to Leeds Avenue was 81,900 vehicles per day. Intersections with a high volume of crashes include US 17 at I-526 and Glenn McConnell Parkway at I-526. Main streets are not easily walkable or bikeable, causing residents to rely on cars or public transportation to reach work, shopping, and entertainment destinations.

CARTA operates five routes that run throughout West Ashley. Routes 30 and 32 serve inner West Ashley, running from the Citadel Mall to downtown Charleston and North Charleston, respectively. Route 301 serves outer West Ashley, running from the Citadel Mall to Bees Ferry Road. Route 33 runs from Bees Ferry Road to downtown Charleston and includes many stops in both inner and outer West Ashley. Route 31 includes one stop in West Ashley and includes termini in St. James Island and downtown Charleston. Except for Route 301, which does not run on Sundays, all routes run seven days a week.

According to the 2017 ACS, 91% of employed West Ashley residents drive to work, with 2% utilizing public transportation, 2% bicycling or walking, and 5% working at home. The average commute time is 23 minutes.

13 National Cooperative Highway Research Program. Economic Implications of Congestion. 2001. http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_rpt_463-a.pdf

Paul Cantrell Boulevard is not a designated bicycle route nor are there any bicycle accommodations on the roadway. There are no sidewalks on Paul Cantrell Boulevard within the immediate vicinity of the I-526 corridor. Refer to Appendix D for more detailed descriptions of sidewalks within the CIA study area neighborhoods in West Ashley.

North Charleston

Major roads in the CIA study area include I-526, I-26, Rivers Avenue, Dorchester Road, Remount Road, and Montague Avenue. According to SCDOT, the 2018 AADT at the I-526 and I-26 intersection was approximately 159,000 vehicles per day.

According to the 2018 American Community Survey, 94 percent of employed North Charleston residents drive to work, with one percent utilizing public transportation, three percent bicycling or walking, and two percent working at home. The average commute time is 28.5 minutes, with many residents utilizing main interstates such as I-526 or I-26. Sidewalks are present on both sides of Rivers Avenue, but there are a number of foot paths on the east side of Rivers Avenue between the Ferndale neighborhood and Rivers Avenue. To the east, there are two footpaths from the Liberty Park neighborhood to Rivers Avenue. Another notable foot path exists between West and East Deacon Roads in the Liberty Park neighborhood. Taylor Street has sidewalk on one side of the roadway, but is lacking a crosswalk from the sidewalk to Highland Terrace Community Center. There are sidewalks on both sides of Dorchester Road and Paramount Drive under I-526. There are no sidewalks on International Boulevard or Leeds Avenue. There is no sidewalk access to the Russelldale Community Center. There are no designated bicycle routes in the North Charleston portion of the CIA study area, nor are there any bicycle accommodations along the above-mentioned roadways.

Residents in the North Charleston area have access to CARTA and TriCounty Link bus services. CARTA serves the urban and suburban area of the TriCounty (Berkeley, Charleston & Dorchester) region. It provides service between larger communities, has regular routes to major destinations, and provides free transportation in the downtown area. Transit routes within the CIA study area in North Charleston include routes 10, 103, 104, 12, 13, XP4, 11, XP3, and XP1. CARTA also manages the Tel-A-Ride Service which meets residents with disabilities to transport them around the region. TriCounty Link provides similar services to more rural parts of North Charleston. They have 49 buses that comply with the Americans with Disabilities Act (ADA) and serve areas as far out as Summerville.

There are plans for a Bus Rapid Transit (BRT) program whose main goal is to give travelers an alternative to sitting in traffic. The BRT will originate in Summerville, have 18 different substations and end in downtown Charleston. There will be 16 buses in the fleet and at least three stops located within the North Charleston area.

According to the 2018 Charleston County Comprehensive Plan, the Charleston International Airport supports the travel of 3.6 million people annually. Located in North Charleston, the airport is a significant resource for the local economy. Continued growth is anticipated due to the increase in population and growth in manufacturing, health care, tourism, and technology industries in the area.

4.4.3.2 Potential Environmental Consequences

West Ashley

Changes in travel patterns and access associated with the I-526 LCC WEST project in West Ashley include a modification of the I-526/Paul Cantrell Boulevard interchange. All alternatives propose a new bridge over Magwood Drive carrying westbound lanes of Paul Cantrell Boulevard, in addition to the widening of the I-526 westbound exit ramp to accommodate a new bridge, bypassing the Magwood Drive intersection. These changes in access and circulation patterns are anticipated to decrease travel time.

As detailed in Section 3.9, the proposed I-526 LCC WEST project includes a shared use path on the crossing of the Ashley River. The shared use path provide a critical link for existing pedestrian and bicycle connectivity, as well as provide a connection for future improvements by other project sponsors. Additional details on the potential shared use path can be found in Section 3.9 and 4.7 of the DEIS.

North Charleston

The proposed Reasonable Alternatives associated with the I-526 LCC WEST project would create minor travel pattern changes around the I-26 interchange at Aviation Avenue. The Build Alternatives propose the removal of two eastbound on-ramps on the south side of I-26 due to their proximity to the eastbound off-ramp to Remount Road. The proximity of these on/off-ramps creates a very short distance for vehicles to merge on and off I-26, increasing the potential for sideswipes and other types of collisions.

When the proposed I-526 LCC WEST project is constructed travelers on northbound Aviation Avenue wishing to access eastbound I-26 would continue over I-26 to Rivers Avenue and move through a new reduced-conflict intersection along Rivers Avenue, then cross back over I-26 to access a new eastbound ramp onto I-26 from Remount Road.

All proposed Reasonable Alternatives include an access management modification at I-26 and West Montague Avenue. Traffic headed west towards West Montague Avenue and Mall Drive would still take the existing exit, but traffic would only have one access point to Mall Drive (via West Montague Avenue), instead of two. Eliminating this access point creates space for a proposed new lane that would channel traffic headed toward I-526, Remount Road, and Aviation Avenue into a single dedicated lane. Similarly, traffic would no longer be able to directly merge onto I-26 from Mall Drive because all Build Alternatives would eliminate this ramp. By removing this ramp, traffic would be able to flow freely, without the obstruction of traffic slowing down to exit.

The Recommended Preferred Alternative at the I-526 at North Rhett Avenue interchange would increase existing access and safety for traffic headed east and west along I-526 and traffic headed to and from Virginia Avenue. Eastbound traffic from Virginia Avenue would have no interaction with I-526 westbound thoroughfare traffic, creating fewer potential conflict points between traffic headed in opposite directions. The weave conflict that arises as traffic merges onto and off the interstate would also be reduced by breaking ramp entrances for N Rhett Avenue into two locations. The low speed loop exit at the N Rhett Avenue at I-526 interchange would be eliminated, along with the weave conflict area between N Rhett Avenue and Virginia Avenue. This design increases safety along I-526 and improves overall capacity levels.

4.5 Environmental Justice Analysis

4.5.1 What is Environmental Justice?

An Environmental Justice (EJ) analysis was performed to identify EJ populations early in the planning process and incorporate strategies into the project management plan to engage EJ community members at the onset of the project development process. As a part of this analysis, the impacts for each project alternative were evaluated to determine whether the impacts are disproportionately high and adverse for any of the communities located on the project corridor. While this section will provide an overview of the Environmental Justice Analysis, the full Environmental Justice Analysis can be reviewed in detail in Appendix G.

Executive Order (EO) 12898 (Federal Actions to Address Environmental Justice to Minority and Low-Income Populations), United States Department of Transportation (USDOT) Order 5610.2(a) (Final Order to Address Environmental Justice in Minority Populations and Low-Income Populations), and Federal Highway Administration (FHWA) Order 6640.23A (FHWA Actions to Address Environmental Justice in Minority Populations and Low-Income Populations) (FHWA EJ Order 6640.23A) have been set forth to:

1. avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority populations and low-income populations;
2. ensure the full and fair participation by all potentially affected communities in the transportation decision-making process, and;
3. prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority and low-income populations.

FHWA EJ Order 6640.23A defines disproportionately high and adverse effects as effects that are “predominately borne by a minority and/or low-income population, or will be suffered by the minority/low-income population and is appreciably more severe or greater in magnitude than the adverse effect that will be suffered by the nonminority/non-low-income population.”

Title VI of the 1964 Civil Rights Act states, “No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.” The Act bars intentional discrimination as well as disparate impact discrimination (i.e., a neutral policy or practice that has a disparate impact on protected groups).

FHWA’s Guidance on Environmental Justice and NEPA¹⁴ describes the process to address Environmental Justice during the NEPA review, including documentation requirements.

4.5.2 How is an Environmental Justice Analysis Performed?

Environmental Justice impacts were analyzed in accordance with EO 12898 (Federal Actions to Address Environmental Justice to Minority and Low-Income Populations), USDOT Order 5610.2 (a) (Final Order to Address Environmental Justice in Minority Populations and Low-Income Populations), and FHWA’s Guidance on Environmental Justice and NEPA.¹⁵ The EJ analysis included the following steps:

14 Federal Highway Administration. Guidance on Environmental Justice and NEPA. December 16, 2011. https://www.environment.fhwa.dot.gov/env_topics/ej/guidance_ejustice-nepa.aspx

15 FHWA Actions to Address Environmental Justice in Minority Populations and Low-Income Populations Classification Code Date OPI 6

- Identifying EJ populations
- Providing opportunities for meaningful public involvement with EJ populations
- Understanding EJ needs and concerns
- Assessing benefits and burdens of proposed plans
- Assessing whether transportation plans may result in disproportionately high and adverse effects on EJ populations
- Deploying strategies to address such effects, including imbalances and needs

FHWA EJ Order 6640.23A defines “adverse effects” as “the totality of significant individual or cumulative human health or environmental effects, including interrelated social and economic effects, which may include, but are not limited to:

- Bodily impairment, infirmity, illness, or death;
- Air, noise, and water pollution and soil contamination;
- Destruction or disruption of human-made or natural resources;
- Destruction or diminution of aesthetic values;
- Destruction or disruption of community cohesion or a community’s economic vitality;
- Destruction or disruption of the availability of public and private facilities and services;
- Vibration;
- Adverse employment effects;
- Displacement of persons, businesses, farms, or nonprofit organizations;
- Increased traffic congestion, isolation, exclusion, or separation of minority and/or low-income individuals within a given community or from the broader community; and,
- Denial of, reduction in, or significant delay in the receipt of benefits of FHWA/DOT programs, policies, or activities.¹⁶

Adverse effects are to be addressed in accordance with FHWA mandates to identify and avoid discrimination and disproportionately high and adverse effects on minority populations and low-income populations by actions that include:

- Identifying and evaluating environmental, public health, and interrelated social and economic effects of FHWA programs, policies, and activities; and,
- Proposing measures to avoid, minimize, and/or mitigate disproportionately high and adverse environmental or public health effects and interrelated social and economic effects, and providing offsetting benefits and opportunities to enhance communities, neighborhoods, and individuals affected by FHWA programs, policies, and activities, where permitted by law and consistent with EO 12898.

Projects can cause positive and negative effects (“benefits and burdens”) that can occur in the near or long term. The FHWA EJ Order notes that practitioners may take planned mitigation measures (offsetting benefits) and the relevant number of similar existing system elements in non-minority and non-low-income areas when assessing impacts on EJ populations.

To supplement this discussion, impacts can be assessed and appropriately mitigated by identifying and understanding factors such as:

- **Connectivity:** Access to jobs, shopping, transit service; pedestrian access; bicycle access
- **Mobility:** Traffic congestion, travel times
- **Safety:** Vehicle crashes, bicycle crashes, pedestrian injuries and fatalities, personal security
- **Displacements:** Residences, businesses, public amenities
- **Equity:** Investments, costs, maintenance
- **Environmental:** Air quality, vibration, noise, climate change

¹⁶ FHWA Actions to Address Environmental Justice in Minority Populations and Low-Income Populations Classification Code Date OPI 6640.23A <https://www.fhwa.dot.gov/legsregs/directives/orders/664023a.pdf>

- Social: Community cohesion/disruption, isolation
- Aesthetics: Diminution of landscaping, lighting

Each of these factors are described in detail in the Environmental Justice Analysis, Appendix G.

4.5.3 Are there Minority and/or Low-Income Populations within the Project Study Area?

As detailed in the Table 4.5 below, areas with high percentages of minority and/or low-income populations within the project study area qualify as EJ communities. Therefore, further Environmental Justice analysis is required.

Table 4.5 Environmental Justice Communities within the I-526 LCC WEST Project Study Area

Neighborhood	Census Block Group	Minority ¹	Low-Income ²	Disproportionately High and Adverse Effects Anticipated?
Russelldale	450190033003	84%	34%	Yes
Highland Terrace	450190031111	91%	36%	Yes
Liberty Park	450190033001	59%	38%	Yes
Ferndale	450190033002	95%	53%	Yes
Wando Woods: West & East Ada Avenue	450190039002	69%	11%	Yes
Camps: Ozark Street & Seiberling Road	450190031111	91%	36%	Yes
Charleston Farms	450190033001	59%	38%	No
North Westchester Drive (West Ashley)	450190027011	63%	46%	No

1 Minority percentages per block group based on Census Bureau’s 2013-2017 American Community Survey 5-year summary estimates.

2 Low income percentages per block group based on 2018 household income data and poverty guidelines set forth by the US Department of Health and Human Services (<https://aspe.hhs.gov/2018-poverty-guidelines>).

There are four communities in North Charleston that will likely face substantial impacts with the implementation of the I-526 LCC WEST project including Russelldale, Highland Terrace, Liberty Park, and Ferndale. In addition, several homes on West and East Ada Avenue in the Wando Woods neighborhood and on Ozark Street and Seiberling Road in the Camps neighborhood in North Charleston are EJ areas anticipated to be impacted by the project.

The Charleston Farms neighborhood is located in North Charleston on the north side of I-526 and the east side of Rivers Avenue. One residential relocation is anticipated in this area and there are no community impacts in the way of community center relocations or indirect and cumulative effects. As such, the single relocation in the Charleston Farms neighborhood is not disproportionately high and adverse. There are homes on North Westchester Drive in the West Ashley portion of the project study area qualifies as an EJ population, but this population is not in the immediate vicinity of the proposed project and would not be adversely affected by direct, indirect, or cumulative effects from the proposed project.

4.5.4 Are there Limited English Proficiency Populations within the Project Study Area?

EO 13166 “Improving Access to Services for Persons with Limited English Proficiency” requires all recipients of federal funds to provide meaningful access to persons who are limited in their English proficiency (LEP). The US

Department of Justice defines LEP individuals as those “who do not speak English as their primary language and who have a limited ability to read, write, speak, or understand English” (67 FR 41459).

The Department of Justice’s “Safe Harbor” LEP threshold is met when a study area’s population exceeded either 1,000 adults or 5% of the study area population speak English “less than very well” as documented by Census Bureau survey results. The 2013-2017 American Community Survey (ACS) data was evaluated to determine if the number of LEP individuals within the CIA study area would exceed the LEP Safe Harbor threshold. There are nine Block Groups with LEP populations exceeding 5% of the total Block Group population. When the number of LEP individuals are tallied in those Block Groups, the total is 1,886 which meets the 1,000 Safe Harbor Threshold (in this instance for Spanish-speaking populations) and necessitates additional actions to ensure that all members of the public are provided with an equitable opportunity to participate in public outreach and engagement.

4.5.5 How did the Project Team Create Opportunities for Meaningful Public Involvement with EJ Populations?

As a part of the project’s development, a comprehensive Public Involvement Plan (PIP) was developed to outline how the public would be engaged during the project. Since EJ neighborhoods were identified along the project corridor and these communities are potentially impacted by the project, a separate and specific EJ Outreach Strategy was developed to incorporate efforts designed to engage those residents and business owners.

A goal of the EJ Outreach Strategy is to facilitate project involvement opportunities that fit within the EJ community’s schedule and overcome traditional barriers to public involvement that many families may face. Such barriers that can prevent effective public engagement include inadequate access to transportation and childcare services, as well as conflicting work hours when meetings or events are scheduled. To best mitigate some of the barriers to public involvement, outreach activities for the project have been held inside the impacted EJ neighborhoods to give residents a more convenient opportunity to engage with the project team. Creating public involvement opportunities within the impacted neighborhoods has helped the project team spread project awareness, promote utilization of the I-526 LCC Community Office, and encourage attendance at the planned Informational Workshops and other outreach meetings. EJ outreach efforts include multiple focus areas to effectively engage the community, including those outlined below.

- Community Drop-in Meetings
 - > Five meetings were held in 2019 to encourage discussions with participants, share information as it relates to the project, and provide an opportunity for residents to meet SCDOT personnel and the Community Office staff who can respond to future questions, concerns, or comments regarding the project.
- Social Needs Assessment (SNA)

Ranked Social Needs Categories (highest to lowest)	
1. Adequate stormwater management	13. Availability of good grocery stores
2. Adequate sidewalks/bicycle facilities	14. Adequate public transportation and facilities
3. Availability of quality housing	15. City’s response to requests related to public services
4. Availability of affordable housing	16. Availability of employment-assistance services
5. Availability of agencies providing services for seniors	17. Availability of nearby medical services
6. Availability of agencies providing services for youth	18. Parks and recreation facilities
7. Quality of teaching at schools	19. Employment opportunities
8. Well-lit streets/sidewalks	20. Availability of opportunities for small businesses
9. Appearance of neighbors’ homes	21. Quality of daycare centers
10. Safety of schools	22. Ability to open a small business
11. Availability of youth employment opportunities	23. Emergency services response times (ambulance, police, fire)
12. Availability of supervised after-school youth activities	24. Availability of affordable daycare centers
	25. Garbage collection frequency

- > The purpose of this assessment was to provide a snapshot of the norms, needs, and desires related to 25 social needs categories and to rank the importance of and satisfaction with each category:
- > 47 EJ neighborhood residents from the four primarily impacted EJ neighborhoods participated in the SNA survey
- > Top social needs and priorities include infrastructure improvements related to stormwater management, bike/pedestrian facilities, and availability/quality of affordable housing followed by services for seniors and youth.
- Pop-up Meetings
 - > 12 small group meetings were held in various locations to engage area residents and create opportunities for residents to discuss the project with the project team. Pop-up meetings are also a means of creating and promoting dialogue to determine what residents see as assets, liabilities, and possible solutions to issues within their respective neighborhoods.
 - > An estimated 265 total participants attended the 2019 pop-up meetings
- Flyer Box Program
 - > Indoor and outdoor locations are stocked with project newsletters and checked on a weekly basis to keep citizens in and around the affected areas up to date on project information without relying on the use of technology, making it more accessible for those with limited computer/internet resources.
- Community Advisory Council (CAC)
 - > A group of local citizens and other stakeholders that meet during the course of the project development process to discuss project-related issues, share individual knowledge and concerns, provide input on the draft community mitigation, spread project information and knowledge to EJ residents, and give EJ residents a strong voice in the project process.
 - > The CAC is comprised of residents that live in, have elderly family living in, or own property in, the impacted EJ neighborhoods of Russelldale, Liberty Park, Highland Terrace, and Ferndale.
- Community Office
 - > A local office for project or community related meetings, workshops, and other events was established in Gas Lite Square, a shopping complex just north of the Liberty Park neighborhood.
 - > The Community Office is staffed with a full-time Office Manager, Community Liaisons/Outreach Specialists, and part-time Right-of-Way Specialists who provide community residents with real-time project information.
- Specific LEP Outreach
 - > The project team participated in the 2017 Latin American Festival sponsored by the Charleston County Parks and Recreation Commission, hosted a Media Day in which several local Spanish media were invited, and advertised for the Community Office Open House in the Spanish newspapers, El Informador and Universal Latin. Universal Latin staff also attended the Community Office Open House and interviewed the 526 LCC WEST Project Manager to publish additional information about the project for their readers.
 - > Art Pot, an art and educational multicultural group based on North Charleston, is conducting specific Hispanic outreach through the radio station 103.9 FM / 95.5 FM Charleston ¡Aquí estamos! and through online platforms such as Facebook and Facebook Live. Spanish advertisements have been posted on the Facebook pages of Charleston Aquí estamos, Iglesias Hispanas del Lowcontry, and Art Pot, and because of the higher concentration of Spanish speaking residents in Ferndale, representatives of Art Pot have been specifically focusing door-to-door outreach in this neighborhood.

For additional outreach information please see the EJ Outreach Strategy, located in Appendix X of the DEIS. Outreach and engagement of EJ neighborhood residents is ongoing through the planning and design process. Upcoming activities include, but are not limited to, CAC meetings and community meetings to gather feedback on proposed mitigation.

The draft EJ Community Mitigation Plan will be presented to residents in affected EJ neighborhoods to gather feedback on proposed mitigation through a series of neighborhood meetings to be held during the public review period for the DEIS. Feedback received from EJ neighborhood residents will be used to refine and finalize the EJ Community Mitigation Plan. The refined draft EJ Community Mitigation Plan will be presented to affected EJ neighborhood residents for review and comment prior to its finalization and inclusion in the FEIS/ROD. The final EJ Community Mitigation Plan will catalog all agreements and plans required to implement the mitigation commitments.

4.5.6 Do EJ Neighborhoods Face Adverse or Disproportionate Impacts from the Project?

As shown in Table 4.6, all Proposed Reasonable Alternatives would create disproportionately high and adverse effects on EJ communities. These neighborhoods are most likely to be most affected by the project due to their proximity to the existing interstate corridor. These EJ neighborhoods were impacted in the past from interstate construction projects and it is anticipated that the impacts to these communities will be significant with any Proposed Reasonable Alternative. As such, it is important to first look at alternatives that would avoid impacts to EJ communities particularly in this case where EJ neighborhoods were impacted by past transportation projects. The range of alternatives evaluated in Sections 3.5.1 through 3.5.6 would avoid impacts to EJ neighborhoods; however, these alternatives would not reduce congestion along the project corridor and would not fulfill the purpose of and need for the proposed project. Improving the existing I-526 LCC WEST mainline from Paul Cantrell Boulevard to Virginia Avenue, as described in Section 3.5.7, would accommodate current and future vehicular demands, as well as population and employment increases. Improving the existing highway would meet the purpose of and need for the project by increasing capacity and thereby reducing congestion. Proposed Reasonable Alternatives to improve the existing corridor were subsequently developed, including options for the I-26/I-526 System interchange (Alternatives 1, 2, 1A, and 2A). Among the four Proposed Reasonable Alternatives in this area, the Recommended Preferred Alternative (Alternative 2) would create the lowest number of displacements.

The Recommended Preferred Alternative (Alternative 2) would displace 34 single-family homes, 11 mobile homes, 44 apartment units, two community centers, and one church within the identified EJ neighborhoods of Russelldale, Liberty Park, Highland Terrace, Ferndale, Camps and Ada Avenue. Impacted facilities at the Highland Terrace-Liberty Park Community Center include a 2,000 square foot community center building, one outdoor basketball court, one half-size basketball court, one multi-use court, playground equipment on a mulch play area, one picnic shelter, multiple benches and picnic tables throughout the park, and a small parking lot. The displacement of the community center would impact local community cohesion because this facility is often used to host events or gather as a group by residents living in the Highland Terrace and Liberty Park neighborhoods. Impacts to the Russelldale Community Center include the 2,000 square foot community center building, an outdoor basketball court, playground equipment on a mulch play area, a multi-use field, and multiple benches and picnic tables throughout the park. Similar to the Highland Terrace-Liberty Park Community Center, the displacement of the community center would impact local community cohesion because this facility is often used for social gatherings by residents living in the Russelldale neighborhood. The Recommended Preferred Alternative would displace Enoch Chapel Methodist Church within the Liberty Park neighborhood. This church was previously relocated by past transportation projects.

Table 4.6 Relocation Impacts within EJ Neighborhoods for the Proposed Reasonable Alternatives between International Blvd and Rivers Ave

Type of Impact	No-Build	Alternative 1	Alternative 1A	Alternative 2 (Recommended Preferred Alternative)	Alternative 2A
Russelldale					
Community Facilities and Services	-	1 Community Center	1 Community Center, 1 Church	1 Community Center	1 Community Center, 1 Church
Residential Acquisitions	-	4 Apartment Buildings (19 units), 1 Single-Family Home	5 Apartment Buildings (25 units), 2 Single-Family Homes, 1 Duplex (2 units), 1 Triplex (3 units)	4 Apartment Buildings (19 units), 1 Single-Family Home, 1 Mobile Home	5 Apartment Buildings (25 units), 2 Single-Family Homes, 1 Duplex (2 units), 1 Triplex (3 units)
Business Acquisitions	-	-	1	-	1
Highland Terrace					
Community Facilities and Services	-	1 Community Center	1 Community Center	1 Community Center	1 Community Center
Residential Acquisitions	-	11 Single-Family Homes	12 Single-Family Homes, 1 Mobile Home	13 Single-Family Homes, 1 Mobile Home	12 Single-Family Homes, 1 Mobile Home
Liberty Park					
Community Facilities and Services	-	1 Community Center*, 1 Church	1 Community Center*, 2 Churches	1 Community Center*, 1 Church	1 Community Center*, 2 Churches
Residential Acquisitions	-	23 Single-Family Homes, 3 Mobile Homes, 11 Duplexes (22 units)	26 Single-Family Homes, 3 Mobile Homes, 11 Duplexes (22 units)	19 Single-Family Homes, 3 Mobile Homes, 8 Duplexes (16 units)	26 Single-Family Homes, 3 Mobile Homes, 11 Duplexes (22 units)
Ferndale					
Residential Acquisitions	-	12 Mobile Homes	12 Mobile Homes	6 Mobile Homes	12 Mobile Homes
Wando Woods: West Ada Avenue & East Ada Street					
Residential Acquisition	-	-	-	1 Single-Family Home	-
Camps: Ozark Street & Seiberling Road					
Residential Acquisition	-	-	-	4 Apartment Buildings (9 units)	-
Total EJ Displacements	-	94	114	92	114
Non -EJ Business Displacements				16	
Non-EJ Residential Displacements				5	
Total Project Displacements in Entire Study Area				113	

Note: cells with “-” indicate no impact anticipated.

* The proposed project would relocate the Highland Terrace/Liberty Park Community Center. This relocation is shown in the table for both neighborhoods as both neighborhoods would experience adverse effects associated with the community center’s relocation. This relocation is only counted once in the Total EJ Displacement number.

The proposed improvements would result in an increase in traffic noise levels in 40 of the 49 Noise Study Areas (NSAs) studied for the noise study report (Appendix K in the DEIS). Many locations in the project study area currently approach or exceed the Noise Abatement Criteria (NAC). The increase in sound levels as a result of the proposed improvements is not substantial, and in some cases result in a decrease in sound levels due to parapets on elevated sections. Traffic noise level changes in the affected EJ neighborhoods in Design Year 2050 range from -4 dB(A) to 5 dB(A), which is comparable to anticipated noise level changes in other areas along the project corridor. Noise walls were evaluated for the affected EJ neighborhoods but did not meet criteria for feasibility and/or reasonableness.

4.5.6.1 Indirect Effects

Indirect impacts in EJ neighborhoods include:

- The proposed improvements would create adverse effects on community cohesion, aesthetics, and economic vitality resulting from anticipated displacements, including the Highland Terrace-Liberty Park and Russelldale community centers
- EJ neighborhood residents are anticipated to experience disproportionate impacts associated with exposure to construction noise and dust as they are likely to have windows open to help ventilate homes
- The proposed project would create a low level of permanent visual changes to the existing environment in the EJ neighborhoods because the existing road already sits above many of the affected communities.

4.5.6.2 Cumulative Effects

Past actions that have contributed to adverse cumulative impacts in EJ neighborhoods include:

- Displacements associated with original construction of I-26 and I-526
- Past actions, in combination with the proposed improvements and future projects, would contribute to cumulative noise levels in the affected EJ neighborhoods. The original construction of I-526 and I-26 and construction/expansion of the Charleston International Airport, generated a substantial increase in highway and air traffic noise. In addition, two railroad corridors border the affected EJ neighborhoods; both railroad corridors generate noise. As Charleston and the surrounding areas have increasingly developed, traffic levels and infill development has increased, resulting in an additional increase in noise levels in the communities.
- Adverse effects on economic vitality due to unjust compensation from original construction of I-26 and I-526
- Adverse community cohesion effects associated with rezoning Russelldale neighborhood to “light industrial” use
- Diminished economic vitality due to depreciated home values, a high number of vacant or underdeveloped parcels, and a high number of homes in disrepair
- Diminished economic vitality increases potential for further erosion of community cohesion as homeowners may sell to developers that do not reinvest in the current community
- Many of the houses in the affected EJ neighborhoods were built in the 1940’s; these homes were prefabricated houses designed to be easily assembled and disassembled so they could be moved as needed; as such, the existing housing stock is old and much is in disrepair
- Affordable housing stock is also affected by the reduction of mobile homes in the project area and vicinity; this trend is anticipated to continue based on local growth plans and policies related to mobile homes
- Available land for affordable housing is also being reduced by new development in the area including other transportation projects, past airport expansions, and large-scale commercial development.
- Heirs’ Property issues can hinder residents from performing home repairs or building new homes

- EJ neighborhood residents experience a high degree of vulnerability related to weather hazards given the quality of housing stock, location within the Filbin Creek drainage basin, and Heirs' Property issues
- EJ neighborhood residents experience environmental stressors, notably those related to economic insecurity, outdoor, and indoor pollutants

The above adverse impacts are also detailed in the Environmental Justice Analysis, Appendix G, Visual Impact Assessment, Appendix E, and the Indirect and Cumulative Effects Assessment, Appendix F.

4.5.6.3 Impact Summary

The EJ neighborhoods of Russelldale, Liberty Park, Highland Terrace, and Ferndale, and additional EJ locations on East Ada Street, West Ada Avenue, Seiberling Road, and Ozark Street would experience a high level of direct impacts associated with displacements, and indirect/cumulative effects. Residential relocations within EJ neighborhoods comprise 95% of total residential relocations.

“Disproportionate impacts” refer to situations of concern on a project where there exists significantly higher and more adverse health and environmental effects on minority populations, low-income populations or indigenous peoples. Disproportionately high and adverse effects are effects that are predominately borne by a minority and/or low-income population, or will be suffered by the minority/low-income population and is appreciably more severe or greater in magnitude than the adverse effect that will be suffered by the non-minority/non-low-income population.” (FHWA Order 6640.23A) Without mitigation, the anticipated residential relocations and recreational facility displacements are considered to have disproportionately high and adverse effects, as there are no comparable burdens placed upon other neighborhoods in the broader vicinity of the proposed project.

4.5.7 How will the Adverse and Disproportionate Impacts be Avoided, Minimized, and Mitigated?

According to FHWA EJ Order 6640.23A, adverse effects are to be addressed in accordance with FHWA mandates that require the identification and evaluation of environmental, public health, and interrelated social and economic effects of FHWA programs, policies, and activities; and, the development of measures to avoid, minimize, and/or mitigate disproportionately high and adverse environmental or public health effects and interrelated social and economic effects, and providing offsetting benefits and opportunities to enhance communities, neighborhoods, and individuals.

4.5.7.1 Avoidance

As noted in Section 4.5.6, a range of alternatives that would avoid impacting EJ communities was evaluated. These alternatives included the No-Build Alternative; Improvements to existing local facilities (i.e., East Montague Avenue and Remount Road; New location alternatives (i.e., US 78 to Virginia Avenue, Ashley Phosphate Road to Virginia Avenue, Bees Ferry Road to Dorchester Road); Managed Lanes; Transportation System Management (TSM)/Transportation Demand Management (TDM) Strategies; Mass Transit; and, Existing Corridor Improvements. Additional information on these alternatives can be found in Sections 3.5.1 through 3.5.6. With the exception of Existing Corridor Improvements (discussed in Section 3.5.7), these alternatives would not reduce congestion along the project corridor and would not fulfill the purpose of and need for the proposed project. Alternatives to improve the existing corridor were found to meet the project's purpose and need and were evaluated further as Proposed Reasonable Alternatives.

4.5.7.2 Minimization

Four Proposed Reasonable Alternatives were developed in the vicinity of the EJ neighborhoods; which all utilize as much of the existing right-of-way as possible. See Sections 3.6 through 3.8 for additional details related to alternative development and evaluation. Among the four Proposed Reasonable Alternatives in this area, the Recommended Preferred Alternative (Alternative 2) would create the lowest number of displacements, avoiding the displacement of five single-family homes, five mobile homes, 11 apartment units, one business, and one church.

4.5.7.3 Mitigation

The Recommended Preferred Alternative would avoid and minimize impacts to the maximum extent practicable; however, adverse impacts would still be created by the proposed project. In addition to residential, business, and community facility displacements within EJ neighborhoods, the proposed project would further encroach upon low-income and minority EJ populations in the immediate vicinity of the I-526/I-26 interchange.

The purpose of mitigation is to lessen the burden of impacts caused by the project to an extent that, after mitigation, are no longer disproportionately high or adverse on a minority or low-income population. This section describes proposed mitigation developed to offset disproportionately high and adverse effects to EJ populations. The proposed EJ Community Mitigation Plan is included as DEIS Appendix H. The Community Mitigation Plan will be presented to residents in affected EJ neighborhoods to gather feedback on proposed mitigation through a series of neighborhood meetings to be held during the public review period for the DEIS. Feedback received from EJ neighborhood residents will be used to refine and finalize the EJ Community Mitigation Plan, which will be appended to the FEIS/ROD.

The Community Advisory Council (CAC) helped the project team develop the proposed mitigation measures contained in the EJ Community Mitigation Plan by sharing individual knowledge, experiences, and perspectives, and providing input on project-related impacts and proposed mitigation.

As previously noted, the SNA was conducted to gather feedback on EJ residents' social needs and priorities. Top social needs priorities include infrastructure improvements related to stormwater management, bike/pedestrian facilities, and availability/quality of affordable housing followed by services for seniors and youth. The results of the SNA were referenced during the development of proposed mitigation.

In consideration of the SNA results, the project team coordinated with the CAC and the City of North Charleston to develop draft mitigation to address the needs and priorities of the impacted EJ neighborhoods. Proposed mitigation is categorized into four pillars: Cohesion, Enhancement, Preservation, and Revitalization as shown in Table 4.7. Table 4.7 summarizes anticipated direct, indirect, and cumulative impacts to EJ neighborhoods (as listed in Section 4.5.6), CAC feedback, SNA results, and mitigation proposed to address project impacts and community needs and priorities. The Environmental Justice Community Mitigation Plan in its entirety can be found in DEIS Appendix H.

Table 4.7 references "Recreation Facilities and Amenities" and "Recreational Programs and Activities" as part of proposed mitigation to offset impacts associated with the displacement of the Highland Terrace-Liberty Park Community Center and Russelldale Community Center. These terms refer to the construction of one large, centrally located community center complex (called the "Filbin Creek Community Center" for the purposes of

this document), a pocket park in Highland Terrace-Liberty Park, and a pocket park in Russelldale. The existing community centers include cinderblock buildings of roughly 2,000 square feet each; the proposed Filbin Creek Community Center includes a roughly 17,850 square foot building.

Potential infrastructure related to the replacement recreational facilities and amenities could include, but is not limited to: classrooms designed for flexibility, which include moveable panel divider walls allowing room size to be modified to meet program needs; basketball courts; a community garden; an educational wetland; outdoor facility lighting above minimum requirements; covered picnic shelters; grills; walkways and common spaces will be user-friendly and defined by vegetation or other natural definitions (i.e., fencing would not be first choice); wayfarer/directional signs to help guide residents to new facilities; and, solar panels and emergency generators to enable the centers to be used as shelters during emergencies or inclement weather.

Programs and activities at the proposed Filbin Creek Community Center could include, but are not be limited to: senior and youth-focused programs and activities; a monthly programming/activity calendar that prioritizes programs for community seniors and youth such as meeting spaces, youth lunch programs, and tennis associations; a yearly calendar of community center events that focuses on events that foster community cohesion such as those that highlight/preserve local history, involve meeting with government representatives, and cross-cultural activities; programming that provides access to educational and financial resources for community advocacy and self-advocacy; volunteer opportunities with priority on neighborhood residents; inclusion of a community garden at the recreational facility to serve as both an educational program and effort to mitigate neighborhoods' location in known food desert; and, nature/ecology programs that incorporate site features.

The proposed pocket parks would be developed to include playgrounds, basketball courts, a 25 ft by 25 ft open air shelters, benches, and on-street parking.

Construction of the new centrally located community center and the pocket parks will be completed prior to the start of construction of the I-526 LCC WEST improvements.

Table 4.7 Mitigation Matrix

COMMUNITY COHESION: ACTIONS THAT STRENGTHEN NEIGHBORHOOD CONNECTIONS	
<p>A cohesive community has a common vision and sense of belonging for all residents; diversity of different backgrounds and circumstances are appreciated and positively valued; those from different backgrounds have similar life opportunities; and there are strong and positive relationships between people from different backgrounds in the workplace, in schools, and within neighborhoods.</p> <p>A number of proposed mitigation measures shown in this table contribute to offsetting adverse effects associated with the loss of community cohesion. The construction of replacement affordable housing, replacement community center and recreational facilities, implementation of the Infrastructure Enhancement Plan, and organizational training.</p> <p>SCDOT will construct a centralized replacement community center and two pocket parks within the EJ communities to replace and expand upon existing services, such as recreational programs and event space, to help repair the bonds of community cohesion. The community center will host programs that are selected by community representatives within the CAC and the City of North Charleston with the intention of strengthening community cohesion within the EJ neighborhoods. SCDOT will construct community infrastructure improvements that will provide additional street lighting and safer bicycle/pedestrian facilities to help foster walking and biking in the EJ neighborhoods and provide opportunities for improved community cohesion. SCDOT will provide support for organizational training for the CAC in order to prepare the members for a transition into the Project Oversight Committee (POC) which will provide the project team with guidance while overseeing the implementation of mitigation.</p>	
Project Impacts	SCDOT Community Mitigation Measures
<ul style="list-style-type: none"> Adverse effects on community cohesion from original construction of I-26 and I-526 Adverse community cohesion effects associated with rezoning Russelldale neighborhood to “light industrial” use Diminished economic vitality increases potential for further erosion of community cohesion as homeowners may sell to developers that do not reinvest in the current community 	<ul style="list-style-type: none"> Replacement Affordable Housing (rentals and owner-occupied) Recreation Facilities and Amenities Recreational Programs and Activities Connectivity and Bicycle & Pedestrian Safety Community Resource Guide
CAC/Social Needs Assessment (SNA) Feedback	SCDOT Community Mitigation Measures
<p>CAC Feedback:</p> <ul style="list-style-type: none"> More access to community center for community children; “neighborhood” center versus “community” center Center staffed by neighborhood residents with scheduled activities that engage the community Center staff need to be qualified to run the center Sense of ownership through well-defined private/public areas; directional signs, landscaping, and informal common areas 	<ul style="list-style-type: none"> Recreation Facilities and Amenities Recreational Programs and Activities Connectivity and Bicycle & Pedestrian Safety Organizational Training Community Infrastructure Enhancement Plan
<p>CAC Feedback:</p> <ul style="list-style-type: none"> Pedestrian bridge to help children and other community center users to avoid traffic Concerns about walkability for children to the proposed community center 	<ul style="list-style-type: none"> Connectivity/Bicycle & Pedestrian Safety Community Infrastructure Enhancement Plan
<p>CAC Feedback:</p> <ul style="list-style-type: none"> Crime prevention through lighting design and maintenance (CPTED principle) Surveillance cameras as crime prevention measure Convey sense of ownership of public spaces as crime deterrent by maintaining areas in public domain (CPTED principle) Crime prevention through well-lit streets; going above code for minimum requirements for spacing of streetlights 	<ul style="list-style-type: none"> Connectivity/Bicycle & Pedestrian Safety elements of Community Infrastructure Enhancement Plan

<p>Social Needs Assessment:</p> <ul style="list-style-type: none"> • Appearance of neighborhood homes #9 out of 25 <p>CAC Feedback:</p> <ul style="list-style-type: none"> • Need to eliminate abandoned properties/overgrown lots • Crime prevention through increased law enforcement presence • Community yard sale to foster community cohesion 	<p>Organizational Training</p> <p>SCDOT contributions to address these needs also include development/distribution of a community resource guide, logistical support (meeting coordination, etc.), and Community Office meeting space or CAC/POC and others to organize and advocate to address these needs.</p>
<p>COMMUNITY ENHANCEMENT: COMMUNITY CENTER AND RECREATIONAL FACILITY REPLACEMENT</p>	
<p>Community enhancement projects improve the value, quality, desirability, and attractiveness of a neighborhood. This pillar focuses on community center and recreational facility replacement and the infrastructure enhancements that will be developed in conjunction with these replacement facilities. This includes replacing the community center facilities and pocket parks, building potential amenities such as playgrounds or walking paths, implementing potential programs such as exercise classes or computer lab training, and increasing connectivity and cyclist/pedestrian safety. Transit and recreation connectivity will be enhanced as a part of the mitigation plan by improving sidewalk connectivity, increasing streetlight density, and installing crosswalks.</p>	
<p>Project Impacts</p>	<p>SCDOT Community Mitigation Measures</p>
<ul style="list-style-type: none"> • The proposed project would displace the Highland Terrace-Liberty Park community centers 	<p>Recreation Facilities, Programs, and Amenities</p>
<p>CAC/SNA Feedback</p>	<p>SCDOT Community Mitigation Measures</p>
<ul style="list-style-type: none"> • Installation of traffic calming measures • Installation of speed humps to address speeding and general safety 	<p>Connectivity/Bicycle & Pedestrian Safety Community Infrastructure Enhancement Plan</p>
<ul style="list-style-type: none"> • Need for advocacy training to prepare for CAC transition to Project Oversight Committee (POC) • Networking opportunities 	<p>Organizational Training</p>
<p>Social Needs Assessment:</p> <ul style="list-style-type: none"> • Services for seniors: #5 out of 25 • Services for youth: #6 out of 25 <p>CAC Feedback:</p> <ul style="list-style-type: none"> • Pedestrian bridge to help children and other community center users to avoid traffic • Concerns about walkability for children to the proposed community center • CAC agreeable to evaluate one, centrally located facility and smaller pocket parks due to limited availability of large and/or contiguous vacant/underdeveloped parcels • Residents' first choice options (amenities) should be included in the intergovernmental agreement • CAC input in the intergovernmental agreement with the City of North Charleston • "Neighborhood" center vs. community center (CAC does not want a box design) • Facility should be broad scale in design, diverse use, forward-thinking, multi-faceted • Include history in community center 	<p>Recreation Facilities and Amenities Recreation Programs and Activities Connectivity and Bicycle & Pedestrian Safety Community Infrastructure Enhancement Plan Community History Preservation Study</p>

**COMMUNITY PRESERVATION:
INFRASTRUCTURE NEEDS**

Community preservation connects the past, present, and future of a community by maintaining and preserving neighborhood infrastructure in consideration of past effects of highway/infrastructure projects and current transportation and land use decisions; the ability to prepare for, and recover from, severe weather; and the ability of residents to be able to age in place. In addition to the previously mentioned infrastructure improvements, SCDOT will document the cultural history and character of the impacted EJ communities by utilizing a qualified historian and photographer to develop a report that will be available for viewing online and at the replacement community center.

The project team will work with the CAC and other stakeholders to develop an Infrastructure Enhancement Plan to facilitate the implementation of infrastructure-related mitigation. The Infrastructure Enhancement Plan includes technical studies on neighborhood traffic, streetlighting, and stormwater to identify infrastructure needs and a commitment by SCDOT to construct or address specified infrastructure needs prior to construction of I-526 improvements. The purpose of the Infrastructure Enhancement Plan is to identify a set of improvements to address bicycle and pedestrian safety, access to community centers, enhanced street aesthetics project-related stormwater improvements, and traffic calming measures that would be implemented as part of the project. Proposed mitigation also includes a planting plan for the project corridor within the EJ neighborhoods to offset visual impacts associated with construction of the proposed project. This vegetation will also provide some benefits related to minimizing other effects of project construction.

Project Impacts	SCDOT Community Mitigation Measures
<ul style="list-style-type: none"> Adverse effects on economic vitality due to unjust compensation from original construction of I-26 and I-526 Diminished economic vitality due to depreciated home values, a high number of vacant or underdeveloped parcels, and a high number of homes in disrepair 	Replacement Affordable Housing (rentals and owner-occupied) Recreation Facilities and Amenities Recreational Programs and Activities Connectivity and Bicycle & Pedestrian Safety Community Infrastructure Enhancement Plan
<ul style="list-style-type: none"> EJ neighborhood residents are anticipated to experience disproportionate impacts associated with exposure to construction noise and dust as they are likely to have windows open to help ventilate homes The proposed project would create a low level of permanent visual changes to the existing environment in the EJ neighborhoods because the existing road already sits above many of the affected communities. 	Planting Plan for I-526/I-26 corridors within EJ Neighborhoods
CAC/SNA Feedback	SCDOT Community Mitigation Measures
Social Needs Assessment: <ul style="list-style-type: none"> Adequate stormwater management #1 out of 25 Adequate sidewalks/bicycle facilities #2 out of 25 Well-lit streets/sidewalks #8 out of 25 CAC Feedback: <ul style="list-style-type: none"> Installation of speed humps to address speeding and general safety Need to address sidewalk infrastructure needs and connectivity in neighborhoods Pedestrian accommodations over/across Rivers Avenue; safety issues for veterans crossing at Patriots Villa across Rivers Avenue Importance of safe, practical footpaths/sidewalks Safety for bicycle riders Address areas with inadequate streetlighting Address areas of standing water CARTA/shuttle bus (with seats) to transport residents, morning and evening Bus shelters with covers and seating 	Connectivity/Bicycle & Pedestrian Safety Community Infrastructure Enhancement Plan

<ul style="list-style-type: none"> • Remove barriers to residents’ ability to ‘age in place’ 	Connectivity/Bicycle & Pedestrian Safety Community Infrastructure Enhancement Plan Community Resource Guide
<ul style="list-style-type: none"> • Potential partnerships with local college nursing programs to develop health and wellness program for senior residents 	Recreation Programs and Activities
COMMUNITY REVITALIZATION: REPLACEMENT HOUSING AND EMPLOYMENT/ECONOMIC OPPORTUNITIES	
<p>Community revitalization focuses on actions such as maintaining and providing more affordable housing stock, providing employment opportunities for neighborhood residents, and actions such as improved public safety which foster community development.</p> <p>In coordination with the South Carolina State Housing Finance and Development Authority, SCDOT will finalize plans to construct replacement affordable housing rental units in the vicinity of the impacted EJ communities. Up to 68% of the potentially impacted homes in the EJ communities are renter occupied. As such, emphasis will be placed on replacing and augmenting the amount of affordable housing available within the project vicinity.</p> <p>SCDOT is conducting early acquisition of vacant lots within the EJ communities and partnering with local nonprofit entities to construct affordable housing prior to right-of-way acquisition in order to ensure families displaced by the I-526 LCC West project have affordable replacement housing options available within their communities. SCDOT is also investigating provisions and partnerships that will enable the replacement housing to remain affordable in the future. Displaced residents would have to meet the qualifications for the affordable housing programs. Replacement affordable housing would be designed to maintain consistency with the character of housing (home size, style, etc.) within the affected EJ neighborhoods. The location and final number of affordable housing units will be determined prior to the approval of the FEIS/ROD.</p> <p>The EJ Community Mitigation Plan focuses on the impacted neighborhoods of Russelldale, Highland Terrace, Liberty Park, and Ferndale as these neighborhoods would experience a higher level of disproportionately high and adverse community effects than the residences in the Wando Woods and Camps neighborhoods. Three residences in the Wando Woods neighborhood and six apartments in the Camps neighborhood would be displaced by the proposed project; however, these relocations are relatively removed from their respective neighborhood cores which, aside from avoiding large scale impacts to the Wando Woods and Camps neighborhoods, precludes the same level of community-wide mitigation proposed for the above-mentioned focus areas. The displacements in Wando Woods and Camps would be offset by the creation of quality affordable housing in the immediate vicinity of the impacted areas with comparable access to public transit and employment centers.</p> <p>SCDOT will provide early residential relocation assistance, construct affordable housing to ensure displaced families have affordable replacement housing options within their communities, provide financial and first-time home buyer counseling. SCDOT will also implement education and employment initiatives such as a school-to-work program, a college aid initiative, and pre-employment training for residents living in the impacted communities.</p>	

Project Impacts	SCDOT Community Mitigation Measures
<ul style="list-style-type: none"> Displacements associated with original construction of I-26 and I-526 Many of the houses in the affected EJ neighborhoods were built in the 1940's; these homes were prefabricated houses designed to be easily assembled and disassembled so they could be moved as needed; as such, the existing housing stock is old and much is in disrepair Affordable housing stock is also affected by the reduction of mobile homes in the project area and vicinity; this trend is anticipated to continue based on local growth plans and policies related to mobile homes Available land for affordable housing is also being reduced by new development in the area including other transportation projects, past airport expansions, and large-scale commercial development. Heirs' Property issues can hinder residents from performing home repairs or building new homes EJ neighborhood residents experience a high degree of vulnerability related to weather hazards given the quality of housing stock, location within the Filbin Creek drainage basin, and Heirs' Property issues EJ neighborhood residents experience environmental stressors, notability those related to economic insecurity, outdoor and indoor pollutants 	<p>Replacement Affordable Housing (rentals and owner-occupied) Recreation Facilities and Amenities Recreational Programs and Activities Connectivity and Bicycle & Pedestrian Safety elements of Community Infrastructure Enhancement Plan Community Resource Guide</p>
CAC/SNA Feedback	SCDOT Community Mitigation Measures
<p>Social Needs Assessment:</p> <ul style="list-style-type: none"> Availability of quality housing #3 out of 25 Availability of affordable housing #4 out of 25 <p>CAC Feedback:</p> <ul style="list-style-type: none"> Prefer single-family rental units as opposed to multi-family units/mobile homes/modular 	<p>Affordable Housing (rentals and owner-occupied) Financial and First-time Home Buyer Counseling</p>
<ul style="list-style-type: none"> Advocacy and self-advocacy – educational and financial resource 	<p>Organizational Training College Aid Initiative School-to-Work Program Pre-employment Training Community Resource Guide</p>

4.5.8 What is the Environmental Justice Analysis Conclusion?

The implementation of any of the Proposed Reasonable Alternatives would create disproportionately high and adverse effects to low income and minority communities in the form of direct impacts such as residential relocations/recreation facility relocations; a decrease in overall community cohesion and economic vitality; and cumulative impacts from past transportation projects, environmental pollutants and a lack of affordable housing in the North Charleston area.

As detailed in Section 4.5.6, the Russelldale, Liberty Park, Ferndale, and Highland Terrace EJ neighborhoods would face the largest impacts due to their proximity to the I-526 and I-26 interstate. Approximately 78 residential units and two community centers will be displaced as a result of the proposed project. In addition, EJ residents living in the Wando Woods and Camps neighborhoods anticipate impacts as nine residential units face project-related relocations.

It is anticipated that the proposed mitigation measures included in the EJ Community Mitigation Plan, summarized in Table 4.7 in Section 4.5.7 and detailed in DEIS Appendix H, would provide community benefits that would offset disproportionately high and adverse effects in accordance with directives contained in EO 12898 (Federal Actions to Address Environmental Justice to Minority and Low-Income Populations) and USDOT Order 5610.2(a) (Final Order to Address Environmental Justice in Minority Populations and Low-Income Populations). As previously stated, the draft EJ Community Mitigation Plan will be presented to residents in affected EJ neighborhoods to gather feedback on proposed mitigation through a series of neighborhood meetings to be held during the public review period for the DEIS. Feedback received from EJ neighborhood residents will be used to refine and finalize the EJ Community Mitigation Plan. The refined draft EJ Community Mitigation Plan will be presented to affected EJ neighborhood residents for review and comment prior to its finalization and inclusion in the FEIS/ROD. The final EJ Community Mitigation Plan will catalog all agreements and plans required to implement the mitigation commitments.

4.6 Relocations

The purpose of a Relocation Impact Study is to expound upon the anticipated problems and proposed solutions associated with the displacement of individuals, families, businesses, farms, and nonprofit organizations. To determine the number of potential displacements within the Recommended Preferred Alternative, field inspections were conducted along with the review of aerial photos and maps showing the proposed new Right-of-Way.

The acquisition of property for Right-of-Way would be in accordance with State Law 28-11-10 and the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (P.L. 91-646, as amended by 100-17; 49 CFR 24.205 (AF)). This Act was enacted by congress in 1971 to assist residents, organizations, and businesses displaced by public agencies in relocating without suffering a disproportionate loss. In addition to just compensation for the acquired property, equitable compensation normally associated with relocations is included as a part of the relocation assistance program. South Carolina Department of Transportation (SCDOT) will provide relocation advisory and financial assistance to homeowners, renters and business owners displaced as a direct result of the project. Title VI of the Civil Rights Act of 1964 will be followed and will be provided without discrimination. Refer to Appendix I, for the Relocation Impact Study. Refer to Table 4.8 for the number of relocations.

Coordination with the SC Housing Authority is underway to construct replacement multi-family rental affordable housing units through their low income tax credit and bond financing programs. Since there is no undeveloped land parcels large enough within the impacted communities for this type of development and number of units proposed, the developers submitting proposals for this affordable housing complex will provide the land within the proposal.

The parcels that would be purchased as part of the construction of the proposed I-526 LCC WEST project within the impacted communities will be committed towards replacement housing and/or single family or duplex affordable housing development. This is the result of feedback from the residents and the CAC that they would prefer to not have additional apartment style multi-family developments within their communities. Recent changes in zoning reflect those sentiments of changing desires for developments within the impacted communities. Therefore, SCDOT will focus on affordable housing initiatives within the lots available for development in the impacted communities toward single family or duplex housing. SCDOT will evaluate whether opportunities are feasible to partner with local non-profit organizations as they develop a plan for the affordable housing initiatives within the communities.

Table 4.8 Relocation Impacts of the Recommended Preferred Alternative

Relocations		Preferred Alternative
Residential	Single-Family	36
	Apartment Units	47
	Mobile Homes	11
Businesses		16
Churches		1
Community Facilities		2
Billboards		10-20
Communication Cell Towers		1

Residential

Several residential communities within the North Charleston area will be impacted by the Recommended Preferred Alternative and will require relocation assistance. The Recommended Preferred Alternative would result in the relocation of approximately 94 residential properties, including 36 single-family homes, 47 apartment units, and 11 mobile homes.

Finding affordable housing within the North Charleston area is a concern for relocating owners and tenants that will be affected by the Recommended Preferred Alternative. Some individuals that will potentially be displaced have expressed an interest in moving to other areas of the state or out of state. It is crucial to continue investigation of affordable house options for the affected communities.

SCDOT will conduct right of way acquisition and relocation assistance in accordance with the federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended (P.L. 91-646). Relocation resources would be made available to all eligible displaced residents, including tenants, without discrimination, consistent with the requirements of the Civil Rights Act of 1964 and the Housing and Urban Development Act of 1974.

Section 8

Section 8 Housing is a federal program that is provided by the U.S. Department of Housing and Urban Development (HUD). This program provides affordable housing to individuals or families that are having a difficult time finding a home due to their financial situation. While there are not any government owned Section 8 housing units in the Recommended Preferred Alternative project study area, there are a large number of privately owned units that accept Section 8 vouchers from program participants. According to Relocation Impact Study in Appendix I, approximately 20% of the residents located in the Russelldale and Highland Terrace Communities may receive assistance from the Section 8 Housing Program. Although it is anticipated that residents receiving Section 8 housing assistance will be displaced by the proposed project, the exact number cannot be determined until preliminary contacts are conducted during the right-of-way acquisition process. SCDOT would work closely with the local Housing Authorities to ensure that each tenant currently receiving Section 8 Assistance will continue to receive the same assistance.

Housing of Last Resort

Affordable housing is still a concern and remains a top priority for SCDOT. As a way to assist with affordable housing and the shortage for both owners and tenants, Housing of Last Resort will be used following the guidelines in the Uniform Act and the SCDOT Relocation Manual. Housing of Last Resort is used when a project or program cannot move forward promptly because there are no comparable replacement dwellings available within the monetary limits for owners or tenants. The purpose is to allow broad latitudes in methods so that decent, safe, and sanitary replacement housing can be established. If the right of way acquisition is phased the current real estate market may be able to absorb the single-family dwelling displacements.

Businesses

The Recommended Preferred Alternative would result in the relocation of 16 businesses throughout the project study area. Several of the businesses are located on parcels that may have enough property remaining for a replacement building. Vacant property for sale near the project area may accommodate additional displaced businesses. There are businesses within the project study area that would require special attention and planning to ensure that the business is given appropriate time to relocate. No grocery stores will be impacted. One daycare center at the Leeds Avenue interchange may be partially impacted, but impacts could be reduced with

the installation of a retaining wall. The majority of business relocations are industrial warehouse types and are located along I-26 approaching the system interchange with I-526. Coburg Dairy is a large potential relocation, but efforts are being made to minimize impacts and/or avoid relocation. The incorporation of retaining walls is being reviewed to minimize impacts and reduce the number of relocations.

SCDOT will assist displaced business owners and tenants by reimbursing reasonable moving costs, personal property losses, expenses in finding a replacement, and expenses in reestablishing the business. SCDOT will offer relocation counseling to employees of displaced businesses to minimize economic harm and provide information as to possible sources of funding and assistance from other local, state, and federal agencies. SCDOT will investigate partnerships with career development and employment organizations to ensure that displaced employees are aware of offerings including career development information, job search resources, and training programs. The counseling programs will be made available to impacted businesses within one month of the design public hearing.

Churches

The Recommended Preferred Alternative would result in the relocation of one church, Enoch Chapel Methodist. This church, which serves a predominately African-American congregation, has previously been relocated four times, three of which have been related to an infrastructure project. **To avoid the potential for additional impacts to Enoch Chapel Methodist Church subsequent to this project, SCDOT will provide the church with elevated advisory assistance during the right-of-way acquisition phase, which shall include a review of future transportation projects within the project study area. It will ultimately be the church's decision as to where they prefer to be relocated. They may have additional considerations such as the visibility of the new location and proximity to their congregants.**

Community Centers

The Recommended Preferred Alternative would result in the relocation of two community centers. One community center is located within the Russelldale Community and one is located in the Highland Terrace-Liberty Park Community. The community centers are vital components of the Russelldale and Highland Terrace-Liberty Park communities, providing support for parents and a safe place for children that live within the area. Functional Replacement should be considered for both community centers and should remain in the same area for continued support. The City of North Charleston is assisting SCDOT in identifying possible relocation sites for the community centers.

Billboards

Billboards in South Carolina are considered personal property so if any are impacted by the project, they will need to be relocated to a conforming location. The Recommended Preferred Alternative would result in the relocation of 10-20 billboards.

Communication Cell Towers

As currently proposed, the Recommended Preferred Alternative would result in the relocation of one communication cell tower. A communication cell tower will require the services of several specialty companies to relocate the tower and can be a costly expense. As a more detailed project design develop, ways to reduce the Right-of-Way impacts to the cell towers will be further analyzed.

4.7 Considerations Relating to Pedestrians and Bicyclists

As described in Section 3.9, the I-526 LCC WEST project will provide a SUP across the Ashley River. Although this path will not connect to existing pedestrian and bicycle facilities, it will provide a critical link for the future overall mobility of pedestrians and cyclists in the project corridor.

The shared use path over the Ashley River will provide an overall benefit to pedestrian and cyclist mobility within the I-526 LCC WEST project corridor.

4.7.1 Is the Project Compatible with Existing Pedestrian and Bicycle Plans?

As detailed in Section 3.9, the I-526 LCC WEST project is compatible with bicycle and pedestrian improvements documented in local and regional transportation plans within the I-526 corridor:

- The Ashley River SUP included in the I-526 LCC WEST project will implement a portion of the parallel SUP from Paul Cantrell Boulevard to Virginia Avenue described in the BCDCOG LRTP. The remaining segments of the parallel SUP will be built outside of the interstate network. Those segments have independent utility from the Ashley River crossing and will be evaluated by other project sponsors.
- The footprint of the I-526 LCC WEST project will not impede the development of pedestrian and bicycle improvements on roadways crossing under I-526.

4.7.2 What are the Environmental Consequences of the Ashley River Shared Use Path?

The addition of the SUP on the Ashley River crossing of I-526 will increase the footprint of the I-526 LCC WEST project in the vicinity of the river crossing. Impacts to the human and natural environment associated with the SUP are included in the impacts of the overall Recommended Preferred Alternative detailed earlier in this chapter.

The I-526 Ashley River SUP will also provide benefits to pedestrians and cyclists in the project vicinity and larger Charleston area. Currently, there are no dedicated pedestrian or bicycle facilities near the I-526 crossing of the Ashley River, with the closest planned accommodations located several miles downstream on the future bicycle and pedestrian bridge that will be built just south of the US 17 drawbridges. The I-526 Ashley River SUP will provide a critical link for existing pedestrian and bicycle connectivity, as well as provide a connection for future improvements by other project sponsors.