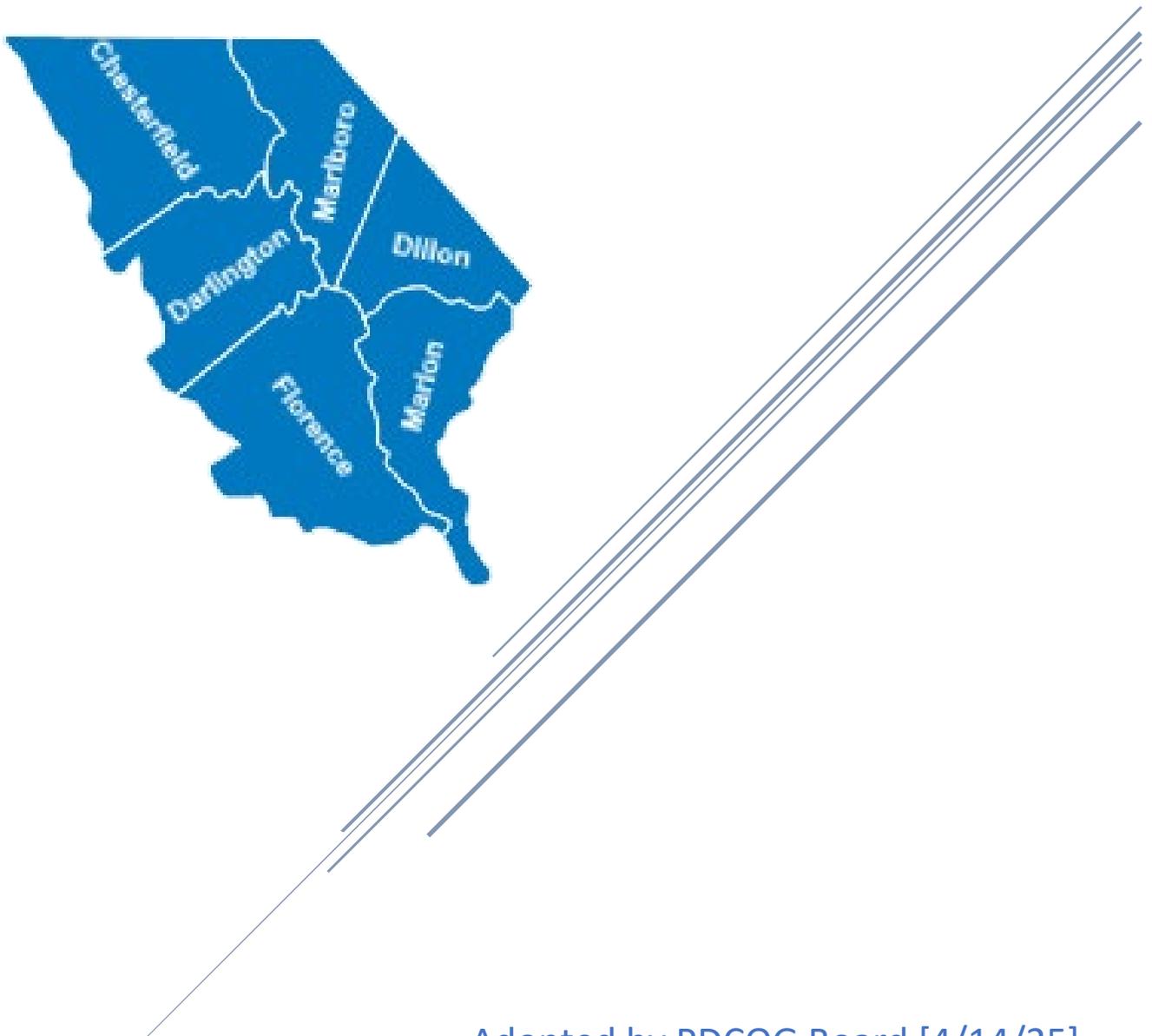


LONG RANGE TRANSPORTATION PLAN 2020- 2040

Pee Dee Regional Council of Governments



Adopted by PDCOG Board [4/14/25]

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Introduction and Process Overview

Transportation is a daily experience and common need for citizens of every community. Transportation is also integral to the function of a community's economy. A network of transportation infrastructure and services conveys people and goods throughout the Pee Dee Region. The network is thus a public good intrinsic to the well-being of the region, its communities, its businesses and institutions, and its citizens.

As a public good, transportation must provide access and mobility to all citizens. The means and abilities of each citizen vary. Service and facility type must meet each citizen where he or she is to ensure that citizen can access education, employment, food, health care, and other essential goods and services.

Transportation planning is the practice of anticipating needs and preparing for demands. A good transportation plan forecasts resources available to meet changing needs and demands with transportation infrastructure and services. The successful plan further identifies opportunities to adapt the network to sources of traffic generation. While maintenance, including road widening, is a critical need for any road network, the successful system will heighten service through appropriate access location, design, alignment, and routing.

The Pee Dee Long-Range Transportation Plan (LRTP) presents an investigation of existing and future needs and demands for service throughout rural portions of the six-county Pee Dee Region over the next 20 years. The LRTP analyzes the existing surface transportation network and available surface transportation services to outline a strategy for providing a highly accessible, well-connected, efficient regional transportation system. The LRTP is a "fiscally constrained plan," meaning that the strategy presented includes only those projects and programs for which revenue can be reasonably anticipated. The LRTP addresses all modes of surface transportation – rail, transit, private on-road vehicle (including freight and personal vehicles), and active transportation (primarily bicycle and pedestrian).

Background

The scope of the plan includes establishment of goals, review of current plans and studies, analysis of current transportation conditions, engagement with regional residents and stakeholders, identification of multi-modal project recommendations, and development of a fiscally constrained plan. The Pee Dee Regional Transportation Advisory Committee (Study Team) oversees development of the LRTP, and the Pee Dee Regional Council of Governments Board of Directors (Policy Committee) formally adopts and manages the plan.

At its core, the LRTP identifies ways a region expects to invest resources to enhance its transportation system. The underlying principles and recommended actions reflect choices made by the public and private sectors regarding transportation investments, land-use decisions, and other infrastructure improvements.

About the Pee Dee

The Pee Dee Regional Council of Governments (PDCOG) is the regional planning agency serving Chesterfield, Darlington, Dillon, Florence, Marion, and Marlboro counties in northeastern South Carolina. PDCOG facilitates a regional, cooperative planning process for a 3,600-square-mile area that is home to 338,000 residents.

The South Carolina Department of Transportation (SCDOT) has designated PDCOG as a planning partner for the non-urbanized portions of the six-county region. The urbanized portion of the Pee Dee includes and surrounds the cities of Florence and Darlington, in the counties of the same names. The Florence-Area Transportation Study, a “metropolitan planning organization housed at Florence County Government,” provides transportation planning for the urbanized area.

The Pee Dee region has long been an agricultural hub. Soils throughout the region are generally fertile and are adaptable to cultivation of various crops, with some lands under cultivation since the early 18th century. The region’s prime agricultural land was a major factor in its initial development, and until the mid-20th century, the region remained primarily agricultural. While agriculture remains an important segment of the economy, manufacturing and retail have become vital employment sectors, and much of the growth in the four counties is tied to the establishment of major manufacturing operations.

Reason for the Plan

The LRTP complies with State and federal standards for transportation planning and articulates the Pee Dee Region’s transportation vision. It characterizes current and future transportation needs, outlines the region’s long-range transportation goals, identifies multimodal transportation strategies to address needs through 2040, and documents long-term opportunities beyond current funding capabilities. Federal funding cannot be allocated to transportation projects unless they are included in the LRTP. In other words, the Pee Dee Region cannot plan to spend more money than it reasonably expects to receive and cannot go off-script with transportation projects outside the region’s vision.

The LRTP consists of two parts: 1) the vision for the region, and 2) a detailed list of policies, operational strategies, and projects to achieve the vision. The LRTP includes a variety of actions that lead to the development of an integrated intermodal transportation system that facilitates the efficient movement of people and goods. These tasks are accomplished within the context of policy review and public involvement to produce an intermodal transportation system that respects the area’s history and heritage while providing true choice to all users.

FAST Act

Forward 2045 is shaped by several elements, including federal legislation. The plan is governed by the Fixing America’s Surface Transportation Act (FAST Act), which was signed into law on December 4, 2015. The goals of the FAST Act include strengthening highways, establishing a performance-based program, creating jobs and supporting economic growth, supporting the U.S. Department of Transportation’s safety agenda, streamlining federal highway programs, accelerating project delivery, and promoting innovation. Additionally, the FAST Act is the first federal legislation that provides a dedicated source of federal funding for freight projects. This legislation extends through fiscal year 2021.

Related Plans and Studies

The LRTP builds on recommendations from previous land use and transportation plans. The following are among those documents reviewed during preparation of this document.

1. Statewide Multimodal Transportation Plan (2014) www.scdot.org/Multimodal/
2. South Carolina 2040 Strategic Corridors Plan (2014) www.scdot.org/Multimodal/pdf/SC_MTP_Strategic_Corridors_Plan_FINAL.pdf

3. Forward 2045: Santee-Lynches Regional Transportation Plan (2019)

[forward2045lrtp6.3.19.pdf \(santeelynchescog.org\)](#)

4. 2040 FLATS Long-Range Transportation Plan (2018)

<https://s3.amazonaws.com/files.florenceco.org/public/Planning/FLATS/2019/dec/FLATS%202040%20LRTP.pdf>

History of State Planning Legislation

'C' Program

The origins of the 'C' Program can be traced to 1946 with the designation of funding to pave dirt "farm-to-market" roads on the state secondary system. The program got its name from a 1951 listing of state highway construction funds. The state secondary-system program was designated as "Program C," and over time, this has evolved in name and form into the "C Program." The program is now a partnership between SCDOT and the state's 46 counties to fund improvements and transportation projects on state and local roads. Funding for the 'C' Program comes from \$0.0266 per gallon of the user fee on gasoline. These revenues - "C funds" - are allocated by the following formula prescribed in S.C. Code §12-28-2740 (the 'C' Fund law):

1. 33% distributed in the ratio to which the land area of the county bears to the total land area of the State.
2. 33% distributed in the ratio to which the population of the county bears to the total population of the State as shown by the latest official decennial census; and
3. 33% distributed in the ratio to which the mileage of all rural roads in the county bears to the total rural road mileage in the State as shown by the latest official records of the Department of Transportation.

Act 176

In 2005, the General Assembly passed Act 176. This act established the State Non-Federal Aid Highway Fund as a fund separate from the pre-existing State Highway Fund for SCDOT's use. It is funded by a portion of certain fines, taxes, user fees, driver's license fees and motor vehicle license and registration fees.

Act 114

In 2007, the General Assembly passed Act 114. This act primarily restructured the governance of SCDOT, and established project prioritization using the following objective criteria: (1) financial viability including a life cycle analysis of estimated maintenance and repair costs over the expected life of the project; (2) public safety; (3) potential for economic development; (4) traffic volume and congestion; (5) truck traffic; (6) the pavement quality index; (7) environmental impact; (8) alternative transportation solutions; and (9) consistency with local land-use plans.

Act 98

In 2013, the General Assembly passed Act 98.

1. The act authorized local governments to transfer roads to SCDOT upon mutual consent.
2. Allowed SCDOT to transfer roads to local governments, school, governmental and non-governmental agencies, or individuals, upon the consent of both parties; and

3. Stated that 50% of the revenue from sales, use, and casual excise taxes on motor vehicle titles are to be credited to the State Non-Federal Aid Highway Fund and to be used exclusively for highway, road, and bridge maintenance, construction, and repair.

Terms

The Transportation Improvement Program (TIP)

The Transportation Improvement Program (TIP) is a project document covering a six-year period. The TIP includes approved regional transportation improvement projects that were identified in the LRTP and comply with Act 114. In addition to projects developed for the “guideshare” account controlled by PDCOG, the TIP covers other federally funded project awards designated to a municipality or agency within our rural jurisdiction.

The State Transportation Improvement Program (STIP)

SCDOT publishes and maintains a 5-year Statewide Transportation Improvement Program (STIP) that details program funding levels, projects, and funding schedules. Councils of Governments (COGs) and Metropolitan Planning Organizations (MPOs) provide SCDOT with updated project priorities for inclusion in the STIP. Projects must be included in the regional LRTPs to be eligible for inclusion in the STIP. Each COG/MPO endorses its regional priorities and is responsible for advertising and documenting public comment for any amendment to the STIP within its region.

The State Maintenance Program

The State Maintenance Plan is prepared annually as required by Act 114 and contains objectives and performance measures for the preservation and improvement of the non-federal aid secondary system. The projects detailed in the plan are funded solely with state funds and other state revenue sources. It is important to note that the Act 98 and Act 176 funding sources indicated in this plan can only be used on non-federal aid secondary system.

Planned resurfacing and bridge replacement projects are included and identified by specific location. The State Maintenance Plan also provides an overview of the current condition of various features of the non-federal aid secondary transportation system.

Study Area

Pee Dee Regional Council of Governments is responsible for rural transportation policy development, planning, and programming for a six-county region covering about 3,600 square miles, including all of Chesterfield, Dillon, Marion, and Marlboro Counties and portions of Darlington and Florence Counties. The US Census Bureau estimated that about 339,000 people lived in the Pee Dee Region as of July 1, 2018 (the most recent estimate available). The MPO claims about 130,000 people across 440 square miles of urbanized area, according to the 2040 FLATS Long-Range Transportation Plan.

PDCOG is one of two entities tasked with transportation planning in the six-county region. The Florence Area Transportation Study (FLATS) is the metropolitan planning organization (MPO) for the Florence-Darlington urbanized area, which includes the municipalities of Florence, Darlington, Quinby, and Timmonsville plus parts of unincorporated areas in northwestern Florence County and southeastern Darlington County.

Region Overview

The Long-Range Transportation Plan (LRTP) must set reasonable and necessary goals that improve the Pee Dee Region. It is therefore important to understand what is happening in the area and how that will drive future transportation needs. This section highlights existing conditions and trends that can help forecast these needs and how the challenges or opportunities arising along the way should be addressed. The information found in this section serves as a basis for all goals and strategies that follow in the plan.

Population

The LRTP ultimately seeks to improve the lives of Pee Dee residents through improved mobility. The needs of these individuals predicate what will be required of future transportation improvements. Access to jobs, education, entertainment, and healthcare are crucial when creating a transportation plan. Reflecting these needs enables the plan to report concise, achievable goals that can help make the region a more prosperous and a desirable place to live for current and future generations.

Population Change

The South Carolina Revenue and Fiscal Affairs Office, a division of state government, projects the population of the Pee Dee Region to decline in coming years. United States Census Bureau estimates of population in each county for 2018 seem to confirm the downward trajectory reported in the following table for 2020.

Table 1. Pee Dee Region Population Figures

Population by County, 2000-2030 (Counts and Projections Where Noted)				
County	2000	2010	2020 (projection)	2030 (projection)
Chesterfield	42,768	46,734	45,090	42,410
Darlington	67,394	68,681	66,180	62,520
Dillon	30,722	32,062	30,350	28,170
Florence	125,761	136,885	140,280	140,710
Marion	35,466	33,062	30,380	27,220
Marlboro	28,818	28,933	26,100	22,960
<i>Total</i>	<i>330,929</i>	<i>346,357</i>	<i>338,380</i>	<i>323,990</i>

Florence County is the exception among the six Pee Dee counties. With the city of Florence anchoring a metropolitan statistical area, it is the region's largest economic center.

The Pee Dee Region is thus like the rest of South Carolina and for that matter, like many areas across the nation. Cities are the engines of economic development in the 21st century. People are moving to cities for economic opportunity. Small towns and rural areas are depopulating as agriculture either declines in importance, experiences mechanization, or undergoes consolidation for economies of scale.

Not everyone prefers a city to a small town or rural area, of course. NESAs (The North Eastern Strategic Alliance of South Carolina) reports that typical Pee Dee residents will commute 60 miles each way. The Pee Dee Region is dotted with towns ranging from 100 to 10,000 in population. These towns feature bustling main streets, quiet neighborhoods, and local schools and churches to which residents walk and bike. Long, flat, relatively straight roads connect these communities to one another, the city of Florence, places of employment in outlying areas, and transportation terminals (e.g., the Dillon Inland Port).

The PDCOG Study Area depicts these transportation terminals and primary routes in the context of the six counties and numerous towns of the Pee Dee Region.

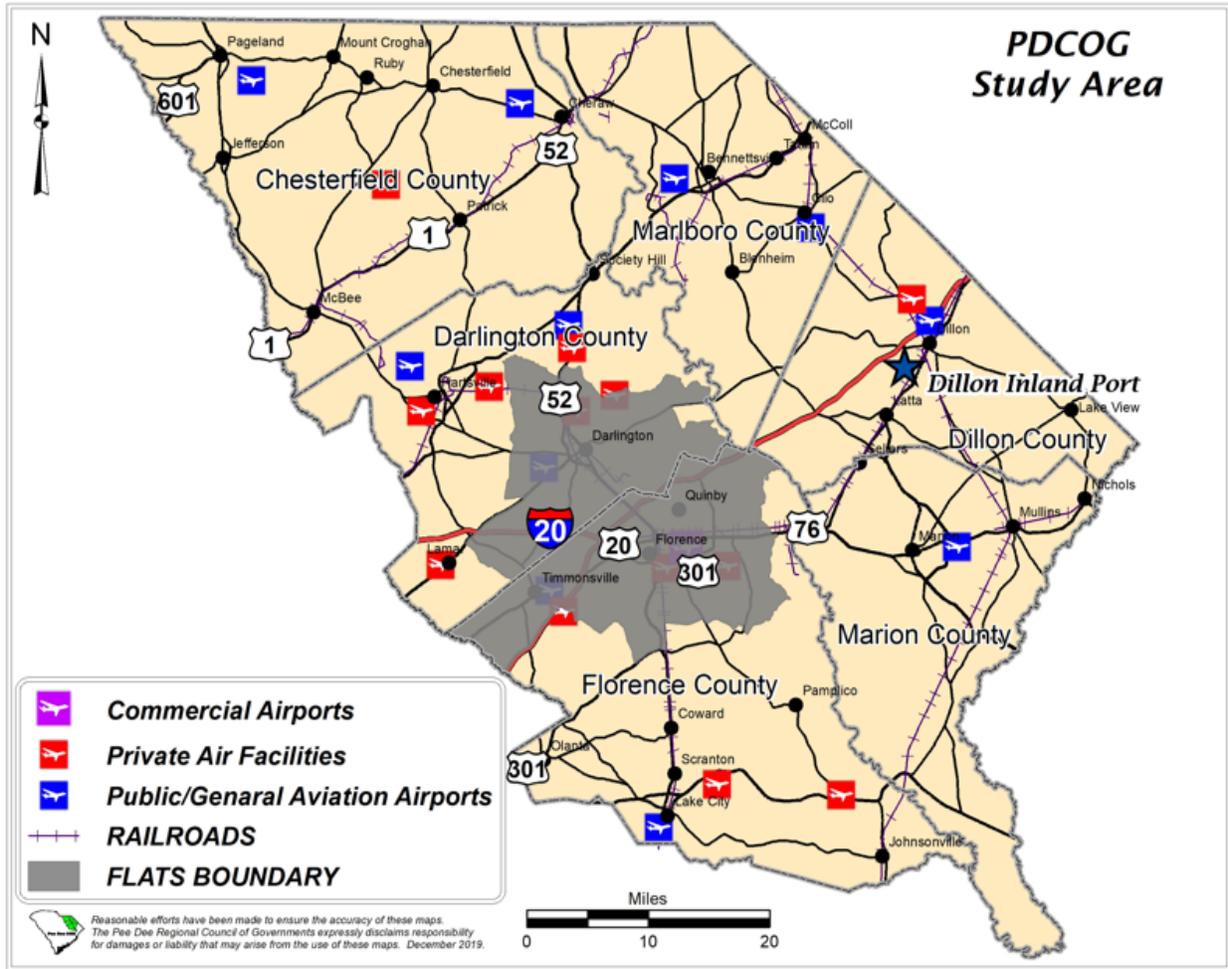


Figure 1. Pee Dee COG LRTP Study Area

Characteristics of the Population

Demographic and socioeconomic characteristics of the citizenry of the Pee Dee Region greatly impact their transportation needs. The aging of the population, together with a relatively high median age, is another characteristic the Pee Dee Region shares with other rural areas. Of the six counties, only Florence County has a median age of residents lower than the state’s median of 39.0 years of age (per US Census Bureau 2018 estimates).

The prevailing factors of an aged population are a lack of children relative to urbanizing areas and the elderly aging in place. Families with school-age children often relocate to metropolitan areas not only for economic opportunity but also for educational opportunities for their children. Empty nesters do not have this second motivation to relocate. They are also more ingrained in their existing communities.

The prevailing form of transportation in the Pee Dee Region is the private automobile. Many residents, however, do not drive due to access to or ability to operate private automobiles. Older drivers may experience declines in the acuity of the senses and skills needed to drive. Those in rural areas face 50- to

60-mph operating speeds daily with slower reflexes. A lack of alternatives to driving encourages them to continue doing so even if it becomes unsafe.

The need for reliance upon the private automobile is evident in the population distribution throughout the Pee Dee. Most of its land area is sparsely populated, with fewer than 374 persons per square mile. The seven largest towns in the study area exhibit densities greater than 1,444 persons/sq. mi., as observed in the *Population Density Map*. The remaining census block groups – those surrounding the large towns and including the small towns – exhibit population densities between 374 and 1,444 persons/sq. mi. This density indicates a mix of suburban and rural characteristics, meaning that neighborhoods in which residents could walk or bike are separated from each other and from destinations (e.g., schools, churches, and markets) by longer distances.

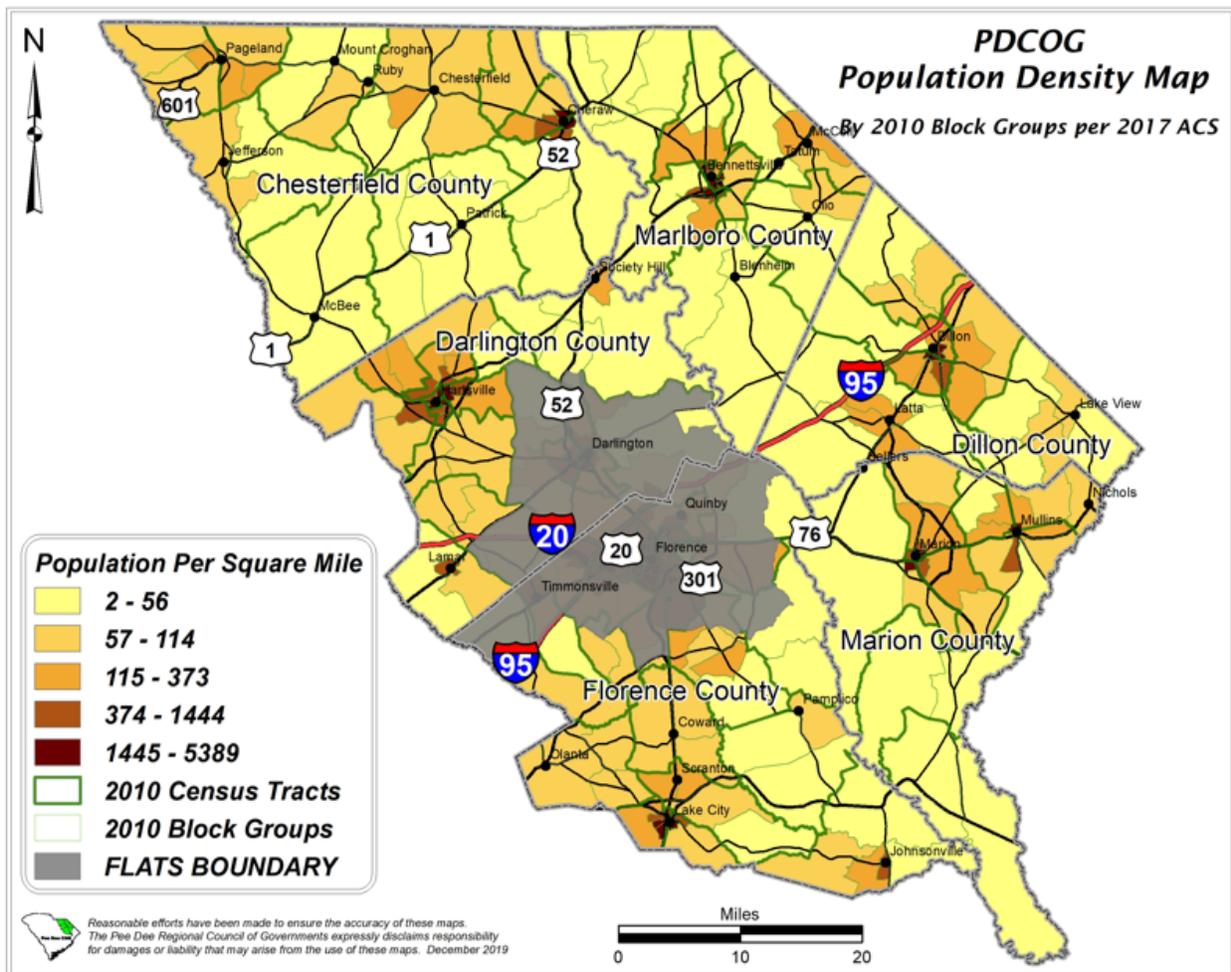


Figure 2. Pee Dee Region Population Density

Household Income

Another factor restricting Pee Dee residents' access to transportation is limited income. The US Bureau of Labor Statistics reports that transportation expenditures in rural areas exceeds those in urban areas by several hundred dollars a year.

Median household incomes are the reverse of this relationship. All but two rural census tracts in the Pee Dee Region report median household incomes below South Carolina’s 2017 statewide median of \$51,015. Each of the six counties in the region have at least two census block groups in which the median household income is less than half the state’s figure. Some of these are quite large and remote, as seen on the following map *PDCOG Median Income*. Residents in these tracts likely struggle with access to safe, reliable transportation across long distances to school, work, health care, and supermarkets.

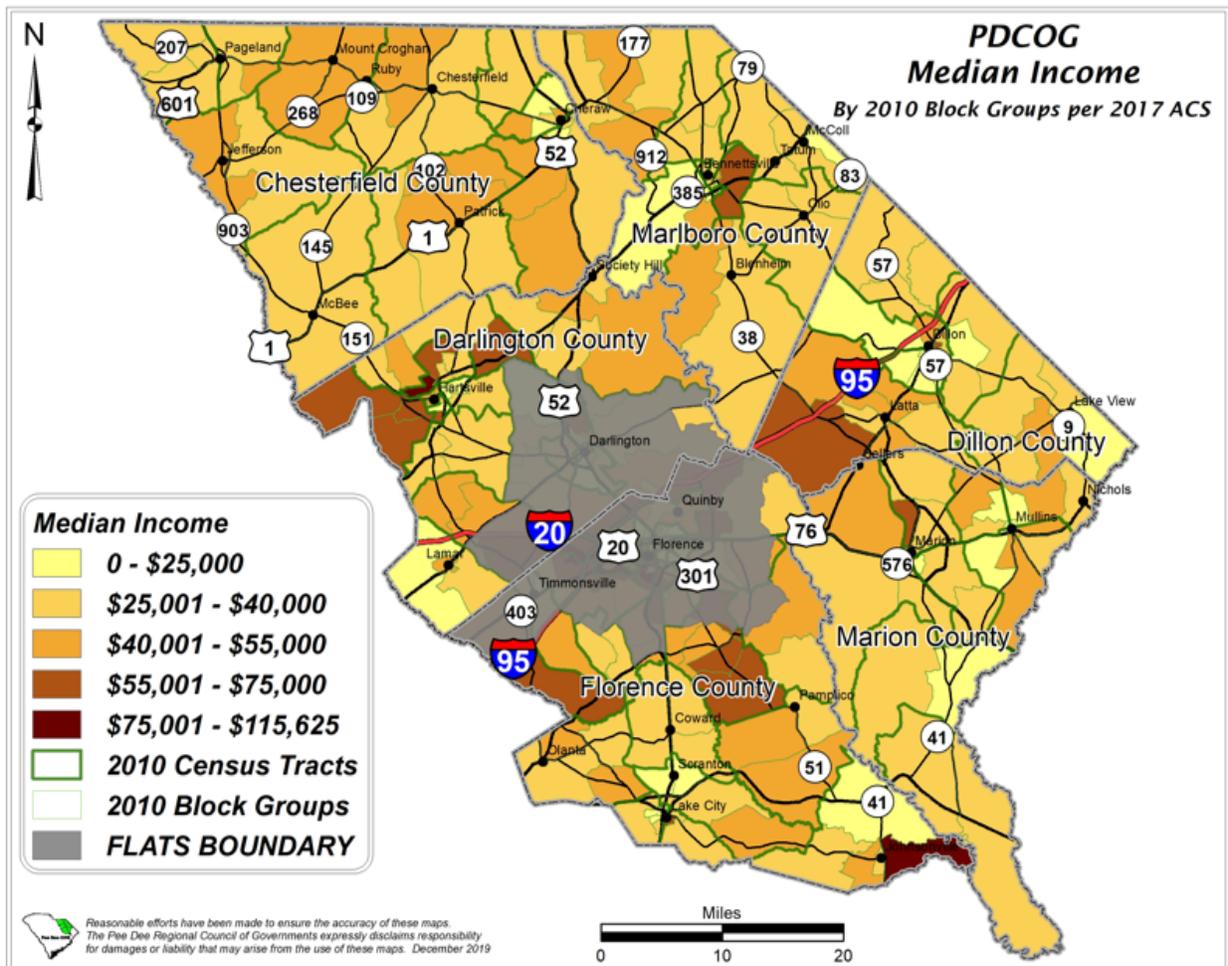


Figure 3. Pee Dee Region Median Household Income

Impoverished Households

A depiction of impoverished households holds is another tool, like median household income, to locate residents struggling with access to transportation. As seen on the map *PDCOG Impoverished Households*, the highest concentrations of rural poverty occur in and around some of the region’s larger towns: Dillon, Hartsville, Lake City, Marion, Mullins, and Cheraw. This proximity makes alternate modes of transportation, particularly bicycling and transit, more feasible if service is available and safe for people outside of motor vehicles.

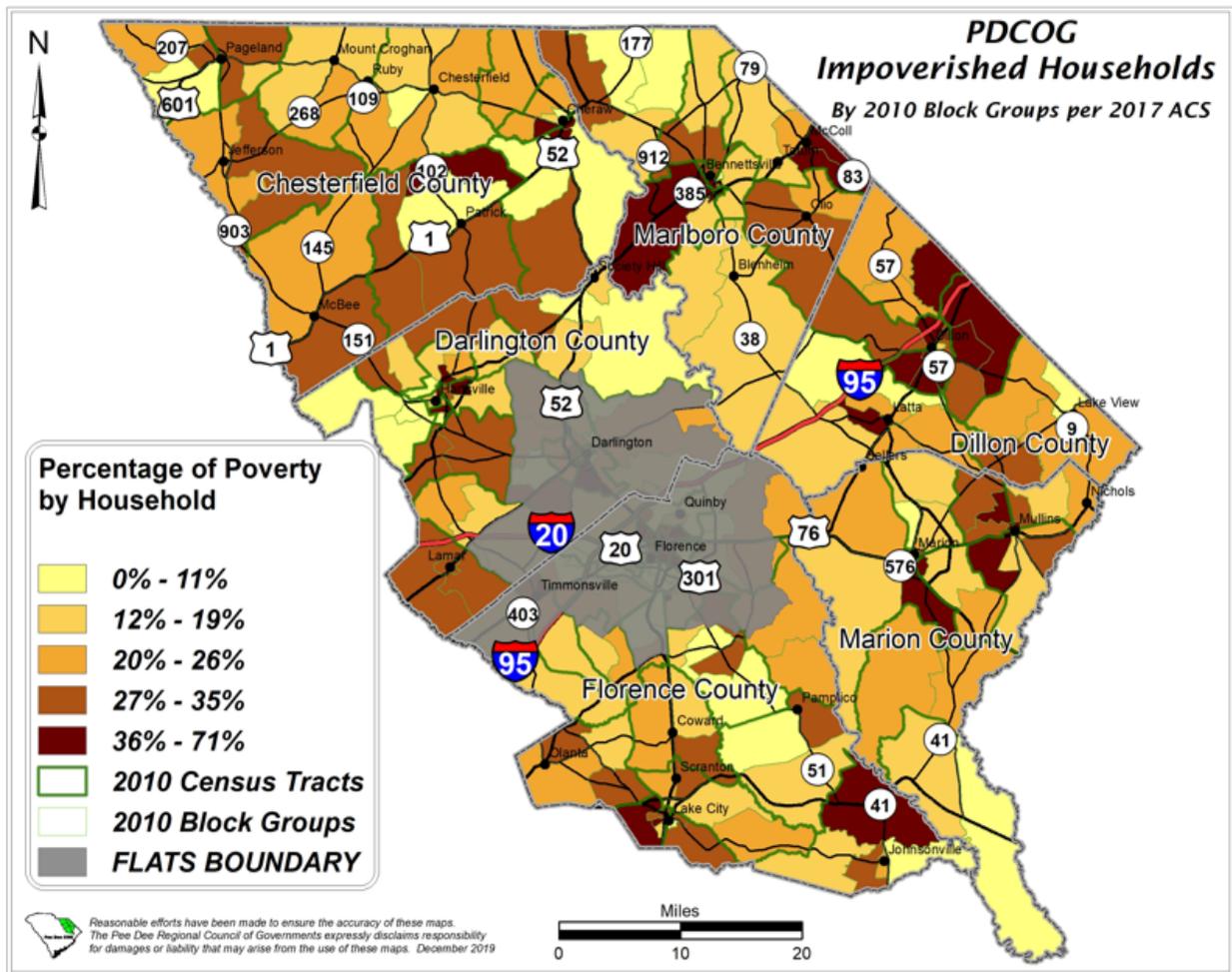


Figure 4. Pee Dee Region Impoverished Households

Car Ownership

Those who own and drive a car daily likely find it difficult to imagine functioning in the Pee Dee Region without that car. A significant proportion of households in the region nevertheless function without a car under ownership. The *PDCOG Vehicle Ownership Map* shows this characteristic present in most census block groups throughout the Pee Dee. Census block groups in and around several towns of the Pee Dee Region report roughly a quarter to a half of all households without a car under ownership of the heads of households.

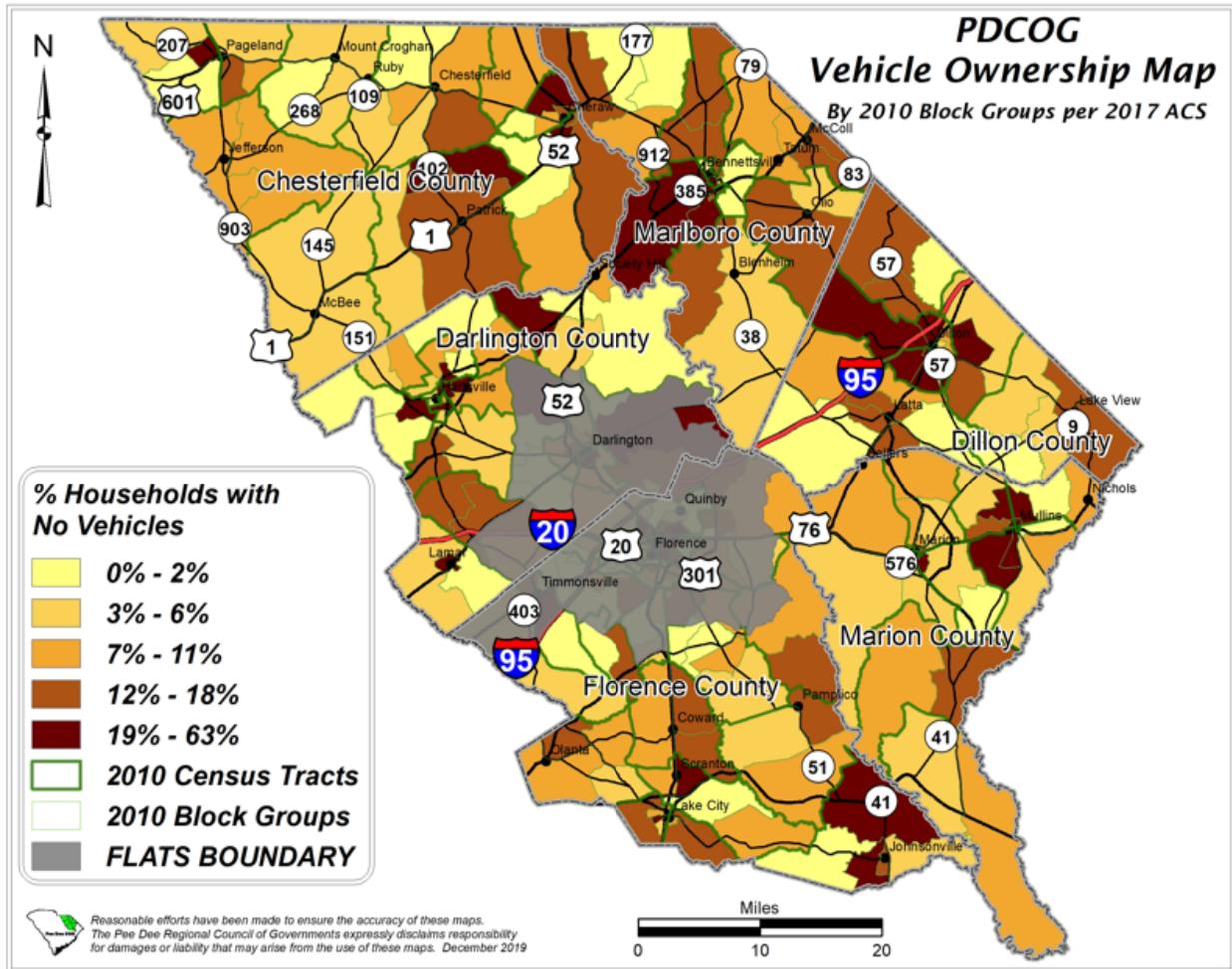


Figure 5. Pee Dee Region Households without Vehicles

Living without a car is often considered an urban condition. Urbanites walk, bike, and use transit (including school busses) to access school, work, healthcare, and groceries. Residents of Pee Dee towns are doing the same to the extent that busses, sidewalks, and bike facilities are available. Where accommodations for these modes of travel are not provided, residents are walking and biking on rural roads or their shoulders.

Characteristics of the Workforce

Unemployment

Unemployment can be caused by a person’s loss of access to transportation systems. As an indicator then, unemployment might represent a chronic condition or cause-and-effect conundrum. One who lacks viable transportation will struggle to find and hold meaningful employment; wages arising from meaningful employment are necessary to secure safe, reliable transportation.

Frank Willis, Executive Director of the Darlington County Economic Development Partnership, identified lack of transportation options as the greatest challenge to the economic development of the county that employs him. Perhaps unsurprisingly then, two of the highest concentrations of unemployment in the Pee Dee Region (by census tract) occur in Darlington County, one on the east side of Hartsville and the

other north of the city of Darlington, including the town of Society Hill. These two tracts are just a couple miles away from Sonoco and Nucor Steel, respectively, two of Darlington County's largest employers.

The map *PDCOG Unemployment Rates by Census Tract* shows several other comparable areas of high unemployment. Southwestern Dillon County and western Marion County are within a comfortable commuting distance of the city of Florence. Access to private automobiles may be a factor in their residents' employment status. Other tracts with troublingly high unemployment include areas near the towns of Clio, Mullins, Lake City, and Timmons ville.

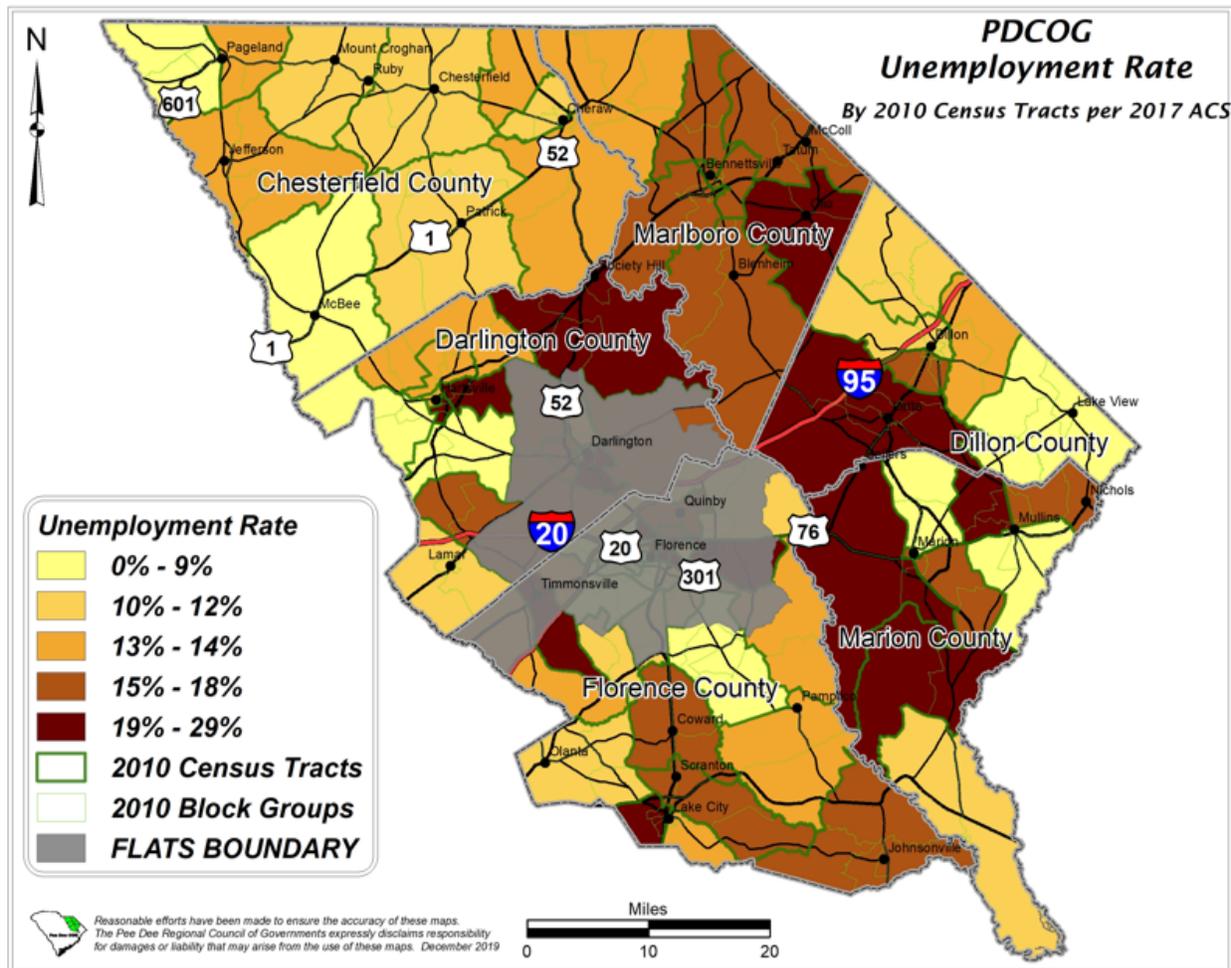


Figure 6. Pee Dee Region Unemployment Rate

Employment Density

Like population, jobs cluster in and around the towns of the Pee Dee Region. Florence, Darlington, and Hartsville are the biggest employment centers. Hartsville enjoys a large employment base relative to its size thanks to Sonoco and Coker University. Other towns in the region benefit from their positions as county seats in terms of stable job provision.

An important distinction in 21st-century jobs distribution is that many in the sectors of manufacturing and distribution exist on lands just outside of municipal limits. Sonoco is an exception in that it remains

in the center of town. Others have sought larger sites on highways beyond municipal limits. Even so, reliance on sanitary sewer infrastructure keeps these employers relatively close to population centers, only not close enough for walking and biking to be safe, convenient options for commuters. Private automobiles and in some cases, transit are employees' transportation options.

Historical Context

Many of the towns of the Pee Dee Region trace their beginnings to the introduction of railroads. The towns developed in a grid pattern, enabling convenient access to the train station by foot or horse. The streets – and the institutions of commerce, government, and religion that front them – are conveniently accessible by foot. The economic health of these institutions varies by town. Many have entered their cores into nationally registered historic districts to acknowledge and promote this history. The *PDCOG Historical Districts Map* depicts these districts across the region.

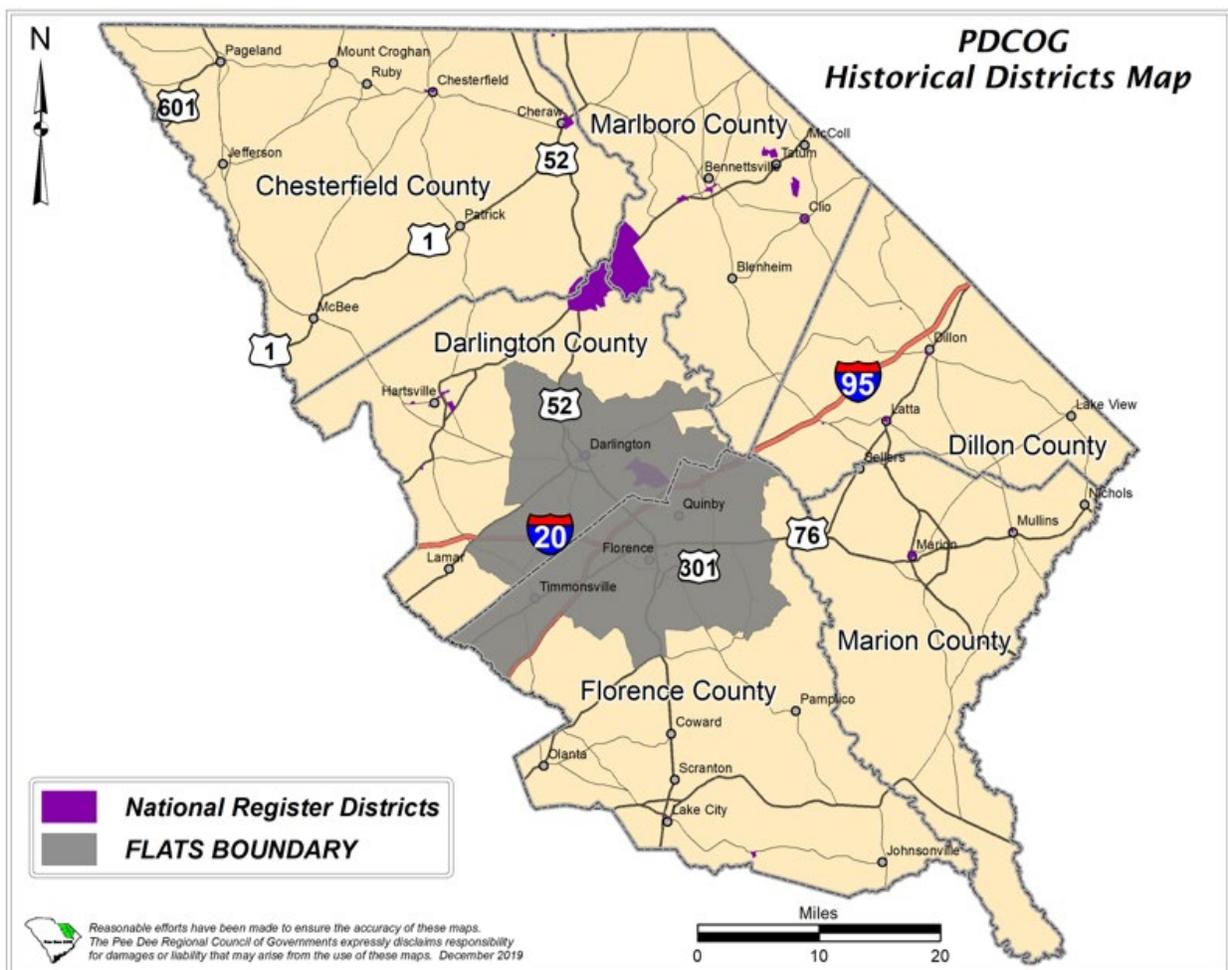


Figure 7. Pee Dee Region Historic Districts

Transportation improvements in these districts must by law acknowledge the distinct characteristics of the historical district. The South Carolina Roadway Design Manual provides specific guidance for "central business districts." These are a starting point for the design of any improvements. Public involvement should include local interests with knowledge of local history and historical design characteristics so that

any changes can successfully fit the physical environment. Institutions – especially commercial properties – are badly injured in function and value by transportation improvements that neglect parking, sidewalks, and crosswalks. Transportation in historical districts should prioritize the landowner, the merchant, and the town over the public traveling through the town. This is known in federal transportation planning terms as a “Context-Sensitive Solution.” Guidance is available at <https://www.fhwa.dot.gov/planning/css/>.

Existing Conditions of the Transportation Network

The road network of the Pee Dee Region is the skeletal and circulatory system of the built environment. Homes, businesses, and institutions alike rely on it daily for access to goods and services. The condition of the road network is a critical factor in the physical, social, and economic development of the region. Well maintained, high quality transportation facilities connect the region to the global economy, improve productivity, saves lives, and bring people together.

The Pee Dee Region gained a pivotal link to the global economy in 2018. The Dillon Inland Port is arguably the most transformative transportation investment in the region in decades. This facility is an intermodal terminal, in which freight traveling from Charleston’s and Georgetown’s seaports via CSX’s A Line Railroad can be transferred to trucks for quick access to Interstate Highway 95.

The Dillon Inland Port dramatically reduces the time international exporters operating in the Pee Dee Region must budget to ship their goods by truck. The facility also overhauls freight traffic patterns in the region, adding new and different stresses to highways across the region.

Pavement Condition

This Pee Dee Long-Range Transportation Plan must identify projects that both maintain and improve the region’s transportation network. A common and often undervalued aspect of maintenance is resurfacing.

The *PDCOG 2019 Pavement Quality Map* represents a Pavement Quality Index (PQI) generated by the South Carolina Department of Transportation (SCDOT). SCDOT has surveyed thousands of centerline-miles of roads throughout the region. The index simply classifies surveyed road segments into one of three conditions:

- Good: Pavement with a remaining service life of 10+ years.
- Fair: Pavement with a remaining service life of 5-10 years; and
- Poor: Pavement with less than five years of remaining service life.

The federal and state departments of transportation have established measures and targets for bridge condition to protect the integrity of the transportation network in South Carolina. These are as follows:

2019 Targets

- Proportion of non-Interstate pavements in the National Highway System in “Good” condition: 14.9%
- Proportion of non-Interstate NHS pavements in “Poor” condition: 4.3%

2021 Targets

- Proportion of Interstate pavements in “Good” condition: 71.0%

- Proportion of Interstate pavements in “Poor” condition: 3.0%
- Proportion of non-Interstate pavements in the National Highway System in “Good” condition: 21.1%
- Proportion of non-Interstate NHS pavements in “Poor” condition: 4.6%

Most centerline-miles of roadway in the Pee Dee Region fall into the “Poor” category. The Pee Dee Region, like much of rural South Carolina, is far out of compliance with the targets SCDOT has set for statewide pavement condition.

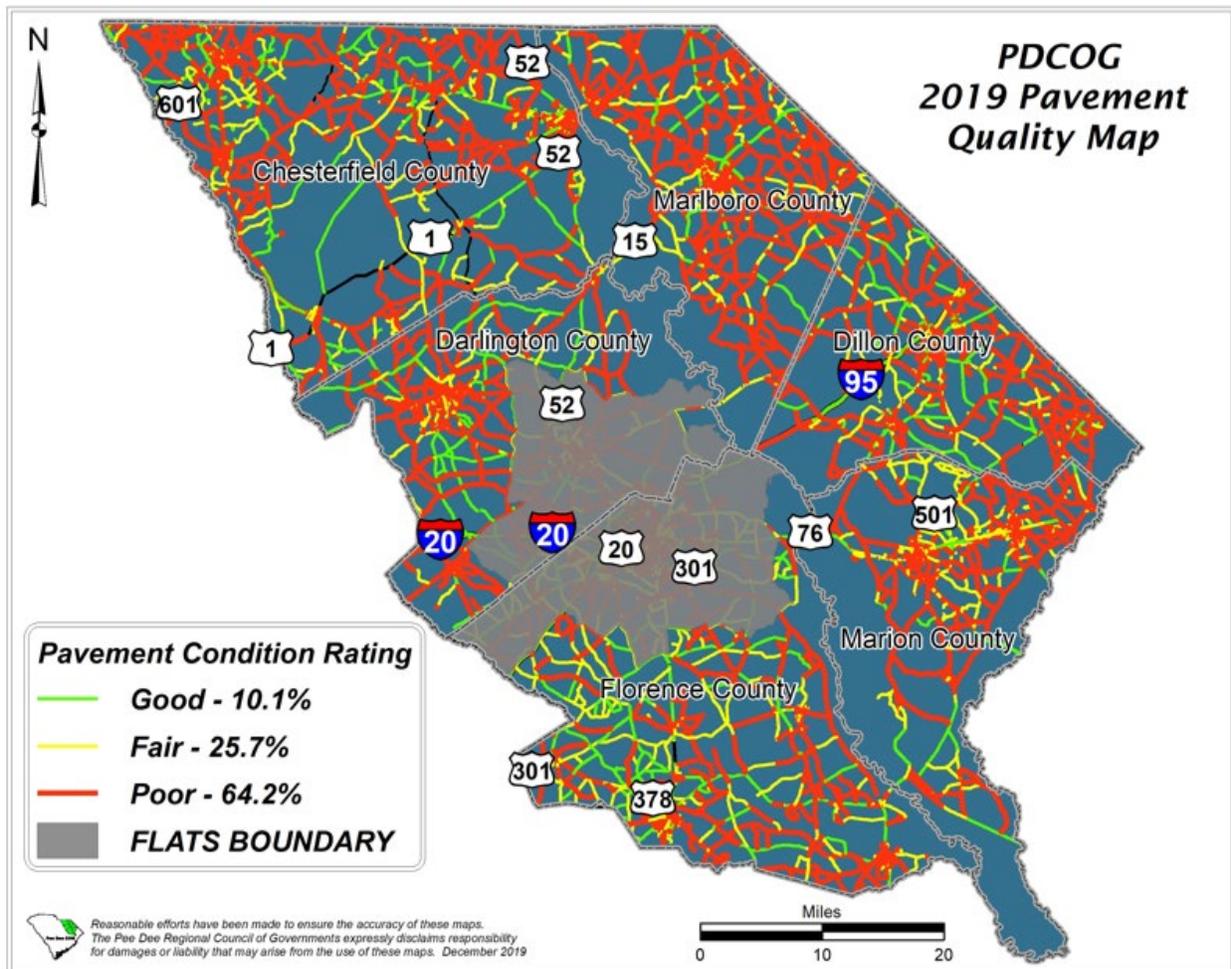


Figure 8. Pee Dee Region Pavement Quality

Resurfacing projects to address pavement condition are ongoing throughout the Pee Dee Region. County Transportation Committees, PDCOG, and SCDOT all have revenue programmed to address the issue. A \$25M project to resurface Interstate Highway in the urbanized area was recently completed.

Bridge Condition

Like pavement quality, bridge condition is another basic yet important indicator of the condition of the transportation network. If a bridge fails, vital links between communities are lost.

SCDOT also surveyed the bridges of the region and characterized the condition of each as Good, Fair, or Poor. The *PDCOG Bridge Conditions Map* color codes these bridges throughout the region. Fortunately, relatively few bridges were found to be in poor condition. Several of these, however, lie on US Highways, whose routes serve as important links within and through the region.

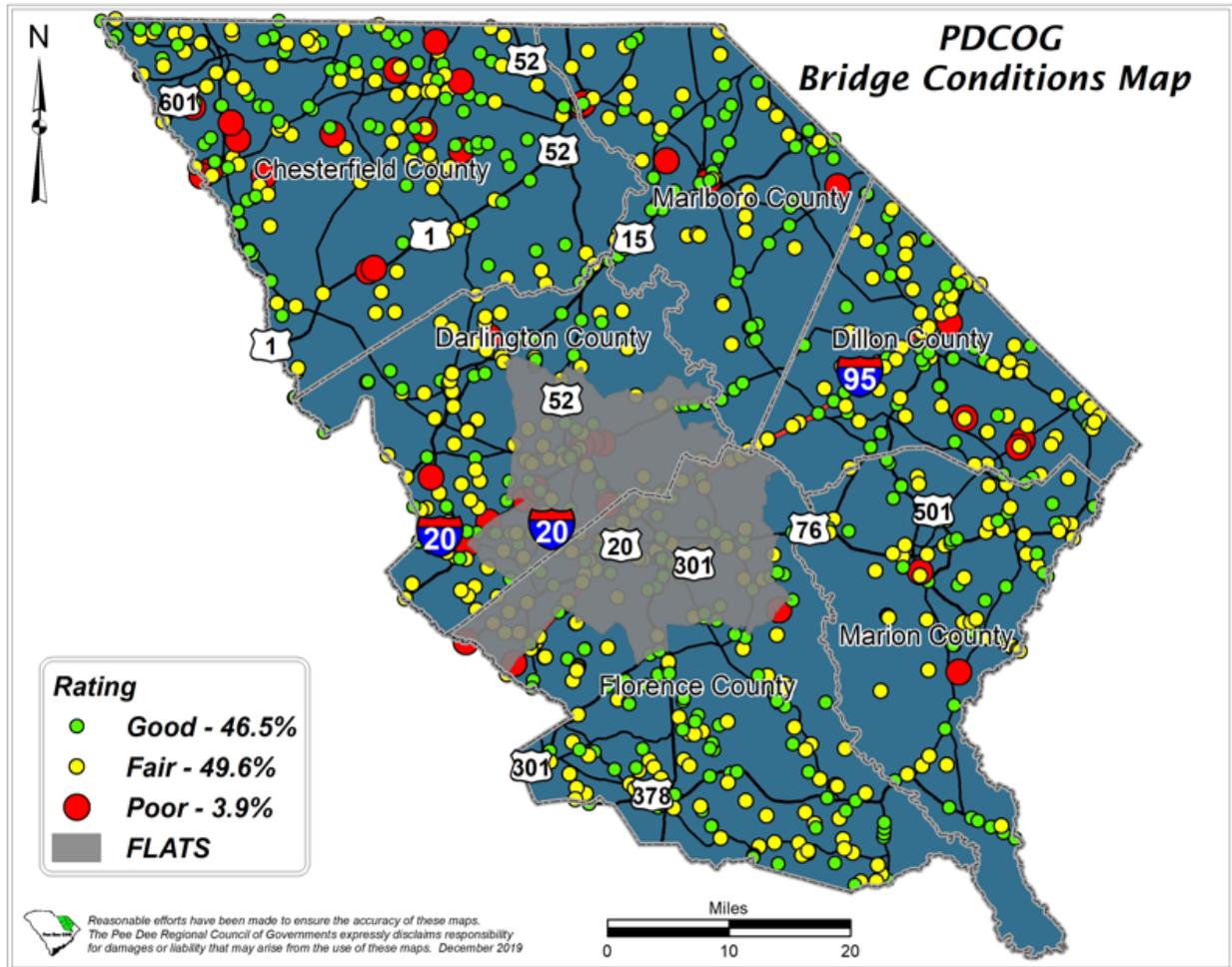


Figure 9. Pee Dee Region Bridge Conditions

The federal and state departments of transportation have established measures and targets for bridge condition to protect the integrity of the transportation network in South Carolina. These are as follows:

2019 Targets

- Proportion of bridges in the National Highway System in “Good” condition: 42.2%
- Proportion of NHS bridges in “Poor” condition: 4.0%

2021 Targets

- Proportion of bridges in the National Highway System in “Good” condition: 42.7%
- Proportion of NHS bridges in “Poor” condition: 6.0%

As reported in the map, the bridges of the Pee Dee Region lie within required parameters. The work of the region to maintain and replace bridges must continue apace. Like any infrastructure asset, a bridge

has a finite life span. As time passes, more bridges will decline into poor condition if not properly maintained and eventually replaced.

Traffic Congestion

As a rural region, the study area experiences few traffic volumes that exceed capacities of roadways. Isolated congestion issues are related to operational issues, primarily at intersections and entrances to large traffic generators like employers and schools.

Town centers may also experience slow-moving traffic at peak times. The streets in the middle of towns are public spaces that support parking, walking, and biking by travelers who seek to access the institutions of commerce and government. Commerce in particular is attracted to high-traffic areas. Congestion in urban environments is a positive indicator of economic activity and should not necessarily be adjusted to improve vehicular activity at the expense of access to goods and services.

Traffic congestion is often a function of population growth. Most population growth in the Pee Dee Region occurs in and around Florence and therefore within the boundaries of FLATS, the metropolitan planning organization. The *PDCOG Population Change Map* shows no clear patterns of population increase outside the metropolitan area. Changes in population are more accurately described as fluctuations. Large proportionate increases occur in census geographies with low populations. In raw numbers then, increases are quite small relative to urbanization in and around Florence and Darlington.

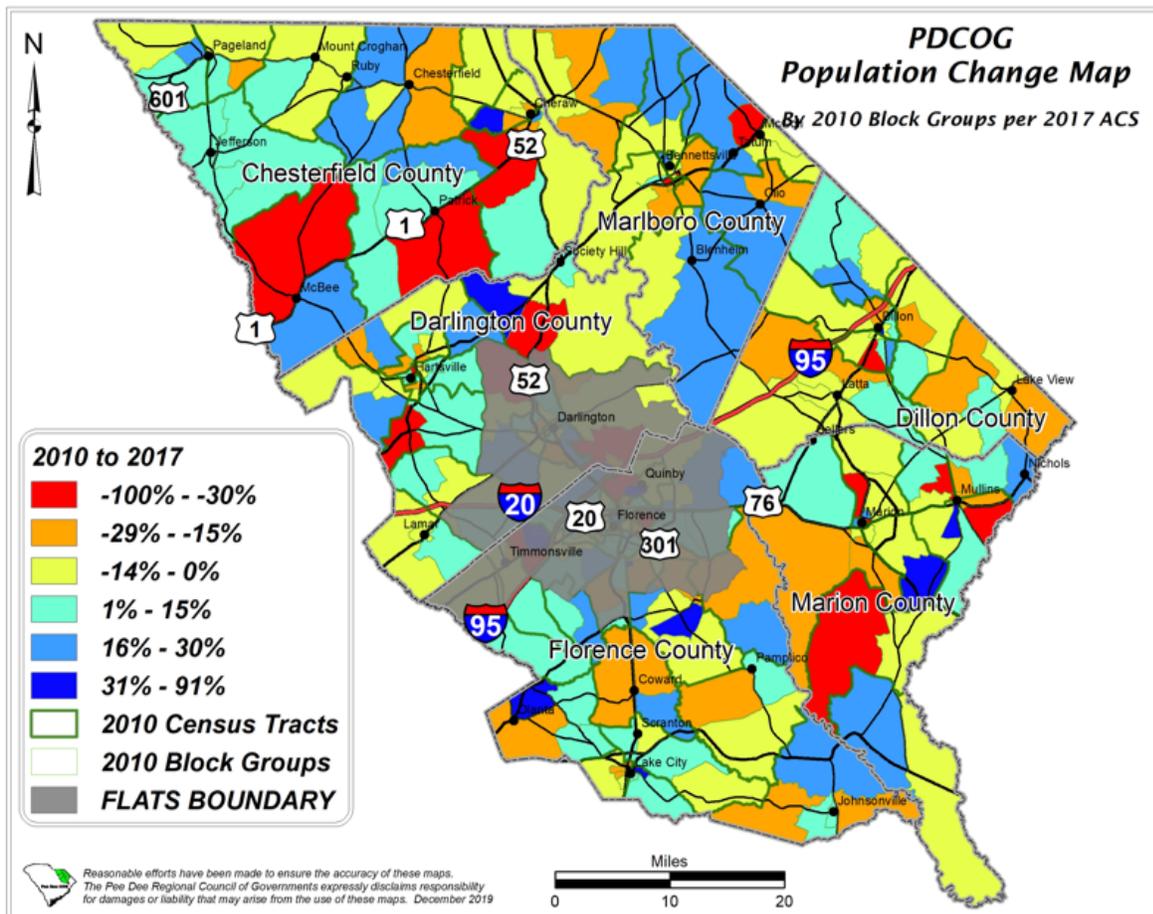


Figure 10. Pee Dee Region Population Change, 2010-2017

FLATS is housed and staffed by Florence County, which collects sales tax revenue for transportation improvements. The Pee Dee Region anticipates that FLATS will be primarily responsible for capacity improvements necessitated by population growth in the Pee Dee Region.

FLATS is successfully keeping pace with increasing pressure on travel-time reliability. The MPO’s 2040 Long-Range Transportation Plan reports compliance with all three reliability indices set by SCDOT, as follows:

Table 2. FLATS Travel Time Reliability Measures

Measure	2019 Target	2021 Target	2017 State Baseline	2017 FLATS Baseline
% of person-miles traveled on the interstate that are reliable	91.0%	90.0%	94.8%	100.0%
% of person-miles traveled on the non-interstate NHS that are reliable	N/A	81.0%	89.8%	94.2%
Truck Travel Time Reliability Index	1.36	1.45	1.34	1.42

The table indicates that automobile travel on the Interstate Highways in the Florence-Darlington urbanized area was 100% reliable in 2017. That means that drivers’ expectations for travel time on I-95 and I-20 were always met within an acceptable parameter. In other words, drivers do not *regularly* experience significant delays in their trips. The merit of this condition is that transit vehicles, delivery trucks, and public service vehicles on regular routes do not *regularly* experience delays that harm efficiency and service delivery. If this were not the case, these operations would incur additional costs that would hurt bottom lines for taxpayers and customers.

In light of the findings for the urbanized area, it is almost self-evident that Interstate-Highway travel-time reliability in the balance of the Pee Dee Region is 100% reliable. The junction of Interstates 20 and 95 occurs near the core of the urbanized area. The remaining segments of these routes intersect primarily with rural two-lane routes leading to relatively small towns.

The table further indicates that 5.8% of trips on NHS (National Highway System) routes other than Interstate Highways were unreliable in 2017. These delays are results of traffic congestion typical to a growing urban area. The number indicates that travel-time reliability for the urbanized area is well within desired parameters. It can be reasonably expected that rural portions of the Pee Dee Region are similarly in compliance.

SCDOT has applied a higher standard for truck travel-time reliability than for the “general population” of traffic. While the calculation of this reliability is similar to that for all traffic, the numerical representation of the index is not as intuitive as a percentage. Nevertheless, a higher number is better in this metric as well. The table above reports that truck travel-time reliability in the urbanized area for 2017 exceeded the 2019 standard.

SCDOT's target for 2021 is significantly higher than 2019's for truck travel-time reliability. The state hopes to make gains in this area due to the importance of manufacturing and distribution in South Carolina's economy. The FLATS index number from 2017 thus needs improvement to 2021.

The Pee Dee Region experienced a significant transportation investment that should improve truck travel-time reliability in its jurisdiction: the Dillon Inland Port. As previously noted, this intervention will dramatically alter truck travel patterns. Further study is needed to understand these impacts and prescribe solutions.

Freight

Freight is defined as moving goods in bulk by truck, rail, ship, or aircraft. Freight is vital to the success and economic integrity of a region. This is especially true in a relatively rural region like the Pee Dee, which has a strong manufacturing industry and access to seaports by rail and truck. The State of South Carolina and its regions must work together to ensure a strong freight network that is structurally maintained and contiguous throughout the state and beyond.

To this end, the state of South Carolina produced the South Carolina Statewide Freight Plan (SFP) as part of the state's larger Multimodal Transportation Plan in 2014. The *PDCOG Strategic Freight Roadway Network Map* represents routes incorporated into a strategic freight roadway network arising from the SFP. The network incorporates most of the Pee Dee Region's major arterial roads. The map further represents recent amendments, including routes to the Dillon Inland Port, as the Pee Dee Region begins to adjust to evolving freight routing patterns.

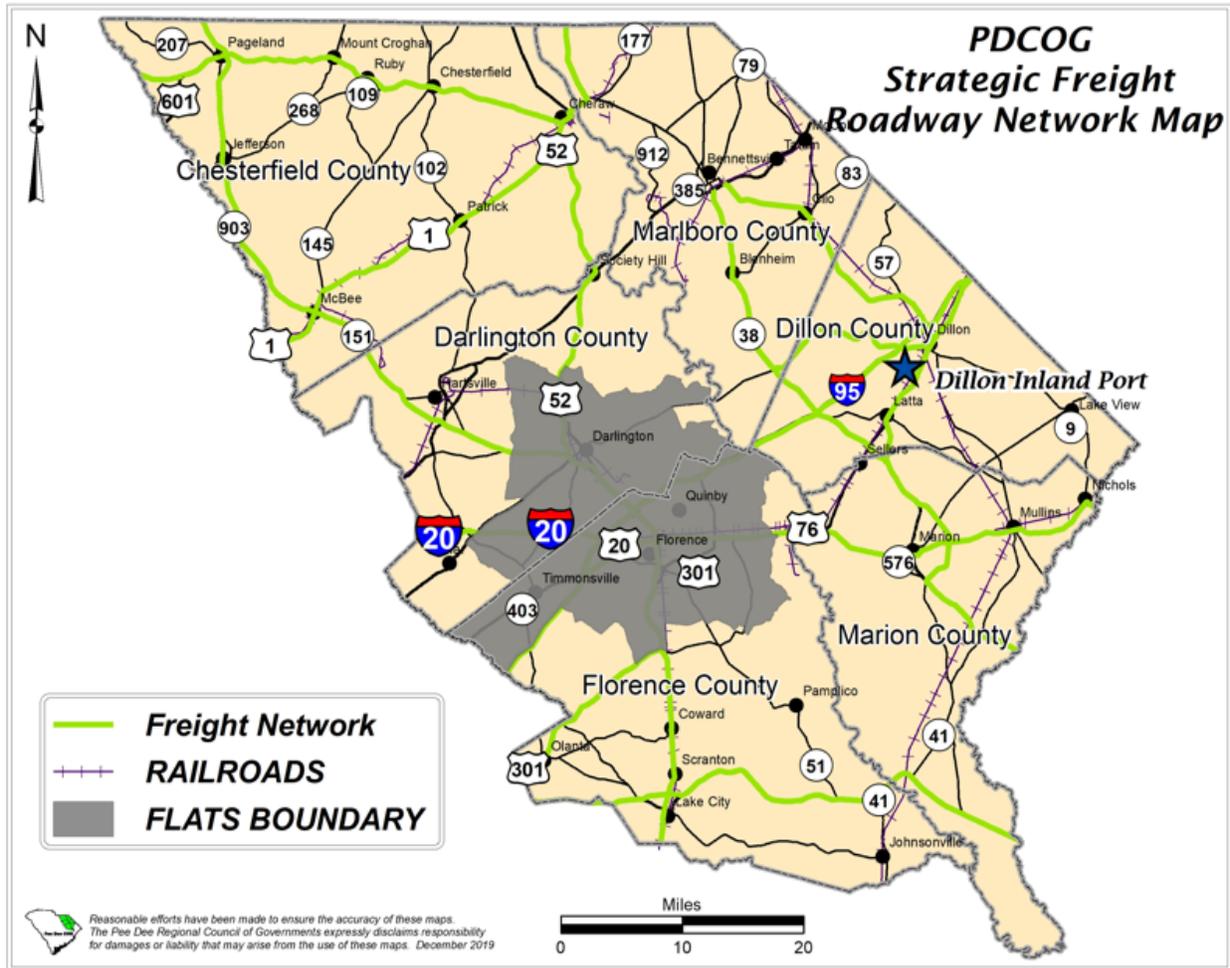


Figure 11. Pee Dee Region Strategic Freight Roadway Network

Strategies to protect and enhance their truck-carrying capacity include upgrades to facilities for safety and free flow, as well as management of access to limit conflict points between trucks and other vehicles on these routes.

Freight Traffic Growth

South Carolina’s Statewide Transportation Plan reports freight shipped on the highways and railroads of South Carolina. Highways in the Pee Dee carrying the most tonnage of freight were, as of that publication, Interstate Highways 95 and 20, of course. The most significant non-Interstate freight routes were US Highways 1, 52, 301, and 378, as well as SC Highways 9, 41, and 151. The Strategic Freight Network includes all these routes except SC-41.

The map *PDCOG Strategic Freight Network Roadways Network Growth 2016-2040* depicts major arterials in the Pee Dee Region and color codes those forecast to experience increases in freight tonnage. Already busy routes that can be expected to carry much more tonnage in future years include I-95, US-1, US-301, US-378, SC-9, and SC-41.

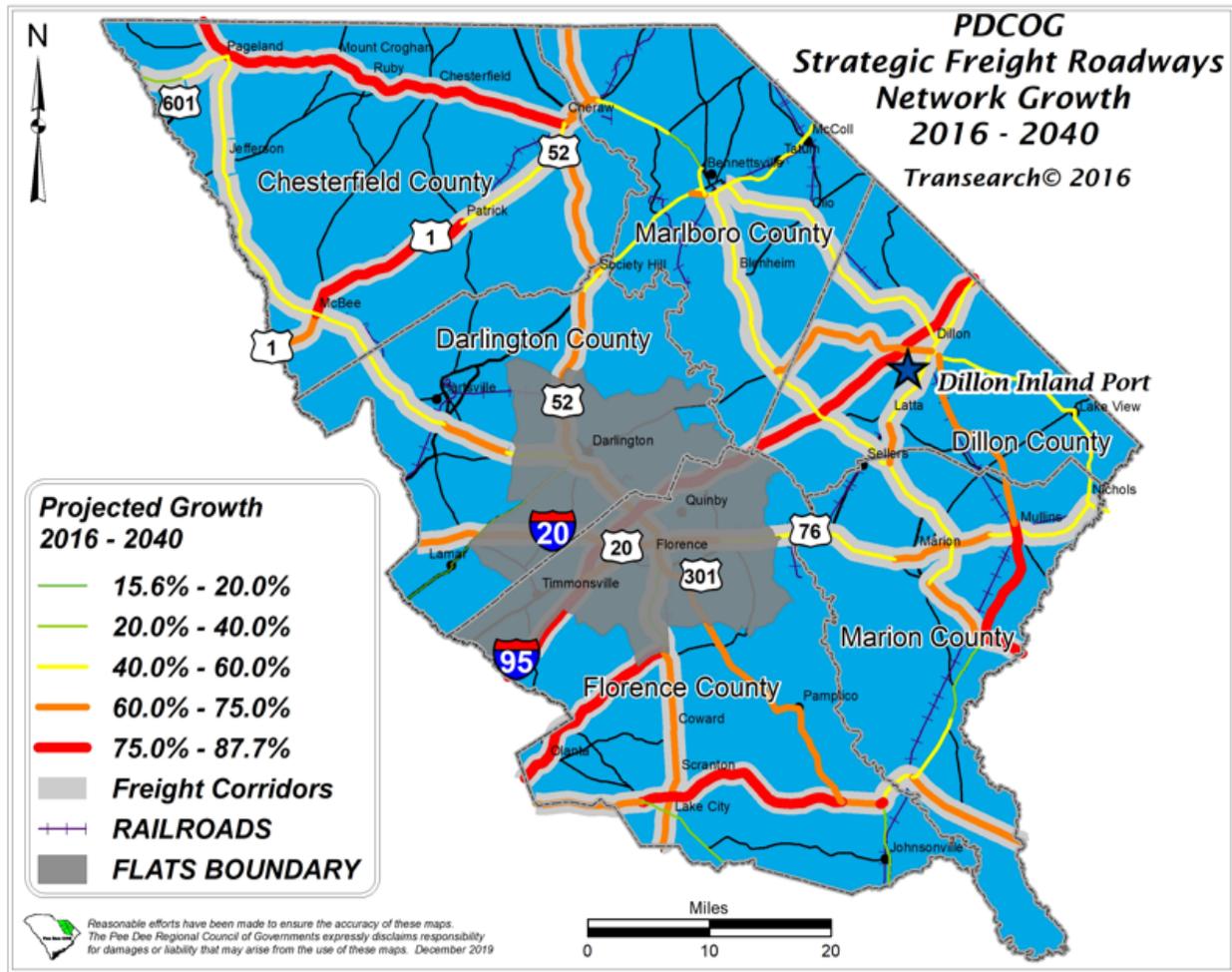


Figure 12. Pee Dee Region Freight Network Projected Growth, 2016-2040

Efforts to improve the region’s capacity to handle this freight traffic are ongoing. \$136M of improvements to US-378 in Florence County appear in the Statewide Plan. A feasibility study of widening SC-9 in Chesterfield County is nearly complete. Smaller-scale projects like intersection improvements are scheduled in Pee Dee COG’s Transportation Improvements Program.

Freight Rail

CSX operates three north-south routes in the Pee Dee Region. These emanate from Columbia, Charleston, and Georgetown. The last two depart from seaports in these coastal cities and cross near the Dillon Inland Port. The third route, CSX’s S Line, connects to the other two just across the state line, in North Carolina.

CSX is an important partner in the Dillon Inland Port. It also has on-dock access at the Port of Charleston’s newest terminal, located on the former Charleston Navy Base. Freight coming into South Carolina can therefore switch from boat to train in Charleston, then to truck in Dillon for rapid transport northward. I-95 is just minutes from the Inland Port.

Recent road upgrades connect the Inland Port to the Interstate Highway. This important connection helps keep heavy truck traffic out of the center of the town of Dillon.

Alternative Modes of Transportation

Many trips in the Pee Dee Region are completed, partially or in whole, without means of private vehicles. Buses operated by the public transit agency and local school districts are critical components of a resilient transportation system that serves the traveling public and supports the economy. All trips to and from bus stops are made on foot or occasionally by bicycle, skateboard, or scooter. Additionally, walking and bicycling are modes of choice for many citizens for a variety of reasons related to age, disability, cost/value, and health.

The Dillon Inland Port will take vehicles off some of the roads of the Pee Dee Region. Similarly, alternative modes of transportation will reduce demand for space on the roadways, especially in towns where residences, institutions, and places of commerce are in close proximity to one another.

Public Transit

The Pee Dee Regional Transportation Authority runs buses in four of the six counties of the Pee Dee Region. The largest network of routes is anchored by the city of Florence. Service into Florence arrives from the cities of Darlington and Marion. PDRTA also operates circulators in and around Hartsville, Lake City, and Bennettsville. Commuter buses also run to Myrtle Beach from Marion and Lake City. The map *Pee Dee Regional Transportation Authority Transit Routes* identifies these routes.

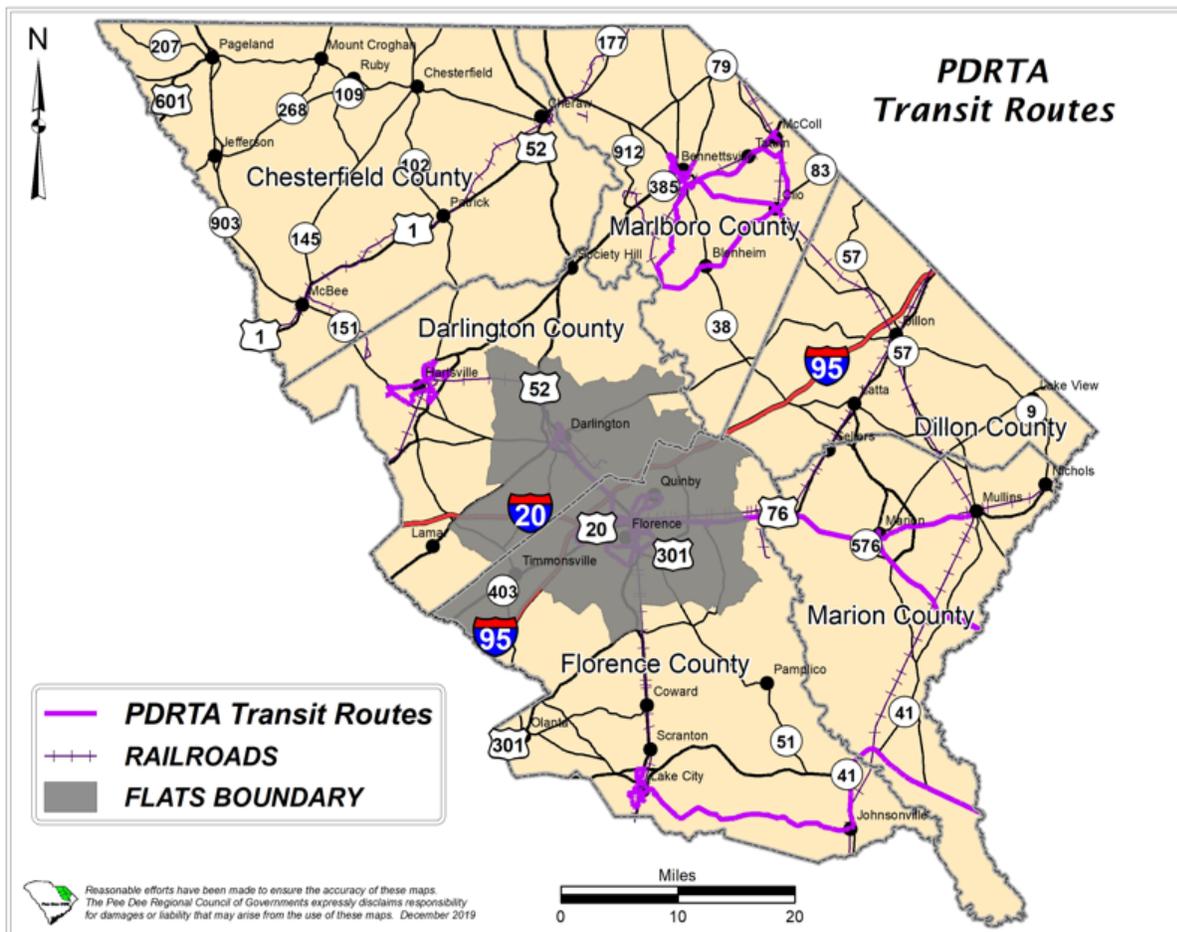


Figure 13. Pee Dee Regional Transit Authority Routes

The South Carolina Department of Transportation commissioned preparation of *Charting the Course to 2040: South Carolina Statewide Transportation Plan*. Included in this plan is a freestanding supplement titled *Regional Transit and Coordination Plan: Pee Dee Region*. As the title suggests, the plan identifies several strategies to improve access to transit in this largely rural region. The plan further documents that roughly five and six needed rides were unprovided in 2011, the year for which data were collected and analyzed. The plan recommends that the Pee Dee Region set a target to meet 20 percent of demand, an increase of three percentage points. The plan goes on to highlight funding necessary to maintain and increase transit demand satisfaction in Section 7.1 on page 61.

The existing transit demand for 2010, as discussed earlier in the report, was identified as approximately 1.5 million trips, with approximately 17 percent (261,136 trips) of that need currently being met with existing services. The 2020 projected demand increases to 1.59 million trips. One goal for the Pee Dee Region may be to increase the need met to 20 percent by 2020, which equates to providing 317,594 trips or an increase of 56,458 one-way trips. With an existing regional average of 3.8 passengers per hour, PDRTA or any other new transit agency in the Pee Dee Region would need to increase revenue service hours by 14,836 annually (56,458/3.8). The average operating cost per hour for the region is \$32.21. To meet approximately 20 percent of the need in 2020 (317,594 trips), operating and administrative budgets would need to increase by approximately \$477,917 (14,836 x \$32.21) annually.

Passenger Rail Service

Three Amtrak trains pass through the Pee Dee Region: The Palmetto, the Silver Meteor, and the Silver Star. The first two of these operate on CSX's A Line once a day in each direction, north and south. The trains stop in Florence and Dillon. The Silver Star passes through the Pee Dee Region daily on CSX's S Line but does not stop. The nearest stations it serves stand in Camden, SC, and Hamlet, NC, near Rockingham.

Bicycle and Pedestrian Transportation

All trips begin and end on foot. Many trips in rural areas begin and end on private property; however, many more traverse the public right-of-way. Trips on PDRTA buses and school buses are among these.

Sidewalks in the Pee Dee Region are generally limited to municipalities, where streets are slower going, and destinations are closer together. Dedicated bicycle facilities are few and far between in the Pee Dee Region. One example lies in Hartsville, connecting Coker University to the town center. The map *PDCOG Cross-State Bike Routes* shows two bike routes that span the Pee Dee Region. The routes are primarily on-road, meaning they are simply mapped and posted with signs along the mapped route. Cross-state bike routes are generally chosen for value to transportation and recreation, as well as scenery in the road corridor.

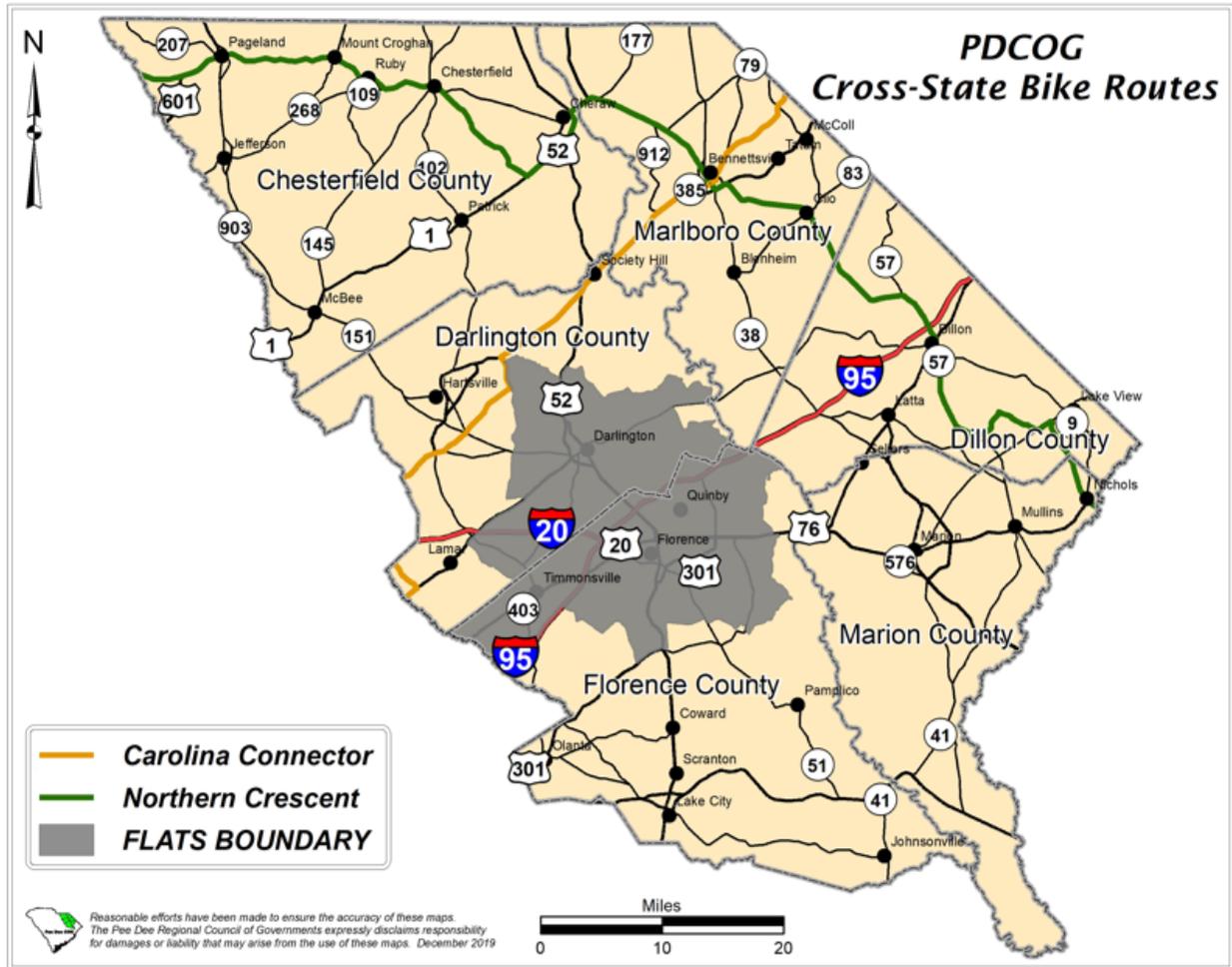


Figure 13. Pee Dee Region Cross-State Bicycle Routes

One such route aligns with SC-9, a link in the Strategic Freight Network that is under study for the feasibility of widening. This study should contemplate how heavy truck traffic and bicycle traffic can operate in the same corridor and identify strategies to ensure proper separation, separation that should increase with expected vehicle speeds and volumes.

People who walk and ride bikes comprise a significant portion of the traveling public. A common challenge they face is lack of illumination. As discussed in the following chapter, South Carolina has one of the highest, if not the highest, rates of fatalities on its roadways in all modes perennially. Many more deaths occur from dusk until dawn than from dawn to dusk.

Rural intersections often remain without illumination even after roadway improvements that greatly increase the footprint of the intersection. Such intersections near destinations like transit stops, schools, churches, social halls, and dollar stores commonly experience bike and foot traffic alongside and across travel lanes. Intersection upgrades should incorporate improvements to enhance access to these destinations for non-motorized users while preserving mobility for all users. Safety for all users should be the highest priority, and illumination is an important safety feature. Electric utilities, not SCDOT, provide this illumination, so engagement of the appropriate utility early in the planning process for an improvement project is important to identifying funding and coordinating interventions.

Safety

Perennially, South Carolina has one of the highest, if not the highest, rates of fatalities on its roadways in all modes. As a result, SCDOT has prepared safety performance measures and set targets for 2020.

These measures and targets are as follows:

- Total Number of Fatalities: 1,011
- Fatality Rate per 100-Million Vehicle-Miles Traveled: 1.819
- Total Number of Serious Injuries: 2,781
- Serious Injury Rate per 100-Million Vehicle-Miles Traveled: 4.979
- Total Number of Non-motorized Fatalities and Serious Injuries: 380

Pee Dee COG has elected to accept and support the state's safety targets for all five safety performance measures. This means that Pee Dee COG will:

- Address areas of concern for fatalities or serious injuries within the region, coordinating with SCDOT and incorporating safety considerations on all projects.
- Integrate safety goals, objectives, performance measures, and targets into the planning process; and
- Include the anticipated effect on achieving the targets noted above within the TIP, linking investment priorities to safety target achievement.

Crashes

Pee Dee COG staff has prepared four maps reporting crash locations and density from 2014 to 2018 by type: pedestrian, bicycle, and vehicular. An additional map is provided depicting location and density for vehicular crashes involving serious injuries and fatalities. This map renders the density in relative terms. The highest concentration of crashes appears in yellow and generally clusters in towns and along Interstate highways. This last map presents data that are, of course, a subset of the preceding map *PDCOG Vehicle Crash Data, 2014-2018*.

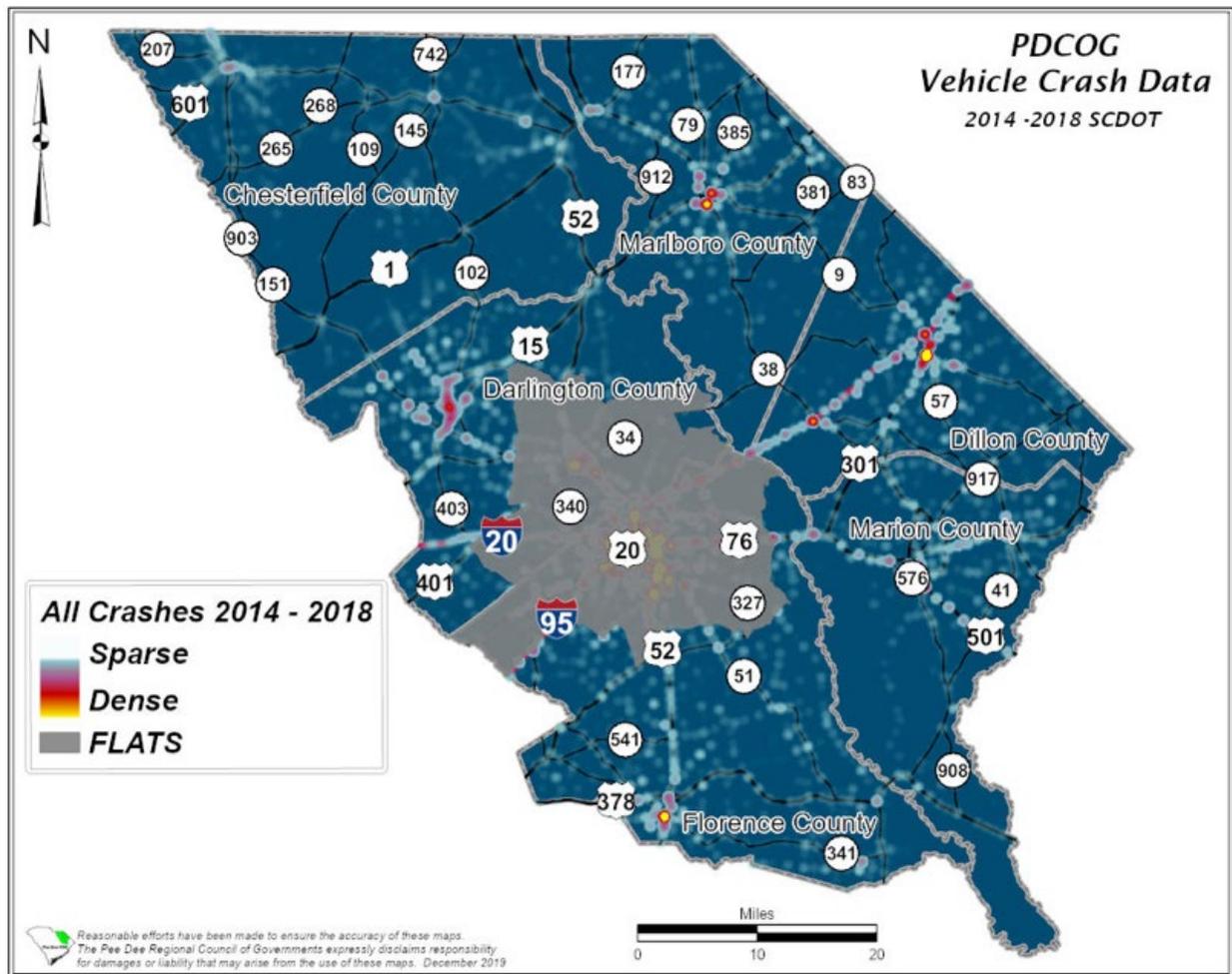


Figure 14. Pee Dee Region Vehicle Crash Data.

The *PDCOG Vehicle Crash Data* map identifies six relatively serious locations for crashes in the study area (i.e., rural portions of the six-county Pee Dee Region). The town of Dillon is the “hottest” spot, meaning the highest concentration of crashes. Other towns with high concentrations are Hartsville, Lake City, and Bennettsville. Interstate Highway 95’s junctions with SC Highways 9 and 38 are also hot spots.

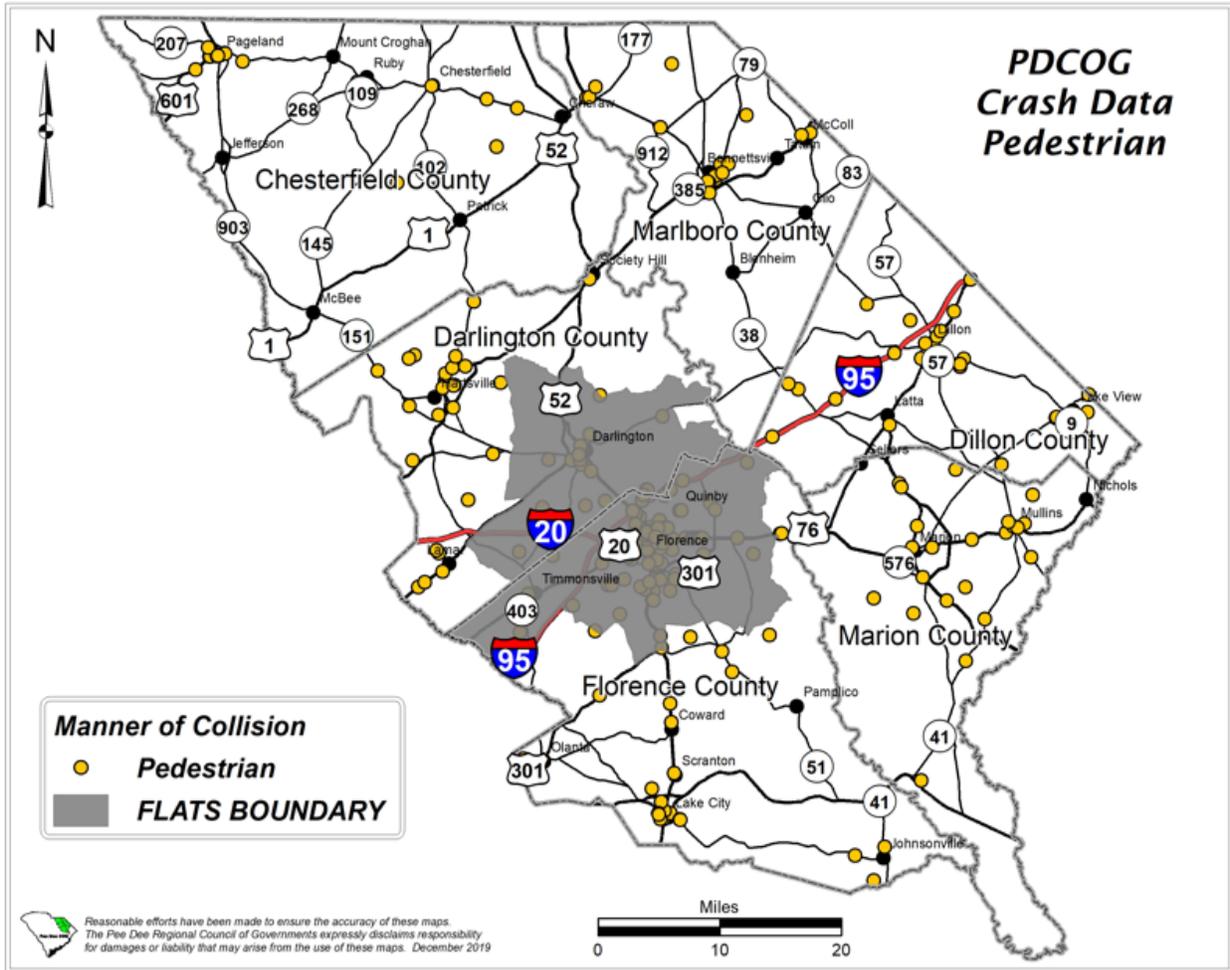


Figure 16. Pee Dee Region Pedestrian-Involvement Crashes

Lake City also shows the highest concentration of bicycle/vehicle crashes on the *PDCOG Crash Data – Bike* map. These types of crashes appear less likely to occur on arterials. Perhaps bicyclists avoid the persistent, high-speed traffic of these routes.

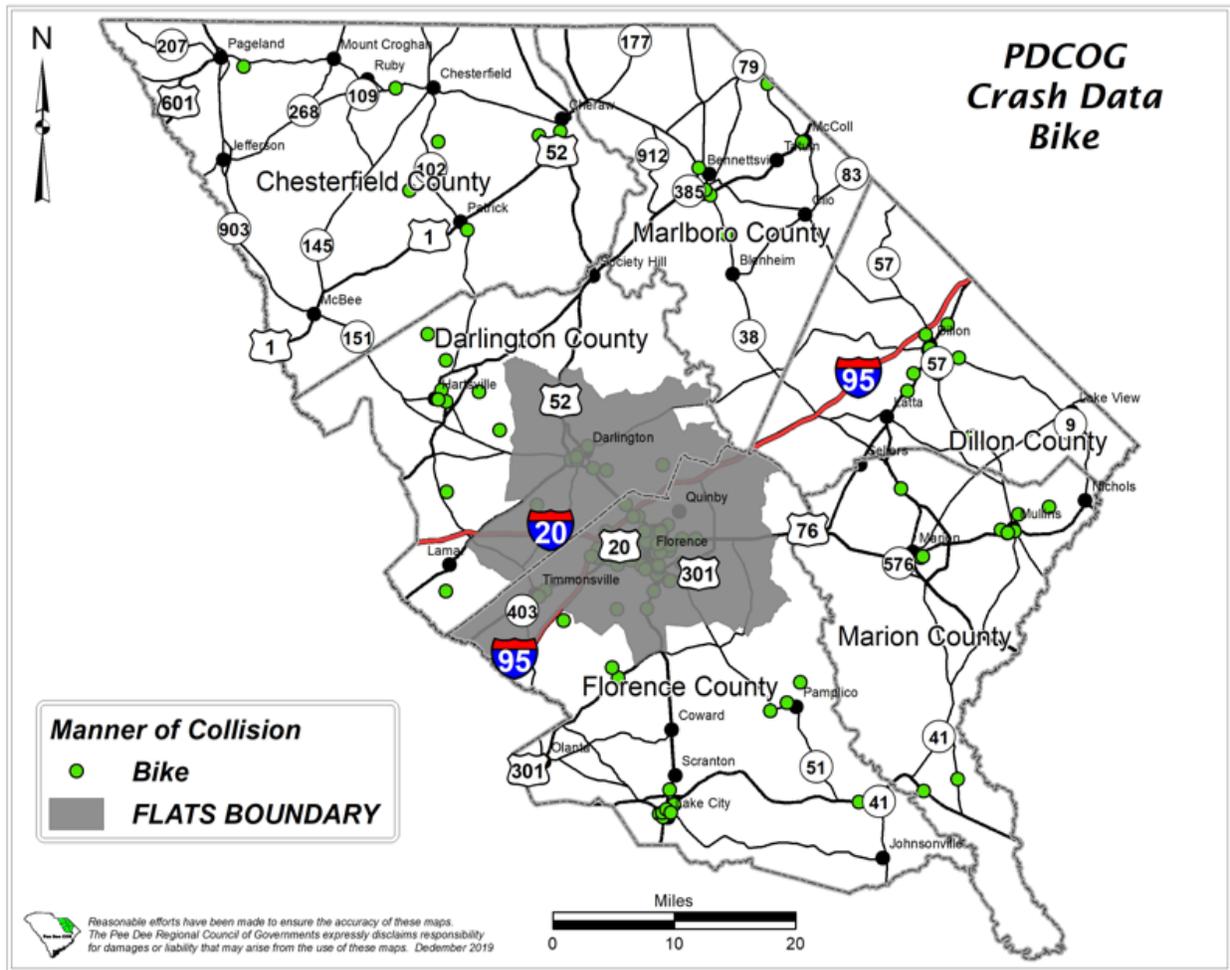


Figure 17. Pee Dee Region Bicycle-Involved Crashes

Safety Tools

Access Management

As part of a coordinated system-level plan, access management strategies make turning movements more predictable, can minimize congestion, and reduce potential for crashes.

Access management strategies control the location, spacing, design, and operation of driveways, median openings, interchanges, and street connections to a roadway. Areas with poor access management, which can include unprotected left turns and curb outs within a short distance, often have higher crash rates, greater congestion, and more spillover cut-through traffic on adjacent residential streets.

Driveway Length

Increasing the driveway length to commercial development prevents internal site operations from affecting the adjacent street.

Driveway Consolidation and Relocation

Shared access driveways minimize curb outs and reduce traffic conflicts. They are particularly effective near intersections.

Left-Turn Storage Lanes

Left-turn lanes reduce vehicle delay when drivers are waiting for vehicles to turn and may decrease the frequency of collisions caused by lane congestion.

Upgrade and/or Supplement Signs

In some case, traffic control devices, such as signs, are improperly used, placed in the wrong location, are too small to be seen, or have suffered damage or deterioration.

Add More Signals

Providing separate signals over each lane, installing higher intensity signals, and changing the length of signals cycle can reduce crashes caused by poor visibility.

Pavement Condition

The pavement quality can be upgraded to better drain the road and help resist skidding.

- Lane utilization arrow
- Rumble strips
- Edge marking
- Recessed pavement markers

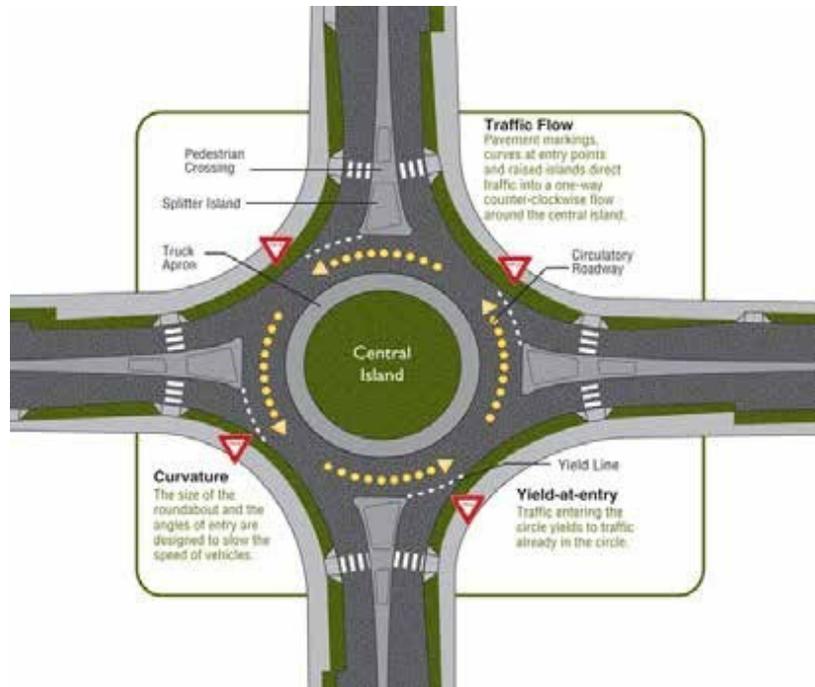
Improve Geometry Design

Both the intersections and their approach roadways can be factors. A major aspect of safety design is restricted sight distance, where drivers do not have enough time to stop or avoiding hitting a pedestrian or another vehicle.

- Flatten curves
- Minimize intersection conflict points
- Improve shoulder
- Install median

Non-traditional Intersection Design

Non-traditional intersection design like roundabouts, or traffic rotaries, can reduce the number of serious crashes while improving traffic flow. Smaller roundabouts should be used in towns, where slower speeds prevail and greater constraints to right-of-way acquisition exist.



Addition of Turn Lanes at Intersections to Improve Connectivity

Turn lanes are used to separate turning traffic from through traffic. Studies have shown that providing turn lanes for left-turning vehicles can reduce accidents by approximately 32%.

Driver Education

Sustained enforcement efforts have been proven to lower both intersection violations and crash rates, sometimes to a dramatic extent. Some drivers do not

"Roundabout Design" Source:

<http://www.mikeontraffic.com/why-build-roundabouts/>

know the basic traffic laws, fail to understand the meaning of certain signs and pavement markings, or do not respect safety needs of non-motorized users (e.g., bicyclists and pedestrians).

Selected Active Transportation Safety Measures: Costs and Benefits

The following tools are particularly relevant to small towns in the Pee Dee Region that are struggling with vehicles colliding with people who walk and bike. Often, funding is cited as a reason for inaction, so these tools' descriptions are accompanied by their costs.

Shared Lane Marking ("Sharrows")

Sharrows indicate proper positioning for people riding bicycles in the travel lane and may discourage unsafe passing by people driving automobiles.

COST: \$180 per sharrow¹

Cost per mile: \$7,560 (assumes 1 per 250 ft. ea. side)

Percentage of typical resurfacing project cost: 3% (assumes resurfacing cost of \$120,000 per lane-mile)

CRASH REDUCTION: 25%² (for all crash types involving bikes)

Crosswalks

A two-rail crosswalk indicates to the person walking or riding in a wheelchair a safe route across a street, ideally connecting opposing curb ramps. A high-visibility crosswalk with transverse markings increases visibility of people walking to people driving automobiles, in addition to indicating walkers' route.

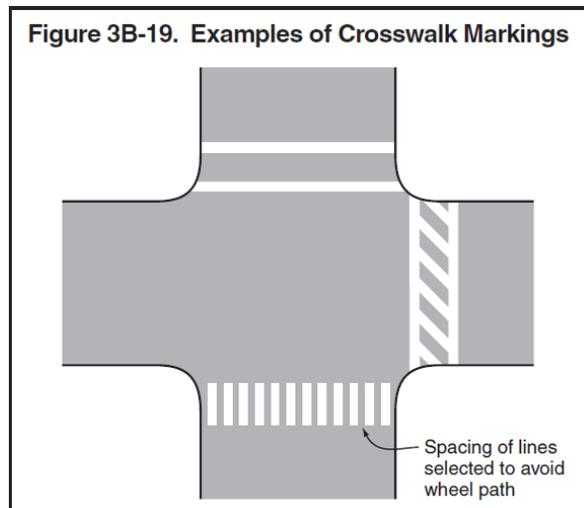
COSTS

CROSSWALK TYPE	Min. Cost ¹	Median Cost ¹	High Cost ¹
Striped (depicted at right, top)	\$110	\$340	\$2,090
Ladder	\$350	n/a	\$1,000
High-Visibility (depicted below)	\$600	\$3,070	\$5,710

High-visibility crosswalks, cost per mile: \$72,000 (assumes one 4-point intersection every 800 feet)



Above, source: "Transportation Needs by Mode;" CDM Smith; Sept. 2014;
https://www.scdot.org/Multimodal/pdf/SC_MTP_mode.pdf



Above, Source: "MUTCD 2009 Edition;"

<https://mutcd.fhwa.usdot.gov>

Below, Source: "SCDOT Roadway Design Policies and

Standards;" <https://www.scdot.org/business/road-design.aspx>



Percentage of typical resurfacing project cost: 12% (assumes 5-lane section, resurfacing cost of \$120,000 per lane-mile)

CRASH REDUCTION by type after high-visibility crosswalk installation:

- Vehicle/pedestrian: **40%**³
- Speed-related: **45%-74%**⁴
- All crash types: **18%-19%**^{4, 3}

Sources

1. "Costs for Pedestrian and Bicyclist Infrastructure Improvements: A Resource for Researchers, Engineers, Planners, and the General Public;" UNC Highway Safety Research Center for FHWA; Oct. 2013; www.pedbikeinfo.org.
2. "Statewide Analysis of Bicycle Crashes;" Florida International University Lehman Center for Transportation Research for FDOT; May 2017; www.cmfclearinghouse.org.
3. "The Relative Effectiveness of Pedestrian Safety Countermeasures at Urban Intersections – Lessons from a New York City Experience;" Chen, Li, Cynthia Chen, and Reid Ewing; Jan. 2012; www.cmfclearinghouse.org.
4. "Desktop Reference for Crash Reduction Factors;" iTRANS Consulting, Ltd. and Vanasse Hangan Brustlin, Inc. for FHWA; Sept. 2008; <https://safety.fhwa.dot.gov>.

Goals and Objectives

Following the assessment of the region's existing conditions as it relates to the long-range transportation process, a series of goals and objectives were established. These goals were adapted from several federal, state, and local transportation planning laws and documents, including the Moving Ahead for Progress for the 21st Century (MAP-21) National Goals, FAST Act Planning Factors, and the Act 114 Project Prioritization Score Criteria. The goals for this plan are listed below.

Map-21 National Goals

The Map-21 National Goals are as follows:

1. Safety – To achieve reduction in fatalities and serious injuries on all public roads
2. Infrastructure Condition – To maintain highway infrastructure assets in state of good repair
3. Congestion Reduction – To achieve reduction in congestion on the National Highway System
4. System Reliability – To improve the efficiency of the surface transportation system
5. Freight Movement and Economic Vitality – To improve freight networks, strengthen the ability of rural communities to access national and international trade markets, and support regional economic development
6. Environmental Sustainability – To enhance the performance of the transportation system while protecting and enhancing the environment
7. Reduced Project Delivery Delays – To reduce project costs, promote jobs and economy, and expedite the movement of people and goods by accelerating project completion through eliminating delays in the project development and delivery process, including reducing regulatory burdens and improving agencies' work practices.

Act 114 Project Prioritization Scores

Act 114 specifies several factors and their relative weights when it comes to assessing potential transportation projects in the Pee Dee Region. These scores are listed below.

1. Financial Viability: 25%
2. Public Safety: 15%
3. Economic Development: 10%
4. Traffic Volume and Congestion: 10%
5. Truck Traffic: 10%
6. Pavement Quality Index: 10%
7. Environmental Impact: 10%
8. Alternative Transportation Solutions: 10%
9. Consistency with Local Land Use Plans: binary (100%)

FAST Act Planning Factors

The FAST Act establishes 10 factors which the PDCOG must consider during its long-range transportation planning process. These factors are listed below.

1. Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency.
2. Increase the safety of the transportation system for motorized and non-motorized users.
3. Increase the security of the transportation system for motorized and non-motorized users.
4. Increase accessibility and mobility of people and freight.
5. Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and **State** and local planned growth and economic development patterns.
6. Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight.
7. Promote efficient system management and operation.
8. Emphasize the preservation of the existing transportation system.
9. Improve the resiliency and reliability of the transportation system and reduce or mitigate stormwater impacts of surface transportation; and
10. Enhance travel and tourism.

Proposed Projects

The projects proposed in this plan were developed with the preceding goals and objectives in mind. Each project was selected for its significance to the long-range transportation planning efforts in the Pee Dee region and its ability to help the region meet the goals and objectives outlined above. These projects were presented to the PDCOG Transportation Advisory Committee. As seen in the map below, the projects cover a wide range of areas within the Pee Dee Rural Planning area.

The transportation improvement recommendations within this plan will be broken out into two categories – priority projects (fiscally constrained) and potential projects (unfunded). Priority projects listed in the LRTP will be eligible for programming in the Transportation Improvement Program (TIP) when guideshare funds are available. Once approved by the PDCOG Board, the project will move to the SCDOT Commission to become part of the State Transportation Improvement Program (STIP). Unfunded projects can be shifted onto the priority projects list if the ranking of a project changes and funding is available. The LRTP is meant to be a living document. Therefore, prior to the next update of the plan (5 years from the approval date), identification of additional transportation projects can be submitted by letter to the PDCOG. The identified transportation improvement project(s) will be provided to the TAC to determine the appropriate action needed to ensure proper consideration is given to the new project(s).

Priority Projects (Fiscally Constrained)

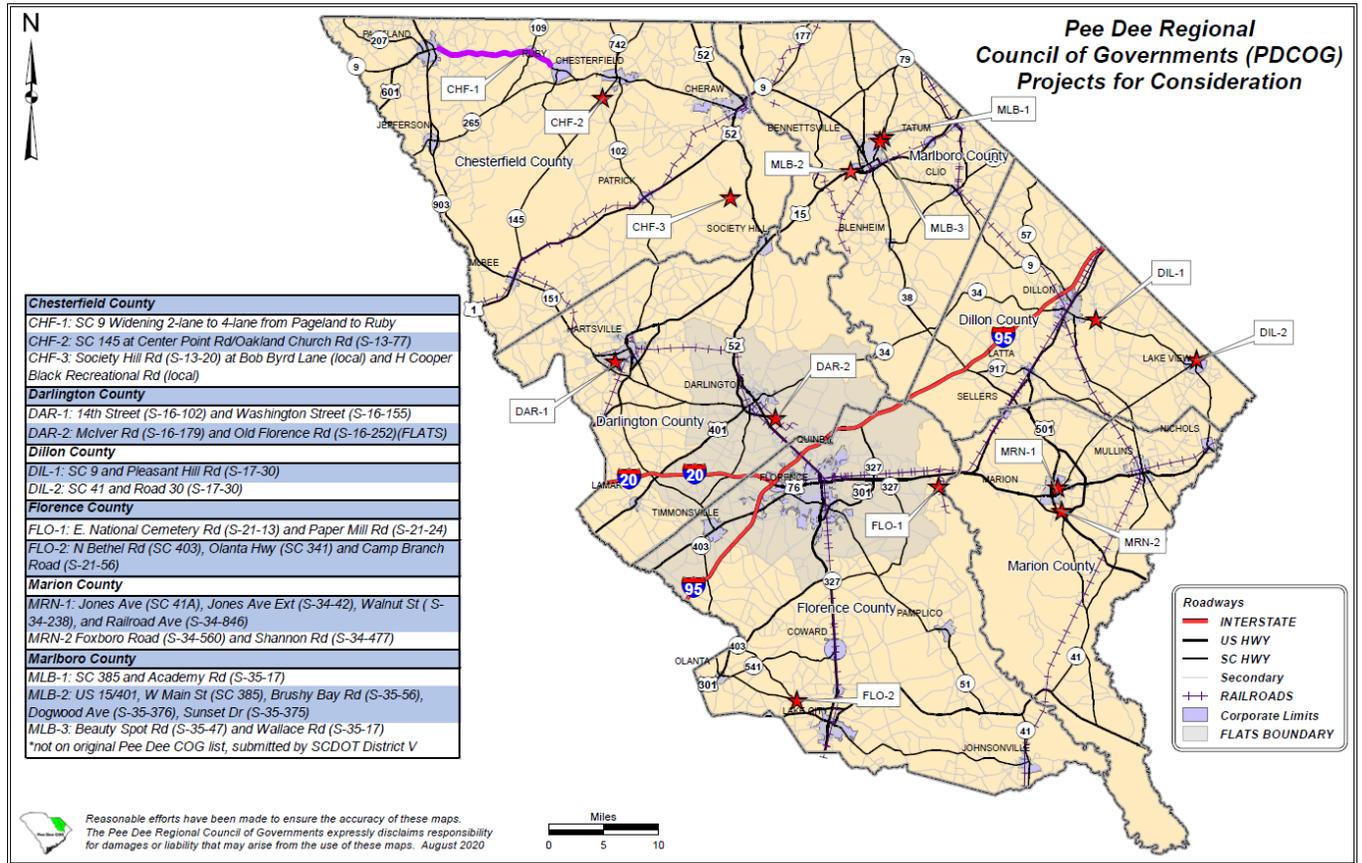


Figure 18. PDCOG Proposed LRTP Projects

A summary of the projects is listed below, with a full breakdown of the Act 114 prioritization rankings available in the appendices of this document.

Chesterfield County

CHF-1: SC 9 Widening 2-lane to 4-lane from Pageland to Ruby

- Scope: The project purpose is to provide a highway facility that will deliver efficient traffic flows with reasonably consistent speeds, increased safety, and provide improved regional connectivity for northern Chesterfield County.
- Cost Estimate: \$126 Million
- Crashes: See Feasibility Report (Full Report Available)
- Traffic Volume: See Feasibility Report
- % of Trucks: See Feasibility Report
- Average Pavement Quality Index (PQI): See Feasibility Report
- Environmental Impacts: See Feasibility Report

CHF-2: SC 145 at Center Point Rd / Oakland Church Rd (S-13-77)

- Scope: Fix sag curve on SC 145 or realign Center Point Rd to improve sight distance. Install left turn lanes at Center Point Rd/Oakland Church Rd
- Cost Estimate: \$2 Million
- 2015-2019 Crashes: 3
- 2019 Traffic Volume: 2,350
- 2019 % of Trucks: 10.5%
- 2019 Average Pavement Quality Index (PQI): 2.7
- Environmental Impacts: Cemetery located at intersection.



CHF-3: Society Hill Rd (S-13-20) at Bob Byrd Lane (local) & H Cooper Black Recreational Rd (local)

- Scope: Flatten out curve on Society Hill Road and minor realignment of Bob Byrd Lane and H Cooper Black Rec Rd. Install left turn lane at Bob Byrd Ln and/or utility relocation, clearing and grading for site distance along S-20.

- Cost Estimate: \$1.5 Million
- 2015-2019 Crashes: 0
- 2019 Traffic Volume: 1,325
- 2019 % of Trucks: 7%
- 2019 Average Pavement Quality Index (PQI): 2.2
- Environmental Impacts: Sand Hill State Forest



Darlington County

DAR-1:

14th Street (S-16-102) & Washington Street (S-16-155)

- Scope: Left turn lanes on 14th Street and Washington St or potential roundabout.
- Cost Estimate: \$3.8 million
- 2015-2019 Crashes: 9
- 2019 Traffic Volume: 8,000
- 2019 % of Trucks: 5.3%
- 2019 Average Pavement Quality Index (PQI): 3.2

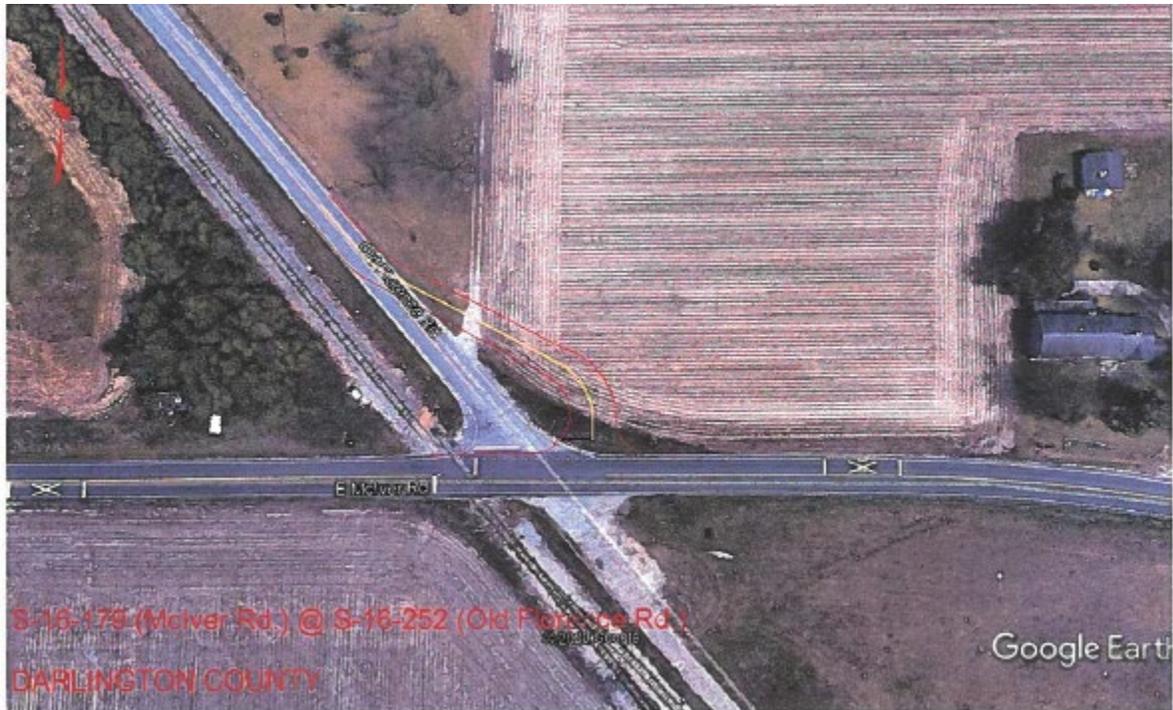
- Environmental Impacts: No known environmental concerns



DAR-2:

Mclver Rd (S-16-179) & Old Florence Rd (S-16-252) FLATS

- Scope: Slight realignment of Old Florence Rd with improved radii from truck turning movements.
- Cost Estimate: \$2.0 million
- 2015-2019 Crashes: 8
- 2019 Traffic Volume: 8,850
- 2019 % of Trucks: 8.4%
- 2019 Average Pavement Quality Index (PQI): 3.1
- Environmental Impacts: No known environmental concerns



Dillon County

DIL-1:

SC 9 & Pleasant Hill Rd (S-17-30)

- Scope: Realign Pleasant Hill Rd and left turn lane on SC 9 if traffic counts warrant. Realign S17-30 to intersect SC-9 at a 90-degree angle.
- Cost Estimate: \$3 million
- 2015-2019 Crashes: 5
- 2019 Traffic Volume: 2,950
- 2019 % of Trucks: 8.9%
- 2019 Average Pavement Quality Index (PQI): 3.5
- Environmental Impacts: Gas Station (UST/HazMat)



DIL-2:

SC 41 & Road 30 (S-17-30)

- Scope: Realign Road 30 and left turn lane on SC 41 if traffic counts warrant.
- Cost Estimate: \$1.7 million
- 2015-2019 Crashes: 1
- 2019 Traffic Volume: 3,500
- 2019 % of Trucks: 8.4%
- 2019 Average Pavement Quality Index (PQI): 1.4
- Environmental Impacts: Historic Page's Mill Pond & Wetlands



DIL-3:
SC 34 Widening

- Scope: SC Highway 34 Phase II B - West Extension (+/- 4,000-LF of Widening to 4-lanes between Interstate 95 and Harlees Bridge Rd S-23)
- Cost Estimate: \$10.9 million
- 2017-2025 Crashes: 17
- 2023 Traffic Volume: 3,500
- 2023 % of Trucks: 12%
- 2023 Average Pavement Quality Index (PQI): 2.90
- Environmental Impacts: Old Mill Creek & Utilities



Florence County

FLO-1:

E. National Cemetery Rd (S-21-13) & Paper Mill Rd (S-21-24)

- Scope: Flatten curve on E. National Cemetery Rd with left turn lane and realign Paper Mill Rd.
- Cost Estimate: \$2.6 million
- 2015-2019 Crashes: 6
- 2019 Traffic Volume: 8,500
- 2019 % of Trucks: 9.5 %
- 2019 Average Pavement Quality Index (PQI): 3.0
- Environmental Impacts: No known environmental concerns



FLO-2:

N Bethel Rd (SC 403), Olanta Hwy (SC 341) & Camp Branch Road (S-21-56)

- Scope: Realign N. Bethel Rd into Olanta Hwy. Skewed Intersection. Combine all roads into more standard intersection.
- Cost Estimate: \$4 Million
- 2015-2019 Crashes: 13
- 2019 Traffic Volume: 4,650
- 2019 % of Trucks: 9.5 %
- 2019 Average Pavement Quality Index (PQI): 3.3
- Environmental Impacts: Gas Station (UST/HazMat)



Marion County

MRN-1:

Jones Ave (SC 41A), Jones Ave Ext (S-34-42), Walnut St (S-34-238) & Railroad Ave (S-34-846)

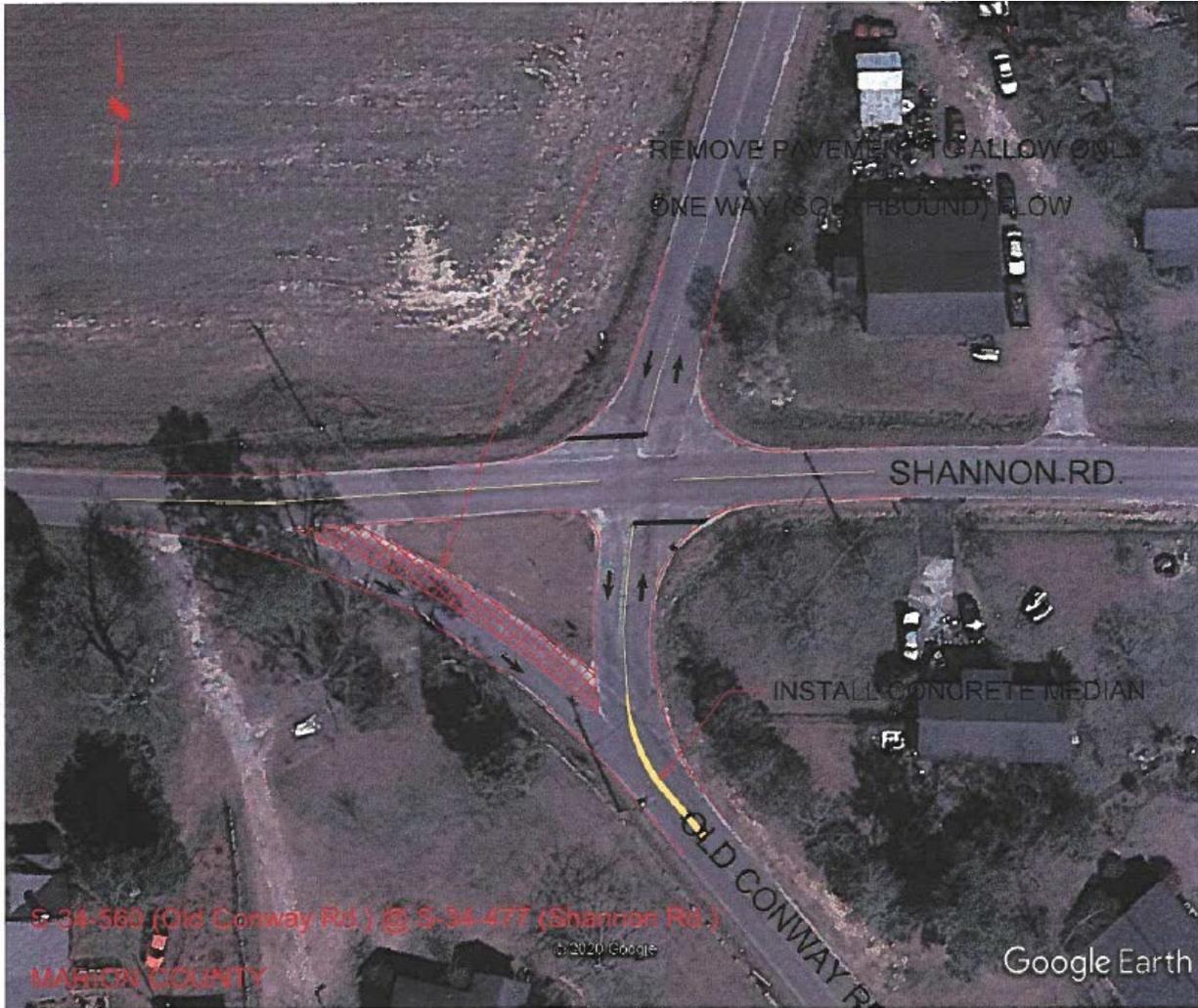
- Scope: Roundabout construction.
- Cost Estimate: \$3 million
- 2015-2019 Crashes: 3
- 2019 Traffic Volume: 11,150
- 2019 % of Trucks: 5.7%
- 2019 Average Pavement Quality Index (PQI): 2.3
- Environmental Impacts: No known environmental concerns



MRN-2:

Foxboro Road (S-34-560) & Shannon Rd (S-34-477)

- Scope: Roundabout construction.
- Cost Estimate: \$2 million
- 2015-2019 Crashes: 4
- 2019 Traffic Volume: 1,850
- 2019 % of Trucks: 5.1%
- 2019 Average Pavement Quality Index (PQI): 1.5
- Environmental Impacts: No known environmental concerns



Marlboro County

MLB-1:

SC 385 & Academy Rd (S-35-17)

- Scope: Realign Academy Road behind C-store. Scissors type intersection.
- Cost Estimate: \$1.5 million
- 2015-2019 Crashes: 7
- 2019 Traffic Volume: 3,250
- 2019 % of Trucks: 7.4%
- 2019 Average Pavement Quality Index (PQI): 3.0
- Environmental Impacts: Gas Station (UST/HazMat)



MLB-2:

**US 15/401, W Main St (SC 385), Brushy Bay Rd (S-35-56),
Dogwood Ave (S-35-376) & Sunset Dr (S-35-375)**

- Scope: Realignment of W. Main St with Brushy Bay Rd. Realign intersections to a more conventional intersection.
- Cost Estimate: \$4 million
- 2015-2019 Crashes: 17
- 2019 Traffic Volume: 7,650
- 2019 % of Trucks: 7.5%
- 2019 Average Pavement Quality Index (PQI): 2.2
- Environmental Impacts: Gas Station (UST/HazMat)



MLB-3:

Beauty Spot Rd (S-35-47) & Wallace Rd (S-35-17) *not on Pee Dee COG list, submitted by District 5

- Scope: Flatten side slope of embankment to improve site distance on SW corner of intersection.
- Cost Estimate: \$500,000
- 2015-2019 Crashes: 6
- 2019 Traffic Volume: 3,625
- 2019 % of Trucks: 5%
- 2019 Average Pavement Quality Index (PQI): 3.8
- Environmental Impacts: No known environmental concerns



Potential Projects (Unfunded)

Unlike the projects listed above, the potential projects do not have definite timelines or funding amounts. These projects will be considered as the need in the region arises and as funding becomes available. For example, the Pee Dee Region can reasonably expect increased growth and development in the area around the Dillon Inland Port in Dillon County since that facility recently opened in 2018. Although the specific needs of that area are unidentified at this time, keeping potential projects in that area on the radar of the PDRCOG and SCDOT will enable these projects to be programmed and included in future PDRCOG transportation planning initiatives, such as the Transportation Improvement Program (TIP). In addition to projects around the Dillon Inland Port, PDRCOG also anticipates upgrades needed along US Highway 38 in Marlboro County north of Bennettsville, along S 4th St leading into Hartsville in Darlington County, as well as an array of potential bicycle and pedestrian projects in the region. For example, a regional network of trails and bicycle/pedestrian facilities is not envisioned at this time but should be considered in the future for economic development, environmental, and public health benefits. Again, these projects lack specific timelines and funding amounts, but are included here as potential transportation improvements in the Pee Dee Region.

Also included in this list are the following projects, which have been identified according to their importance to the Pee Dee region.

1. US 15 Bus N 5th St from US 15 bypass N Marquis Rd to SC 102 Patrick Hwy
Resurface

Cost: \$900,000

2. SC 34 from Dothan Rd to Longstreet Rd
Widen to 4-Lane

Cost: \$35 million

3. SC 385 Main St in Bennettsville from Cheraw St SC 9 to Tyson Ave SC 9
Resurface

Cost: \$500,000

Note: small section between Broad and Lindsey under contract to be pave by June 2021. (0.3 miles)

4. US 52 and US 52 Business Intersection
Intersection Improvement

Cost: \$4,000,000

Note: potential feasibility study on this one.

5. S Cypress St, Mullins – Sopakco Plant (Road too narrow for trucks coming in/out)
Widening

Cost: \$3 million

I-73 Project

Interstate 73 was identified as a high priority route from Michigan to South Carolina in the Intermodal Surface Transportation Equity Act (ISTEA) that the US Congress passed in 1991. This summary provides information regarding the portion of Interstate 73 for which environmental studies have been completed by the South Carolina Department of Transportation.

The study area for I-73 in South Carolina followed the Great Pee Dee River to US 378 west of Conway, traveled along US 378 to US 501 and followed US 501 to the coast. It then proceeded up the coast to the North Carolina state line and then ran along the state line to the northwest corner of Scotland County, North Carolina. It extended along the Scotland and Rockingham County line to the northern side of I-74 in Rockingham County, then west along US 1 to the floodplain of the Great Pee Dee River. This study area was divided into two projects. The Northern Project ties to Interstate 73/74 in the Rockingham/Hamlet, North Carolina region and runs south across the South Carolina/North Carolina state line through Marlboro and Dillon Counties to a connection at Interstate 95. The Southern Project continues from Interstate 95 and runs to State Route 22 (Conway Bypass, or Veteran's Highway) in the Myrtle Beach/Conway area.

Projected Project Cost

I-73 Phase 1 (I-95 to US 501) - \$395M

I-73 Phase 2 (US 501 to Little Pee Dee River) - \$1,385.2M

Regional Freight Planning

The need for a comprehensive strategy to address goods movement in this region results from significant growth in both population and industry that has put pressure on existing infrastructure. The Freight Plan is an important product that ties together findings from a series of significant regional studies and projects over the past decade. It is expected that the Freight Plan will guide project partners and stakeholders (public and private) in the development of a staged, priority-driven technical process to address future regional freight (primarily truck and rail) processes, policies and investments.

The key objectives of the Freight Plan will be to:

- Collect system freight data, across modes, that support an ongoing regional freight-planning function;
- Create a framework of analysis for freight performance measures and the identification of freight-specific issues on the transportation network to inform a set of strategic recommendations;
- Develop a framework for incorporating Intelligent Transportation System (ITS) efforts and emerging technologies into freight planning, modeling, and prioritization processes;
- Guide the prioritization and implementation of future investments, policies, and strategies in the short-, mid-, and long-term that improve the safety, security, mobility, operations and reliability of the freight transportation system and support the economic development goals of the region.

Freight mobility is an important aspect of the area's transportation system performance and a major driving force for the Pee Dee Region's economy. The movement of freight not only impacts the region's economy, it supplies you with your needed, everyday goods such as toilet paper, clothing and groceries.

Transit Planning

Rural public transportation presents a unique challenge. Long trips and low population densities mean that it is a challenge to get sufficient ridership to support transit routes. However, the lack of transportation options combined with the prevalence of elderly and low-income people in many rural communities means that there is a need for such a service.

Another key indicator of transit need is the percentage of households without access to a vehicle. Often these individuals depend on others to provide them with transportation, particularly in rural areas where destinations are too far to reach by foot or pedal. There are particularly high concentrations of these households in the most rural areas. The distribution of senior citizens and people with disabilities can also be an indicator of transit need since many of these individuals may be unable or unwilling to drive an automobile.

PDCOG partners with PDRTA to help provide public transportation with the highest degree of integrity, respectfulness, and efficiency across six counties in the Pee Dee Region.

PDRTA service area is the largest RTA territory in South Carolina and the 3rd largest RTA in the United States. They include services such as:

- **Fixed Routes** Scheduled routes with predetermined stops that provide access to many destinations. These are where you typically see bus stop signs.
- **Paratransit / Demand Response** available to passengers with mobility difficulties who are unable to navigate fixed-route service. To call 24 hours in advance to schedule their trips from home to their destination. They then call when they are ready to be picked up or they may be on a set schedule such as work force where the group gets off at a set time.
- **Vanpools** This service is COMING SOON. At a much lower cost than using your own car a small group of commuters will use a shared ride service to reach a destination. 1-2 drivers receive the PDRTA Training program before getting behind the wheel. One main point with this program is that there will be a guaranteed ride home offered in the event of emergencies.
- **Park-n-Rides** PDRTA will soon offer a service that will allow commuters to drive just a few miles from their home and then use a commuter bus to travel the remainder of the trip. From the data we have collected we found that this service will work great for those traveling more than 20 miles to reach work.

PDRTA relies on partnerships with local stakeholders and local match funding to access our allocated Federal dollars to cover 2 main expenses, Capital and Operational. PDCOG looks to help PDRTA in this process.

Transportation Alternatives Program (TAP)

The Transportation Alternatives Program (TAP) (officially known as the “Transportation Alternatives Set-Aside”) is a Federal reimbursement grant program funded through the US Department of Transportation’s Federal Highway Administration (FHWA).

The Transportation Alternatives Program allows local governments and other eligible entities to apply for grants for a variety of non-motorized transportation projects.

PDCOG has applied for the following:

Town of Chesterfield Various Sidewalks –

Lucas (S13-175) & Turner (S13-591), Crescent (S13-129), & Welsh (S13-131) - 5-ft wide sidewalk

Estimate - \$1,359,505.00

Town of Patrick Various Sidewalks –

Main St. (US HWY 1), McLain (S13-208 & S13-583), Turnage St. (SC HWY 102), Polson St. (SC HWY 102), Griggs St. (S13-208 & S13-747), Douglas St. (SC13-628), & Cranford St. (Local)

Estimate - \$3,192,320.00

City of Darlington Various Sidewalks –

S. Main St. (US HWY 52 BUS.), Juleswood Dr. (S16-1176), Joe Louis Blvd. (S16-620), Limit St. (S16-342), Southern Pine St. (S16-341), Allen St. (S16-339), Hickory St. (S16-221), Reid St. (S16-223), Chalmers St. (S16-218), Jessamine St. (S16-137), Edwards Ave. (S16-98), Pine St. (S16-199) & S. Dargan St. (S16-220)

Estimate - \$4,999,060.00

City of Johnsonville Various Sidewalks –

Stuckey (S21-607), S Hampton (S21-124), & E Marion (S21-134) & S Jackson (S21-139)

Estimate - \$1,989,980.00

City of Bennettsville Sidewalk (SCDOT Applied) -

Northern side of US 15/401

Estimate - \$1,455,000.00

Appendices

A. Act 114 Project Prioritization Rankings

County	Possible Projects	Cost Est. \$ (thousands)	Project Prioritization SC Act 114									Total Score	Include	Discard
			Finan. Viability (25%)	Public Safety (15%)	Econ. Devel. (10%)	Traffic Volume & Congest. (10%)	Truck Traffic (10%)	Pave Quality Index (10%)	Environ. Impact (10%) high score = low impact	Alt Trans. Solut. (10%)	Meets Land Use Plan (Yes or No)			
Chesterfield	CHF-1 SC 9 Widening 2-lane to 4-lane from Pageland to Ruby	\$ 128,200	5	15	10	7.5	7.5	5	2.5	0	52.5			
	CHF-2 SC 145 at Center Point Rd / Oakland Church Rd (S-13-77)	\$ 2,000	17.5	7.5	5	2.5	5	7.5	7.5	0	52.5			
	CHF-3 Society Hill Rd (S-13-20) at Bob Byrd Lane (local) & H Cooper Black Recreational Rd (local)	\$ 1,500	20	2.5	6	2.5	2.5	7.5	5	0	46.0			
Darlington	DAR-1 14th Street (S-16-102) & Washington Street (S-16-155)	\$ 3,800	10	10	10	5	5	5	10	0	55.0			
	DAR-2 Molver Rd (S-16-178) & Old Florence Rd (S-16-252) FLATS	\$ 2,000	17.5	10	10	5	7.5	5	10	0	65.0			
Dillon	DIL-1 SC 9 & Pleasant Hill Rd (S-17-30)	\$ 3,000	10	7.5	7	2.5	5	2.5	5	0	39.5			
	DIL-2 SC 41 & Road 30 (S-17-30)	\$ 1,700	20	5	6	2.5	5	10	2.5	0	51.0			
Florence	FLO-1 E. National Cemetery Rd (S-21-13) & Paper Mill Rd (S-21-24)	\$ 2,600	15	10	6	5	7.5	5	10	0	58.5			
	FLO-2 N Bethel Rd (SC 403), Olanta Hwy (SC 341) & Camp Branch Road (S-21-56)	\$ 4,000	10	12.5	5	2.5	5	5	5	0	45.0			
Marion	MRN-1 Jones Ave (SC 41A), Jones Ave Ext (S-34-42), Walnut St (S-34-236) & Railroad Ave (S-34-846)	\$ 3,000	10	7.5	7	7.5	7.5	7.5	10	0	57.0			
	MRN-2 Foxboro Road (S-34-560) & Shannon Rd (S-34-477)	\$ 2,000	17.5	7.5	9	2.5	2.5	10	10	0	59.0			
Marlboro	MLB-1 SC 385 & Academy Rd (S-35-17)	\$ 1,500	20	10	10	2.5	5	5	5	0	57.5			
	MLB-2 US 15/401, W Main St (SC 385), Brushy Bay Rd (S-35-56), Dogwood Ave (S-35-376) & Sunset Dr (S-35-375)	\$ 4,000	10	12.5	9	5	7.5	7.5	5	0	56.5			
	MLB-3 Beauty Spot Rd (S-35-47) & Wallace Rd (S-35-17) *not on Fee Dee COG list, submitted by District 5	\$ 500	25	10	7	2.5	2.5	2.5	10	0	59.5			

B. SCDOT Transportation Asset Management Plan (TAMP) System Performance Report