

# 2045

## RURAL LONG RANGE TRANSPORTATION PLAN

A 20-YEAR  
TRANSPORTATION PLAN  
FOR THE APPALACHIAN REGION  
OF SOUTH CAROLINA

AUGUST 2022



**APPALACHIAN**  
COUNCIL OF GOVERNMENTS



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# 1 INTRODUCTION

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Appalachian Council of Governments (ACOG) is responsible for transportation planning activities within the rural portion of the six-county region while the urbanized areas are addressed by three Metropolitan Organizations (MPO's): the Anderson Area Transportation Study (ANATS), Greenville-Pickens Area Transportation Study (GPATS), and the Spartanburg Area Transportation Study (SPATS). This arrangement is managed and funded by the South Carolina Department of Transportation (SCDOT) and the United States Department of Transportation (USDOT) through its components including the Federal Highway Administration (FHWA) and Federal Transit Administration (FTA).

This layered approach provides financial and technical resources to ensure compliance with federal and state laws and policies regarding the transportation system. ACOG's 44-Member Board of Directors sets policy for the Council of Governments. Two-thirds of the members are local elected officials, including state legislators, county council members, and mayors or city council members. County councils appoint the remaining citizen and minority members, some of whom may also be elected officials. The ACOG Board appoints a Regional Transportation Committee that meets regularly to coordinate transportation projects and update various plans, including this Rural Long Range Transportation Plan (RLRTP). ACOG staff also participate on study and technical committees for ACOG region MPO's to promote cooperation, consistency and communication between the varied transportation planning agencies in the area.

This is the fourth comprehensive RLRTP for the rural area of the Appalachian Region which consists of the following six counties: Anderson, Cherokee, Greenville, Oconee, Pickens and Spartanburg. According to the 2010 Census, the total population for the six-county region is 1.3 million people of which 22 percent or approximately 282,000 are located in the rural areas.

## 1.1 The Infrastructure Investment and Jobs Act (IIJA)

On November 15, 2021, President Biden signed the Infrastructure Investment and Jobs Act (IIJA) (Public Law 117-58, also known as the "Bipartisan Infrastructure Law") into law. The Bipartisan Infrastructure Law is the largest long-term investment in our infrastructure and economy in our Nation's history. It provides the basis for FHWA programs and activities through September 30, 2026. It makes a once-in-a-generation investment of \$350 billion in highway programs. This includes the largest dedicated bridge investment since the construction of the Interstate Highway System. As under the FAST Act, the BIL authorizes a single, combined amount for each fiscal year for all apportioned highway programs combined. That amount is first apportioned among the States, and then each State's apportionment is divided among the individual apportioned programs.

New programs under the BIL focus on key infrastructure priorities including rehabilitating bridges in critical need of repair, reducing carbon emissions, increasing system resilience, removing barriers to connecting communities, and improving mobility and access to economic opportunity.

The BIL will continue the FAST Act’s emphasis on a performance-based approach to transportation decision-making to support the seven national goals of the federal-aid highway program. These seven national performance goals include:

Goal area	National goal
Safety	To achieve a significant reduction in traffic fatalities and serious injuries on all public roads
Infrastructure condition	To maintain the highway infrastructure asset system in a state of good repair
Congestion reduction	To achieve a significant reduction in congestion on the National Highway System
System reliability	To improve the efficiency of the surface transportation system
Freight movement and economic vitality	To improve the national freight network, strengthen the ability of rural communities to access national and international trade markets, and support regional economic development
Environmental sustainability	To enhance the performance of the transportation system while protecting and enhancing the natural environment
Reduced project delivery delays	To reduce project costs, promote jobs and the 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

The previous transportation authorization, the FAST Act, describes federal planning factors issued by Congress to emphasize a national perspective. Under the BIL, these existing planning factors remain unchanged. The ten federal planning factors are as follows:

1. Support the economic vitality of the United States, the States, nonmetropolitan areas, and metropolitan areas, especially by enabling global competitiveness, productivity, and efficiency;

2. Increase the safety of the transportation system for motorized and nonmotorized users;
3. Increase the security of the transportation system for motorized and nonmotorized users;
4. Increase the 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 throughout the State, 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.

## 1.2 Rural Planning Process

The rural long range transportation planning process does not have the same federal mandates that guide the urbanized area transportation planning process. However, in South Carolina each Council of Government, in partnership with SCDOT, is responsible for implementing a transportation planning process that fully complies with federal planning requirements. ACOG's 2045 Rural LRTP engaged the following stakeholders throughout the planning process:

- **ACOG Rural Transportation Advisory Committee (RTAC):** Consists of 10 members; 6 representing each County, 3 representing the region's MPOs, and 1 at-large member. The Committee met several times during the planning process to guide funding priorities and to establish goals and objectives.
- **ACOG Board of Directors:** This policy body of 44 members has the responsibility of adopting and overseeing implementation of the 2045 Rural LRTP.
- **SCDOT:** ACOG staff worked closely with SCDOT to ensure that the planning process successfully met regulatory requirements. SCDOT also assisted with reviewing project recommendations to ensure that proposed projects did not overlap with any existing and future SCDOT projects.

- **Municipal and County Officials:** Planners, engineers, and economic development staff at different levels of government were engaged to provide appropriate input in the plan's development.

### 1.3 ACOG Rural Transportation Goals

As established by the RTAC, the long-range transportation goals for the ACOG region are listed below:

1. Identify the current condition of the transportation system;
2. Provide research and data analysis to state and local governments;
3. Assist local governments with transportation and land use planning;
4. Coordinate transit efforts with regional transit authorities and human service providers;
5. Identify and prioritize transportation needs for input to the Statewide Multi-Modal Transportation Plan and STIP;
6. Implement a transportation planning process that fully complies with the federal planning requirements established by the BIL; and
7. Develop a Rural Planning Work Program (RPWP).

### 1.4 Amendment Process

From time to time circumstances dictate that updates be made to the Rural LRTP following its original adoption. Amendments can be made if the changes are consistent with federal requirements for plan development and approval. Amendments are categorized as major or minor.

Major amendments constitute significant changes to the cost, scope and schedule of a project listing. In addition, the addition of chapters to the LRTP as mandated by SCDOT and/or FHWA will constitute a major amendment. Major amendments must be approved by the ACOG Board of Directors, SCDOT, FHWA, and FTA (if applicable).

Minor amendments are minor changes in funding sources, description, lead agency, project limits, LRTP text, etc. and may be processed administratively by the ACOG Executive Director or his/her designee.



## 1.5 Federal Delineations

The U.S. Office of Management and Budget (OMB) establishes and maintains the delineations of Metropolitan Statistical Areas (MSA), Metropolitan Divisions (MD), Micropolitan Statistical Areas (McrSA), Combined Statistical Areas (CSA), and New England City and Town Areas solely for statistical purposes. This classification is intended to provide nationally consistent delineations for collecting, tabulating, and publishing Federal statistics for a set of geographic areas. The MSA Standards do not equate to an urban-rural classification; many counties included in MSAs, and many other counties, contain both urban and rural territory and populations.

In the ACOG region, there are two separate MSA designations: the Greenville-Anderson, SC MSA (Anderson, Greenville, Laurens, and Pickens Counties) and the Spartanburg, SC MSA (Spartanburg County). Both MSAs are part of the larger Greenville-Spartanburg-Anderson CSA, which includes the Gaffney, SC McrSA, Greenwood, SC McrSA, Seneca, SC McrSA, and Union McrSA.

The Census Bureau's urban-rural classification is fundamentally a delineation of geographical areas, identifying both individual urban areas and the rural areas of the nation. The Census Bureau's urban areas represent densely developed territory, and encompass residential, commercial, and other non-residential urban land uses.

The primary purpose of both geographies (MSA and UZA) is to provide statistical information for use by government agencies. A secondary purpose is to serve as the basis for distribution of program funds that use a formula.

For all urbanized areas with a population of more than 50,000, as defined by the U.S. Census Bureau, a Metropolitan Planning Organization (MPO) must be established. In the ACOG region, three such MPOs exist: the Anderson Area Transportation Study (ANATS), the Greenville-Pickens Area Transportation Study (GPATS) and the Spartanburg Area Transportation Study (SPATS). ACOG administers the transportation program for the rural portions of the ACOG region outside of the urban areas.

## 1.6 State and Local Delineations

The State of South Carolina is subdivided into 46 counties. South Carolina also has ten Council of Governments (COGs) across the state, with each of these COGs serving multiple counties. In the Upstate of South Carolina, ACOG facilitates partnerships among the delineated federal and state organizations to allow local governments to come together to address common challenges. These challenges include issues pertaining to infrastructure, community and economic development, and other general regional governmental concerns.

## 1.7 Impacts of COVID-19

The impact of the novel coronavirus COVID-19 on the transportation system regionally and nationally during 2020 would be hard to overstate. The need for social distancing combined with more formal stay at home recommendations has greatly curtailed discretionary travel and reduced commute trips for many residents of the region able to work or participate in school from home. Many people in front line jobs that require a physical presence in the workplace have changed commute patterns too, reducing carpooling and transit use.

Highway traffic volumes statewide in South Carolina dropped by as much as 45% in the spring of 2020 before gradually beginning to climb back up. More speed related crashes have resulted from fewer cars on the road. Bicycling and walking have conversely grown as many people sought options for outdoor activity after being isolated at home for extended periods.

This 2022 update to the ACOG Rural Long Range Transportation Plan is intended to be a minor update, revisiting fiscal constraint and project timing but not fundamentally revisiting goals, objectives and policies established for the plan in 2016. For that reason this document does not comprehensively address impacts of COVID-19 on the various transportation system measures and travel trends described herein.

COVID-19 is anticipated to have medium and potentially long term impacts on the transportation system. Several of these are summarized here:

- **Telecommuting Growth & Implications** – COVID-19 has forced a massive experiment in working from home, and many employers have found that has worked surprisingly well for them, reducing traditional skepticism about productivity if employees aren't in the office. As the pandemic has lessened in severity, many employees have returned to normal office situation. Undoubtedly a significant subset of workers will enjoy for flexibility moving forward, which will impact the growth of traffic volumes throughout South Carolina.
- **Funding Impacts** - Reduced commuter travel also means fewer gallons of gas sold and reduced revenue to the state and federal highway funds, with implications across modes.
- **Housing Market** – A spike in housing prices since 2020 was in small part due to a desire to leave dense, congested cities to work remotely. As the Federal Reserve continues to raise interest rates in an effort to curb inflation, the housing market will likely stabilize but telecommuting has forever changed the concept of relocation for the professional worker.
- **Impacts on Transit & Ridesharing** – Public transit agencies have seen ridership rebound partially following short suspensions in spring 2020, but ridership remains 40%-45% below normal.

- Biking & Walking have increased as office and gym closures have led many to seek fresh air and exercise outside walking and riding. Bicycle sales have set records and demand for parking at trailheads has outstripped capacity.

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## 2 DEMOGRAPHICS

### 2.1 Land Area

The ACOG region, as seen in **Map 1**, encompasses approximately 3,956 square miles. As the size of the urban area has increased, the size of the rural area has decreased. **Table 2-1** shows how the region’s urban/rural balance has changed since 2000.

Table 2-1. ACOG Regional Land Area (SqMi)

Planning Area	2000		2010		% Change 2000-2010
	Land Area (SqMi)	% of ACOG Region	Land Area (SqMi)	% of ACOG Region	
ANATS	176.37	4.5%	176.37	4.5%	0.0%
GPATS	753.18	19.0%	878.14	22.2%	16.6%
SPATS	422.83	10.7%	424.61	10.7%	0.4%
Rural Area	2,603.62	65.8%	2,476.88	62.6%	-4.9%
<b>Total Area</b>	<b>3,956.00</b>		<b>3,956.00</b>		

Source: U.S. Census Bureau 2010 and 2020 decennial Census data converted by Esri into 2020 geography.

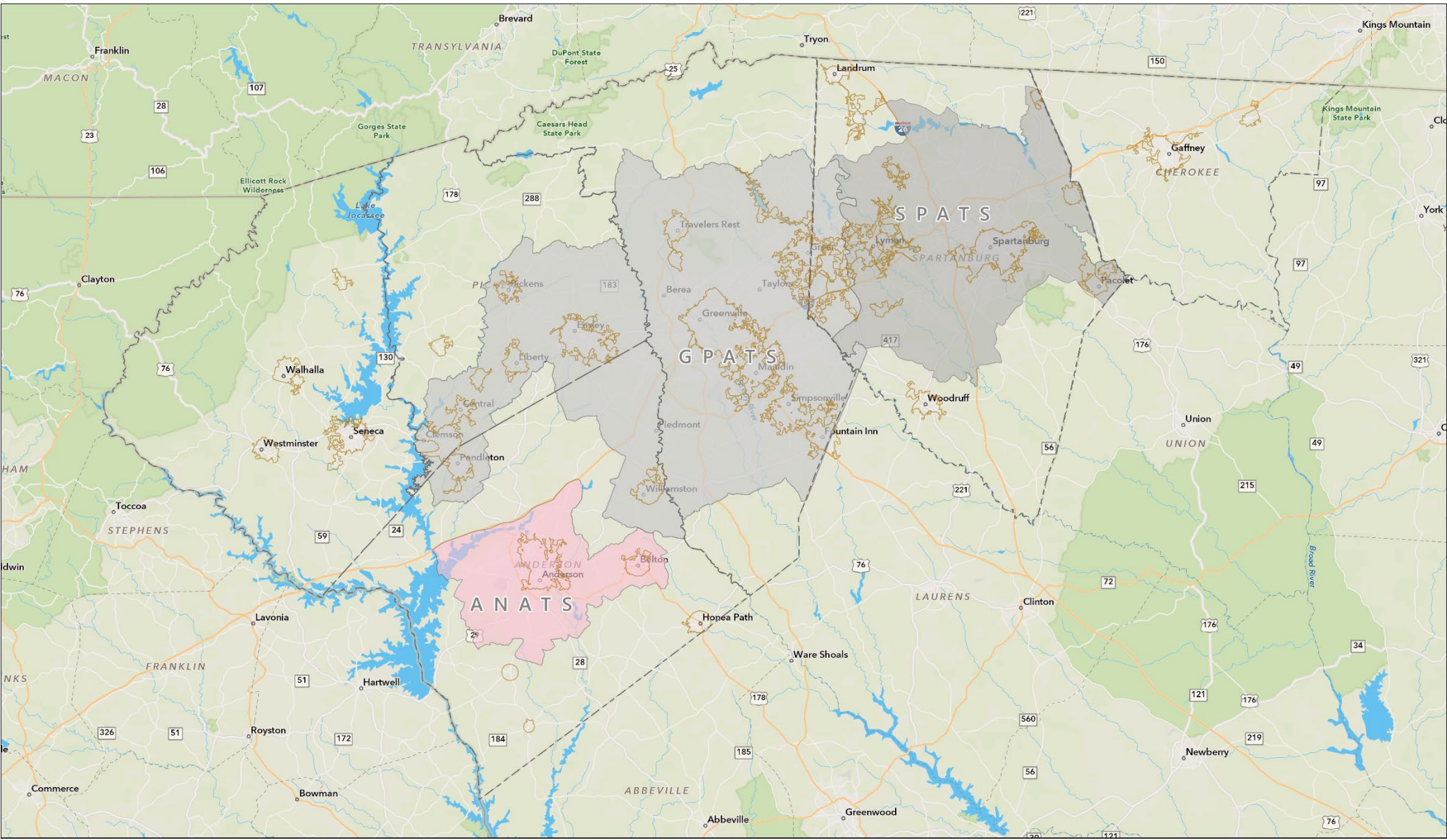
**Table 2-2** shows the by-county urban and rural land coverage change over this ten-year period. As shown in Figure 3.2, the largest increase in the ACOG region’s urban area took place in Anderson County. This change reflects in part the increase in growth of Powdersville, Williamston, and Pelzer along the I-85, SC 153, SC 8 and US 29 corridors in Anderson County. Growth in and around Clemson has spilled over into northern Anderson County along US 76 in Pendleton. Pickens County also saw a sizeable increase in urbanized area between 2000 and 2010 due to growth along the US 123 and SC 93 corridors through Liberty, Central, and Clemson.

Table 2-2. ACOG Regional Land Area Change, by County (SqMi)

	2000		2010		% Change Urban	% Change Rural
	Urban (SqMi)	Rural (SqMi)	Urban (SqMi)	Rural (SqMi)		
Anderson	235.29	521.94	299.32	457.91	27.2%	-12.3%
Cherokee	-	397.26	-	397.26	0.0%	0.0%
Greenville	479.51	315.40	492.21	302.70	2.6%	-4.0%
Oconee	-	673.48	-	673.48	0.0%	0.0%
Pickens	165.84	346.21	210.09	301.96	26.7%	-12.8%
Spartanburg	471.74	347.56	477.50	341.80	1.2%	-1.7%

Source: U.S. Census Bureau 2010 and 2020 decennial Census data converted by Esri into 2020 geography.

Map 1. ACOG Region



## 2.2 Historical Population

The ACOG region is a vibrant and growing area, and it is important to understand how the population is changing in order to better plan for future transportation needs. The six-county region has a 2020 estimated population of 1,323,476. The primary population centers are in Greenville and Spartanburg Counties with populations of 525,534 and 327,997 respectively. Their combined populations make up nearly 65 percent of all people living in the region, and they are also the most urbanized counties. The remaining counties tend to be more rural, with the exception of Anderson.

Table 2-3. Population by County, 2000 - 2020

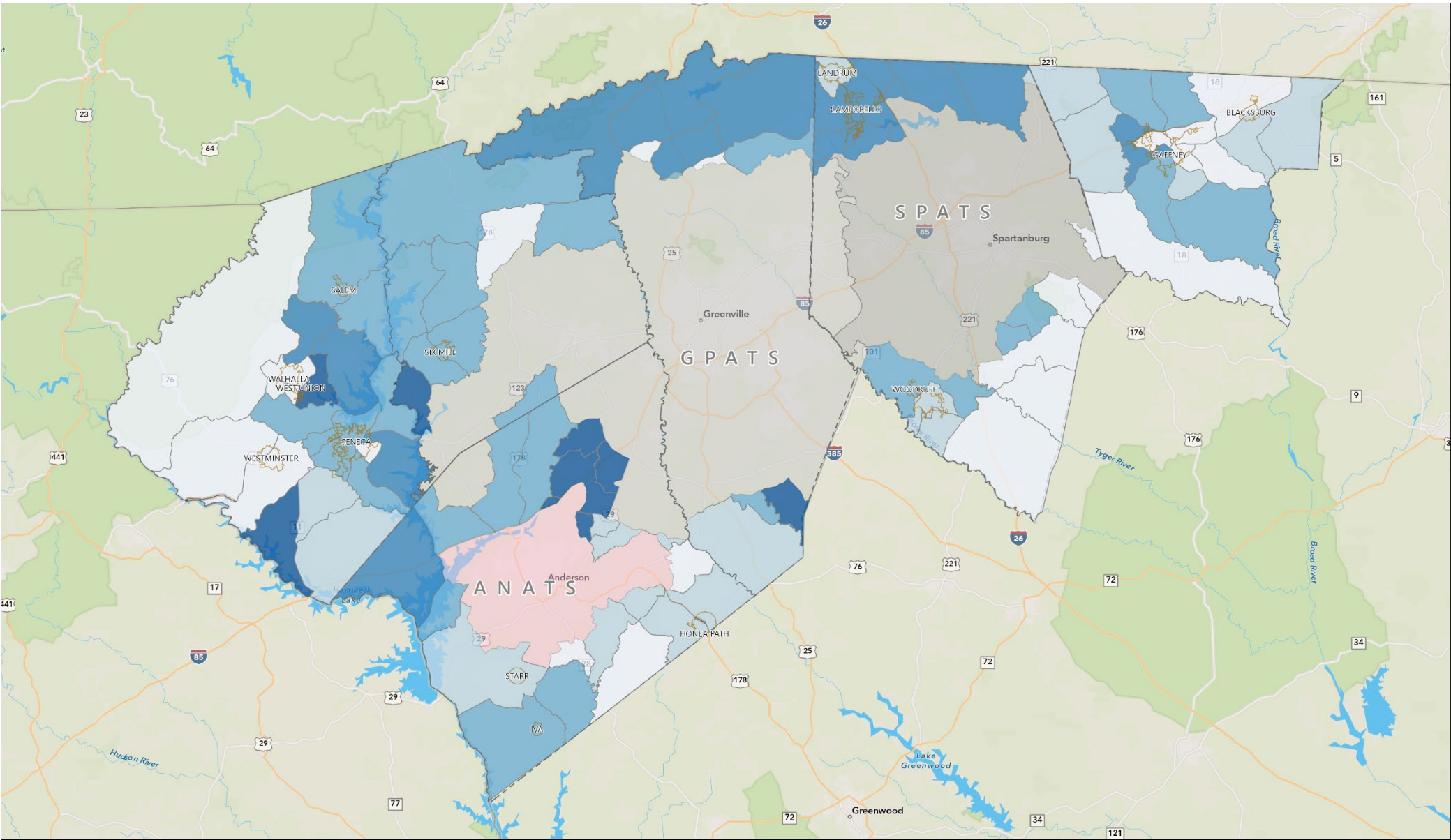
	2000	2010	2020	% Change (10 - 20)
Anderson	166,304	187,126	203,718	8.87%
Cherokee	52,649	55,342	56,216	1.58%
Greenville	380,949	451,225	525,534	16.47%
Oconee	66,434	74,273	78,607	5.84%
Pickens	111,062	119,224	131,404	10.22%
Spartanburg	254,443	284,307	327,997	15.37%
ACOG Region	1,031,841	1,171,497	1,323,476	12.97%

Source: U.S. Census Bureau, 2020 Census Redistricting Data (P.L. 94-171). U.S. Census Bureau 2000 & 2010

Although all parts of the ACOG region have seen significant growth since 2010, **Map 2** displays some of the higher growth areas by census tract over the last 10 years. It is evident from this map that the areas of highest percentage growth are:

- **Western Cherokee County in the Grassy Pond/Macedonia area.** This is largely defined as the area between the City of Gaffney and the Cowpens area, just across the Spartanburg County line between US Highway 29 and SC Scenic Highway 11. Growth in this area is largely tied to development along I-85, which is a major impetus for growth in the Upstate as well as some “spillover” growth from eastern Spartanburg.
- **Northern Greenville County.** This region is sparsely populated. The actual number of people moving to this area is relatively low, but in terms of a percentage increase, it is significant. Retirees that desire a scenic mountain home comprise a significant portion of the people that are moving to this area.
- **Western Anderson and southern Oconee Counties.** This area is defined as the area near the Townville and Fair Play area adjacent to Lake Hartwell. This area is also seeing growth tied to increased demand for lakefront housing that is convenient to I-85.

Map 2. Population Growth by Census Tract, 2010-2020



Percent Change by Census Tract

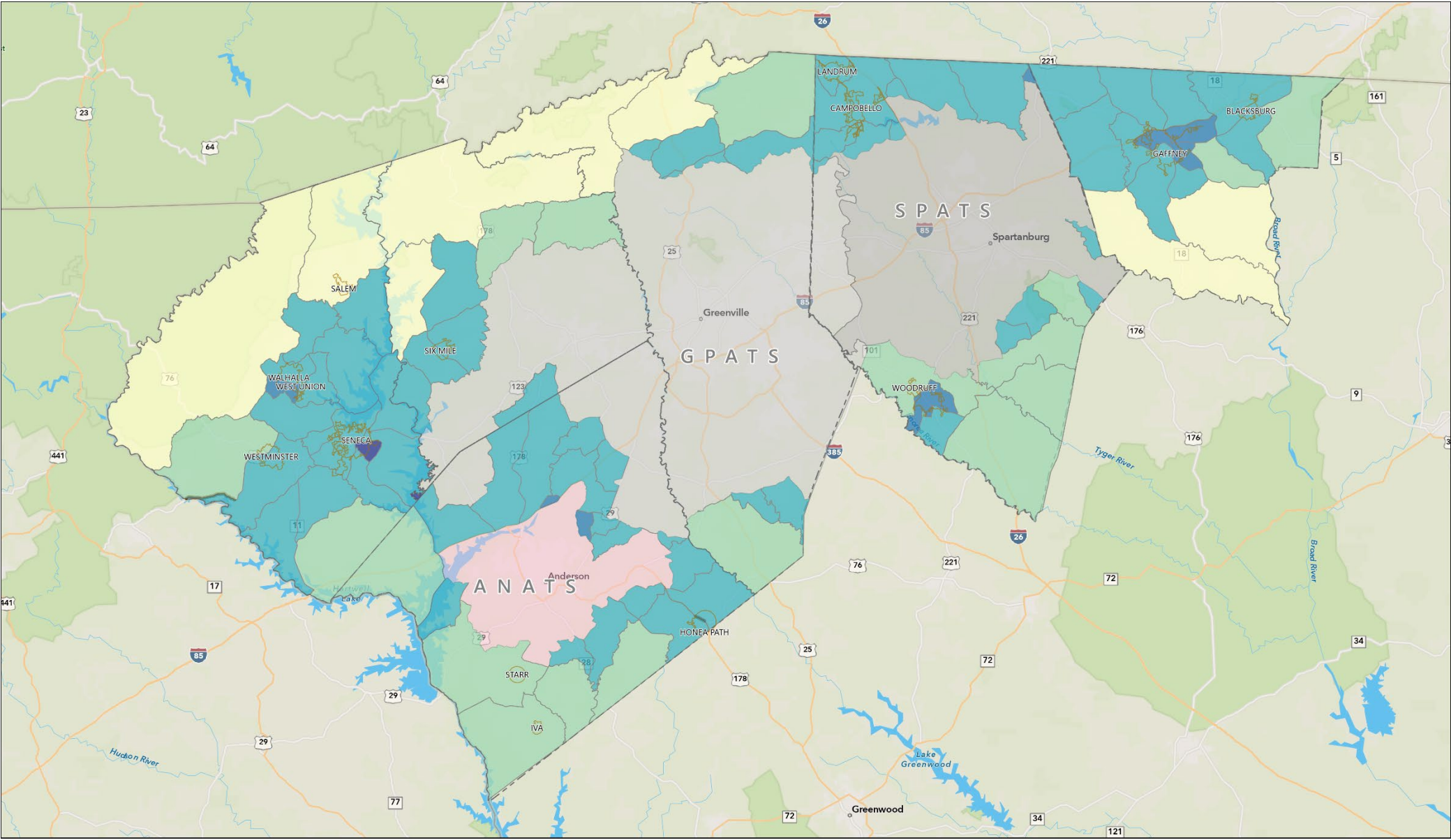
- Loss of 0.1% or more
- 0% to 5%
- 5% to 10%
- 10% to 20%
- Gain of 20% or more

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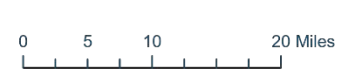
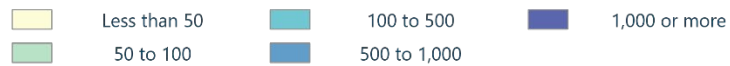


Map 3. 2020 Regional Population Density by Census Tract



2020 Regional Population Density by Census Tract

Persons per Square Mile



- **Eastern Anderson County.** Much of this growth is associated with growth in Powdersville and Greenville.
- **Northern Spartanburg County.** The area around Inman and US Highway 176 are quickly becoming targets for developments in suburban Spartanburg.

With respect to the rural areas of the ACOG region, population growth was highest in Greenville and Anderson counties between 2010 and 2020. As of the writing of this report in August of 2022, the U.S. Census Bureau has not released new urbanized areas based on the 2020 Census. Given the population increases in rural Anderson, rural Greenville, and rural Pickens Counties, it is likely that a portion of the rural areas in these counties will meet the definition of urban and thus brought under MPO jurisdiction in the near future.

The rural counties of Cherokee and Oconee grew at different rates, with Oconee seeing a nearly six percent increase. As was mentioned in the prior section, growth in southern and eastern Oconee County has persisted over the last 10-20 years. Development pressure from Seneca and Clemson should continue for the foreseeable future. It is possible that these areas of Oconee County will meet the Census definition for urban in the near future.

Cherokee County’s growth rate was just above 1.5 percent from 2010-2020. The improvement of Interstate 85 in Cherokee County coupled with an increase in industrial and residential development will likely begin to push growth in the region to the eastern Upstate. Proximity to the rapidly sprawling Charlotte metro area and housing affordability are also catalysts for future growth.

Table 2-4. ACOG Rural Area Change in Population, 2010-2020

	2010			2020			% Change in Pop.
	Rural Pop.	Rural Land Area (SqMi)	Density (Pop/SqMi)	Rural Pop.	Rural Land Area (SqMi)	Density (Pop/SqMi)	
Anderson	46,500	457.91	101.5	49,866	457.91	108.9	7.2%
Cherokee	55,342	397.26	139.3	56,216	397.26	141.5	1.6%
Greenville	17,307	302.70	57.2	19,102	302.70	63.1	10.4%
Oconee	74,237	673.48	110.2	78,607	673.48	116.7	5.9%
Pickens	21,015	301.96	69.6	22,445	301.96	74.3	6.8%
Spartanburg	40,108	341.80	117.3	42,396	341.80	124.0	5.7%
ACOG Rural Area	254,509	2,475.11	102.8	268,632	2,475.11	108.5	5.5%

Source: U.S. Census Bureau 2010 and 2020 decennial Census data converted by Esri into 2020 geography.

## 2.3 Population Projections

The ACOG region is expected to be the most populous region in South Carolina for the foreseeable future. The new population will tend to be concentrated in the urban MPO areas; however the rural areas of the COG will increasingly feel the effects of the expanding influence of development and growth in the region.

Population growth is expected in all counties in the COG. Greenville County will continue to be the primary population center in the Upstate. It will also have the most growth in terms of real population, exceeding 745,000 by 2045. This increase reflects a change of approximately 172,000 or 30 percent between 2025 and 2045. Most of the growth in Greenville will occur within the urban MPO jurisdiction.

Spartanburg County is the second largest population center in the Upstate, and it is expected to retain that status in the future. It has the second largest projected population increase of approximately 102,000 or 29 percent between 2025 and 2045. Much of the growth will occur within the MPO jurisdictions, however, there is some growth expected to the south of the MPO in the Woodruff area that could impact the non-MPO area.

Anderson County is expected to have an increase of approximately 40,000, representing a 18 percent increase between 2025 and 2045. Anderson County will see much of its growth outside of the MPO areas, particularly in the northwestern portion of the county in vicinity of Lake Hartwell, Pendleton, and around the Townville community. Another key growth area in the non-MPO region is located northeast of Anderson, between I-85 and US Highway 29 towards Powdersville.

Oconee and Pickens Counties are projected to see a consistent increase in population over the next 20 years; population projections for 2045 are approximately 90,500 (a 10 percent increase between 2025 and 2045) and 148,000 (a 13 percent increase between 2025 and 2045) respectively. The growth in both counties will be focused around Lakes Hartwell and Keowee, and will include the cities such as Clemson, Central, Seneca, and Walhalla. The growth of second homes and retirement communities around the lakes will be an important factor in planning for growth in this region.

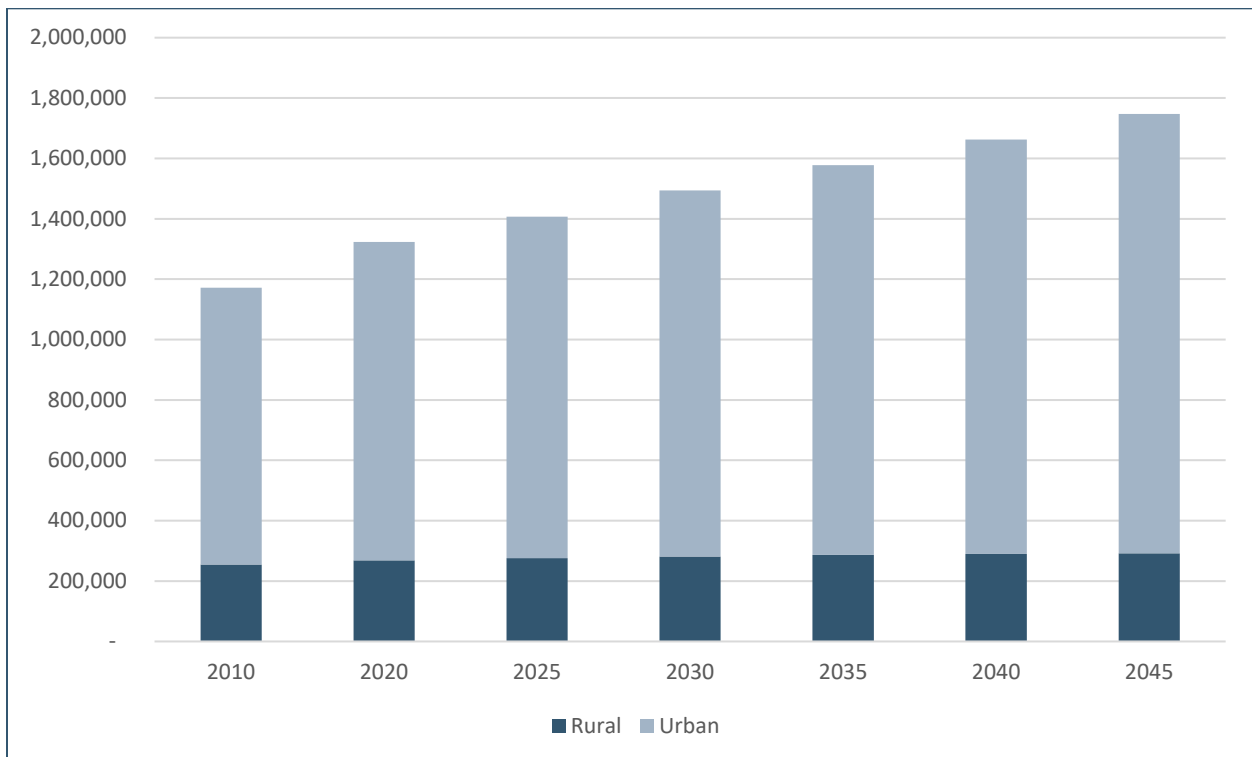
Cherokee County is projected to have the lowest population of the COG counties in 2045, including an expected population near 59,000 (a 1 percent increase between 2025 and 2045). The growth in Cherokee will likely occur along I-85 in the vicinity of Gaffney, the largest city and county seat, and to the southeast towards Cherokee Falls and the Broad River.

Table 2-5. Population Projections by County, 2025-2045

	2025	2030	2035	2040	2045
Anderson	214,715	224,750	234,420	244,333	254,186
Cherokee	57,960	58,315	58,350	58,598	58,793
Greenville	573,060	616,105	659,270	702,355	745,460
Oconee	82,490	84,940	86,380	88,493	90,438
Pickens	131,255	135,865	139,525	143,818	147,953
Spartanburg	348,085	373,465	399,415	424,985	450,650
ACOG Region	1,407,565	1,493,440	1,577,360	1,662,583	1,747,481
ACOG Urban Area	1,131,921	1,211,643	1,290,990	1,372,612	1,455,180
ACOG Rural Area	275,644	281,797	286,370	289,971	292,301

Source: 2025, 2030, and 2035 projections from South Carolina revenue and Fiscal Affairs Health and Demographics Section. 2040 and 2045 projections via linear trend extrapolation of 2025-2035 projections. ACOG Urban and Rural Area projections based on a forecast of percent of rural population to total population.

Figure 2-1. Rural vs. Urban Share of ACOG Region Population, 2010-2045



## 2.4 Housing and Employment

As the Upstate grows in population, the number of households also increases. Household size across the nation has been on the decline, and that trend is true in South Carolina and the ACOG region too. The number of households can be indicative of the amount of traffic more so than the actual population. All households generate traffic of some kind, even though everyone in that household may not drive.

The number of households in the ACOG region increased between 2010 and 2020 by approximately 64,000. Following the real population trends, Greenville Spartanburg and Anderson added the most households. Greenville County has seen the largest increase in households, adding 32,551 during this period. Spartanburg County added 16,590 households and Anderson County added 6,543 households.

Table 2-6. Households by County, 2000-2020

	2000	2010	2020	% Change (10 - 20)
Anderson	65,649	73,829	80,372	8.86%
Cherokee	20,495	21,519	22,349	3.86%
Greenville	149,556	176,531	209,082	18.44%
Oconee	27,283	30,676	33,241	8.36%
Pickens	41,306	45,228	50,364	11.36%
Spartanburg	97,735	109,246	125,836	15.19%
ACOG Region	402,024	457,029	521,244	14.05%

Source: U.S. Bureau of the Census 2010

Between 2020 and 2045, the ACOG region is expected to increase its population by more than 32 percent, adding 424,005 residents to the region. With the continuing trend towards smaller household sizes, this population increase would create slightly more than 160,000 new households, averaging approximately 6,400 new households each year.

Closely tied to residential growth in the region, employment growth is also expected to continue throughout the ACOG region during the same time period. Overall, employment is expected to increase 24 percent by 2045 across the entire region. According to the Appalachian Regional Travel Demand Model, much of the employment growth anticipated in the rural areas is expected to occur in Oconee and Pickens Counties. This anticipated growth of an additional 20,000 jobs will be predominantly in the industrial sector.

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### 3 EXISTING TRANSPORTATION MOBILITY

The most obvious component of a regional transportation system is the network of major and minor roads that accommodate the transport of people and goods in and through a region. A robust transportation system will offer many options for consideration such as personal vehicles, buses and rail, heavy trucks and railways, and airplane transport. The ACOG Rural Long Range Transportation Plan will primarily focus on roadway transport and will summarize the availability of public transportation and bicycle and pedestrian facilities in the region.

#### 3.1 Roadway Network

The ACOG rural planning region is served by two major interstates and an extensive system of Interstate spurs and U.S. and State highways, many of which are four-lane facilities. Roads in the region are owned and/or maintained by one of the following: South Carolina Department of Transportation (SCDOT); one of the six counties in the ACOG region, incorporated jurisdictions, private developers and individuals. In addition, numerous roads are the responsibility of the federal government and the U.S. Forest Service. In the past, roads constructed by a developer eventually were adopted into the state highway maintenance system under the Beltline Act. Recently the State Department of Transportation Commission capped the number of roads it would maintain and placed responsibility for all new roads to be accepted within the local systems (county or cities/towns) rather than the state system.

The Federal Highway Administration (FHWA) classifies roads and highways into groups according to the type of service they are intended to provide based on daily traffic volumes as well as purpose, characteristics, and location. The classification system includes Interstates, Principal Arterials, and Minor Arterials, and Major Collectors.

Table 3-1. SCDOT Functional Class in ACOG Rural Area by County (Mileage)

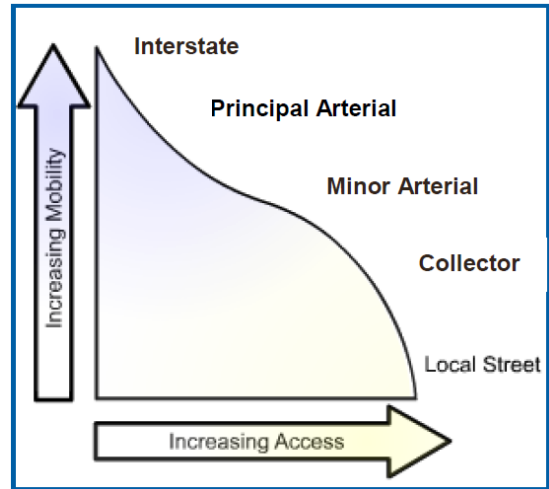
	Anderson	Cherokee	Greenville	Oconee	Pickens	Spartanburg
Interstate	11	22	0	4	0	30
Principal Arterial	32	32	29	26	0	3
Minor Arterial	69	73	54	133	50	78
Major Collector	281	190	79	257	148	186
Minor Collector	29	31	46	32	12	31
Local	207	387	91	368	77	209
Total Mileage	629	735	299	820	287	537

Source: SCDOT Functional Class GIS Shapefile, 2012.

**Interstates** are the highest classification of Arterials and were designed and constructed with mobility and long-distance travel in mind. Since its inception in the 1950's, the Interstate System has provided a network of limited access, divided highways offering high levels of mobility while linking the major urban areas of the United States. Roadways in this functional classification category are officially designated as Interstates by U.S. Secretary of Transportation, and all routes that comprise the Dwight D. Eisenhower National System of Interstates and Defense Highways belong to the Interstate functional classification category and are considered Principal Arterials.

**Principal arterials** are major highways of regional and statewide significance intended to serve large amounts of traffic traveling relatively long distances at higher speeds. Direct property access requires careful management to preserve traffic mobility and avoid creating unsafe and congested traffic operations.

**Minor arterials** interconnect with and augment the principal arterial system. Minor arterials distribute traffic to smaller geographic areas providing service between and within communities. Development connections to the arterial need to be managed so as to not adversely affect their traffic movement function.



**Collectors** provide both access to land uses and traffic circulation within residential, commercial, and industrial areas. The collector system distributes traffic from the arterials through the area to the motorist's ultimate destination. Conversely, collectors also collect traffic from local streets in residential neighborhoods and channel it into the arterial system.

**Local roads** and streets primarily serve as access roads to farms, residences, businesses and other abutting properties. They distribute traffic to highways in the higher functional classification network.

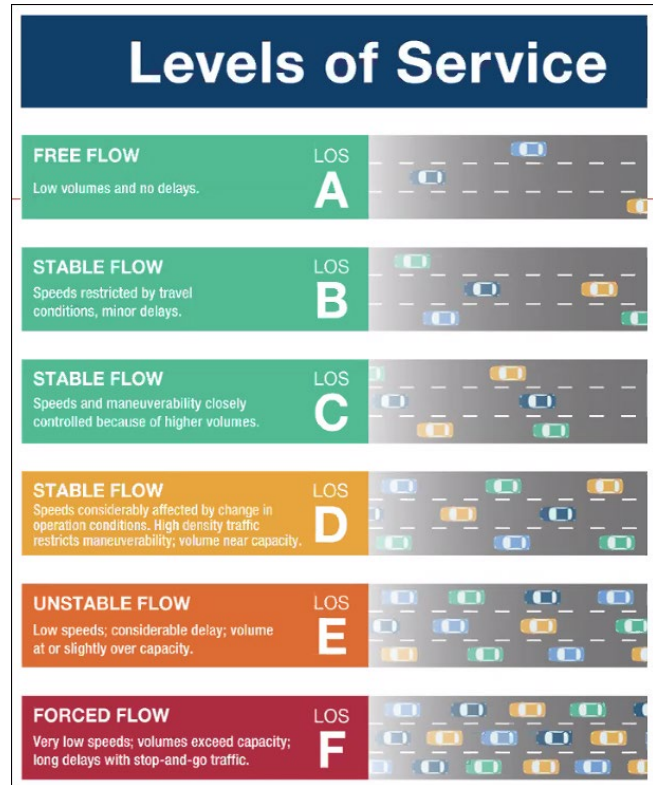
### 3.1.1 Roadway Network Performance

The Appalachian Regional Model (ARM) was designed to support corridor planning, project-level travel forecasts, air quality conformity (cost-benefit measures), air quality analysis (pollution of HC, NOX, CO), environmental documents, freight planning, economic development studies, toll studies, public transportation planning, land use and zoning scenario planning, evacuation scenario planning, and many other land use and transportation planning activities.



When simplified, the basic purpose of the ARM is to replicate traffic conditions in the ACOG region on an average weekday, in base year 2010 and forecast year 2045.

Analysis of traffic volumes is useful in understanding the general nature of traffic in an area, but by itself indicates neither the ability of the road network to carry additional traffic nor the quality of service afforded by the road facilities. For this, the concept of Level of Service has been developed to subjectively describe traffic performance. A Level of Service (LOS) is a letter designation, similar to a report card rating, which describes a range of operating conditions on a particular type of facility. Mathematically, a LOS scheme is a scale to qualitatively describe the volume-to-capacity ratios. Volumes are observations of traffic flows at a given location (as discussed in the section above). Capacities are calculated from a road section’s traffic related attributes, e.g. functional class, number of lanes, lane widths etc.; and determine theoretical total volumes that the road section can carry.



Map 4 shows the 2010 ARM Existing + Committed Model Network Level of Service, which takes into account current roadway attributes (e.g. speed limit, number of lanes, etc.) as well as any fiscally constrained projects programmed in the region. In order to calibrate the model for accuracy, 2010 traffic counts are used to compare and contrast travel model outputs. Once the 2010 model is calibrated, future year models can give planners a quantitative look at future traffic conditions, assuming a continuation of existing trends. Map 5 show the 2040 APCOG Existing + Committed Model Network Level of Service.

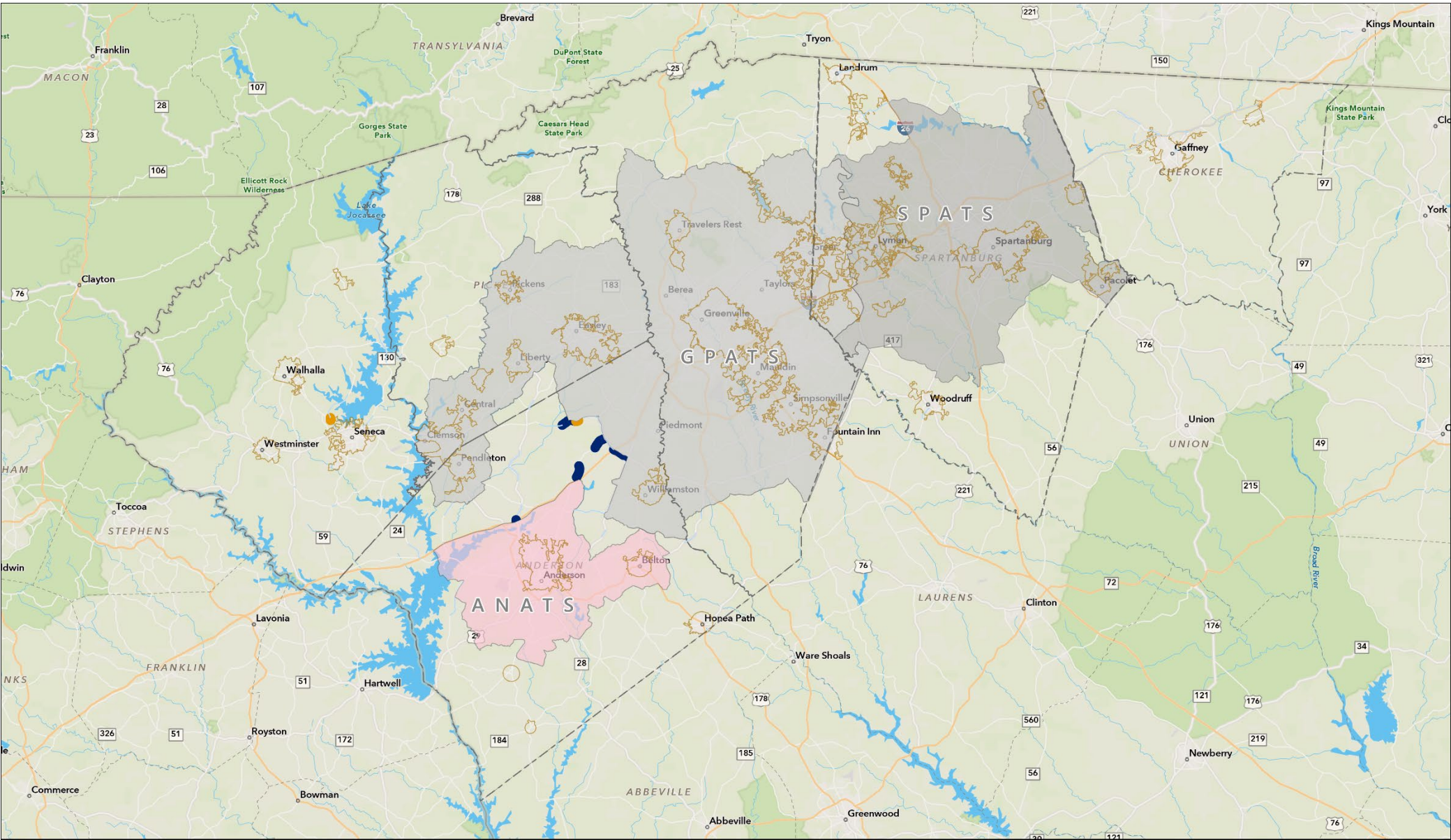
Table 3-2 summarizes the lanes miles and Level of Service for model years 2010 and 2040. According to the 2010 Model, the vast majority of the roadway segments in the rural area are operating at Level of Service A. This trend continues in 2040, with a migration of some lane miles from LOS A to LOS B and LOS C. In both model years, nearly 100% of the model network operates at or below capacity (LOS D).

Table 3-2. ARM LOS Summary, 2010 and 2045

LOS	2010 Model		2040 Model	
	Lane Miles	Percent	Lane Miles	Percent
A	3,357	69.6%	2,442	50.2%
B	963	20.0%	1185	24.4%
C	424	8.8%	856	17.6%
D	45	0.9%	231	4.8%
E	28	0.6%	100	2.1%
F	4	0.1%	49	1.0%

Overall, the roadway network in the rural areas performs very well. In 2010, nearly 90 percent of lane miles were performing at LOS A or B. The 2045 transportation network shows some signs of traffic growth, but only 8 percent of lane miles perform at LOS D or greater. In the rural ACOG region, traffic congestion is not a significant issue.

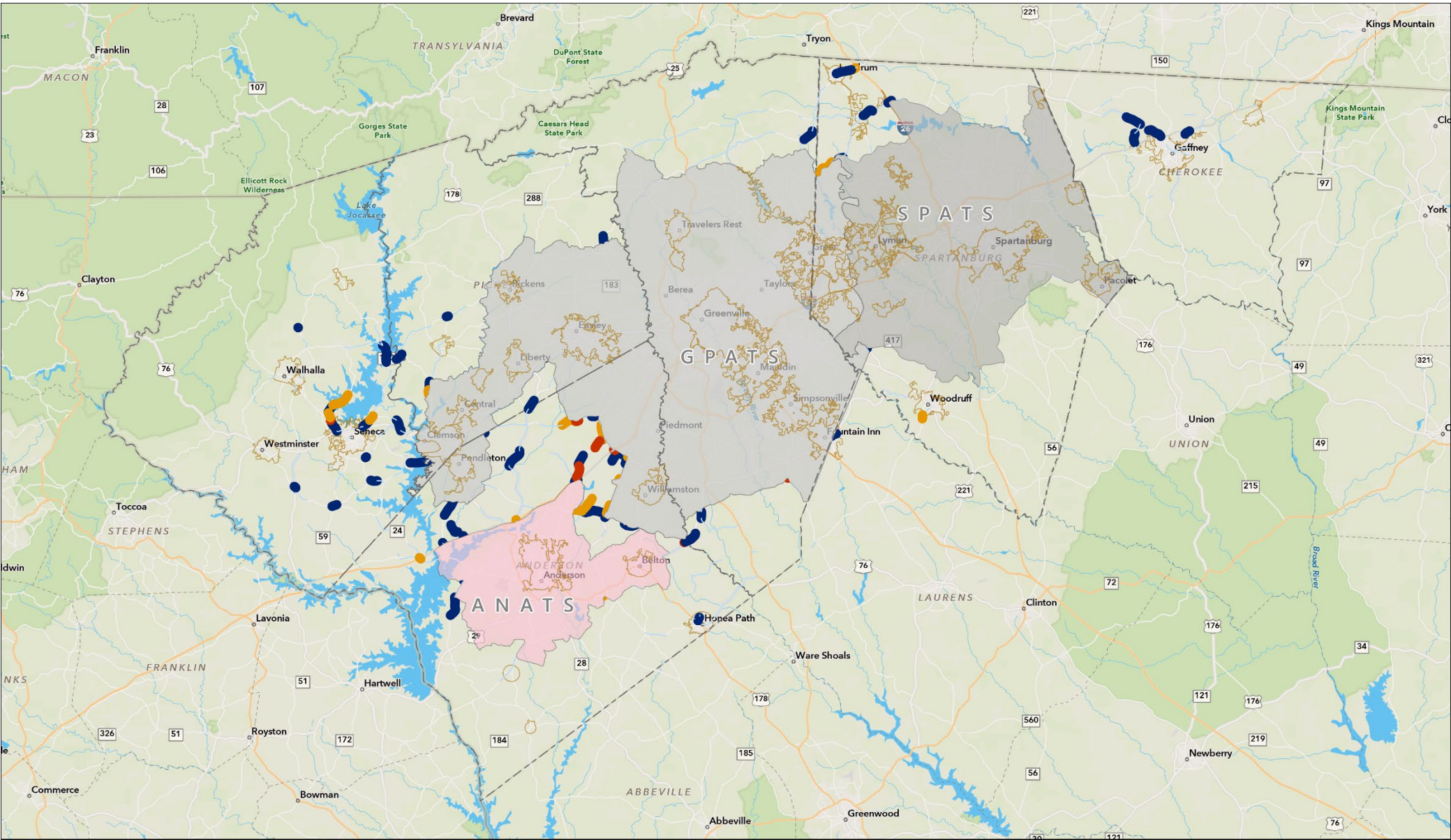
Map 4. 2010 Appalachian Regional Model Level of Service



2010 Level of Service (LOS)



Map 5. 2045 Appalachian Regional Model Level of Service



2045 Level of Service (LOS)



## 3.2 Public Transportation

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 individuals in many rural communities; it means that there is a need for such a service.

Each of the three designated MPOs has a fixed route public transit system operating in their respective areas. Greenville is served by the Greenville Transit Authority (GTA), Spartanburg is served by the Spartanburg Area Transit Agency (SPARTA), and Anderson is served by Electric City Transit (ECT). Because these transit providers are located inside the urban areas, they are not included in this study.

### 3.2.1 Fixed Route Transit

Currently, the only fixed-route transit provider in the rural ACOG study area is Clemson Area Transit (CAT). Founded in 1996, CAT is the largest fare-free transits system in the United States in terms of ridership. It is the one of the most used transit systems in South Carolina. The system was created with the goal of serving Clemson University students. To accomplish that goal, CAT has partnered with the City of Clemson to manage its operations and is managed by officials from both the City and the University. Its service areas include Clemson University, the City of Clemson, the City of Seneca, the Town of Central, and the Town of Pendleton.

### 3.2.2 Human Service Transit and Coordination

Each county in the ACOG region has Disabilities and Special Needs Boards that provide Title IX transportation services for eligible clients in their own counties respectively. Some use agency-operated vehicles while others contract out these services. In addition, a significant number of private transportation companies, including taxicab and shuttle companies operate in the ACOG region. These companies provide specialized services for individuals and groups.

Agencies that provide transit options for seniors and individuals with disabilities obtain funding through the Federal Transit Administration (FTA) via Section 5310 – Enhanced Mobility of Senior and Individuals with Disabilities. Transit providers in the ACOG region apply for funding annually to cover vehicle replacement. ACOG assists the SCDOT Office of Public Transit during the grant application process by reviewing applications and ranking them in accordance with the Appalachian Regional Transit and Coordination Plan.

Demand for Human Transit services continues to climb in the region. According to U.S. Census data summarized in the Appalachian Regional Transit and Coordination Plan, population groups (over 65, disabled, and impoverished populations) that depend on enhanced transit services will

increase by 20 percent in the ACOG rural region from 2020 to 2040. Based on an adjusted transit demand forecast, the total transit demand in 2010 was estimated at 7.9 million one-way trips. The existing transit agencies in the region provide approximately 3.4 million trips annually, which meets 44 percent of the overall transit needs for the region. The unmet needs, given the prospect of continued population and employment growth, will include more connectivity, opportunities for improved efficiencies, greater emphasis on commuter transportation and a substantial need for increases in the overall funding for transit.

### 3.3 Bicycle and Pedestrian Facilities

The facilities available to walkers and bikers are diverse in the rural ACOG area. Walking and biking are, by their nature, localized modes of transportation. So, they tend to be focused around nodes of activity. These nodes are typically existing communities and other places with a relatively dense built environment. The parts of these towns that were constructed before the 1940s, before the widespread use of the automobile, tend to be more pedestrian friendly. However, many business centers and places of employment are no longer located in the historic cores. They tend to locate near major highways or in urban areas. As a result, the demand for pedestrian and bicycle facilities is low.

Historically, roads were designed for pedestrian and equine travel. It is only within the last century that the automobile has replaced the pedestrian as the primary mode of travel. Facilities accommodating pedestrians and bicycles tend to be separate from automobile traffic. Sidewalks and bicycle lanes are the most common modes for each mode, respectively and are becoming more prolific through the nation. Because of the historical connection with pedestrians, and the universal accessibility to walking, it can be assumed that all roads will be used for pedestrian traffic at some point.

Fatality rates for bicycle/ pedestrian traffic are higher in rural areas than in urban areas. Speed is a contributing factor to this problem. According to the National Highway Traffic Safety Administration, a pedestrian hit by a car traveling 20 miles per hour has a 95 percent chance of surviving. At 40 miles per hour the chance of survival drops to 15 percent.

Currently, the ACOG does not fund any bicycle/ pedestrian facilities in rural areas. These are funded on the state or county level. However, it is anticipated that bicycle and pedestrian facilities will be considered when transportation improvements are made. SCDOT implemented a Complete Streets Policy in 2021 that requires the agency to work with the state's regional transportation planning partners and regional transit providers to identify and include walking, bicycling and transit needs as part of their regional visioning plans.

### 3.3.1 Pedestrian Facilities

The many small towns in the region each have their own pedestrian friendly zones that tend to be focused on the historic core of the each community. These zones typically connect downtown areas to adjacent, historic neighborhoods. In many cases the infrastructure may exist but maintenance of these facilities has largely been ignored or differed in favor of higher priority projects in recent times. A key issue to consider for pedestrians is safety. This typically comes in the form of crosswalks. Pedestrians tend to not like to cross large, busy highways. They prefer the more compact environment that the urban cores offer. There are some communities that have significant pedestrian facilities and other that have recently taken steps to enhance the quality of their pedestrian facilities.

Rural areas can present conditions that are threatening to pedestrian travel. In the remainder of the region, the pedestrian and bicycle traffic takes place on rural roads without any specific accommodations made for this type of traffic. Most rural roads are narrow and lack a paved shoulder, bike lanes, and sidewalks. Combined with low visibility and high speeds, these roads can be very dangerous for non-motorized traffic. The volume of this type of traffic is low.

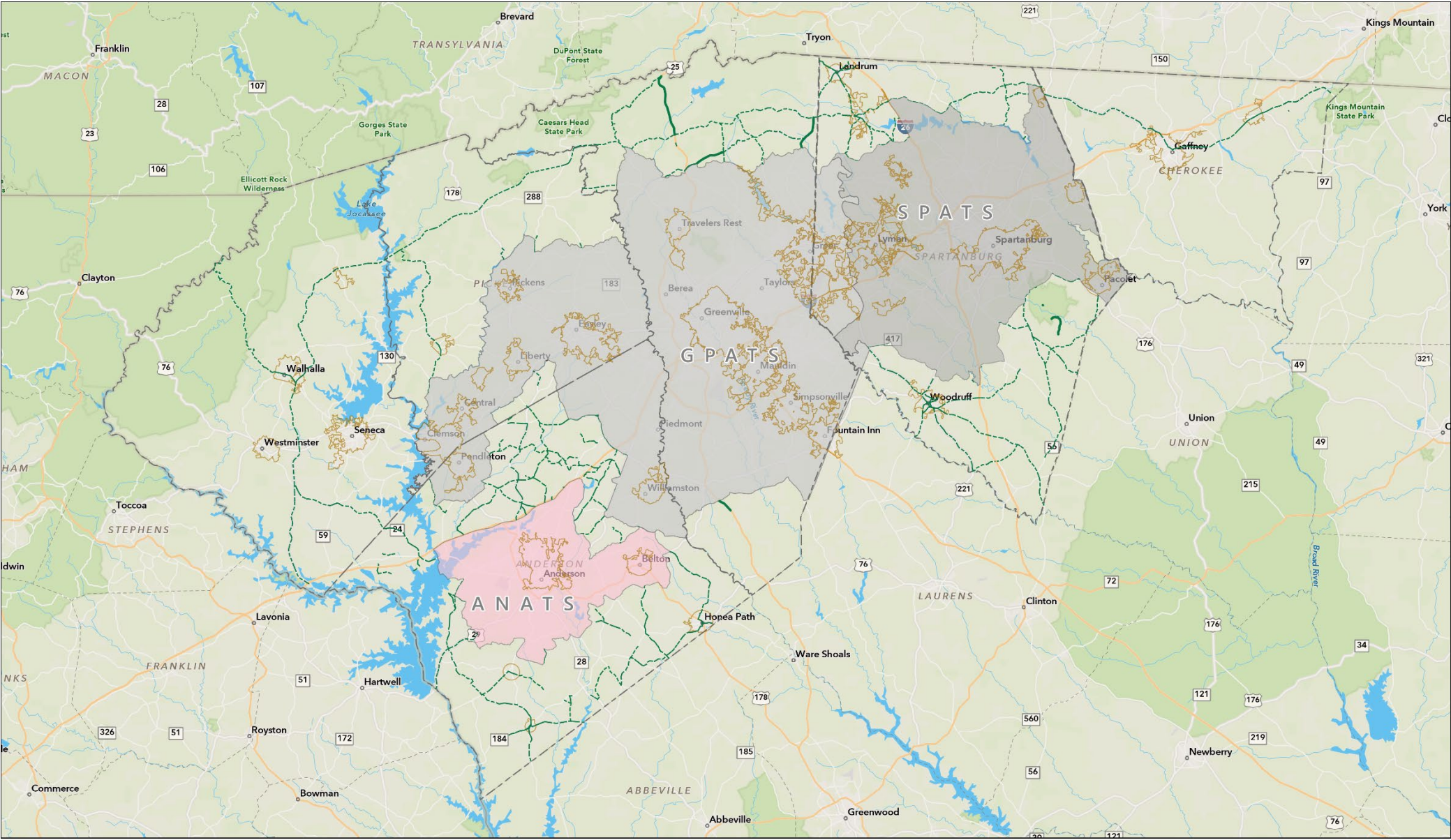
### 3.3.2 Bicycle Facilities

Bicycling is becoming a more popular mode of transportation. Like pedestrians, bicycles have similar range restrictions. Bicycles have a more extended range than pedestrians, but prefer a similar dedication of facilities. Ultimately most non-recreational travel will have origins and destinations within the same community. Dedicated bike lanes paralleling traffic are the most frequent way of accommodating bikers, but share-the-lane demarcations are also common. Bike paths are another facility. They are separate from roadways and offer alternate connections to various destinations. Bike paths tend to be for recreational purposes and always include pedestrians. Bikers are more likely to occupy the same traffic lanes as automobiles, and are required by law to follow the same rules as larger motorized forms of transportation.

One important aspect of biking is the need for racks. Bicycles need bike-racks just like cars need parking lots. Bike racks can become in many forms, and the objects used for such can even be forms of public art. Transit can also enhance bikers' options by adding bike racks.

**Map 6** depicts the existing and proposed ACOG regional bike network from SCDOT. The only community in the rural COG study area that offers bicycle facilities are those areas near Clemson. Most roads extending from the University have dedicated and well maintained bike lanes that extend as far as Central and Pendleton. Racks are included on each of the Clemson Area Transit buses.

Map 6. Existing and Proposed Bike Routes



— Existing Bike Routes      - - - Proposed Bike Routes





## 4 REGIONAL FREIGHT MOBILITY

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In March of 2020, ACOG partnered with ANATS, GPATS, and SPATS for an integrated planning effort to address freight-related issues in the region. The Appalachian Council of Governments' (ACOG) Regional Freight Mobility Plan (Freight Plan) focused on providing multimodal freight transportation strategies for the Appalachian Region of South Carolina. Millions of tons and billions of dollars in freight traverse ACOG's multimodal freight transportation network every year. The purpose of the Freight Plan is to serve as a strategic planning tool for the ACOG. The need for a comprehensive strategy to address goods movement in the region results from significant growth in both population and industry that has put pressure on existing infrastructure.

Together, this multimodal freight transportation network generates just over half of the ACOG's economy, based on the averaged direct, indirect, and induced impacts of the freight industry on the region's sales output, gross regional product, income, and jobs created.



Accommodated  
**364,200 jobs**



Produced **\$34.5 billion** in  
gross regional product (GRP)



Earned **\$19.4 billion**  
in income



Sold **\$88.2 billion** worth of  
goods and services

This means that freight contributes 60 percent of the region's economic output, 51 percent of the gross regional product, 48 percent of the region's income, and 46 percent of the region's jobs. All sectors of the region's economy depend on freight to deliver goods and services, either directly or indirectly.

Considering that the region comprises nearly one-third of the state's economy (29 percent), it is clear that the region's freight movement plays a pivotal role in both the regional and South Carolina economies. Not only that, but the region's infrastructure helps facilitate interstate freight movement. The majority of freight moving along the region's multimodal network is through-freight, meaning it both originates and terminates outside of the ACOG. The through-freight moving on the ACOG's infrastructure mainly represents interstate trade, predominantly with Georgia, North Carolina, and Florida. Ensuring that the region's freight infrastructure can continue to accommodate the safe, efficient movement of freight now and into the future is critical for the local, state, and national economies.

The complete Freight Plan is available for review at [www.scacog.org/acog-freight-plan](http://www.scacog.org/acog-freight-plan).

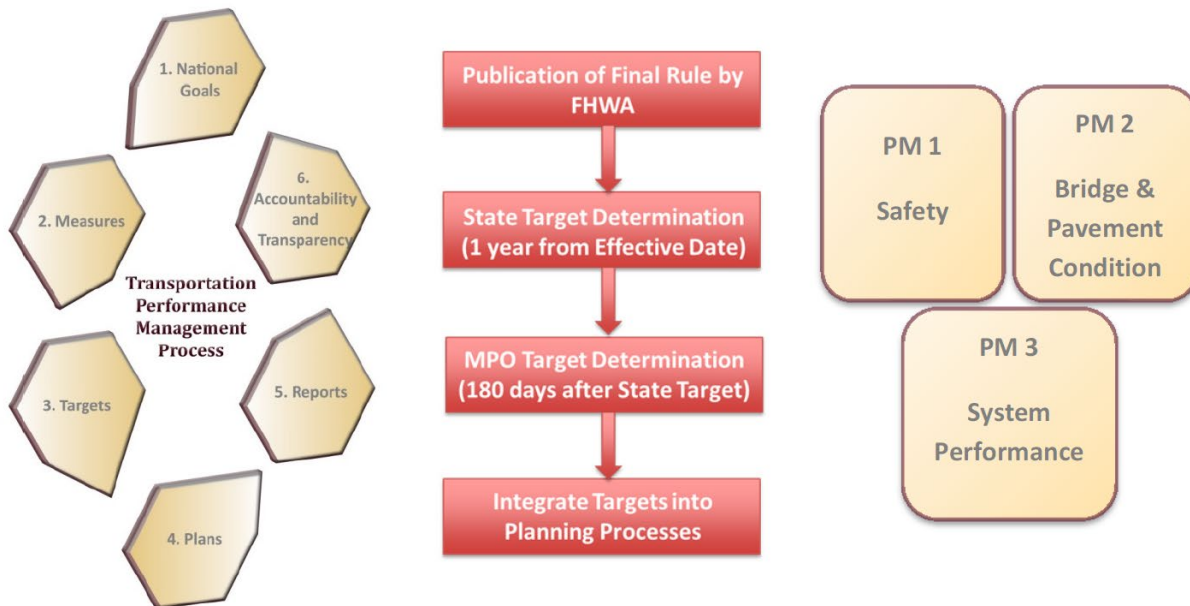
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## 5 TRANSPORTATION PERFORMANCE MANAGEMENT

### 5.1 Overview

Performance management is a strategic approach that uses system information to make investment and policy decisions to achieve goals set for the multimodal transportation systems in the ACOG study area. This process provides key information to decision makers allowing them to understand the consequences of investment decisions across transportation assets and modes. It is also credited with improving project and program delivery and providing greater transparency and accountability to the public.

Figure 5-1. Transportation Performance Management Process



Performance-Based Planning and Programming (PBPP) refers to the transportation agencies' application of performance management as standard state of the practice in the planning and programming processes. ACOG's Long Range Transportation Plan and Transportation Improvement Program are now required to incorporate a performance-driven, outcome-based approach to planning.

The goal of PBPP is to ensure that transportation investment decisions – both long-term planning and short-term programming – depend on the ability to meet established goals. In addition to meeting the federal PBPP requirements, PBPP will help the ACOG better communicate the Appalachian Region-specific performance story.

## 5.2 National Goal Areas

Through the federal rulemaking process, the Federal Highway Administration (FHWA) is requiring state DOT's, MPO's and COG's to monitor the transportation system using specific performance measures. These measures are associated with national goal areas prescribed in MAP-21 and the FAST Act. The following list describes these national goal areas for highway performance as well as performance measures.

Figure 5-2. National Goal Areas and Performance Measures

National Goal		Performance Area	Performance Measure
PM1	Safety <i>To achieve a significant reduction in traffic fatalities and serious injuries on all public roads.</i>	Injuries and Fatalities	Number of Fatalities Fatality Rate per 100 million VMT Number of Serious Injuries Serious Injury Rate per 100 million VMT Number of Non-Motorized Fatalities and Non-Motorized Serious Injuries
PM2	Infrastructure Condition <i>To maintain the highway infrastructure asset system in a state of good repair.</i>	Pavement Condition	Percentage of Pavements on the Interstate System in Good Condition Percentage of Pavements on the Interstate System in Poor Condition Percentage of Pavements on the Non-Interstate NHS in Good Condition Percentage of Pavements on the Non-Interstate NHS in Poor Condition
		Bridge Condition	Percentage of NHS bridges classified in Good Condition Percentage of NHS bridges classified in Poor Condition
	System Reliability <i>To improve the efficiency of the surface transportation system.</i>	Performance of the NHS	Percentage of Person Miles Traveled on the Interstate System that are Reliable Percentage of Person Miles Traveled on the Non-Interstate NHS that are Reliable
PM3	Freight Movement and Economic Vitality <i>To improve the national freight network, strengthen the ability of rural communities to access national and international trade markets, and support regional economic development.</i>	Freight Movement on the Interstate System	Truck Travel Time Reliability Index

## 5.3 Federal Requirements

### 5.3.1 Targets

- All MPO's are required to establish performance targets no later than 180 days after SCDOT or a public transportation operator sets performance targets.
- For each performance measure, the Policy Committee or Board of Directors will decide to commit to support a statewide target, or to establish a quantifiable target specific to the planning area.
- SCDOT, MPO's, and public transit operators must coordinate targets for performance measures to ensure consistency to the maximum extent practicable.

- Per SCDOT PL Agreements, all COG's shall comply with the same requirements of the MPO's beginning fiscal year 2019.

### 5.3.2 Reporting

- The LRTP must describe the performance measures and targets, evaluating the performance of the transportation system, and report on progress made.
- The TIP must link investment priorities to the targets in the LRTP's and describe, to the maximum extent practicable, the anticipated effect of the program toward achieving established targets.
- The MPO must also report baseline roadway transportation system condition and performance data and progress toward the achievement of targets to SCDOT.

### 5.3.3 Assessments

- FHWA and FTA will not directly evaluate the MPO/COG progress towards meeting targets for required performance measures. The MPO's and COG's performance will be assessed as part of regular cyclical transportation planning process reviews, including Transportation Management Area certification reviews, small MPO self-certification reviews, and the Federal Planning Finding associated with approval of the STIP.
- FHWA will determine if SCDOT has met or made significant progress towards attaining the selected targets for the highway system.

## 5.4 Performance Measure 1 (PM1) – Safety

South Carolina has the highest traffic fatality rate per 100 million annual VMT in the nation in 2022. It is 47% higher than the national rate and 24% higher than the states in the Southeast. Reducing the number of transportation-related collisions, injuries, and fatalities is SCDOT's highest priority and makes safety everyone's business. In 2011, the Director of the South Carolina Department of Public Safety (SCDPS), who also serves as the Governor's Representative for Highway Safety in South Carolina, announced the Agency's goal of zero traffic-related deaths in the State. This goal, also strongly supported by SCDOT and the South Carolina Department of Motor Vehicles, became the starting point for the State's update of the strategic highway safety plan (SHSP), entitled Target Zero. Target Zero is an aspirational goal for South Carolina and is based on the philosophy that no fatalities are acceptable. The state will set targets advancing this goal during the next 20 years.

### 5.4.1 Safety Targets

SCDOT evaluated and was required to first report on safety targets for the five measures on August 31, 2017. SCDOT recently issued their fifth annual report on safety targets for the five measures on August 31, 2022. This action started the 180-day clock for ACOG to take action to either set region-specific targets or accept and support the state’s targets.

When setting safety performance targets for the state, statisticians performed extensive analysis of the data related to each measure (i.e. traffic fatalities and severe injuries and vehicle miles traveled). South Carolina used a seven data-point graphical analysis with a five-year rolling average. After the data points were plotted and graphical representations of the data were created, trend lines were added to predict future values. The trend lines were based on linear and non-linear equations with R-squared (i.e. best fit measure) values.

Using the models, statisticians predicted the values for the current year. Examining the current and planned education and engineering safety initiatives, they estimated reductions in fatalities and severe injuries to calculate the state’s safety performance targets. Staff from the SCDOT Traffic Engineering Office also met with representatives from the MPO’s and COG’s to deliver a presentation on the state’s target-setting methods. **Figure 5-3** below shows the latest safety targets from SCDOT.

Figure 5-3. SCDOT Safety Targets

Performance Measure	5-year Rolling Averages		
	SCDOT Baseline (2017-2021)	ACOG Baseline (2017-2021)	2023 Targets for Adoption
Number of Fatalities	1058.0	72.0	1,119.0
Fatality Rate	1.880	2.272	1.940
Number of Serious Injuries	2,859.0	181.6	2,868.0
Serious Injury Rate	5.073	5.750	4.960
Number of Non-motorized Fatalities and Serious Injuries	458.0	15.4	485.0

For the current performance period, the ACOG has elected to accept and support the State of South Carolina’s safety targets for all five safety performance measures. This means the ACOG will:

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

## 5.5 Performance Measure 2 (PM2) – Pavement and Bridge Condition

### 5.5.1 Bridge Condition

The initial National Bridge Inspection Standards (NBIS) were established as part of the Federal Aid Highway Act of 1970 that were limited to bridges on the Federal-aid highway system. Currently, the NBIS regulations apply to all publicly owned highway bridges longer than twenty feet located on public roads. NBIS are federal regulations (23 CFR 650) establishing requirements for bridge inspection procedures, frequency of inspections, qualifications of personnel, inspection reports, and maintenance of bridge inventory. Information from these inspections is stored in the National Bridge Inventory (NBI) database, created in 1972. The NBI is the aggregation of structure inventory and appraisal data collected by each state to fulfill the requirements of NBIS. The NBI database contains condition information on five aggregate structural units (deck, superstructure, substructure, channel, and culvert) by assigning a condition rating to each of these components of a bridge on a scale from 9 (perfect) to 1 (severe deterioration/failure).

SCDOT's bridge inspection program started in the 1970's. The SCDOT Bridge Maintenance Office manages the bridge inspection program. As required by NBIS, SCDOT performs inspection on non-load restricted bridges biennially and annually on load restricted bridges. SCDOT's bridge inspection data are stored in the Roadway Information Management System (RIMS) and in the SCDOT Bridge Management System (BrM).

SCDOT is faced with significant challenges in addressing the highway bridge preservation and replacement needs. Approximately 40% percent of NHS bridges by count are approaching or have exceeded their theoretical design life and may need various levels of repairs, rehabilitation, or replacement. With limited resources and increasing travel demands, these circumstances require SCDOT to become more strategic by adopting and implementing performance and risk based approaches to address the bridge program needs.

To set targets for future bridge conditions, it is important to understand bridge deterioration. Deterioration is a long-term process of decline in bridge conditions due to environmental factors,

degradation of material, and vehicular loading. Different structural types of bridges, such as concrete slab, steel, and prestressed concrete, may have similar response and loading mechanisms; however, no two bridges are the same in all respects, especially in their deterioration and aging characteristics.

Most bridge deterioration models are based on statistical regression and/or stochastic modeling. A Markovian process, which has been adopted in many bridge management systems, is a stochastic process that takes the uncertainties involved in the bridge deterioration process into consideration. SCDOT ultimately decided to develop individual probability matrices based on ten-year deck, superstructure, substructure, and culvert ratings for each structure type. Whole bridge ratings were calculated based on the lowest element rating.

The chosen targets are based on the projected conditions using Markovian process for the respective structure type and assumptions that planned construction projects will be finished and inspected within the first performance period as outlined in the methodology above. The 4-year percent poor target for NHS bridges meets the FHWA's 10.0% maximum threshold requirement.

For the current performance period, the ACOG has elected to accept and support the State of South Carolina's NHS Bridge condition target recommendations.

### 5.5.2 Pavement Condition

Since its inception in 1978, FHWA's Highway Performance Monitoring System (HPMS) has evolved into a robust national repository of data on the extent, condition, performance, use, and operating characteristics of the nation's highways. States report a variety of pavement condition statistics to HPMS each year for roads on the NHS, including, but not limited to, International Roughness Index (IRI) information, cracking, rutting and faulting data. Prior to MAP-21, each State decided its own index on pavement quality measurement.

SCDOT started collecting pavement condition data in 2000. In the early 2000s, SCDOT began measuring its pavement condition using PQI, which is a unique pavement index developed for SCDOT.

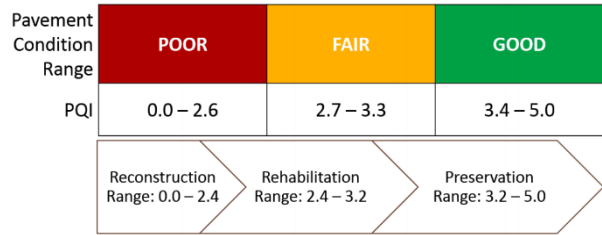
SCDOT chooses pavement preservation candidates based on the PQI of the roadway section. Once PQI is calculated, a candidate list of potential pavement preservation projects is developed. The type of treatment selected depends on several factors, including traffic condition, cost and location. A set of trigger values used for selecting pavement preservation projects for each route system in South Carolina are as follows:



- US and SC Routes: PQI greater than or equal to 3.2 but less than 4.0

- Federal-aid Secondary Routes: PQI greater than or equal to 3.2 but less than 4.0

- Secondary Routes: PQI greater than or equal to 3.0



Due to environmental conditions and traffic loading, pavements deteriorate with age. Well designed, constructed, and maintained roadways are a vital component of any transportation system. One of the main goals of performance-based planning is to apply the right preservation/rehabilitation method to the right pavement at the right time. Proper preventive maintenance treatments are a cost-effective means of obtaining the maximum life and performance from the pavement. Treatments applied too soon add little benefit and treatments applied too late are ineffective, failing to prolong the life of the pavement. The potential savings from following a cost-effective approach to meeting performance objectives for pavements could be significant.

The chosen targets are the median projected conditions using average deterioration rates for the respective systems and planned completed construction projects that will be finished in time to be rated by the Department’s pavement condition collection contractor. The 4-year percent poor target for interstate pavements meets the FHWA 5.0% minimum threshold requirement.

For the current performance period, the ACOG has elected to accept and support the State of South Carolina’s Interstate and non-Interstate NHS Pavement Condition target recommendations.

### 5.5.3 Pavement and Bridge Performance Measures

Performance Measure	Baseline	2-Year Condition/ Performance	2-Year Target	4-Year Condition/ Performance	4-Year Target
Percentage of Pavements on the Interstate System in Good Condition (Federal Metric)	75.8%		77.0%		78.0%
Percentage of Pavements on the Interstate System in Poor Condition (Federal Metric)	0.2%		2.5%		2.5%
Percentage of Pavements of the Non-Interstate NHS in Good Condition (Federal Metric)	38.8%		36.0%		38.0%
Percentage of Pavements of the Non-Interstate NHS in Poor Condition (Federal Metric)	1.6%		10.0%		10.0%
Percentage of NHS Bridges Classified as in Good Condition	38.5%		35.0%		34.0%
Percentage of NHS Bridges Classified as in Poor Condition	4.3%		6.0%		6.0%

## 5.6 Performance Measure 3 (PM3) – System Performance and Freight

### 5.6.1 System Performance

Transportation system users desire travel time reliability – consistent and predictable travel times. Travel time reliability is a reflection of the variability of travel time. Travelers and shippers like to know what to expect and travel time reliability gives them greater certainty when using the transportation system. Unreliable travel is caused by non-recurring events, such as weather conditions, work zones, special events, and traffic incidents, as well as fluctuations in traffic volumes.

Planning practitioners are increasingly using vehicle probe data to obtain information on travel time reliability. FHWA has acquired a national data set of average travel times for use in performance measurement. This data set is being made available to States and metropolitan planning organizations (MPOs) as a tool for performance measurement. The National Performance Management Research Data Set (NPMRDS) is a vehicle probe-based travel time data set and consists of average travel times reported every 5 minutes on the National Highway System (NHS) as defined in MAP-21 and on the five-mile radius of arterials at border crossings. The table below shows the Travel Time Reliability target recommendations:

All Travel Time based measures will be computed using the “Travel Time Metric Dataset” in HPMS for the reporting segments. Beginning in 2018, the State DOTs are required to submit travel time-related metric data and the data necessary for measure computation for reporting segments on NHS into HPMS (i.e., “Travel Time Metric Dataset” in HPMS) by June 15th of each year, 56 and the travel time based metrics are:

- Level of Travel Time Reliability (LOTTR) metrics, corresponding 80th and 50th percentile travel times, directional Average Annual Daily Traffic (DIR\_AADT), and vehicle occupancy factor for each of the reporting segments on NHS, as required in 23 CFR 490.511(e).

## 5.6.2 Freight Movement and Economic Vitality

Understanding performance of the freight transportation system and the challenges that come with increasing demand for freight transportation is important to improving mobility and productivity and establishing goods movement goals in the transportation plan.

The Travel Time Reliability (TTR) measure assesses the reliability of roadways on the Interstate and Non-Interstate (NHS) systems. TTR is defined by the FHWA as the percent of person-miles on the (Interstate/NHS) that are reliable. Concerning freight, reliability is the ratio of the Interstate System Mileage providing for reliable Truck Travel Time Reliability (TTTR). Data are derived from the travel time data set found in the National Performance Management Research Data Set (NPMRDS). The metrics to be used are Level of Travel Time Reliability (LOTTR) and the TTTR Index. The table below shows the Truck Travel Time Reliability target recommendations:

All Travel Time based measures will be computed using the “Travel Time Metric Dataset” in HPMS for the reporting segments. Beginning in 2018, the State DOTs are required to submit travel time-related metric data and the data necessary for measure computation for reporting segments on NHS into HPMS (i.e., “Travel Time Metric Dataset” in HPMS) by June 15th of each year, 56 and the travel time based metrics are:

- Truck Travel Time Reliability (TTTR) metrics, corresponding 95th and 50th percentile truck travel times for each of the reporting segments on Interstate System, as required in 23 CFR 490.611(b).

### 5.6.3 System and Freight Performance Measures

Performance Measure	Baseline	2-Year Condition/ Performance	2-Year Target	4-Year Condition / Performance	4-Year Target
Percent of the Person-Miles Traveled on the Interstate that are Reliable	95.9%		89.1%		89.1%
Percent of the Person-Miles Traveled on the Non-Interstate NHS that are Reliable	95.0%		85.0%		85.0%
Truck Travel Time Reliability Index (TTTR)	1.31		1.45		1.45

## 6 PROJECT IDENTIFICATION AND PRIORITIZATION

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The process of estimating the project cost, and scoring and ranking the proposed projects, culminates with a prioritized list of projects. This chapter describes the process used to identify proposed projects, calculate preliminary cost estimates for the proposed projects, and ultimately score and rank the proposed projects. In Chapter 7, this prioritized list of projects is compared to projected revenue to create a Fiscally Constrained Transportation Program for the 2045 ACOG RL RTP.

### 6.1 Identifying Proposed Projects

A number of sources provided input on transportation needs that ultimately resulted into a preliminary list of proposed projects for the 2045 ACOG RL RTP. In addition to input received from the ACOG Regional Transportation Advisory Committee, ACOG Staff purposefully sought out input from transportation professionals as well as the general public.

#### 6.1.1 Jurisdictional Meetings

For the most part, meetings with transportation professionals took place at the county level. These were meetings set up specifically to bring to light county transportation needs and potential actions required to address those needs. In addition to county-level meetings, ACOG staff consulted with SCDOT on several occasions and received direct guidance from the SCDOT Planning Department.

#### 6.1.2 Planning Projects and Public Meetings

ACOG staff participate in planning efforts throughout the region that require public involvement, such as CDBG Needs Assessment Public Hearings, Corridor Studies, Comprehensive Plans, Zoning Ordinance updates, and Strategic Plans. As opposed to having multiple public meetings in very short periods of time, this approach allows for a continuous dialog on transportation issues throughout the region. Below is a summary of the projects that ACOG staff have held or attended public meetings on in the rural areas of the region:

- SC Highway 11 Corridor Study, Pickens County, 2021-2022
- City of Gaffney Comprehensive Plan, Cherokee County, 2021
- Appalachian Regional Freight Mobility Plan, 2020-2021
- City of Woodruff Comprehensive Plan, Spartanburg County, 2019
- City of Campobello Comprehensive Plan, Spartanburg County, 2022
- Town of Westminster, Oconee County, 2017

- CDBG Needs Assessment Public Hearings in Woodruff (2017, 2019, 2021), Cherokee County (2017, 2021), Anderson County (2018), Seneca (2019), Chesnee (2019), Cowpens (2020), Oconee County (2021), and Westminster (2021, 2022).
- Public Meetings for GPATS LRTP Update, 2022
- Public Meetings for SPATS LRTP Update, 2022

### 6.1.3 Data Analysis

ACOG staff utilized ArcGIS Pro to perform a regional analysis on crash data and pavement quality data. SCDOT provided ACOG staff with crash data from 2015-2019. ACOG staff geocoded the crash locations, performed a cluster spatial analysis, and identified intersections with numerous crashes. These locations were pared down further through the prioritization process detailed in the next section. Pavement quality data (PQI) was analyzed and cross-checked with the regional freight network to determine if significant roadway segments had poor PQI readings.

## 6.2 Prioritization Process

In 2022, the Regional Transportation Advisory Committee (RTAC) met monthly to decide how to prioritize regional transportation funding. The first meeting focused on broad transportation categories. The RTAC determined that safety was the top priority in the region and should be prioritized. The Appalachian Regional Freight Mobility Plan identified corridor studies, road projects, and bridge replacements that the RTAC also felt critical to the continued economic success of the Upstate. A rural traffic signal program was discussed after several public meetings revealed the need for upgraded signals in rural areas. Lastly, the RTAC decided to evaluate the resurfacing of freight-critical roadways if in poor condition.

Figure 6-1. RTAC Strategic Funding Allocation



The resulting Funding Allocation strategically targets the three priorities identified through the FAST Act and reinforced through the recent passage of the BIL, which are Roadway Safety, Bridge & Pavement Condition, and System Performance.

### 6.2.1 Safety Intersections

The first step of the project prioritization process was a consultation between ACOG staff and the SCDOT safety office for assistance. ACOG staff performed a cluster spatial analysis based on the 2015-2019 crash dataset and, with assistance from the SCDOT safety office, identified a first cut of 198 intersections. From there, ACOG staff utilized the most recent SCDOT Engineering Directive (ED-71) to prioritize the intersections further, which resulted in a list of 140 intersections. After consulting with each SCDOT District Engineering office and the statewide programmed project list, ACOG staff presented a final list of 129 intersection projects.

#### Safety Intersection Prioritization

1. Obtain 5 years of crash data from SCDOT Safety Office
2. Perform a Spatial Cluster Analysis in ArcGIS Pro to identify intersections where clusters of 15 or more crashes occurred within 250 feet of an intersection.
3. Take the list from Step 2 and evaluate based on ED-71. The directive selects intersections where fatal and serious injury crashes are greater than 25% of all crashes and then selects the Top 100 with the highest severity index (as defined in ED-71).
4. Cross-check the list from Step 3 with SCDOT District Engineering offices and the SCDOT Statewide Programmed Project list. Remove any duplicates.
5. Take the list from Step 4 and sort by crash rate to determine priority.

### 6.2.2 Road Improvements and Resurfacings

The ACOG transportation program has included targeted resurfacings in the past, most recently the US 178 corridor in Anderson and Pickens Counties which programmed nearly 10 miles of resurfacing for a major north-south corridor that connects Interstate 85 with Liberty and points east and west via U.S. Highway 123.

The RTAC sees value in strategically guiding resources to resurfacing corridors that have economic and mobility benefits to the region. The Appalachian Regional Freight Mobility Plan did not identify specific corridors for resurfacing and improvement; however, it did identify critical freight corridors in the region. The RTAC allocated a maximum of 18 percent of ACOG guideshares to resurfacing these critical corridors.

Upon first glance at pavement quality data, a large amount of roadways in poor condition immediately stand out. It is important to note that SCDOT, CTCs, and each county has resurfacing programs that prioritize these corridors for improvement and the RTAC recognizes this. It is strategically in the best interest of the region to improve roadways that provide critical connection to and mobility between freight generators and employment and population centers. The resurfacing projects selected by the RTAC were prioritized using SCDOT Engineering Directive 63 – Primary Pavement Improvement Project Prioritization Process.

#### Road Improvements and Resurfacings Prioritization

1. Obtain the most recent Pavement Quality Index (PQI) data from SCDOT.
2. Select corridors with a PQI of Fair or Poor.
3. Remove corridors from the list in Step 2 that are not on the Statewide Freight Corridor or the Appalachian Regional Freight Mobility Plan Freight Network.
4. Cross-check the list from Step 3 with SCDOT District Engineering offices and the SCDOT Statewide Programmed Project list. Remove any duplicates.
5. Rank the remaining corridors per ED-63. The directive assigns weights to PQI, the International Roughness Index (IRI), Average Daily Traffic (ADT), Percent Patching, Average Daily Truck Traffic (ADTT), Functional Classification (FC), and gives points if the corridor is on the state freight network, the strategic corridor network, or is on a state safety programs list. Each segment was ranked against the other selected segments. For example, the segment with the highest ADT was given a maximum score of 150 points. All other segments were scored based on ADT factor.

### 6.2.3 Signals

ACOG has never participated in a signalization program through its Guideshare funding, though it is common amongst regional MPO partners. Several comments throughout the public participation process focused on issues with signals, mainly in those areas adjacent to fast-growing urban areas. Nonetheless, the RTAC has seen and heard the need for a signalization program and will allocate six percent of annual Guideshares to the program. SCDOT will prioritize the signal improvements in accordance with signal prioritization directives.

### 6.2.4 Corridor Studies

The Appalachian Regional Freight Mobility Plan identified eight corridor, planning, or engineering studies in the ACOG rural region. In addition, the Appalachian Regional Model update and a future Long Range Transportation Plan update is included. Prioritization of these studies is based on the Freight Plan prioritization and, in the case of the model update and LRTP update, based on when the items are required to be completed. It is understood and expected that additional projects



will be recommended through these special studies. Newly identified projects will be ranked using the same criteria as the 2045 ACOG RL RTP has utilized. Projects that score high will be included into the Transportation Improvement Program (TIP) for programming.

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## 7 FISCALLY CONSTRAINED TRANSPORTATION PROGRAM

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This final chapter describes how the Guideshare revenue source is related to the ACOG RL RTP Fiscally Constrained Transportation Program. It provides a description of what Guideshare is and how anticipated Guideshare is calculated. A discussion on how projects “committed” in the Rural Transportation Improvement Program (RTIP) impact anticipated Guideshare leads into a description of what is meant by a fiscally constrained transportation program. Finally, the 2045 ACOG RL RTP Fiscally Constrained Transportation Program and the 2045 BCDCOG RL RTP Vision Projects are presented.

### 7.1 Regional Mobility Program and Guideshares

SCDOT recently rebranded the traditional “Guideshare” program in South Carolina as the “Regional Mobility” Program. The program itself institutes changes into the project selection process that encourage a data-driven analysis in project selection. Aside from the program, the “Guideshare” itself is formula funding made available to each of the South Carolina Metropolitan Planning Organizations (MPOs) and Councils of Governments (COGs) for System Upgrade projects. The Guideshare dollar amount is calculated by taking the MPO’s and COG’s specific proportion of the state population and applying it to the total available funds for System Upgrade projects. Guideshare is the only revenue source that is taken into consideration in preparing the 2045 ACOG Fiscally Constrained Transportation Program. The most recent allocation of Guideshare funds for the ACOG rural program totals \$8,591,000 annually.

#### 7.1.1 RL RTP and RTIP Planning Horizons

It is important to understand the different roles and relationship between the RL RTP and the RTIP. The RL RTP identifies critical transportation needs over 20 or more years and establishes a broad vision for meeting those needs. Conversely, the RTIP is a short range document that lists specific “programmed” projects that have actual committed funding (i.e. Guideshare) associated with them. Thus it is accurate to characterize the RL RTP as the “vision” document and the RTIP as the “implementation” document. Currently, the BCDCOG RTIP identifies and programs projects from Fiscal Year (FY) 2021 through FY 2027.

#### 7.1.2 Anticipated Guideshare Revenue

As stated, the current ACOG RTIP runs through FY 2027. Guideshare funding is currently “committed” to projects listed in the RTIP through part of FY 2025, leaving a balance of \$25,775,000 (including carryover) for FY 2025 and the entire annual allocation of \$8,691,000 for FY 2026 and FY 2027 that has not yet been committed to any projects. Adding these uncommitted

funds to Guideshare revenue anticipated for FY2020 through FY2035, results in the following total anticipated Guideshare funds through FY2035 available for planning purposes:

FY 2025 Uncommitted Guideshare Funds	\$	25,775,000
<u>FY 2026 to FY 2045 Guideshare Funds</u>	<u>\$</u>	<u>173,820,000</u>
<b><u>Total Uncommitted Guideshare Funds through FY 2045</u></b>	<b><u>\$</u></b>	<b><u>199,595,000</u></b>

## 7.2 Fiscally Constrained Transportation Plan

Fiscal constraint is a demonstration of budgeting sufficient funds (Federal, State, local, and/or private) to implement proposed transportation system improvements, as well as to operate and maintain the entire system, through the comparison of revenues and costs. With respect to the 2045 ACOG RL RTP Fiscally Constrained Transportation Program, this means restricting the list of proposed projects to be included in the transportation program to the amount of anticipated Guideshare revenue that is available through FY 2045, or \$199,595,000.

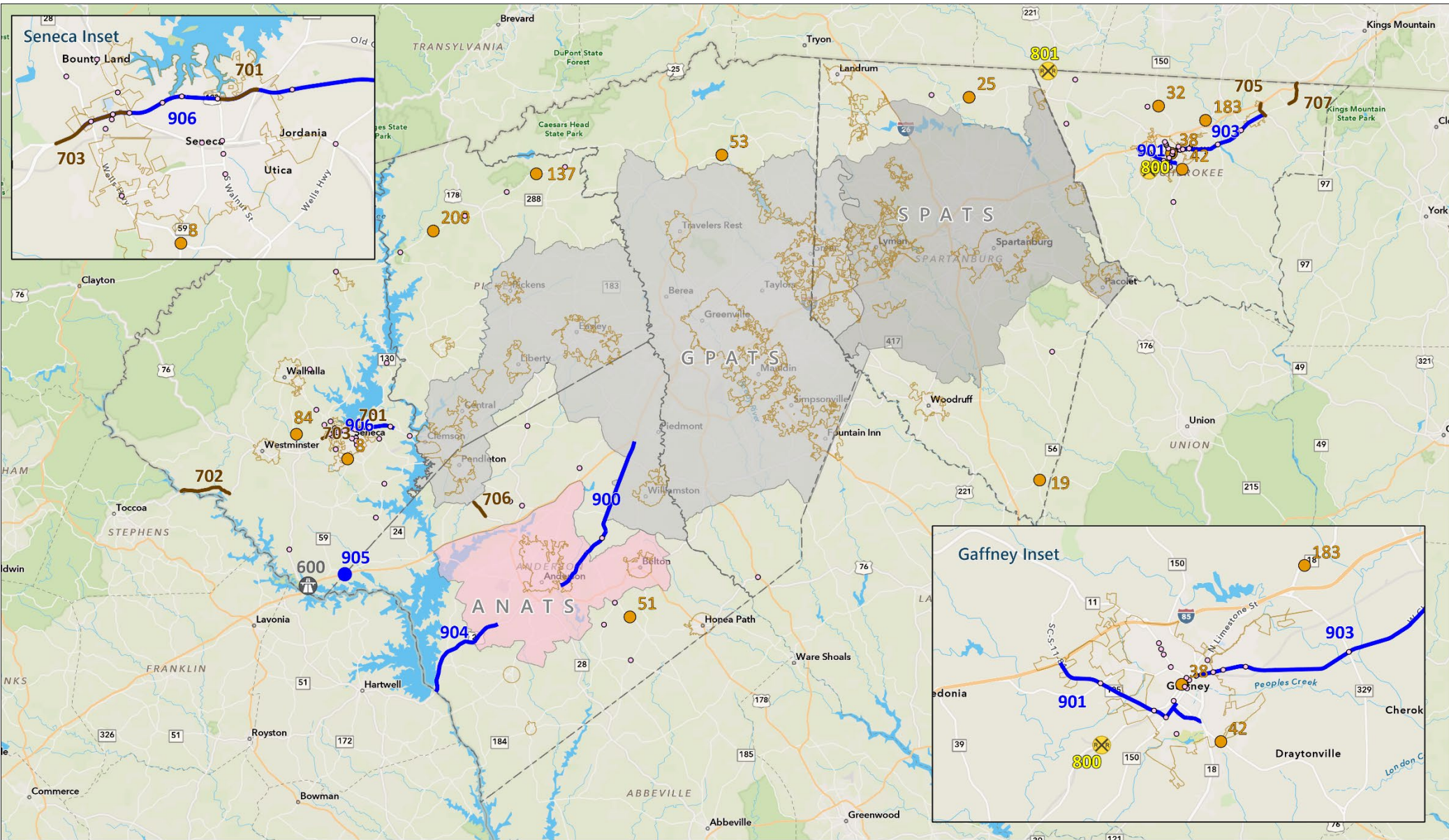
As discussed in the previous chapter, the RTAC elected to strategically allocate Guideshare funding to specific programs. Based on the available committed Guideshares figure, the program allocations are as follows:

Safety Intersections (80%):	\$	159,676,000
Road Improvements and Resurfacings (14%):	\$	27,943,300
Rural Signalization Program (5%):	\$	9,979,750
Special Studies (1%)	\$	1,995,950

To remain fiscally constrained, a maximum of 79 Safety Intersection Projects (projected at \$2,000,000 per project) and a maximum of 18 miles of resurfacings (projected at \$1,500,000 per mile for a 2-lane road) are allowable. Projects that fall outside of these thresholds will be added to the “Unfunded” list of projects in this document.

The following page contains the 2045 ACOG RL RTP Fiscally Constrained Transportation Program. The transportation program tables are followed by the list of “unfunded projects” that represent transportation needs that cannot be addressed with anticipated Guideshare revenue before FY 2045.

Map 7. RL RTP Project Location Map



Proposed Project Location Map

● 2021-2027 Intersection Projects

○ 2028-2045 Intersection Projects

— Resurfacing  
— Special Studies

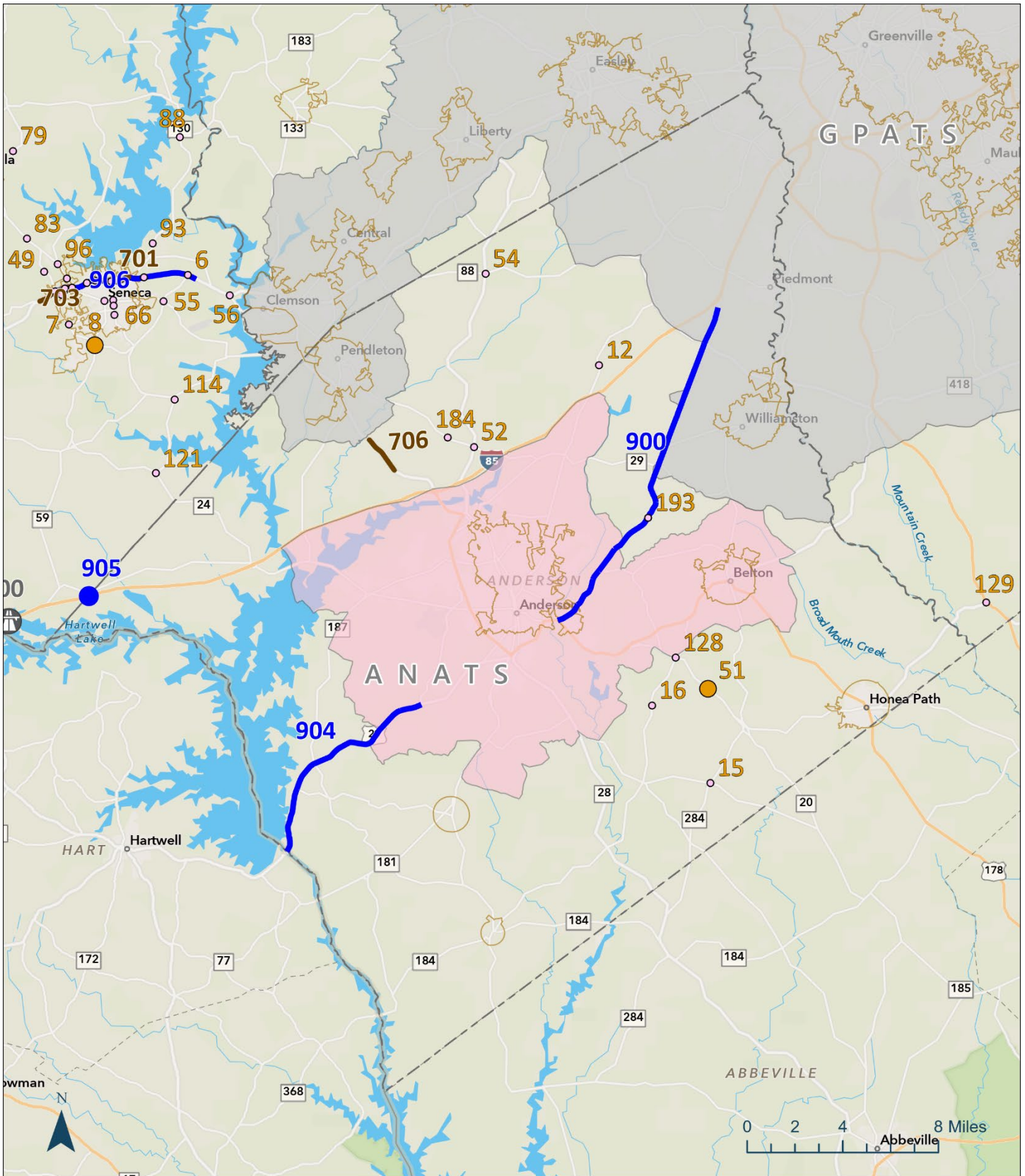
● Interchange Study

⊗ At-Grade Rail Crossings

0 5 10 20 Miles



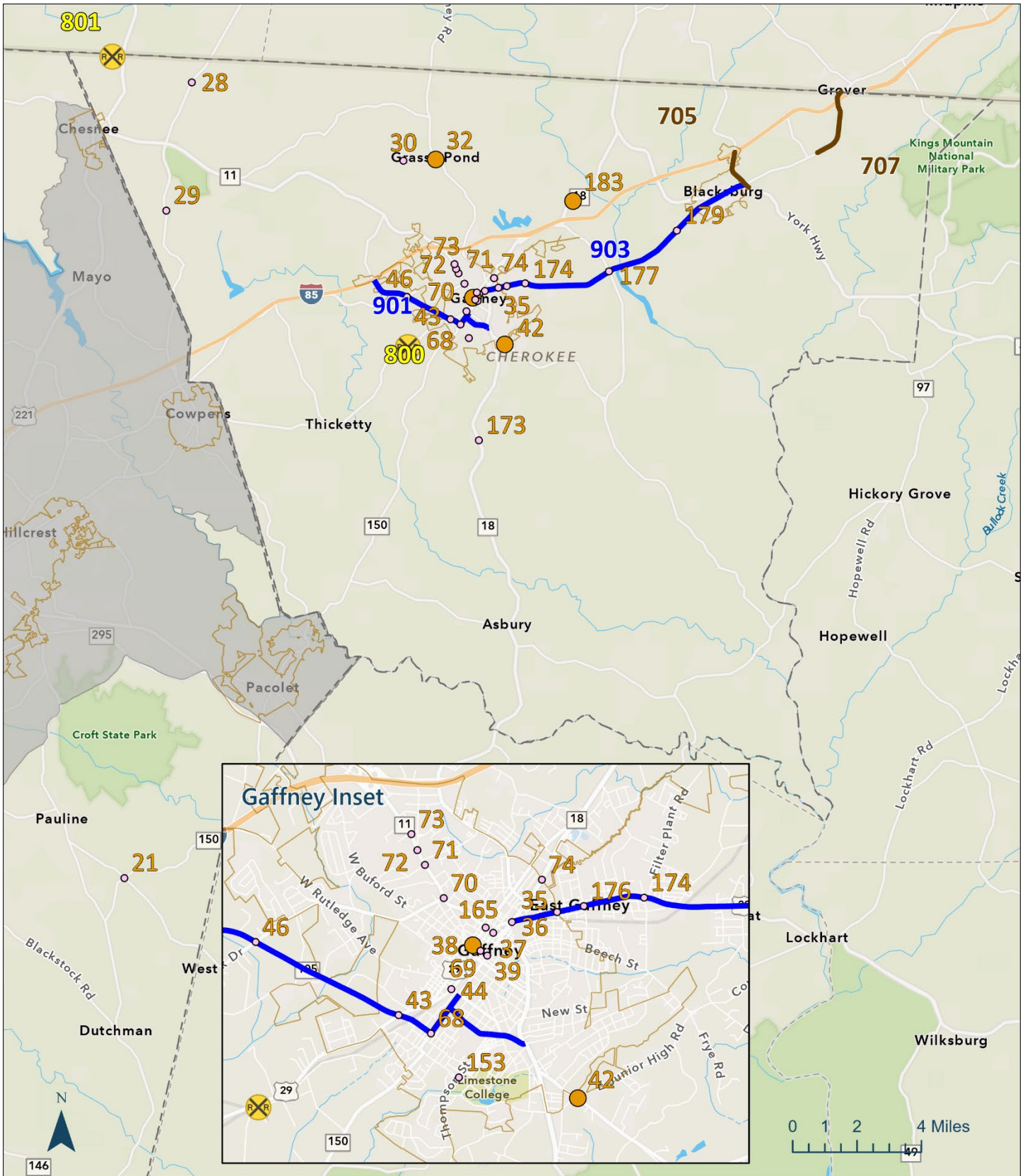
Map 8. Anderson County Project Location Map



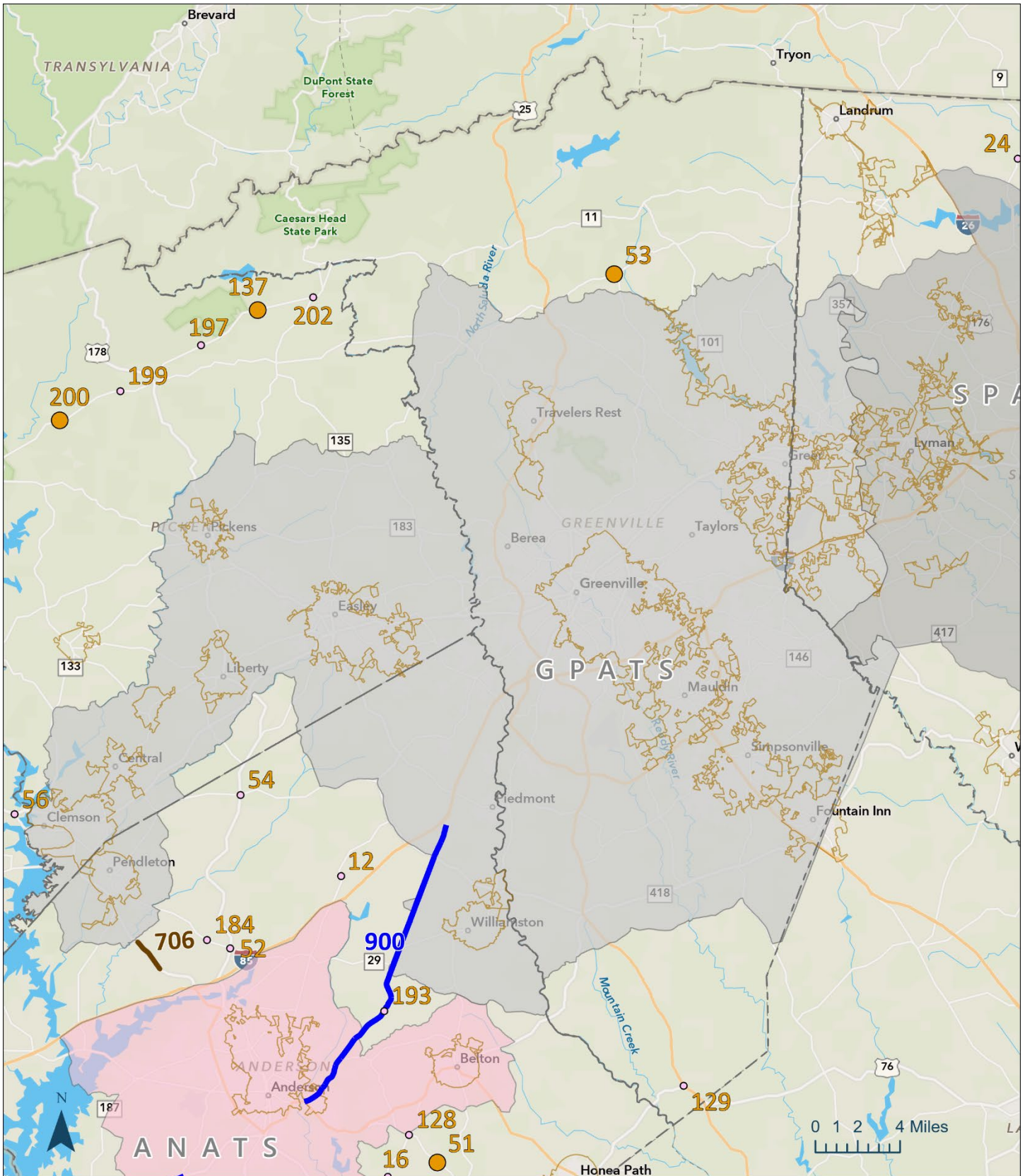
Anderson County Project Map

- 2021-2027 Intersection Projects
- Special Studies
- Interchange Study
- 2028-2045 Intersection Projects
- Resurfacing
- X At-Grade Rail Crossings

Map 9. Cherokee County Project Location Map



Map 10. Greenville County Project Location Map

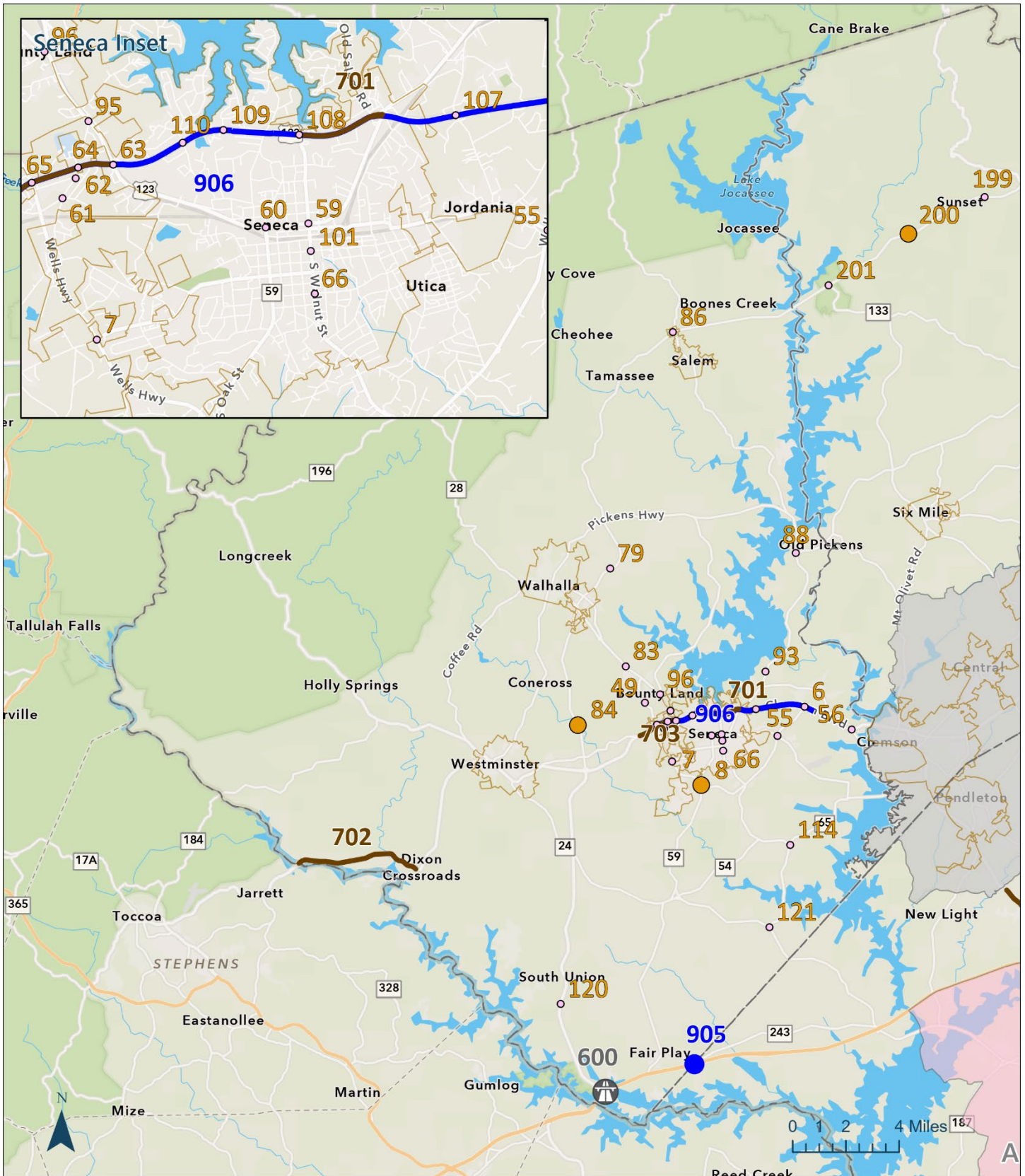


Greenville County Project Map







- 2021-2027 Intersection Projects
- 2028-2045 Intersection Projects
- Special Studies
- Interchange Study
- Resurfacing
- R  
X  
R At-Grade Rail Crossings



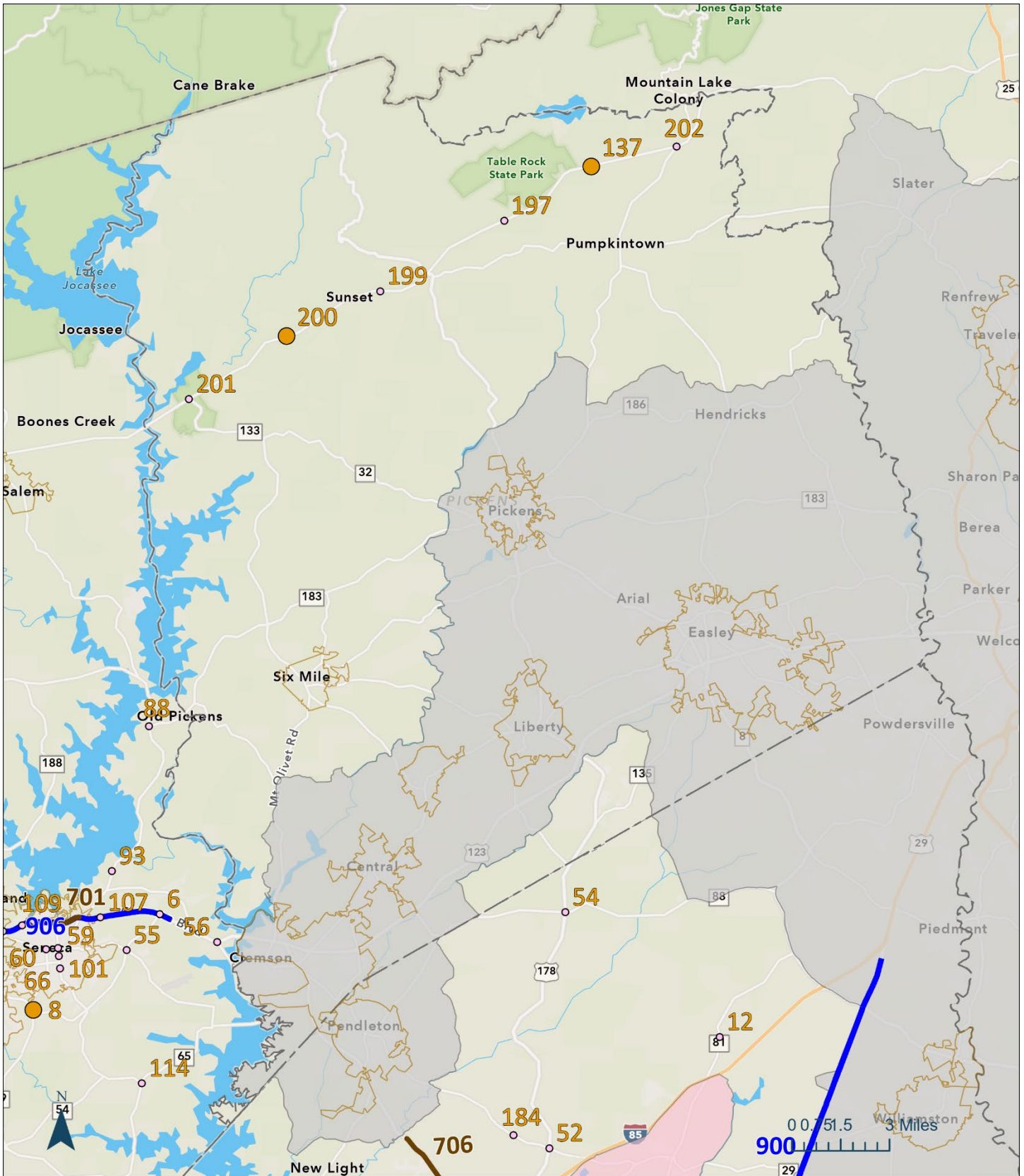
Map 11. Oconee County Project Location Map



Oconee County Project Map

-  2021-2027 Intersection Projects
-  Special Studies
-  2028-2045 Intersection Projects
-  Interchange Study
-  At-Grade Rail Crossings
-  Resurfacing

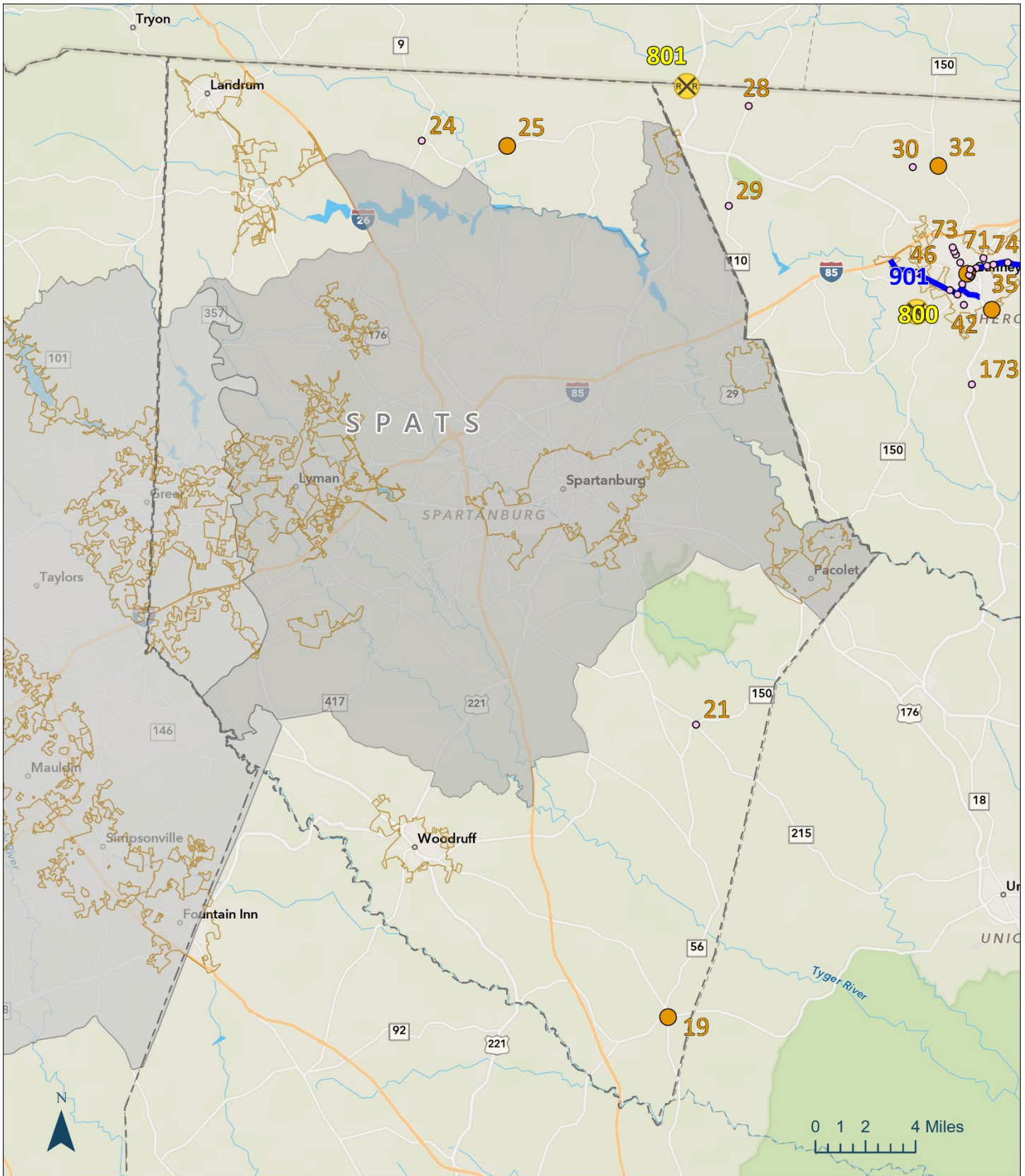
Map 12. Pickens County Project Location Map



Pickens County Project Map

- 2021-2027 Intersection Projects
- 2028-2045 Intersection Projects
- Resurfacing
- Special Studies
- Interchange Study
- X  
R At-Grade Rail Crossings

Map 13. Spartanburg County Project Location Map



Spartanburg County Project Map

- 2021-2027 Intersection Projects
- 2028-2045 Intersection Projects
- Resurfacing
- Special Studies
- Interchange Study
- X At-Grade Rail Crossings

Appalachian Council of Governments | 2045 Rural Long Range Transportation Plan

Table 7-1. Fiscally Constrained Road Improvement and Resurfacing Project List

Rk	Proj No	County	Roadway1	Roadway2	TIP YR
1	19	Spartanburg	SC 49	SC 56	2023
2	53	Greenville	SC 414	Blackwell Rd	2023
3	25	Spartanburg	SC 11	Peachtree Rd	2023
4	32	Cherokee	SC 150	Grassy Pond Rd	2023
5	137	Pickens	SC 11	S Saluda Rd	2024
6	38	Cherokee	US 29	W Floyd Baker Blvd	2024
7	200	Pickens	SC 11	Little Eastatoee Road	2025
8	183	Cherokee	SC 18	Concord Rd	2025
9	42	Cherokee	SC 105	E Oneal St	2026
10	51	Anderson	SC 252	Wright School Rd	2026
11	84	Oconee	SC 11	Mountain Rd / Critter Rd	2027
12	8	Oconee	SC 59	Wells Hwy	2027
13	173	Cherokee	SC 18	Corinth Rd	2027
14	96	Oconee	SC 28	Bountyland Rd	2028
15	153	Cherokee	Oneal St	Thompson St	2028
16	74	Cherokee	SC 18	E 3rd St	2028
17	165	Cherokee	SC 11	US 29	2028
18	121	Oconee	SC 247	Coneross Creek Rd	2029
19	46	Cherokee	SC 105	Overbrook Dr	2029
20	93	Oconee	SC 130	Keowee Lakeshore Dr	2030
21	43	Cherokee	US 29	SC 105	2030
22	35	Cherokee	US 29	E 3rd St	2031
23	37	Cherokee	US 29	SC 18	2031
24	197	Pickens	SC 11	West Gate Road	2031
25	202	Pickens	SC 11	SC 8	2032
26	199	Pickens	SC 11	Bearcat Trail	2032
27	79	Oconee	SC 11	Fowler Rd	2032
28	68	Cherokee	SC 150	SC 105	2032
29	44	Cherokee	US 29	Rutledge Ave	2033
30	128	Anderson	SC 252	SC 413	2033
31	129	Greenville	US 25	US 76	2033
32	39	Cherokee	SC 150	W Floyd Baker Blvd	2034
33	59	Oconee	US 123	W Walnut St	2034
34	69	Cherokee	US 29	W Floyd Baker Blvd	2034
35	179	Cherokee	US 29	Moss Xing	2034
36	56	Oconee	US 123	SC 93	2035
37	36	Cherokee	US 29	SC 150	2035
38	193	Anderson	US 29	Griffin Rd	2035
39	177	Cherokee	US 29	SC 329	2035
40	88	Oconee	SC 183	SC 130	2036

Rk	Proj No	County	Roadway1	Roadway2	TIP YR
41	72	Cherokee	SC 11	Ellis Ferry Ave	2036
42	7	Oconee	Wells Hwy	W South 4th St	2036
43	83	Oconee	SC 28	W Halfway Branch Rd	2036
44	109	Oconee	US 123	Pine Cliff Dr	2037
45	95	Oconee	SC 28	Memorial Dr	2037
46	110	Oconee	US 123	Mountain View Dr	2037
47	65	Oconee	US 123	Wells Hwy / Sheep Farm Rd	2037
48	64	Oconee	US 123	Hospital Dr	2038
49	73	Cherokee	SC 11	Walton Dr	2038
50	70	Cherokee	SC 11	Overbrook Dr	2038
51	6	Oconee	US 123	Wells Hwy	2038
52	63	Oconee	US 123	SC 28	2039
53	107	Oconee	US 123	Keowee Trl	2039
54	71	Cherokee	SC 11	Gettys Dr	2039
55	49	Oconee	Bountyland Rd	Sheep Farm Rd	2039
56	52	Anderson	US 178	SC 29	2040
57	54	Anderson	US 178	SC 88	2040
58	55	Oconee	Wells Hwy	Shiloh Rd	2040
59	60	Oconee	US 123	SC 59	2040
60	61	Oconee	Keowee Business Pkwy	N Radio Station Rd	2041
61	62	Oconee	Applewood Center Pl	N Radio Station Rd	2041
62	108	Oconee	US 123	N Walnut St	2041
63	174	Cherokee	US 29	13th St	2041
64	176	Cherokee	US 29	6th St	2042
65	201	Pickens	SC 11	SC 133	2042
66	15	Anderson	SC 185	SC 284	2042
67	24	Spartanburg	SC 9	Rainbow Lake Rd	2042
68	29	Cherokee	SC 110	E Cudd Rd / Bonner Rd	2043
69	28	Cherokee	US 221	N Green River Rd	2043
70	16	Anderson	SC 413	Broadway Lake Rd	2043
71	86	Oconee	SC 11	SC 130	2043
72	101	Oconee	S Walnut St	E South 2nd St	2044
73	114	Oconee	SC 21	Friendship Rd	2044
74	120	Oconee	SC 11	Cow Creek Dr	2044
75	21	Spartanburg	SC 150	SC 215	2044
76	184	Anderson	SC 29 / Lebanon Rd	Eastview Dr	2045
77	12	Anderson	SC 81	Cherokee Rd	2045
78	30	Cherokee	Twin Bridge Rd	Grassy Pond Rd	2045
79	66	Oconee	S Walnut St	E South 6th St	2045

**Table 7-2. Fiscally Constrained Road Improvement and Resurfacing Project List**

Rk	Proj No	County	Route	RouteLRS	BMP	EMP	Length	TIP YR
1	701	OCONEE	US 123	N WALNUT ST TO SC 130	28.09	28.86	0.77	2024
2	702	OCONEE	US 123	GA BORDER TO DIXON RD	-	5.00	5.00	2026
3	703	OCONEE	US 123 (SANDIFER BLVD)	SC 28 TO RICHLAND RD	24.86	26.38	1.52	2030
4	705	CHEROKEE	SC 5	I-85 TO OSEE ST	-	1.29	1.29	2034
5	706	ANDERSON	US 76	CHAPMAN RD TO LA FRANCE RD	4.47	8.00	3.53	2038
6	707	CHEROKEE	US 29	ANTIOCH RD TO NC BORDER	22.12	24.42	2.30	2042

**Table 7-3. Fiscally Constrained Special Studies Project List**

Rk	Proj ID	County	Studies	Origin	TIP YR
1	900	Anderson	US 29 Corridor Study	Freight Study	2022
2	901	Cherokee	SC 105 Truck Movement Study	Gaffney	2023
3	903	Cherokee	US 29 Corridor Study from East Gaffney to Blacksburg	Freight Study	2024
4	904	Anderson	US 29 (SW of Anderson) Corridor Study for New Weigh in Motion Station	Freight Study	2025
5	905	Oconee	I-85 at Whitfield Road Interchange Area Improvements	Freight Study	2026
6	906	Oconee	US 123 Corridor Study	Safety Analysis	2026
7	902	Region	Travel Demand Model Update - 2027	L RTP	2026
8	910	Region	Regional LRTP - 2027	L RTP	2027

Table 7-4. Unfunded Projects

UNFUNDED INTERSECTION PROJECTS

County	Roadway1	Roadway2
Anderson	SC 187	Burns Bridge Rd
Anderson	SC 247	Shady Grove Rd
Oconee	SC 21	Singing Pines / Greenbriar Dr
Oconee	SC 11	Bear Swamp Rd
Cherokee	SC 80	Twin Bridge Rd
Greenville	Cooley Bridge Rd	Holiday Dam Rd
Cherokee	US 221	E Oconee St
Oconee	SC 135	Flat Rock Rd
Anderson	SC 81	Welcome Rd
Cherokee	SC 209	Bluebird Ln
Oconee	SC 59	W South 6th St
Anderson	US 178	Levis Smith Rd
Oconee	SC 11	Old House Rd
Cherokee	Overbrook Dr	Rutledge Ave
Cherokee	US 29	Double Bridge Rd
Pickens	SC 183	Mile Creek Rd
Cherokee	SC 18	Settlemyey St
Oconee	Old Clemson Hwy	Lawrence Bridge Rd
Greenville	SC 11	Smith Rd / Tugaloo Rd
Cherokee	W Pine St	S Chester St
Cherokee	SC 150	Buford St
Oconee	Wells Hwy	Singing Pines Rd
Cherokee	SC 11	Whelchel Rd
Cherokee	US 29	Baker Rd
Cherokee	US 29	W Robinson Rd
Cherokee	SC 18	Old Race Track Rd
Anderson	SC 187	Dobbins Bridge Rd
Cherokee	US 29	Beaver Dam Rd
Cherokee	SC 11	Cherokee National Hwy
Pickens	SC 133	SC 183
Cherokee	SC 18	Blacksburg Hwy / Old Buffalo Church Rd
Oconee	SC 59	W South 4th St
Cherokee	US 29	Marion Ave
Cherokee	SC 150	Providence Creek Rd
Cherokee	SC 150	Hampshire Dr
Spartanburg	SC 14	Blackstock Rd
Oconee	SC 183	SC 130
Spartanburg	SC 101	Bellview Rd
Anderson	SC 88	Melton Rd
Cherokee	SC 11	Broad St
Cherokee	SC 150	W 3rd St
Oconee	SC 11	SC 24
Cherokee	SC 105	Woodland Rd
Spartanburg	US 221	SC 146
Oconee	US 123	Armstrong Rd
Anderson	SC 81	Agnew Rd
Oconee	SC 28	West Union Rd
Cherokee	SC 105	SC 18

UNFUNDED INTERCHANGE PROJECTS

County	Roadway1	Roadway2
Spartanburg	I 26	SC 49 (Exit 44)
Spartanburg	I 26	SC 146 (Exit 38)
Anderson	I 85	US 178 (Exit 21)
Anderson	I 85	SC 81 (Exit 27)

UNFUNDED ROAD IMPROVEMENT AND RESURFACING PROJECTS

County	Roadway	Description
Greenville	US 25	Resurfacing MM 50.10 to MM 53.89
Anderson	Orange Way	Extension from Ryobi Dr to SC 81
Greenville	US 25	Jersey barrier from The Cliffs to to NC Line

UNFUNDED SPECIAL STUDIES

County	Study Name
Oconee	Truck Parking Site Selection Study (Freight Plan)
Cherokee	SC 11 Corridor Access Management Study (Regional Safety)
Anderson	SC 24 Corridor Study (Freight Plan)



Table 7-5. FY 2021-2027 RTIP Summary Worksheet

TIP Summary Worksheet						
	FY 2022	FY 2023	FY2024	FY2025	FY2026	FY2027
Carryover	\$ 27,861,000	\$ 27,902,000	\$ 7,713,000	\$ 3,574,000	\$ 4,410,000	\$ 921,000
Guideshare	\$ 8,691,000	\$ 8,691,000	\$ 8,691,000	\$ 8,691,000	\$ 8,691,000	\$ 8,691,000
Available	\$ 36,552,000	\$ 36,593,000	\$ 16,404,000	\$ 12,265,000	\$ 13,101,000	\$ 9,612,000
<b>Existing Projects Under Development</b>						
SC 28 @ SC 185 Intersection - Anderson	\$ 300,000		\$ 200,000	\$ 1,000,000		
US 76 @ Welpine Rd Intersection - Anderson	\$ 450,000	\$ 3,500,000				
US 29 Jockey Lot Intersection - Anderson		\$ 500,000	\$ 3,500,000			
US 178 Resurfacing - Anderson	\$ 50,000	\$ 9,000,000				
SC 150 @ O'Neal St Intersection- Cherokee	\$ 350,000		\$ 250,000	\$ 750,000		
SC 11 @ Old Post Rd - Cherokee	\$ 3,100,000					
JP Stevens Rd @ Cherry Rd - Oconee		\$ 500,000	\$ 2,500,000			
SC 24 @ SC 182 - Oconee	\$ 2,150,000					
SC 59 @ SC 182/SC 245 - Oconee	\$ 1,000,000	\$ 2,500,000				
US 178 Resurfacing - Pickens	\$ 50,000	\$ 4,000,000				
US 176 @ SC 357 - Spartanburg	\$ 1,000,000					
Travel Demand Model Update	\$ 200,000					
<b>Special Studies and Allocations (NEW)</b>						
Rural Signalization Program		\$ 430,000	\$ 430,000	\$ 430,000	\$ 430,000	\$ 430,000
US 29 Corridor Study - Anderson		\$ 450,000				
SC 105 Truck Movement Study - Cherokee			\$ 75,000			
US 29 Corridor Study from East Gaffney to Blacksburg - Cherokee				\$ 150,000		
US 29 Corridor Study for New Weigh in Motion Station - Anderson					\$ 50,000	
US 123 Corridor Study - Oconee						\$ 150,000
Truck Parking Site Selection Study - Oconee						\$ 50,000
Regional LRTP Update - Region						\$ 250,000
Travel Demand Model Update - Region					\$ 200,000	
<b>Intersections, Rail Crossings, and Bridges (NEW)</b>						
SC 49 @ SC 56 Intersection - Spartanburg		\$ 2,000,000				
SC 414 @ Blackwell Rd Intersection - Greenville		\$ 2,000,000				
SC 11 @ Peachtree Rd Intersection - Spartanburg		\$ 2,000,000				
SC 150 @ Grassy Pond Rd Intersection - Cherokee		\$ 2,000,000				
Hamrick Street (Gaffney) Rail Crossing Improvement - Cherokee			\$ 375,000			
SC 11 @ S Saluda Rd Interscetion - Pickens			\$ 2,000,000			
US 29 @ Floyd Baker Blvd Intersection - Cherokee			\$ 2,000,000			
SC 11 @ Little Eastatoee Rd Intersection - Pickens				\$ 2,000,000		
SC 11 and Whitfield Rd Bridge Rehabilitation - Oconee				\$ 1,500,000		
Island Ford Street Rail Crossing Improvement - Cherokee				\$ 25,000		
SC 18 @ Concord Rd Intersection - Cherokee				\$ 2,000,000		
SC 105 @ E Oneal St - Cherokee					\$ 2,000,000	
SC 252 @ Wright School Rd - Anderson					\$ 2,000,000	
SC 11 @ Mountain Rd - Oconee						\$ 2,000,000
SC 59 @ Wells Hwy - Oconee						\$ 2,000,000
SC 18 @ Corinth Rd - Cherokee						\$ 2,000,000
<b>Resurfacing (NEW)</b>						
US 123 (Sandifer Rd) Resurfacing - Oconee			\$ 1,500,000			
US 123 Resurfacing - Oconee					\$ 7,500,000	
<b>Project Total</b>	<b>\$ 8,650,000</b>	<b>\$ 28,880,000</b>	<b>\$ 12,830,000</b>	<b>\$ 7,855,000</b>	<b>\$ 12,180,000</b>	<b>\$ 6,880,000</b>
Carryover	\$ 27,902,000	\$ 7,713,000	\$ 3,574,000	\$ 4,410,000	\$ 921,000	\$ 2,732,000



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