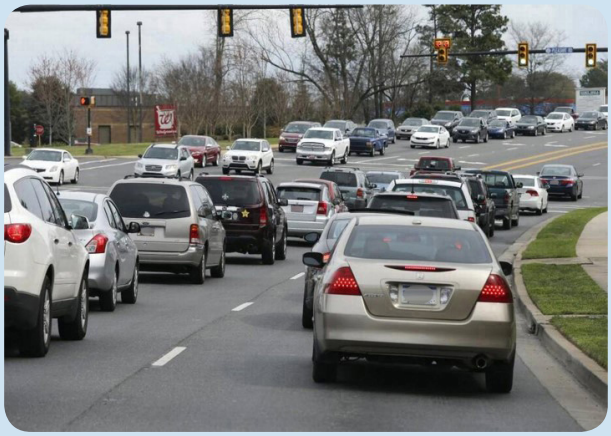

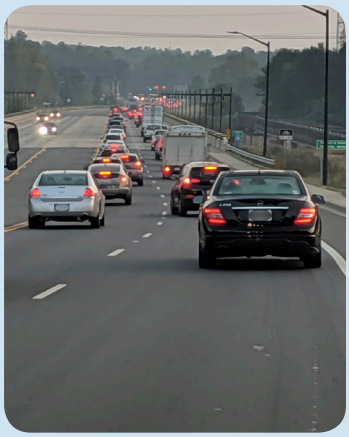

2050 Long Range Transportation Plan

June **2021**

REATS
Rock Hill-Fort Mill Area Transportation Study

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Introduction

About this Plan

This document is the 2050 Long Range Transportation Plan (LRTP) for the urbanized areas of York and Lancaster counties, South Carolina. It has been prepared by the Rock Hill - Fort Mill Area Transportation Study (RFATS), which is the agency responsible for regional transportation planning in this area. Federal law requires the preparation of this plan, and also specifies issues which the plan must consider.

The plan is multi-modal, covering highways, public transportation, freight, bicycle and pedestrian travel, as well as aviation. It includes a financial plan for transportation expenditures to 2050, as well as a congestion management process. The plan also takes social and environmental considerations into account, along with public involvement during the course of its preparation.

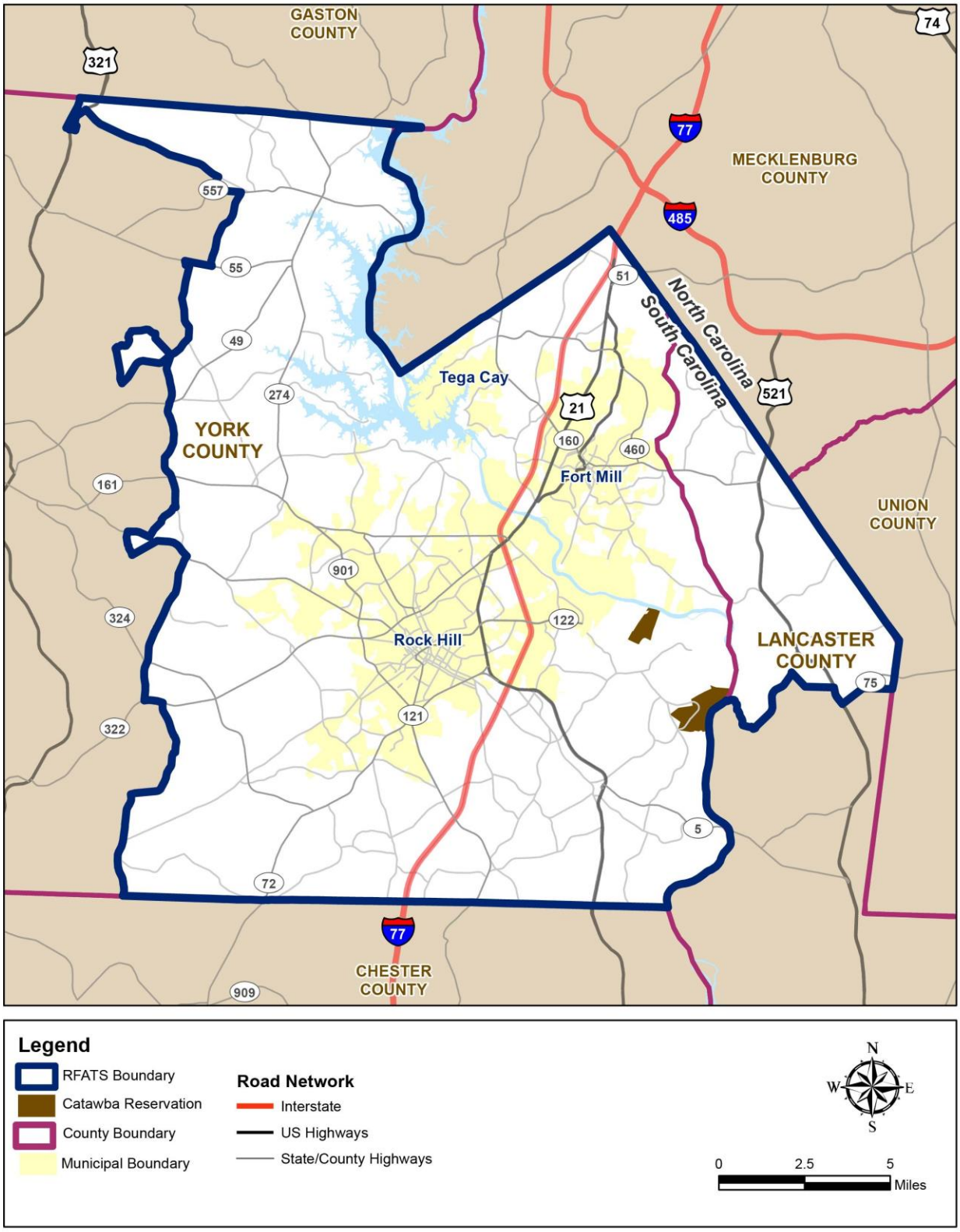
About RFATS

What is an MPO?

RFATS is a Metropolitan Planning Organization (MPO), one of more than 400 such agencies across the country that are responsible for regional transportation planning. In order to remain eligible for federal transportation funds, urbanized areas with a population of 50,000 or greater must maintain a formal metropolitan transportation planning process. The overall aim of these requirements is to ensure continuing, cooperative, and comprehensive transportation planning for urban areas, and MPOs are central to that process. Each MPO is responsible for short- and long-range transportation planning for its region, as well as the programming of all federal transportation funds spent within the area.

Figure 1.1 shows the boundary of the area for which RFATS is responsible. Member communities of RFATS include the cities of Rock Hill and Tega Cay, the Town of Fort Mill, the unincorporated urban areas of York and Lancaster counties, and the Catawba Indian Nation.

Figure 1.1: RFATS Planning Area



The RFATS Planning Area

As shown in **Figure 1.1,** the Interstate 77 corridor runs through the heart of the RFATS planning area. The largest city in the region, Rock Hill, is 20 miles south of Charlotte and approximately 65 miles north of Columbia. The U.S. Census Bureau estimates that Rock Hill is now the fifth-largest city in South Carolina.

I-77 connects the area to Columbia (to the south) and Charlotte (to the north). Nearby, I-85 connects the area to Greenville (to the west) and Atlanta (to the southwest). A major international airport (Charlotte Douglas) and intermodal freight yard are located just north of the planning area on the western edge of Charlotte, NC. To the south, one of the east coast's major ports in Charleston can be accessed via highway links along I-77 and I-26. Freight rail facilities broadly parallel I-77 regionally and run through downtown Rock Hill. One of the state's major river systems, the Catawba, flows through the area as well.

As described above, the RFATS planning area includes the cities of Rock Hill and Tega Cay, the Town of Fort Mill, the Catawba Indian Nation, the eastern urbanized portion of York County as well as the panhandle of Lancaster County – which essentially runs from the state line along US 521 down to Hwy 75 (Waxhaw Hwy). The planning area also includes the communities of Lake Wylie, Newport, Bethel, Leslie and Catawba.

Formal regional transportation planning in the RFATS area began in the early 1960s. At that time, the planning process principally focused only on the eastern urbanized portion of York County – which was essentially Rock Hill. Since this time, RFATS has grown in size and population – as of 2018, the planning area includes a population of 254,000. This growth has led to increasing pressure on many parts of the transportation system, and further growth is projected to continue for the duration of the LRTP through 2050 – though the next ten years are expected to be among the strongest.

RFATS Organizational Structure

The planning process is guided by the RFATS Policy Committee, comprised of 12 voting members who represent each of the region's local governments, the Catawba Indian Nation, the South Carolina Department of Transportation (SCDOT) Commission, as well as legislative representatives from the South Carolina House and Senate. The committee chair is selected annually on a rotating basis among local government members. The vice-chair also serves a one-year term and is selected by vote of the Policy Committee members.

Figure 1.2: RFATS Organizational Structure

The Technical Team includes staff from each of the municipalities, York and Lancaster counties, as well as SCDOT, the Federal Highway Administration (FHWA), the Federal Transit Administration (FTA), the Catawba Regional Council of Governments, and the Catawba Indian Nation. The RFATS Administrator serves as chair of the Technical Team.

RFATS also maintains a standing Citizens Advisory Committee which reviews and provides input on the development of programs and projects within the region. Members include representatives from the six RFATS communities and at-large members who represent persons traditionally underserved by the transportation system.

The Transportation Planning Process and the LRTP

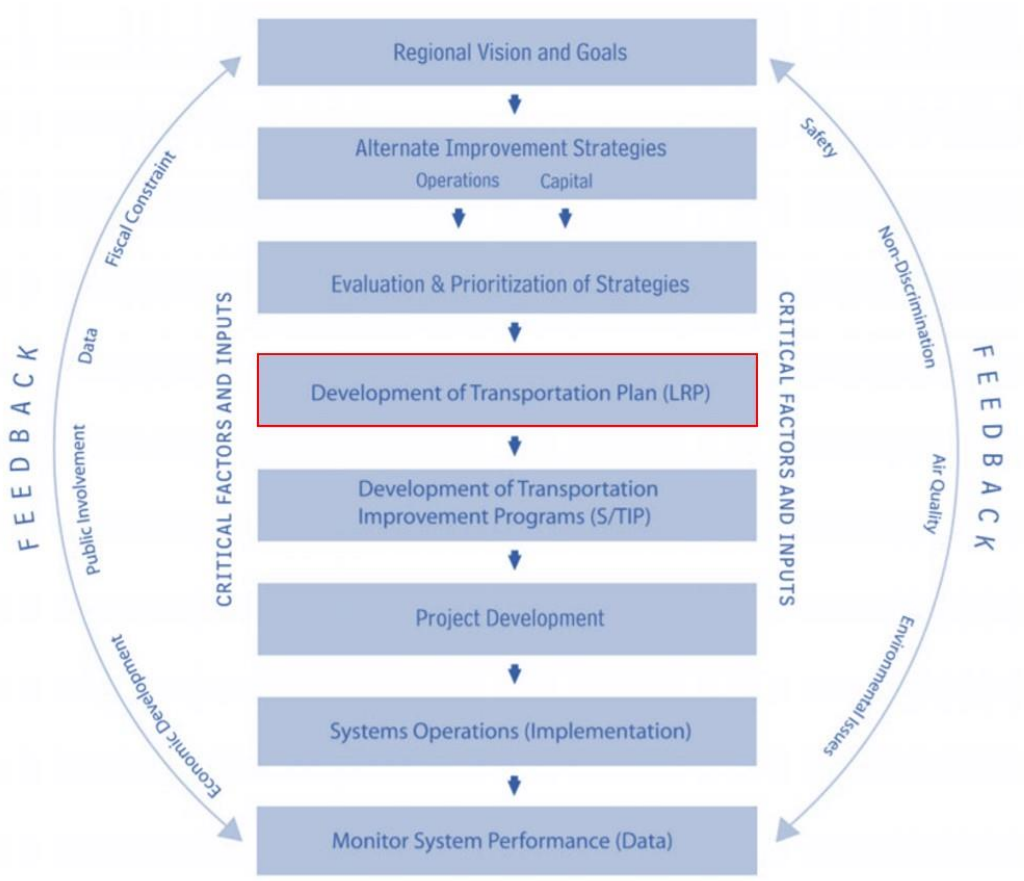
Figure 1.3 presents an overview of the major elements in the transportation planning process, including the development of the LRTP. As shown, the plan summarizes the priority "strategies" that have been identified to help meet regional transportation goals. These strategies include both capital projects and operations (such as roadway maintenance and public transit service). Once the long-range plan has been adopted, the near-term strategies receive funding for implementation by being included in the region's Transportation Improvement Program, or TIP.

After a project has been included in the adopted TIP, the responsible agency may begin formal project development. This typically starts with confirming the purpose and need of the project, securing the necessary environmental agency approvals, and completing the design. If needed, right-of-way is then purchased and then construction begins. This process generally takes several years from planning to construction, particularly in the case of larger projects.

As the region implements strategies from the LRTP, RFATS will continue to monitor the performance of the area's transportation system, as well as track the nature of transportation needs and demands.

The plan must be updated every four to five years. Any necessary changes in regional strategies can be made either through amending the current LRTP, or as part of the next plan update.

Figure 1.3 The Transportation Planning Process



From USDOT's *The Transportation Planning Process: Key Issues*

Public Participation Plan

Transportation plans and decisions affect travel costs and quality of life for every citizen of every community in the RFATS region, and active public participation in the planning and decision-making process is critical to RFATS' goals and mission.

With this in mind, RFATS has established a Public Participation Plan to actively encourage community members to provide input into the transportation planning process. The plan is regularly reviewed for improvement opportunities and was most recently updated in September 2019. One of the principal goals of the plan is to ensure that the planning process is open to all who would participate, including the following populations:

- Work commuters to and from the urbanized areas of York and Lancaster counties to Charlotte, NC.
- Local work commuters within the urbanized areas of York and Lancaster counties and the respective population centers.
- Student populations from local colleges and universities.
- Elderly, handicapped, minority, low-income, and disadvantaged residents.
- Commercial / industrial enterprise activity, including freight.
- All non-commuting travelers.

The type of transportation presently used by the majority of these populations is the single passenger automobile. Other transportation service is offered through commercial trucks, express bus service to and from Charlotte, fixed route service in the City of Rock Hill; and more broadly, demand response transit service, vanpool arrangements, and a developing network of bicycle & pedestrian facilities.

Rapid growth and development within the planning area is generating increased demand across the transportation network, resulting in a challenging operational environment for both people and goods. This pressure represents an important planning variable for short, intermediate, and long-term development decisions that will impact every community within the RFATS Study Area. Future growth will require a substantial increase in local

transportation investment as well as greater diversity in the planning and funding of various transportation improvement strategies. This approach will protect the area from significant traffic congestion, lower levels of system reliability, diminished quality of life, and decreased economic vitality.

PUBLIC PARTICIPATION PLAN: VISION, GOALS & OBJECTIVES

The RFATS vision for public participation includes providing information on transportation planning services and project development in a convenient and timely manner. To this end, the following goals and policies have been established.

Goal I. To actively engage the public in the transportation planning process according to the policies contained in Federal and State law as well as in the RFATS Public Participation Plan.

A. RFATS will maintain a current database of contacts and/or interested parties that includes:

- Federal, state and local agencies responsible for planned growth, economic development, environmental protection, airport operations, freight movement, land use management, natural resources, and historic preservation
- Elected Officials
- Local Government Staff
- Tribal Governments
- Transportation Agencies (freight, port, airport, transit, etc.)
- Organizations/agencies representing users of public transportation
- Organizations/agencies representing those traditionally underserved by the existing transportation system
- Local Media
- Homeowners Associations
- Libraries (for public display)
- Interested members of the general public

B. RFATS will (when feasible) electronically send meeting notices to all interested parties (RFATS contact list and/or targeted

group mailing, etc.).

C. RFATS will employ visualization techniques to illustrate transportation plans/projects. Examples of visualization techniques include charts, graphs and maps.

Goal II. RFATS shall keep the public informed of on-going transportation related activities on a continuous basis.

A. RFATS will make publications and work products available to the public.

B. RFATS staff will be available to provide general and project specific information at a central location during normal business hours and after hours when deemed appropriate and with reasonable notice.

C. RFATS will maintain an accurate website with current transportation planning and project activity descriptions/summaries, including:

- Updated list of Policy Committee members
- Current schedule for RFATS meetings and events
- Public display ads and notices
- Copies of the Metropolitan Transportation Plan (MTP), Transportation Improvement Program (TIP), Unified Planning Work Program (UPWP), Public Participation Plan (PPP), and other documents/studies
- Opportunity for public comment
- Opportunity to request updates for notices and announcements
- Civil Rights/Title VI Information
- Glossary of commonly used terms and phrases
- Interactive Mapping available via ArcGIS Online
- Staff Contact Information

D. RFATS will maintain and update social media accounts with current planning and project activity in an effort to broaden public awareness.

Goal III. RFATS shall encourage the participation of all citizens in the transportation planning process.

A. RFATS utilize a "Public Participation Communications Venue" matrix (**Figure 2.1**), which lists the stakeholder groups and communication media (both direct and indirect), to provide the greatest opportunity to influence the transportation/transit choices in the RFATS Study Area.

Figure 2.1: RFATS Public Participation Communication Venues

	RFATS Citizens Advisory Committee	Community town hall meetings	Organization meetings	Newspapers – general circulation & targeted, etc.	Websites (linked to all jurisdictional sites)	Newsletters (Neighborhood Empowerment, etc.)	Mass Media	Targeted Bulk Mailings	Public Facility Contact	Senior Centers	Personal Interviews	Public Events
Residents – General Public	•			•	•				•			•
Historically Underserved	•	•		•	•	•	•		•			
Housing Authorities	•	•	•		•			•				
Neighborhood Organizations	•	•	•	•	•				•			
Churches, Faith-Based Organizations	•	•		•	•				•			
ESL Groups	•	•							•			
Council on Aging/Special Needs	•	•	•	•	•				•	•		
Chamber of Commerce	•		•	•	•				•			
Economic Development Organizations	•		•	•	•				•			
Homebuilders Association	•		•	•	•				•			
Educational Institutions / Organizations	•		•		•	•	•		•			
Freight Movement (i.e. SC Trucking Association)			•								•	

Goal IV. RFATS shall strive to improve public participation by continuously monitoring and evaluating public participation techniques.

A. The Public Participation Plan will be reviewed at least every three (3) years.

PUBLIC PARTICIPATION TECHNIQUES

Public Participation is an ongoing activity of the MPO. An effective public participation process is characterized by techniques and procedures that enable citizens to become and remain well informed. This section contains descriptions of public participation tools that RFATS currently uses and proposes to use in the future:

- Citizens Advisory Committee
- Community Based Public Events/SC Visitors Center
- Community Town Hall Meetings
- Comment Forms
- Consultation
- Direct Mailings/Postcards
- E-mail Notifications/ Announcements
- Flyers
- Legal Advertisements and Display Ads
- Library Distribution
- Limited English Proficiency Populations (Translation Services)
- LRTP Brochure
- MPO and Local Government Websites
- Media/Press Releases
- Personal Interviews
- Public comment period during Policy Committee Meetings
- Responding to comments or questions (written, telephone, meetings)
- Small Group/Public Meetings
- Social Media
- Summary of Comments Received
- Surveys
- Title VI and Environmental Justice
- Visualization

To support participation by persons with limited English proficiency, a translation tool is provided on the RFATS website which translates text on the webpages into more than 70 different languages, including Spanish. RFATS also works with the York County International Center to address other requests for translation.

Public Participation Activities for the 2050 LRTP

Stakeholder Outreach

Comprehensive outreach to all stakeholder groups was undertaken during the development of the 2050 LRTP, beginning in the fall of 2020 and concluding with the final public hearing at the April 23, 2021 Policy Committee meeting. A representative sample of those contacted includes the following:

- Local Governments / CRAFT Planning Partners / SCDOT
- Federal Highway Administration / Federal Transit Administration
- Environmental Protection Agency / SCDHEC
- Freight & Rail Providers / Citizens Advisory Committee
- Employers & Chambers of Commerce
- Transit Agencies / Providers
- Bicycle / Pedestrian Organizations

Outreach Meetings

Given the circumstances with COVID-19 in 2020, most outreach was done online. RFATS advertised public meeting opportunities through the local newspapers of general circulation (The Herald and the Carolina Gateway). RFATS reached out to an extensive stakeholder distribution list, accepting comments via phone, email, and through the RFATS website. Ads were ran on the My Ride Transit Service, utilizing their messaging system on the buses. Lastly, RFATS ran ads through social media reaching over 25,000 people in York and Lancaster Counties.

As a part of the stakeholder outreach, a series of virtual meetings were held to provide opportunity to all interested parties to identify transportation needs and priorities. These were held on Tuesday, October 13th, 2020 from 1:30 PM to 3:00 PM and Thursday, October 15th, 2020 6:00 to 7:30 PM. The Tuesday session had 33 attendees including citizens, media, technical staff from within the region. The Thursday session had 12 attendees. Below are some of the common themes heard during those meetings and in comments provided online.

- Operations & Maintenance – seemed to be a focus on repaving needs across the region, specifically noted were Dobys Bridge Road, Cel-River Road & Sutton Road
- Road Widenings – specifically focus was on the widening projects planned by Pennies for Progress on US 21 and the need for widening to continue on US 21 from the Catawba River to SC 160
- Bicycle & Pedestrian Improvements – noted in a number of locations that there is a growing emphasis from the public on the

need for improved pedestrian access & safety as well as improved system connectivity

- Public Transit – there were a number of comments received regarding the need for additional options for public transit across the network, as well as a continued desire for access to the CATS LYNX Blue Line. There was also interest in Commuter rail connecting to Charlotte, Columbia, & Raleigh. Some concerns were voiced on how regional transit options may work, and what possible drawbacks there may be.
- Dave Lyle Blvd Extension – there was concern expressed by some regarding the impact to communities in the eastern parts of the study area by any potential extension of Dave Lyle Blvd.
- Funding – concern was express regarding any impact COVID-19 has had on funding levels (SCDOT noted in fall 2020 that they projected a $54M loss in gas tax revenue and a $24M decrease in vehicle sales tax revenue).
- Connected and Autonomous Vehicles – there was interest in how the MPO is considering Connected & Autonomous Vehicles in its Long Range Planning.
- Collector Streets – there was extensive interest in the role of Collector Street Planning and the impact collector streets can have on our network connectivity and congestion reduction on arterial roadways.

RFATS Committees

RFATS has several committees that not only contribute directly to the policy-making process but also serve as a means of public and stakeholder involvement. The committees include:

Policy Committee – The RFATS planning process is guided by a 12-member Policy Committee which sets priorities and provides direction for the RFATS Study Area. This committee is made up of elected officials from each jurisdiction within the MPO Planning Area, the South Carolina Legislature and a representative from the SCDOT Commission. The committee chair is determined through a yearly rotating schedule among members representing the local governments that participate in the process. The vice-chair is also selected by a vote of the members of the Policy Committee and also serves a one-year term.

Technical Committee – This committee includes staff from each of the municipalities within the RFATS Study Area, as well as the South Carolina Department of Transportation (SCDOT), the Federal Highway Administration (FHWA), the Catawba Regional Council of Governments (CRCOG), and the Catawba Indian Nation. The RFATS Administrator serves as chair of this committee.

Citizen's Advisory Committee (CAC) – The Citizens Advisory Committee provides input and review of the RFATS transportation planning process and activities. Members include representation from the six RFATS communities and at-large members representing those with special needs as well as communities traditionally underserved by the existing transportation system.

Interagency Consultation Committee (IAC) – The primary purpose of the IAC is to promote cooperative coordination and review in ensuring that all transportation plans, programs and projects adopted by RFATS properly conform with the purpose of the State Implementation Plan (SIP) to meet the National Ambient Air Quality Standards in the RFATS region. The Interagency Consultation Committee includes staff representation from RFATS, as well as SCDOT, FHWA, the Federal Transit Administration (FTA), the South Carolina Department of Health and Environmental Control (SCDHEC) and the Environmental Protection Agency (EPA).

LRTP Adoption Process

The adoption process for the 2050 Long Range Transportation Plan involved a multi-stage evaluation and review effort that included Interagency Consultation with a variety of Federal and State partners. During the period from January 2021 through April 2021, the RFATS Technical Team and the IAC reviewed all three LRTP documents (Long Range Plan, Air Quality Conformity Report and Transportation Improvement Program).

On March 26, 2021, the RFATS Policy Committee granted preliminary approval of a public review draft and authorized a 30-day public comment period. Draft LRTP documents were then posted on the RFATS website as well as on the websites of all RFATS communities. Notice of the opportunity for public review was then published in the Rock Hill *Herald and Carolina Gateway* (the general circulation newspapers for the area), providing information regarding the availability of the LRTP documents for public inspection as well as information on how to submit input for presentation to the Policy Committee prior to final approval.

On April 23, 2021 a public hearing was held prior to the RFATS Policy Committee presentation and adoption of the 2050 Long Range Transportation Plan and Air Quality Conformity Report.

Summary of Comments

Public comments relating to the 2050 Long Range Transportation Plan are summarized as follows:

- Support for investing $10 million of Guideshare funds towards bicycle & pedestrian improvements
- The 2050 LRTP is focusing more on multimodal recognition, recommendations, and improvements
- Support for focusing on improving connectivity from not only a collector street need, but with bicycle and pedestrian projects
- Support for focusing on improving and investing in transit to enhance mobility choices and reduction in congestion
- Support for improving connections to transit stops
- Emphasis on roadway projects to be multimodal in nature and account for bicycle and pedestrian facilities through design standards for enhancing safety

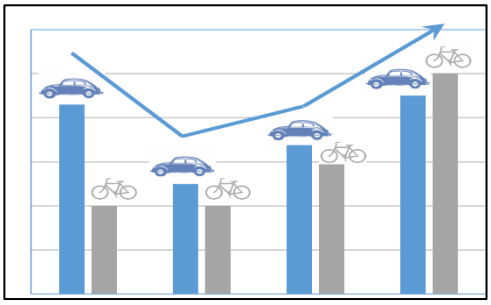
A Performance-Based Planning Framework

The current federal legislation – *Fixing America's Surface Transportation* (FAST) Act, enacted in December 2015 – retains the same performance-based planning frameworks that were enacted under the previous federal legislation - *Moving Ahead for Progress in the 21st Century* (MAP-21). The framework requires MPOs to use performance measures in their planning processes – including the LRTP.

Goals, Objectives and Performance Measures

The terms "goals" and "objectives", used in a variety of settings, have specific meanings in the planning field. *Goals* are broad qualitative or descriptive statements that indicate a general direction for a plan. *Objectives* describe the specific steps or actions that will be taken to reach a given goal. Multiple objectives are typically assigned to one goal to paint a picture of how a goal can be successfully met.

MPOs have always used goals and objectives in the development of LRTPs and other planning activities. There has been a recent increase in the use of *performance measures* to further refine or "operationalize" objectives by providing a means of quantifying and tracking progress. In long-range planning, these measures can be used to compare current performance against future projections.



Most MPOs already use some form of performance measurement in the long range transportation planning process. Common measures include roadway level of service (a measure of how freely traffic is flowing) and volume to capacity ratio (a measure of traffic volume relative to the number of roadway lanes). Regional travel demand models are used to generate these measures in addition to others, such as the number of vehicle-miles traveled, vehicle-hours traveled, and vehicle-hours of delay.

Several of these measures for the RFATS region are presented in Chapter 4. This provides a comparison of how well the roadway system functions under current conditions against projected performance under the conditions that are expected by the year 2050. Proposed transportation improvements can then be evaluated by the degree to which they are expected to improve future system performance.

Performance targets can be used to delineate ideal minimum and/or maximum values for these measures. For example, a city may aim to have sidewalks lining at least 75% of its roads or a transit system may strive to have at least 90% of its buses arrive within 5 minutes of their scheduled time.

The 2050 LRTP includes performance measures that align with anticipated federal requirements for monitoring safety and air quality improvement, which are the measures applicable to the RFATS region based on preliminary federal guidance.

Federal Planning Factors Included in the LRTP

Many investments in the RFATS region use federal funding and therefore must be guided by a long range plan that addresses multiple modes of transportation and specific factors such as economic vitality and safety. These factors, listed in **Figure 3.1**, have remained largely the same in federal legislation over the past decade.

Two additional planning factors were added by the FAST Act: first, the transportation system's resiliency (i.e. its ability to withstand unexpected impacts, including stormwater impacts) and second, its capacity to promote and facilitate travel and tourism.

Other laws that inform the development of the LRTP include Title VI of the Civil Rights Act of 1964, the Americans with Disabilities Act (ADA) of 1990, and the National Environmental Policy Act (NEPA) of 1969. Each of these laws in some way influences the type, location, and design of transportation facilities and services contained in the LRTP.

Figure 3.1: Federal Metropolitan (FAST) Planning Factors

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

LRTP Goals and Objectives

The goals of the 2050 LRTP, shown in **Figure 3.2**, encompass the federal planning factors listed above. **Figure 3.3** demonstrates the relationship between the goals of the 2050 LRTP and the federally required transportation planning factors.

Figure 3.2: Goals of the 2050 Long Range Transportation Plan

1	Provide Safe, Secure, Reliable Roadway Travel
2	Manage Congestion
3	Provide Mobility Choices
4	Promote Consistency of the LRTP with Other Regional Plans

Figure 3.3: Relationship of National FAST Planning Factors to 2050 LRTP Goals

FAST Planning Factor	2050 LRTP Goal(s)
Support the **economic vitality** of the metropolitan area, especially by enabling global competitiveness, productivity and efficiency	1, 2
Increase the **safety** of the transportation system for motorized and non-motorized users	1, 3
Increase the **security** of the transportation system for motorized and non-motorized users	1, 4
Increase the **accessibility** and **mobility** of people and for freight	1, 2, 3
Protect and enhance the **environment**, promote **energy conservation**, and improve **quality of life**; and promote **consistency** between transportation improvements and State and local planned growth and economic development patterns	2, 3, 4
Enhance the integration and **connectivity** of the transportation system, across and between modes, for people and freight	1, 2, 3
Promote efficient **system management** and operations	1, 2
Emphasize the **preservation** of the existing transportation system	1, 4
Improve transportation system **resiliency** and **reliability,** and reduce or mitigate **stormwater impacts** on the surface transportation system	1, 2, 3, 4
Enhance **travel** and **tourism**	1, 3, 4

Described on the following pages are specific objectives representing action steps to be taken to implement each 2050 LRTP goal. These objectives do not represent every possible action that could be taken, but they correspond to the issues most relevant to the RFATS region based on analysis, input and other local/regional plans. Performance measures are also given for a number of objectives.

Goal I. Provide Safe, Secure, Reliable Roadway Travel

Objectives

1) Protect public investment by maintaining the existing transportation system, including pavement, bridges, signal equipment and signs, transit vehicles and other transportation system components.
2) Provide a transportation system that enables reliable and efficient movement of passengers and freight to support the region's economic productivity.
3) Improve transportation safety for both motorized and non-motorized users.
    a) Reduce crashes at key intersections.
    b) Reduce crashes involving pedestrians and bicyclists.
4) Improve transportation security and the system's resiliency by developing an interconnected network that offers multiple routes and modes of travel.
5) Address visitor transportation needs through wayfinding, alternative modes in targeted areas, and other improvements.

Performance measures

A. Crash statistics for York and Lancaster counties, based on the most recent five years of data available:

a) Number of fatalities
b) Rate of fatalities per 100 million vehicle-miles traveled (VMT)
c) Number of serious injuries
d) Rate of serious injuries per 100 million VMT
e) Number of non-motorized fatalities and number of non-motorized serious injuries combined

B. Annual hours of delay in the RFATS region, as estimated by the regional travel demand model.

Goal II. Manage Congestion

Objectives

1) Make improvements to fully utilize capacity on the existing road network before constructing new lanes or facilities.
2) Give priority to projects that implement the strategies in the RFATS Congestion Management Process, including operational improvements such as traffic signal timing.
3) Give priority to projects that relate to implementation of the Collector Road plan.
4) Preserve traffic capacity on major corridors through quality development practices.
    a) Require driveway access on collector or local streets, rather than arterial routes.
    b) Increase the level of internal circulation within and between developments by designing more interconnected road networks.
4) Provide additional mobility choices (i.e. bicycle, pedestrian, and transit) along congested corridors.
5) Encourage and support sustainable development along congested corridors.
6) Maintain and improve the natural environment through the implementation of transportation policies, programs, and projects that reduce vehicle emissions to improve regional air quality.

Performance measures

A. Volume / Capacity ratios (V/C ratios): calculated using data from the Metrolina Regional Travel Demand Model (MRTDM).
B. Travel times, speeds, and corridor Level of Service (LOS): obtained through periodic travel time surveys.
C. Transit ridership and transit vehicle route reliability (on-time metrics): provided by the Charlotte Area Transit System and MyRide.
D. Safety: areas of safety concern were identified in the 2019 CMP using crash data provided by the South Carolina Department of Transportation (SCDOT).

Goal III. Provide Mobility Choices

Objectives

1) Incorporate pedestrian and bicycle facilities in planned improvements to roads and corridors, including state and local maintenance and pavement marking projects.
2) Require developments to provide pedestrian and bicycle facilities and connections.
3) Make demand-response service and rideshare opportunities available to all citizens in the RFATS area.
4) Maintain and improve citizens' access to inter-city rail and bus systems.
5) Continue to pursue implementation of local fixed-route transit service for RFATS communities.
6) Promote a transportation system that includes equitable options for low-income and minority persons.
7) Support expansion of existing demand-response services.

Performance measures

A. Percent of federal-aid roads within urban areas of RFATS that have sidewalks.

B. Percent of all workers who commute to work by walking or bicycling.

C. Percent of all workers who commute to work by using transit.

D. Annual ridership and on-time performance of transit service.

E. Transit trips per capita.

Goal IV. Promote Consistency of the LRTP with Other Regional Plans

Objectives

1) Implement strategies to improve regional air quality, including ridesharing, increasing trips made by alternative transportation, and improving traffic flow.

2) Implement the local land use policies needed to maximize the region's existing transportation investments and reach its long-term goals.
   a) Encourage growth and redevelopment in existing urban areas.
   b) Promote compact, walkable development patterns along the proposed future Bus Rapid Transit (BRT) corridor (as referenced in Chapter (as referenced in Chapter 8 – Public Transportation).
   c) Reserve future rights-of-way needed for planned transportation projects, whether affected by public or private development.
   d) Encourage review of development standards that may impede the expansion of transportation infrastructure.
   e) Encourage review of site development plans in relationship to number of driveways, locations of driveways, and opportunities to share access points to reduce increased curb cuts/driveways.

3) Minimize environmental impacts of the transportation system.
   a) Select, locate and design transportation system improvements so as to preserve and protect the area's natural features.
   a) Encourage transportation projects that help mitigate the impacts of stormwater runoff.

4) Ensure consistency with rural LRTPs in surrounding areas that are managed by the Catawba Regional Council of Governments as well as with other plans that affect the regional network, such as each county's Carolina Thread Trail Master Plan.

Performance measures

A. Tons of NOx (ozone) and volatile organic chemicals (VOCs) reduced by CMAQ-funded projects over a two-year and four-year period.

B. Total coverage of land area converted for new roadway right-of-way.

C. Staff hours committed to coordination with other organizations responsible for transportation planning.

D. Clean fuels as a share of total fleet fuel use by transit agencies in the region.

Each of the transportation investments recommended in the LRTP is expected to contribute to the achievement of these goals and objectives. In many cases, a proposed project or service will accomplish multiple goals and objectives. For example, growing the sidewalk system has environmental benefits, expands the availability of transportation choices, and improves safety for pedestrians.

Introduction

This section describes the regional roadway network and the process used to model future roadway conditions based on projected growth in population and employment within and around the RFATS region. Roadways that are currently congested or are projected to be congested in future years are identified. Proposed roadway improvements to address anticipated congestion as well as other operational factors have been developed and tested through a regional travel demand modeling process that takes account of operating conditions within RFATS as well as in adjacent areas. This ensures that all sources of current and projected travel demand are properly considered. These resulting projects, along with proposed timeframes for their implementation, form the basis for the roadway portion of this plan. Additionally, RFATS completed a Collector Street Plan in 2017 for which periodic updates are recommended due to the continued growth within the region.

Beyond the local roadway network in the planning area, it is important to note that additional infrastructure layers such as pavement quality; bridge conditions; and overall network performance / reliability, equally represent important components of the Metropolitan Transportation Planning Process as well and serve as additional reference points in shaping project and/or strategy identification, programming and implementation within the RFATS Study Area.

Existing Conditions and Trends

The roadway system is the principal means of mobility and access within the transportation system. An efficient roadway network allows for operational effectiveness, regional economic competitiveness, and a good quality of life.

There are also important linkages between transportation and land use that should be highlighted. This was true in the 19th century when the area developed with the building of the railroad, and it remains true today, particularly in relation to the highway system. Land use patterns determine travel needs, and the demands ultimately placed upon the road network. The need for transportation improvements — whether road widenings, intersection modifications, or simply a more context-sensitive street design— often reflect changes in adjoining land uses. Roadways in turn have a significant influence on land use. Providing improved access to property often generates new development at that location, which in turn generates additional travel demand, and then additional development, and so on in a circular fashion.

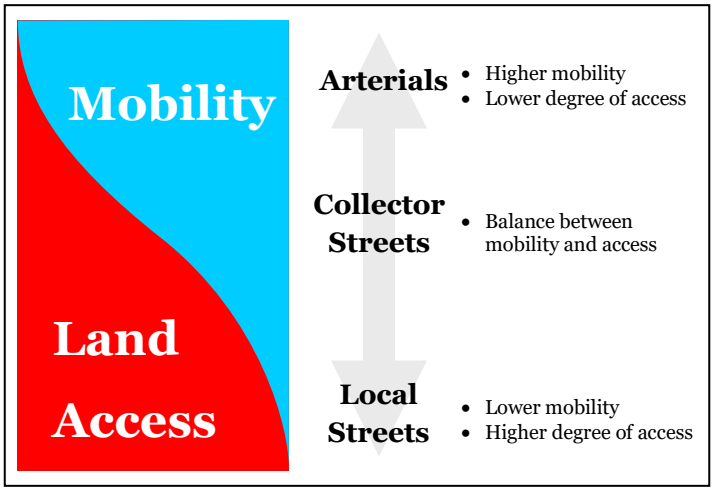
The RFATS roadway system connects the urban areas of Rock Hill, Tega Cay, Fort Mill and portions of York and Lancaster counties, the smaller communities within each urban area, and the wider regional and national transportation networks. Interstate 77, US 21, US 521, and SC 49 connect the RFATS region with Charlotte to the north and with Columbia to the south.

Roadway Functional Classification

Roadways are divided into functional classifications that reflect the balance between their role in providing mobility and their role in providing access to land (see **Figure 4.1** below). The functional classification of the nation's highways, roads and streets provides data that is used in the apportionment of federal funds, such as for the National Highway System (NHS) and Surface Transportation Program (STP). However, functional classification is also used for many other transportation planning and public policy purposes within states, MPOs, and local communities.

Within urbanized areas, roadways are classified into four categories: principal arterials, minor arterials, collector streets, and local streets.

Figure 4.1: Framework for Roadway Classification



Principal arterials carry traffic into and out of the region. Principal arterials (including freeways and expressways) in the RFATS region include:

- I-77
- US 21
- US 521
- Celanese Road / SC 161
- SC 49
- SC 160
- SC 5

Example of a principal arterial: SC 160

Minor arterials connect with the principal arterials and provide access between smaller communities within the urban area. Minor arterials include:

- SC 274 (Hands Mill Highway)
- SC 72
- Marvin Road
- Gold Hill Road / SC 460
- India Hook Road/Herlong Avenue
- Waxhaw Highway

Example of a minor arterial: Gold Hill Road

Collector streets collect traffic from residential areas and channel it to the arterials. Examples of collector streets include:

- Dobys Bridge Road
- Collins Road
- Barberville Road
- Ebinport Road
- Dam Road
- Pole Branch Road

Example of a collector street: Dam Road

Local streets provide direct access to adjacent land. Most streets within residential subdivisions would be classified as local streets, although it is also important to have collector streets that provide connections within and between neighborhoods.

Figure 4.2 shows the functional classifications for significant roadways in the RFATS region.

Traffic Conditions

Traffic Volumes

Generally, the higher the level of functional classification, the higher the volume of traffic that the roadway carries. **Figures 4.3** and **4.4** show the estimated annual average daily traffic (AADT) volumes in the RFATS region in the year 2019.

I-77 carries the highest number of vehicles per day, with volumes ranging from approximately 53,300 vehicles per day at the southern edge of the region to 176,500 at the North Carolina border. Arterials with the highest traffic volumes include Celanese Road, Gold Hill Road, Cherry Road, SC 160, Carowinds Blvd, US 521, US 21, SC 49, and Dave Lyle Boulevard.

Table 4.1 – Highest Non-Interstate Traffic Volumes by Segment

Roadway	Segment	Length (Miles)	2019 AADT
SC 161 (Celanese Road)	Mt. Gallant Road to US 21 (Cherry Road)	1.2	55,000
SC 161 (Celanese Road)	India Hook Road to Mt. Gallant Road	1.2	44,600
SC 122 (Dave Lyle Boulevard)	I-77 to Galleria Boulevard	0.3	41,500
US 521	SC 160 (Fort Mill Highway) to North Carolina State Line	0.9	39,700
US 21 (Cherry Road)	Aberdeen Road North to I-77	0.4	39,000
Carowinds Boulevard	North Carolina State Line to US 21	1.1	37,600
SC 161 (Old York Road)	SC 274 (Celanese Road) to Trexler Lane	3.0	35,700
SC 49	SC 274 (Charlotte Highway), SC 557 to North Carolina State Line	3.0	35,500
SC 160	SC 460 (Gold Hill Road) to I-77	3.0	32,600
US 521	Shelley Mullis Road to SC 160 (Fort Mill Highway)	3.8	32,000

National Highway System (NHS)

As noted earlier, the roadway network within RFATS is connected to a larger system of roadways and transportation network connectors known as the or NHS. This system includes principal arterial roadways, the Interstate, as well as other strategically important highways and / or intermodal facilitates whose reliability and efficiency are crucial to the National Transportation System. **Figure 4.5** shows the NHS within the RFATS region.

As such, RFATS assembles the latest operational data from the National Performance Management Research Data Set or NPMRDS. This source of information represents the principal tool on which the establishment of appropriate performance targets are developed and monitored overtime. Changes in the operating conditions of this data set are another important reference point in identifying and implementing needed transportation system investments that will preserve and enhance current as well as future operating conditions within the planning area on the National Highway System as well.

Figure 4.2: Roadway Functional Classifications

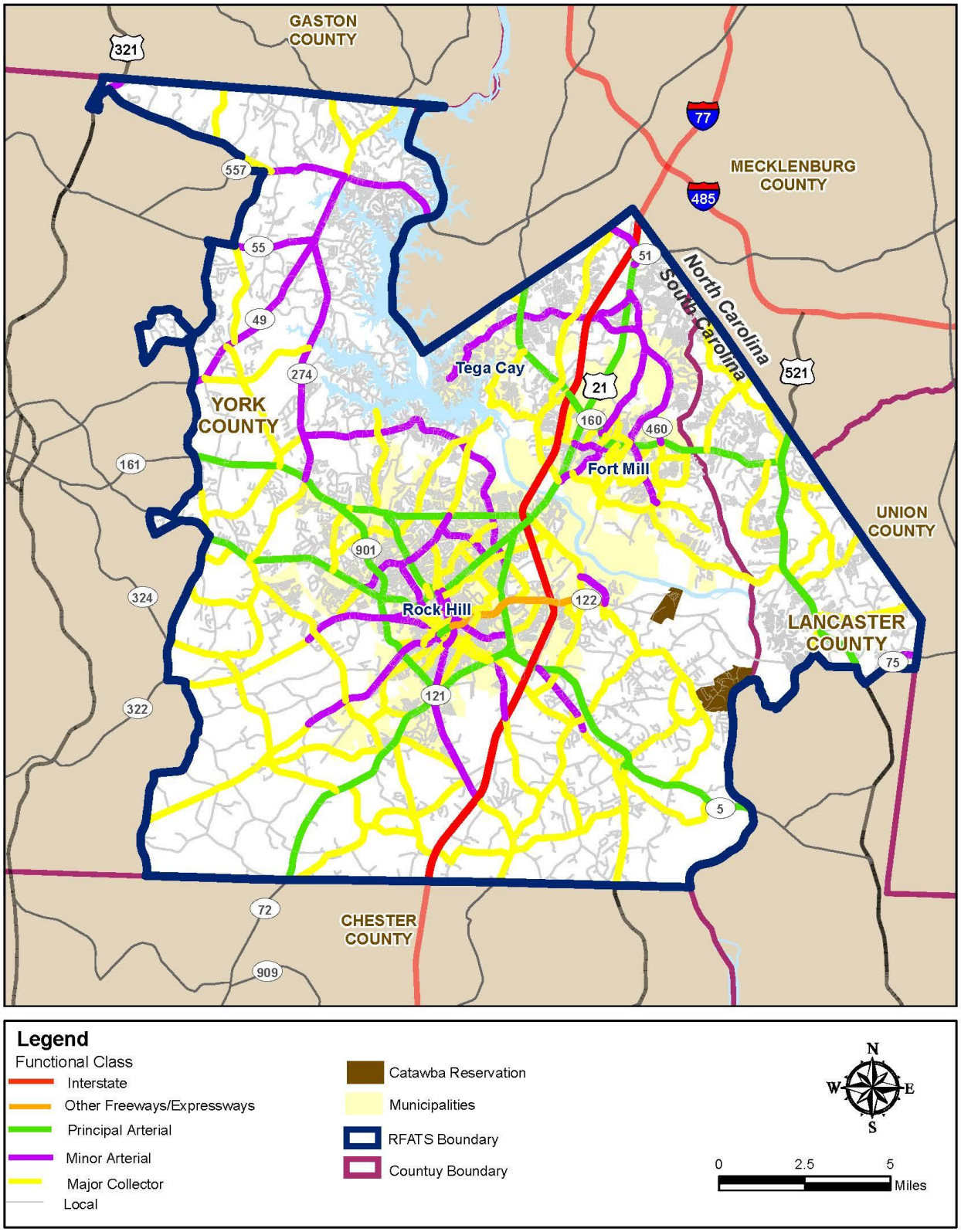


Figure 4.3: Average Annual Daily Traffic, 2019 (Region Overview)

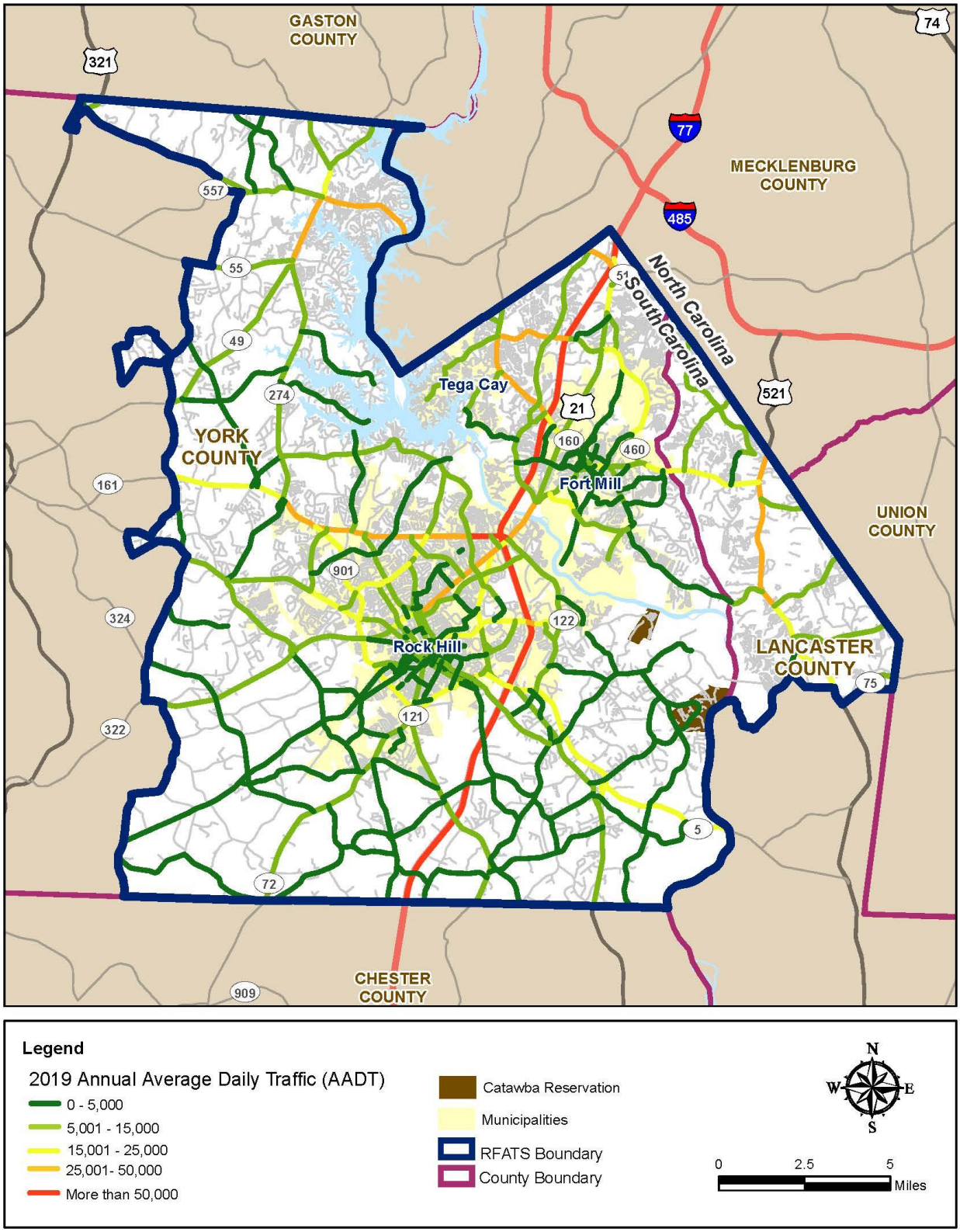


Figure 4.4: Average Annual Daily Traffic, 2019 (Rock Hill and Fort Mill areas)

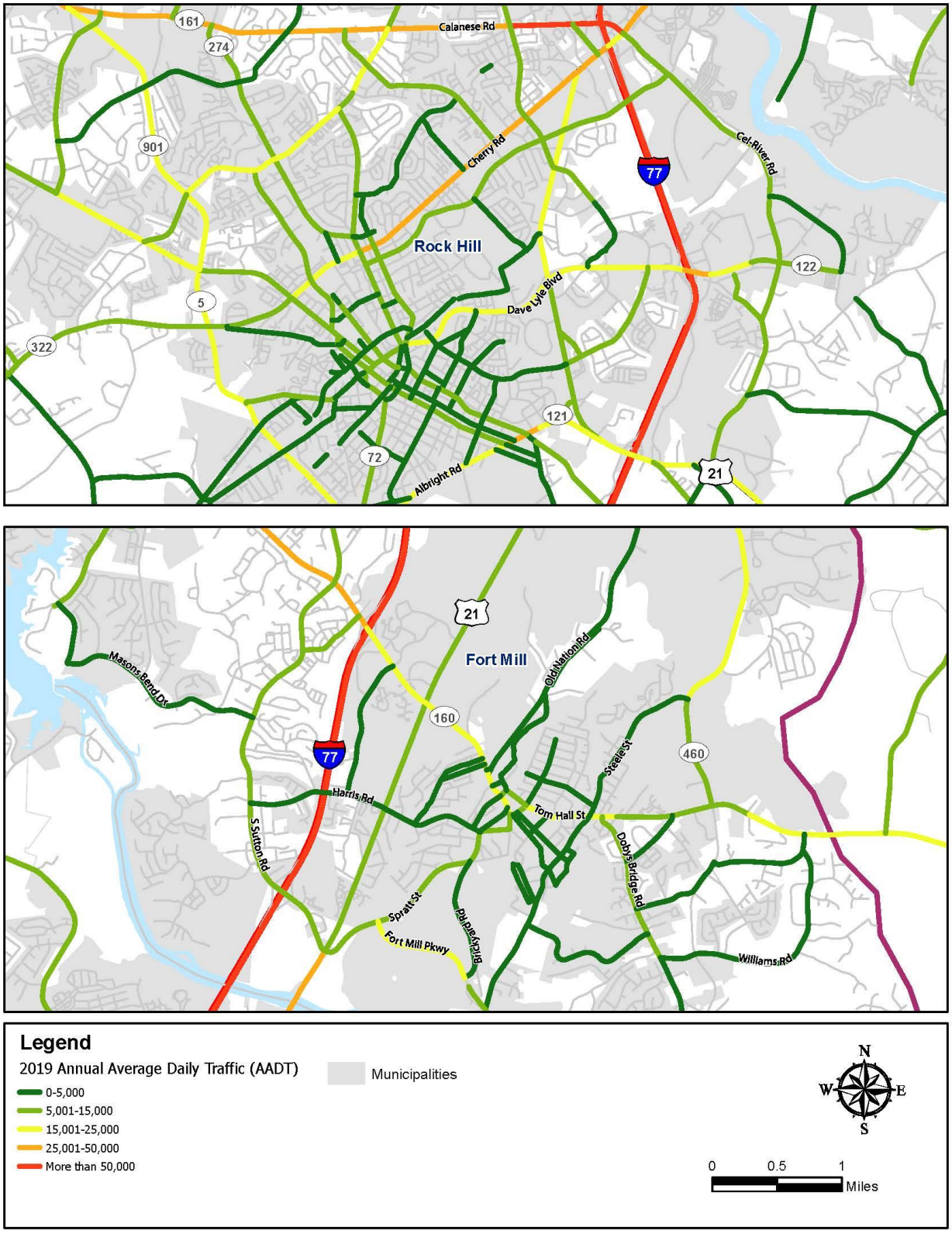
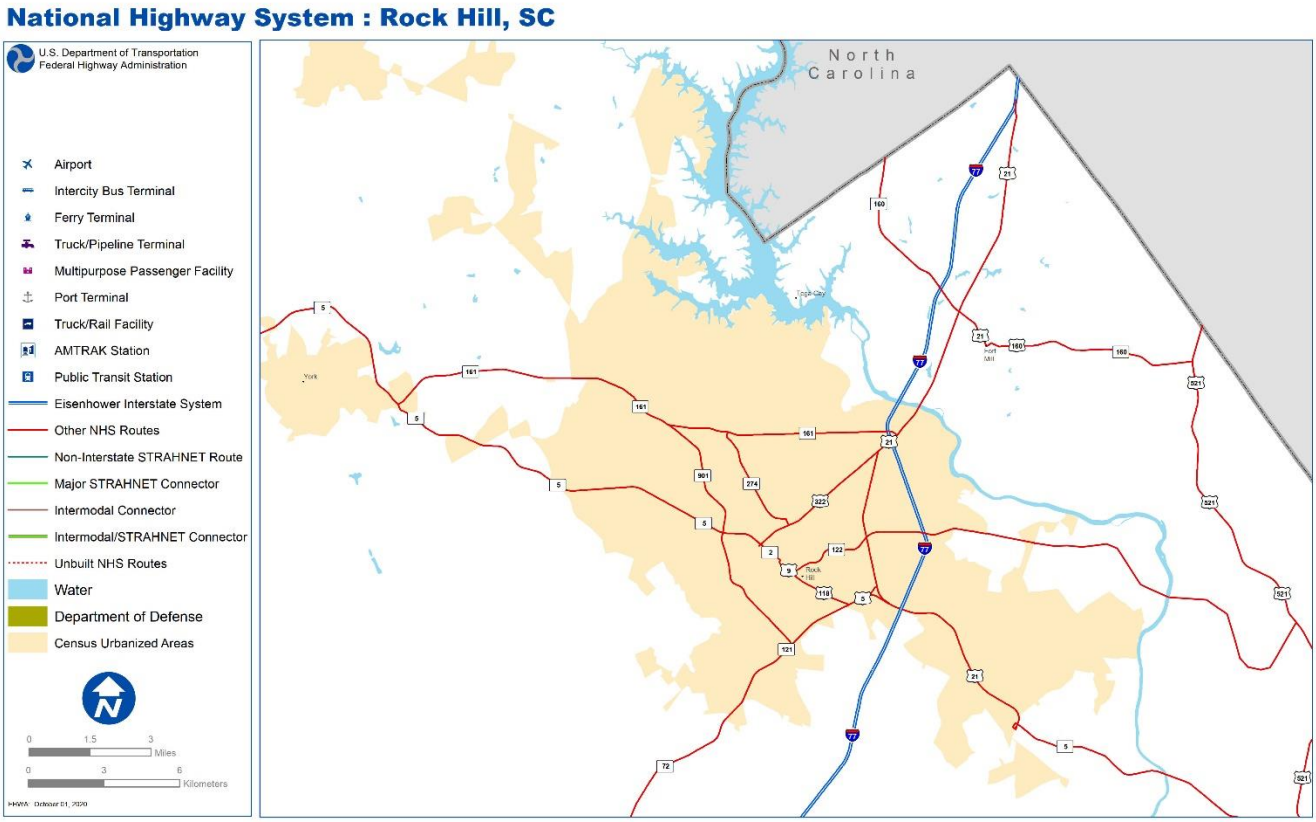


Figure 4.5: National Highway System (NHS) within RFATS Region



Current and Future Traffic Conditions

Traffic flow along a given roadway is often presented in terms of volume-to-capacity ratio (i.e. the volume of traffic that the road is carrying compared to its maximum capacity. A roadway's capacity is based on its functional classification, number of lanes, posted speed limit, percent of truck traffic, and geometric characteristics. Volume-to-capacity thresholds vary by the functional class of the facility and whether it is classified as urban or rural.

Higher V/C ratios indicate there are a higher number of vehicles relative to the road's capacity. For example, a V/C ratio of 0.70 means that about 70 percent of the road's available capacity is being used. As the V/C ratio nears 1, it means that the traffic volume is almost equal to the maximum number of vehicles the road can carry. Locations that have high V/C ratios are therefore almost certain to be experiencing traffic congestion and delay.

As the V/C ratio exceeds 1, reliability diminishes. Users of the roadway network look to find the quickest route to get to their destination, as the V/C and traffic volumes increase, drivers begin to experience less reliability in the roadway network.

The Metrolina Model was used to estimate traffic conditions on RFATS area roadways for a number of scenarios:

- **Existing Conditions (Figure 4.6):** This scenario uses a base year model calibrated to actual 2015 traffic data.

- **2050 LRTP (Figure 4.7):** This scenario shows projected traffic conditions by the year 2050, assuming the implementation of the projects included in this adopted long-range transportation plan.

All results reported here are for the PM peak period (3:30 to 6:30 PM), which shows the highest level of congestion during the 24-hour day that is modeled. It should therefore be noted that a route that appears congested in the following maps may only be congested at certain times of day.

In the Existing Conditions scenario, the arterial roads show the highest levels of congestion, especially in the areas with large retail developments near I-77. Significant PM peak congestion is also indicated along Fort Mill Highway and on I-77 itself; the latter is nearing capacity north of Sutton Road and already at capacity south of Mt. Holly Road.

Figure 4.6: Existing Traffic Conditions (2018)

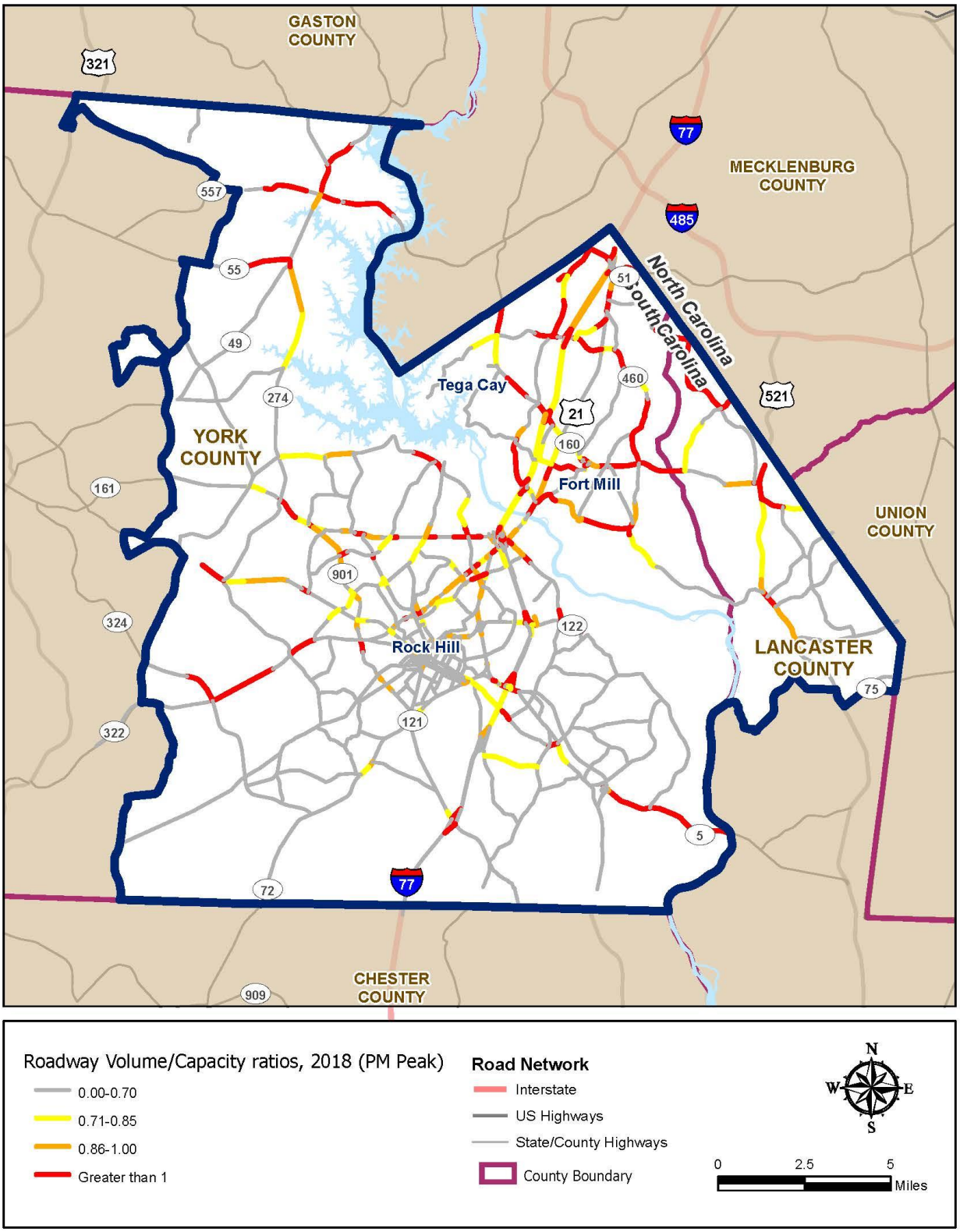
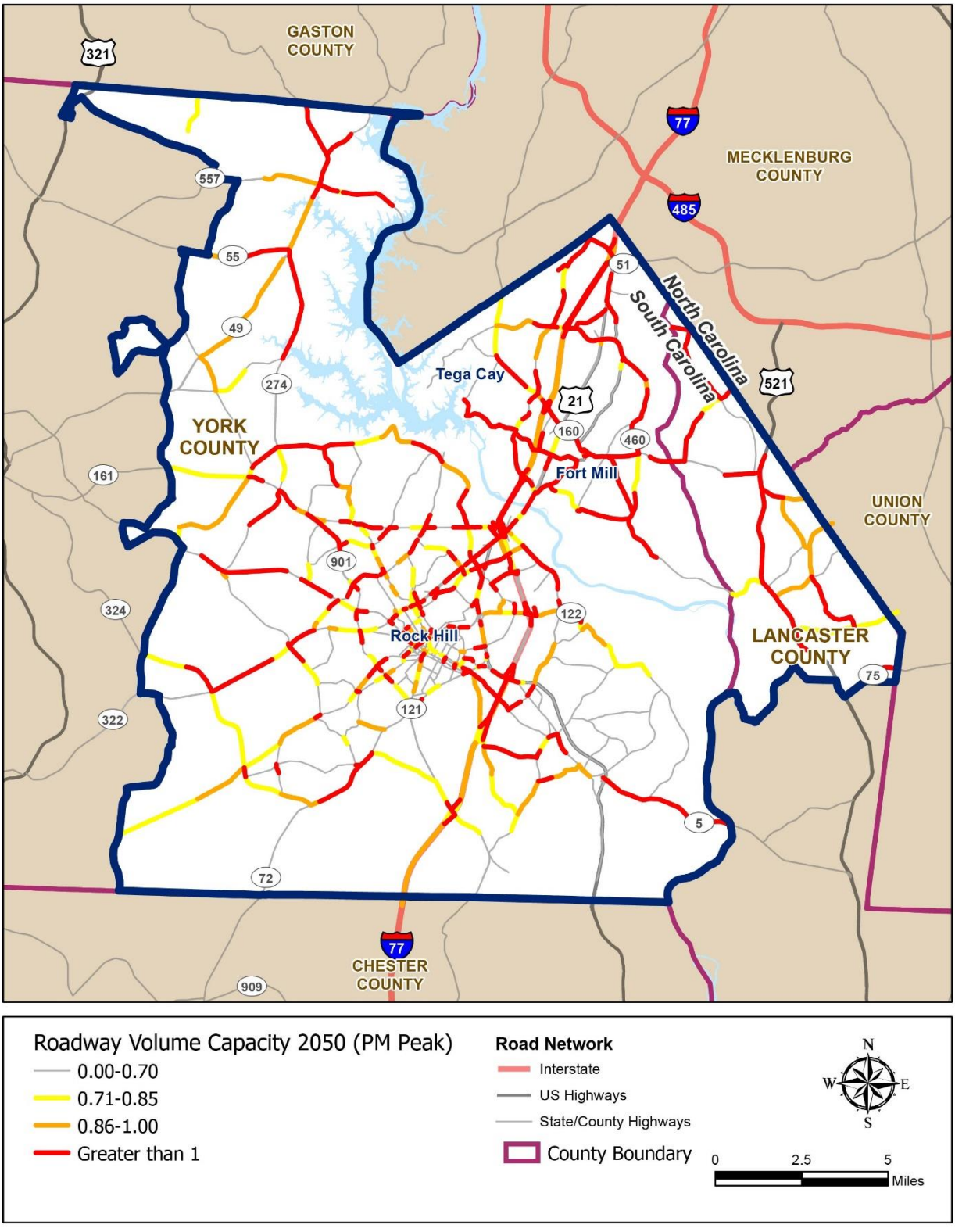


Figure 4.7: Projected Traffic Conditions with Implementation of 2050 LRTP



By the year 2050 – with implementation of the projects for which there is committed funding in the TIP – the model projects PM peak congestion for nearly every major road north of the Catawba River (see **Figure 4.7**). I-77 is expected to be over capacity both north and south of Rock Hill. Dobys Bridge Road, which is relatively uncongested under existing conditions, is projected for major delays for its entire length by 2050.

Traffic conditions are expected to improve somewhat with the implementation of the 2050 LRTP. It should be noted that with the focus on reconfiguring the interchanges at Exit 85 (SC 160 / I-77), at Exit 82 (Celanese & Cherry / I-77), and at Exit 77 (SC 5; US 21), the modeling displays don't fully reflect the benefits to be realized from these types of operational improvements given that they don't alter volume levels – even though the efficiency with which the demand levels are processed has been favorably impacted.

However, despite these significant investments along the I-77 Corridor in the 2050 LRTP, the majority of major roads are projected to continue to carry high demand levels under congested conditions, particularly during the peak periods. Drivers on Celanese Road, Hands Mill Highway (SC 274), Gold Hill Road, SC 160, US 521, and many other routes will continue to experience heavy traffic congestion. Delays on I-77 will likely become more frequent in both time and intensity if no other interstate improvements are undertaken between now and 2050.

In other words, even with the full use of available resources, traffic congestion is expected to become more challenging over time; and therefore, roadway capacity improvements (as important as they are), will need to be combined with a number of additional policies and operational strategies (such as more alternative routes, strengthening the collector street network, continued expansion of transit options, etc.), in order to enable the transportation system to function in a safe, reliable and efficient manner. This is a challenge experienced in many parts of the country, but particularly important in high growth environments like RFATS.

Project Selection Criteria

A number of factors were considered in selecting projects for the LRTP. In response to Act 114 (passed in 2007), SCDOT developed a set of ranking criteria for five types of projects: new locations, intersections, widenings, interstate mainline capacity, and interchanges.

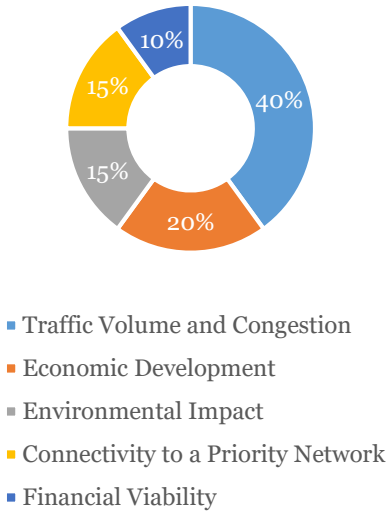
In 2008, the RFATS Policy Committee endorsed SCDOT's project criteria for its own use in the LRTP; further ranking criteria parameters were updated by

SCDOT in 2020. These criteria are broken down and weighted based on the following factors:

For ranking **new location** projects:

- Traffic volume and congestion (40%). Quantified by comparing the number of network hours of delay between build and no-build scenarios.
- Economic Development (20%). Quantified based on an assessment of short-term, intermediate, and long-term development potential as a result of the proposed improvement.
- Environmental Impact (15%). Quantified based on an assessment of potential impacts to natural, social, and cultural resources.
- Connectivity to a priority network (15%). The priority network score is based on the proposed road's relationship to a priority network, as designated at a regional level.
- Financial Viability (10%). Quantified based on estimated project cost in comparison to the ten-year Statewide Transportation Improvement Program (STIP) budget. Additional consideration is given to projects supplemented with local project funding and/or other federal and state funding.
- Alternative Transportation Solutions. Considered independently of ranking.
- Consistency with Local Land Use Plans. Considered independently of ranking. The official designation of a new location option as the project solution will be determined in the alternatives analysis within the environmental process.

Scoring New Location Projects

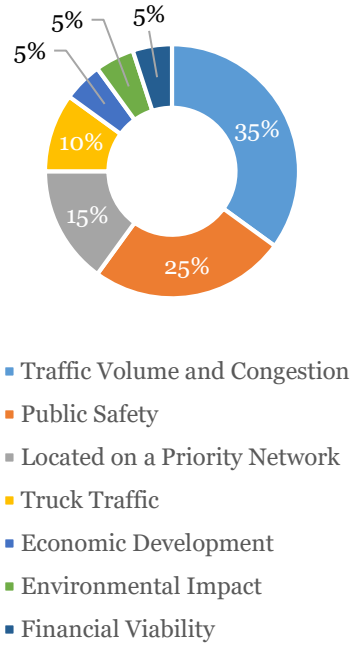


For ranking **intersection** projects:

- Traffic Volume and Congestion (35%). Quantified based on current traffic volumes.
- Public Safety (25%). Quantified based on crash rates.
- Located on a priority network (15%). The priority network score is based on the project's relationship to a priority network.
- Truck Traffic (10%). Quantified based on current volume and average daily truck traffic estimates.

- Economic Development (5%). Quantified based on short-term, intermediate, and long-term development potential as a result of the proposed improvement.
- Environmental Impact (5%). Quantified based on an assessment of potential impacts to natural, social, and cultural resources.
- Financial Viability (5%). The financial viability score is based on estimated project cost in comparison to the ten-year Statewide Transportation Improvement Program (STIP) budget. Additional consideration will be given to projects supplemented with local project funding and/or other federal and state funding.
- Alternative Transportation Solutions. Considered independently of ranking.
- Consistency with Local Land Use Plans. Considered independently of ranking.

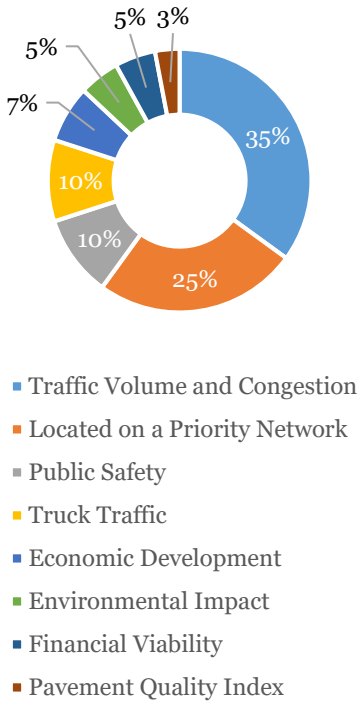
Scoring Intersection Projects



For ranking **corridor improvement/widening** projects:

- Traffic Volume and Congestion (35%). Quantified based on current traffic volumes and the associated level-of-service condition.
- Located on a priority network (national highway system (NHS), freight, and strategic corridors) (25%). The priority network score is based on a project's location in relationship to defined priority networks.
- Public Safety (10%). Quantified based on crash rates.
- Truck Traffic (10%). Quantified based on current volume and average daily truck traffic estimates.
- Economic Development (7%). Quantified based on an assessment of items such as livability, regional economic development, benefit-cost & cost effectiveness, and system performance.
- Environmental Impact (5%). Quantified based on an assessment of potential impacts to natural, social, and cultural resources.

Scoring Corridor Improvement / Widening Projects

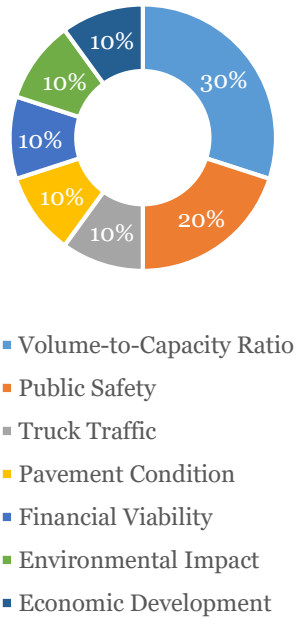


- Financial Viability (5%). Quantified based on estimated project cost in comparison to the six-year Statewide Transportation Improvement Program (STIP) budget. Additional consideration will be given to projects supplemented with local project funding and/or other federal and state funding.
- Pavement Quality Index (PQI) (3%). Quantified based on pavement condition assessments.
- Consistency with Local Land Use Plan (for consideration only). Considered independently of the ranking process. A determination of consistency will be made during the long-range plan development process.
- Alternative Transportation Solutions (for consideration only). Considered independently of the ranking process. Transit propensity is evaluated based on surrounding population and employment characteristics to support transit service as a potential alternative or in addition to a proposed improvement.

For ranking **interstate mainline capacity** projects:

- Volume-to-Capacity Ratio (30%). The volume-to-capacity ratio (V/C) score is based on average annual daily traffic data and capacity thresholds consistent with the Highway Capacity Manual.
- Public Safety (20%). The safety score is based on an accident rate that is calculated by the total number of crashes within a given segment divided by the volume and multiplied by the number of years.
- Truck Traffic (10%). The truck score is based on historical truck classification data that is expressed as a percentage of total daily traffic. The truck percentage is multiplied by the average daily traffic to calculate the truck ADT. Truck ADT is used instead of truck percentage to give greater consideration to higher volume roads.
- Pavement Condition (10%). The pavement score is based on pavement management data collected using video and computer technology.
- Financial Viability (10%). The financial viability score is based on project cost in comparison to the six-year Statewide Transportation Improvement Program (STIP) budget.

Scoring Interstate Mainline Capacity Projects



- Environmental Impact (10%). The environmental impact score is based on an assessment of the project's potential impacts to all known environmental, cultural and social resources.
- Economic Development (10%). The economic development score is provided by the South Carolina Department of Commerce and is based on an assessment of the project's benefit to existing industrial/manufacturing development, as well as its proximity to existing infrastructure.

For ranking **interstate interchange** projects, 80 percent of the total weighted scoring is based on the following criteria, which are included in the Interstate Interchange Management System (IIMS):

- Passenger Vehicle Travel Time
- Truck Vehicle Travel Time
- Passenger Vehicle Delay
- Truck Vehicle Delay
- Passenger Vehicle Distance
- Truck Vehicle Distance
- Truck Vehicle Time
- Truck Detour Distance
- Design-Related Fatal Crashes
- Design-Related Personal Injury Crashes
- Design-Related Property Damage Crashes
- Other Fatal Crashes
- Other Personal Injury Crashes
- Other Property Damage Crashes

The remaining inputs include 10 percent from economic development and 10 percent from environmental impacts, similar to interstate mainline capacity projects.

2050 LRTP Projects

This section presents the major roadway projects to be implemented during the life of the 2050 Long Range Transportation Plan. The projects include road widenings and traffic flow improvements in and around heavily congested interchanges, as well as priority intersection locations. In 2021, RFATS is committing $10 Million of the allocated Guideshare funding towards bicycle and pedestrian facilities. As described in Chapter 9, the RFATS region conducted as survey with more than 90% of area respondents agreeing that tax dollars spent on the transportation system should include pedestrian and bicycle investments. Therefore, RFATS will be working with the local jurisdictions and SCDOT to identify bicycle and pedestrian projects for possible funding within the allocated allotment.

The projects are presented below in two primary categories:

- **Federally Funded Projects**

  Table 4.2 lists the projects that will be funded at least partly with federal sources. This includes projects selected for Guideshare funding allocated to RFATS, as well as statewide programmatic investments that SCDOT will make during the life of the plan. (For more detail on Guideshare and other funding sources, see Chapter 12.)

  A map of the federally funded projects is provided in **Figure 4.8**.

- **Non-Federally Funded Projects**

  Table 4.3 lists projects to be built with non-federal funding sources.

  The primary funding source for these projects is the York County Local Option Sales Tax program (known as 'Pennies for Progress'). The program was initiated by York County to provide citizens with a safer and more efficient roadway system. Projects were chosen by a Sales Tax Commission representing the citizens of York County, and were then approved by the voters. York County was the first county in South Carolina to pass this type of sales tax program to improve the road system. A benefit of this tax is that 99 cents of every sales tax dollar raised in York County stays in the County.

  The first Pennies for Progress referendum was passed in 1997, with subsequent referendums passed in 2003, 2011, and 2017. **Table 4.3** indicates the referendum in which each project was approved.

  A map of the non-federally funded projects is provided in **Figure 4.9.**

Other projects include **Public/Private Partnership Projects**, which are not part of fiscally constrained LRTP projects but are shown in **Table 4.4** and **Figure 4.10**. These projects are a combination of public funds from the United States Department of Transportation Infrastructure for Rebuilding America (INFRA) grant for $34.6 million, local incentives from York County, and private funds from the Carolina Panthers organization. The project proposed is to construct a new

full access interstate interchange on I-77, along with a new boulevard to connect to the parallel local thoroughfares.

Unfunded Needs are not part of the fiscally constrained LRTP but are shown in **Table 4.5** to indicate other transportation needs identified during the development of this plan. This list was developed through input from the local municipalities through their identification of project needs and improvements to assist in mitigation congestion.

Table 4.2 – Federally Funded Projects in the 2050 LRTP

Project ID	Project Description	Funding Source	Cost (millions)	Length (miles)	Horizon Year
1	SC 160 / I-77 Interchange Reconfiguration; 4 to 6 Lane Widening (Sutton Road to US 21) (*)	SIB & Guideshare	$49.6 M + $23.4 M	N/A	2025
2	Celanese / I-77 Interchange Reconfiguration (*)	SIB & Guideshare	$32.5 M + $68.6 M	N/A	2035
3	SC 160 Widening (Rosemont / McMillan to Springfield Parkway) - 5 Lanes	Guideshare	$28.5	2.86	2025
4	Cel-River Road Widening (S. Eden Terrace Extension to Dave Lyle Boulevard) - 5 Lanes	Guideshare	$46.2	2.00	2025
5	I-77 / US 21 / SC 5 Interchange Area (Exit 77) (*)	Guideshare	$5.7	N/A	2025
-	System Improvement Projects (Bridge Replacements, Safety, Road Widenings, Interstate Program)	FHWA, SCDOT	TBD	N/A	Throughout
-	CMAQ (Congestion Mitigation & Air Quality Improvement Program)	FHWA, SCDOT	TBD	N/A	Throughout
-	TAP (Transportation Alternatives Program)	FHWA, SCDOT	TBD	N/A	Throughout
	Total		**$#**		

As dicussed earlier, preserving and enhancing the National Highway System (NHS), in addition to more localized transportation needs is an important component of sound transportation decision-making, and those projects with an asterik * near to their project name simultaneously advance both regional and NHS objectives

Figure 4.8 – Federally Funded Projects in the 2050 LRTP

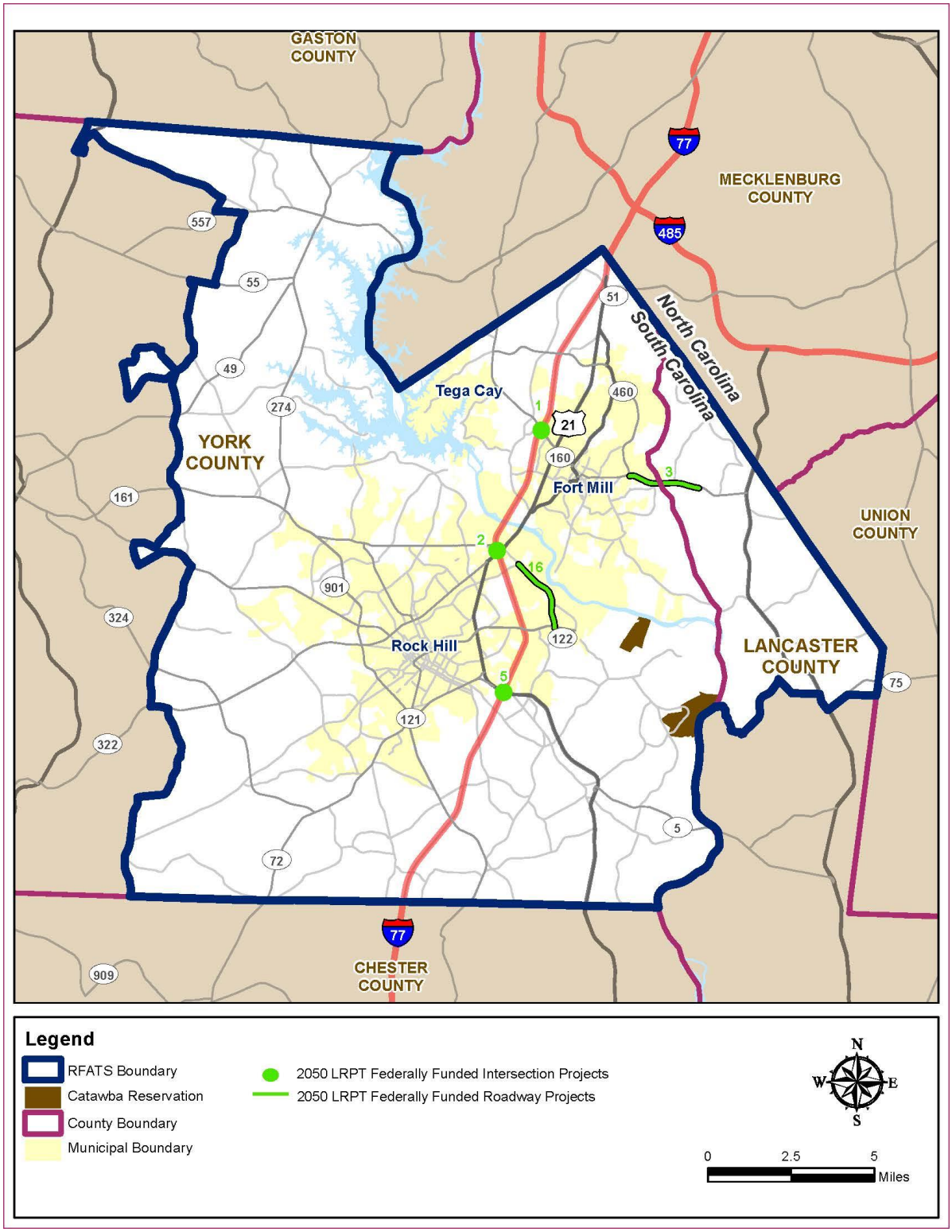
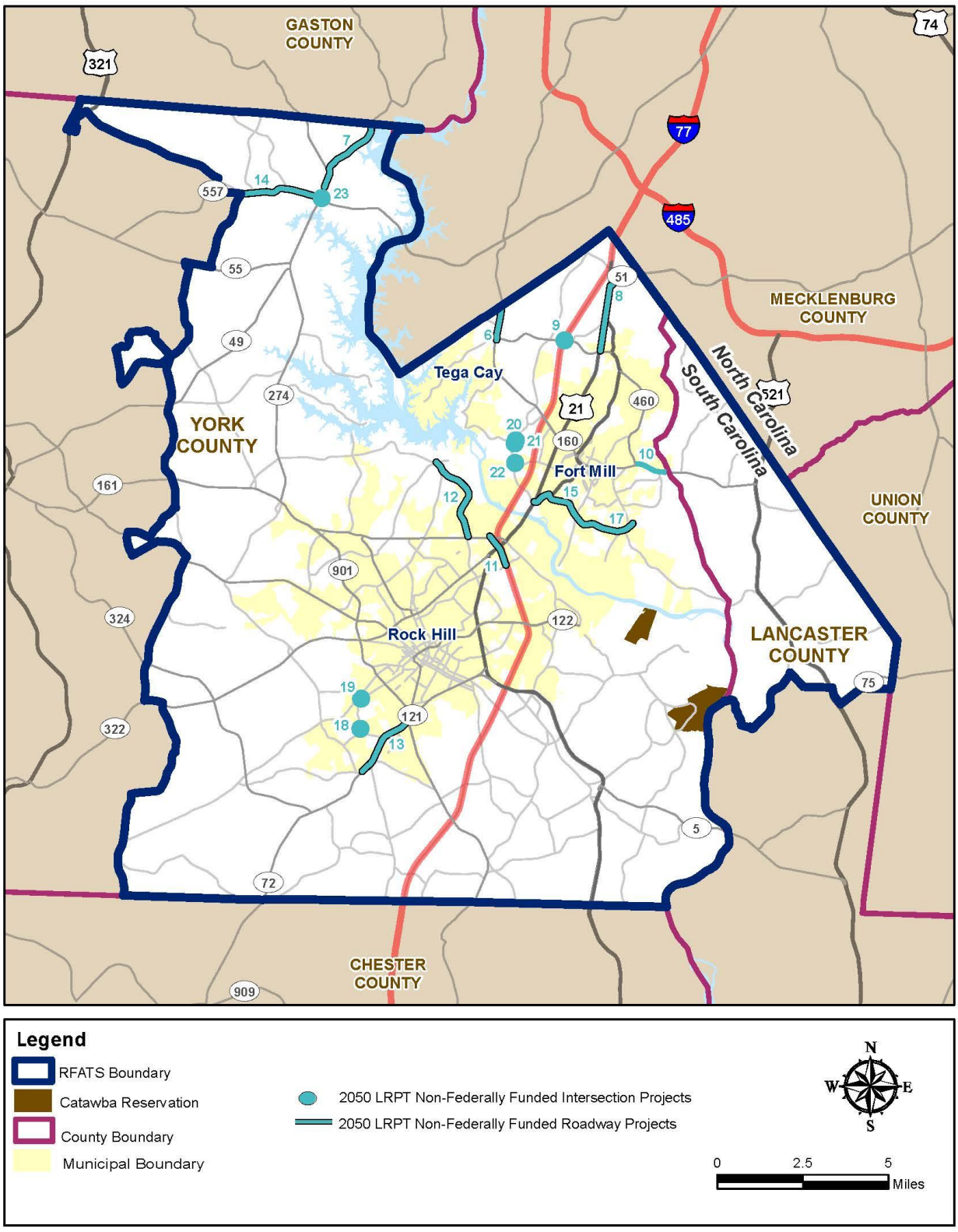


Table 4.3: Non-Federally Funded Projects in the 2050 LRTP (continued from previous page)

Project ID	Project Type	Route	Project Description	Horizon	Pennies Referendum	Cost (millions)
6	Road Widening	SC 160	Gold Hill to Zoar Road; Zoar Road to NC State Line - 5 Lanes	2025	2011	$13.1
7	Road Widening	Highway 274 / 279	Highway 274 at Landing Pointe Dr to Pole Branch Road - 5 Lanes; Pole Branch Road to NC Stateline - 3 Lanes	2025	2011	$37.8
8	Road Widening	US 21 North Phase I & SC 51	Springfield Parkway to NC State Line - 5 Lanes	2025	2011	$40.0
9	Interchange	Gold Hill Road / I-77	Interchange Reconfiguration	2025	2011	$12.5
10	Road Widening	SC 160 East	Springfield Parkway to Lancaster County Line; formerly project in 2003 PFP - 3 Lanes	2025	2011	$4.8
11	Road Widening	Riverview Road	From Eden Terrace to Celanese Road - 3 Lanes	2025	2011	$9.5
12	Road Widening	Mt Gallant Road	Celanese Road to Twin Lakes Road - 3 Lanes	2025	2011	$26.3
13	Road Widening	SC Highway 72	Highway 901 to Rambo Road; formerly in 2003 PFP - 3 Lanes	2025	2011	$20.7
14	Road Widening	Highway 557	Highway 274 to Kingsbury Road - Multilane	2025	2011	$25.0
15	Intersection	Fort Mill Southern Bypass / Spratt / Sutton Connector	Reconfigure intersection	2025	2011	$9.0
16	Road Widening	Cel-River Road	2 to 5 Lane Widening from S-645 (Southern Eden Terrace Extension) to S-122 (Dave Lyle Boulevard)	2025	2017	$40.5
17	Road Widening	Fort Mill Parkway	I-77 to bridge over railroad - 5 Lanes with Sidewalks and Bike Lanes	2035	2017	$23.1

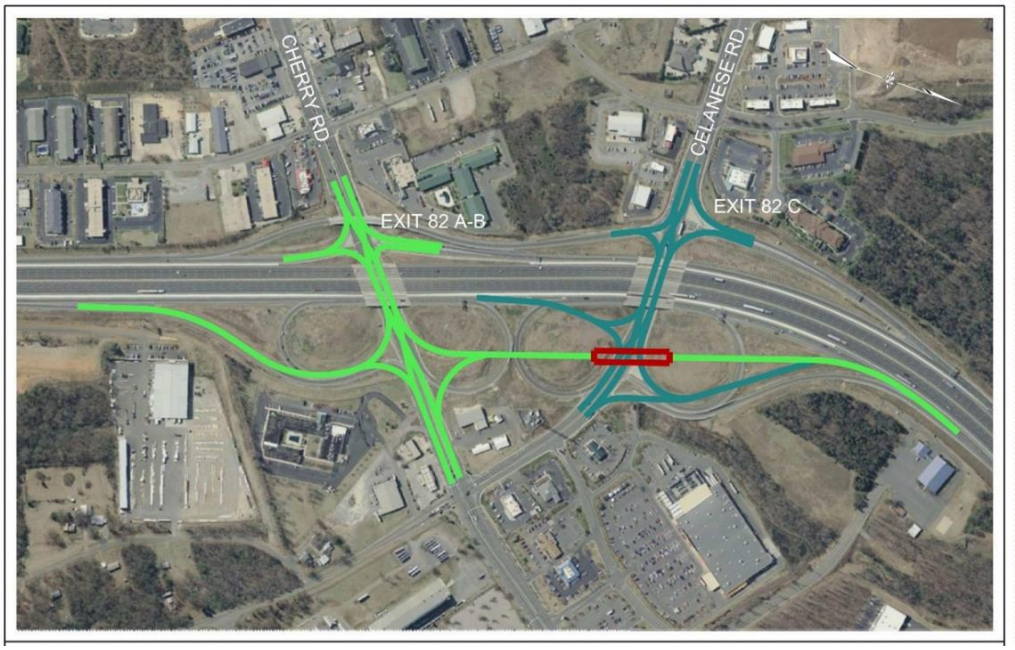
18	Intersection	Neely & Rawlsville Road	Realignment and Improvement	2035	2017	(included in $10.9 million)
19	Intersection	Neely Road & Crawford Road	Realignment and Improvement; Adjustment for Railroad	2035	2017	10.9
20	Intersection	Sutton Road / New Grey Rock Road	Consider Dedicated Left from NB Sutton onto New Gray Rock Road; Dedicated Right from EB New Gray Rock Road onto Sutton Road	2025	2017	$1.0
21	Intersection	Sutton Road / Sam Smith Road	Consider Dedicated Left from SB Sutton Road onto Sam Smith Road	2025	2017	$1.0
22	Intersection	Sutton Road / Harris Road	Consider Dedicated Left from SB Sutton Road onto Harris Road	2025	2017	$1.0
23	Intersection	Highway 274 / 49 / 557	Operational / Capacity Additions	2025	2017	$7.3
	Total					**$283.5M**

Figure 4.9: Non-Federally Funded Projects in the 2050 LRTP



The two projects shown below have also been submitted and approved for potential funding through the State Infrastructure Bank (SIB). SIB funds were awarded in October 2020 and plans will be further refined.

Proposed Interchange Improvements for I-77 at Celanese and Cherry Road (Exit 82 A,B,C)



Proposed Interchange Improvements for I-77 at SC 160

Table 4.4: Public Private Partnerships

Project ID	Location	Project Description
24	New Interchange "Exit 81"	Located Between Celanese / Cherry Road and Dave Lyle Boulevard
25	New Roadway Segment #1	Connection from New Interchange to Paragon Way / Cel-River Road - 3 Lanes
26	New Roadway Segment #2	Connection from New Interchange to Mt Gallant Road - 4 Lanes

Figure 4.10: Public-Private Partnership Projects in the 2050 LRTP

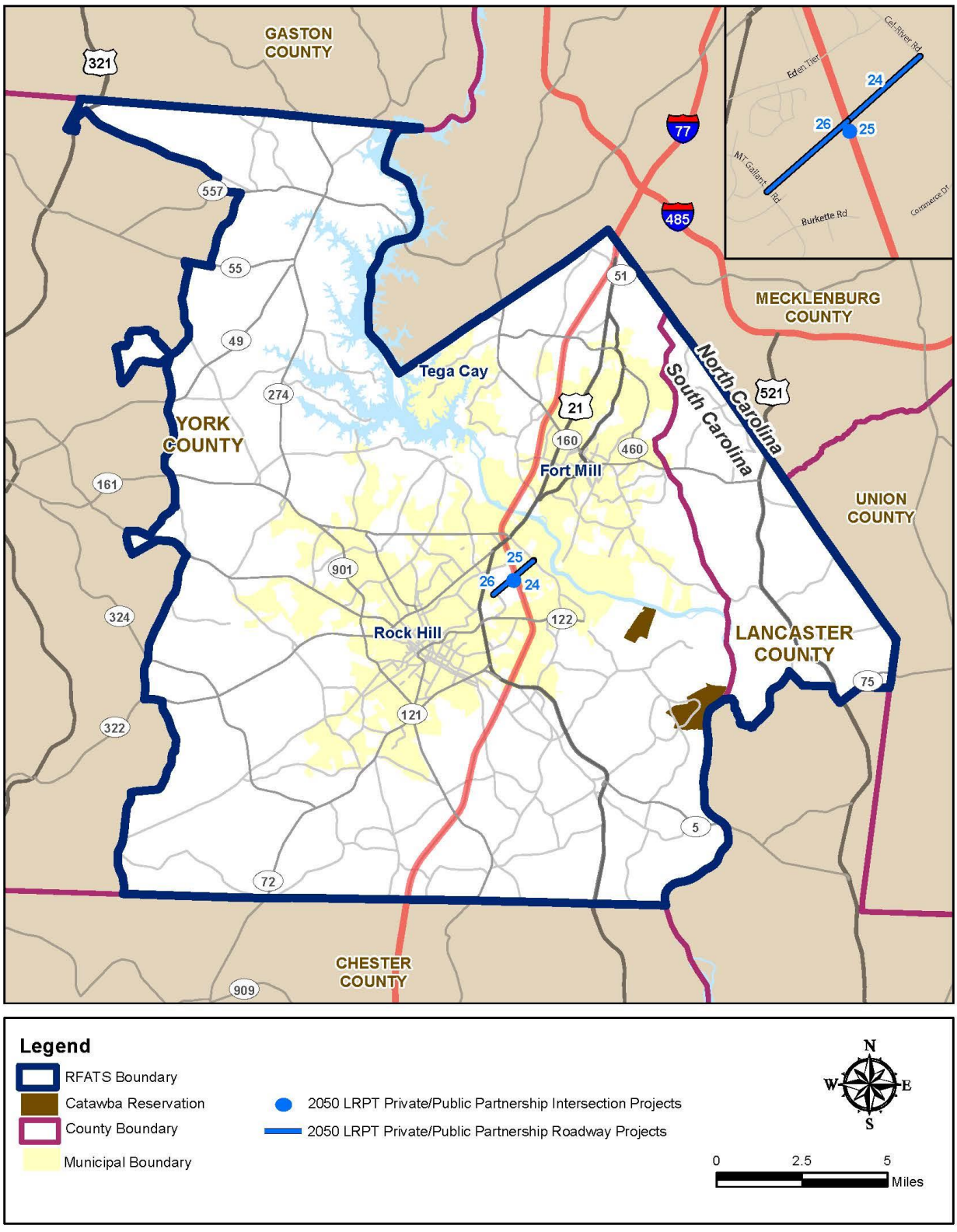


Table 4.5: Unfunded Needs

Location	Project Description
Gold Hill Road / Springfield Parkway (I-77 to SC 160)	5 Lanes with Sidewalks and Shared-Use Bike Lanes
Marvin Road (US 521 to Union County Line)	3 Lanes (Potential 4 lane from US 521 to Henry Harris Road)
Harrisburg Road (Mecklenburg County Line to SC 160)	3 Lanes with Sidewalks and Bike Lanes
Sutton Road (Sixth Baxter Crossing to US 21)	5 Lanes with Sidewalks and Bike Lanes
Cel-River / Red River Road (SC 122 to US 21)	3 Lanes; Consider Interchange Improvement at Exit 77
US 21 Widening (Sutton Road / Spratt Street to SC 160)	5 Lanes with Sidewalks and Bike Lanes
S. Dobys Bridge Road (Fort Mill Southern Parkway to US 521)	5 Lanes with Sidewalks and Bike Lanes
US 521 (Jim Wilson Road to State Line)	6 lanes
Fort Mill Parkway (Holbrook Road to SC 160)	5 Lanes with Sidewalks and Bike Lanes
Fort Mill Parkway (US 21 to Holbrook Road)	5 Lanes with Sidewalks and Bike Lanes
Jim Wilson Road (US 521 to Henry Harris Road)	5 Lanes
Shelley Mullis Road (US 521 to Union County Line)	3 Lanes with Sidewalks and Bike Lanes
Mt Gallant Road	5-Lane widening from end of Panthers widening north to north of Celanese Road

Eden Terrace	3-Lane widening with shared use path
Ebenezer Road	3-Lane widening; address termini intersection to account for 3-lane section
DLB Flyover	3-Lane connection between John Ross Parkway and Galleria Boulevard, including a grade separated bridge over I-77
Ebinport Road	3-Lane widening; with roundabout at Marett Blvd

Catawba Indian Nation Transportation Plan

Catawba Indian Nation Projects

The Catawba Indian Nation coordinates transportation planning with RFATS and has a voting representative on the RFATS Policy Committee.

The Nation also participates in the Tribal Transportation Program (TTP). This is a program addressing the transportation needs of tribes by providing funds for planning, design, construction, and maintenance activities. This program is jointly administered by the Federal Highway Administration's Federal Lands Highway Office and the Bureau of Indian Affairs (BIA).

Projects for the tribe are overseen by the Catawba Indian Nation Department of Transportation.

Currently planned projects include:

- Paving eight gravel roads, including Charley Horse Road, Little Moon Road, Red Hawk Road, Evelyn George Road, Tom Steven Road, Peace Pipe Road, Rebecca Pitcher Road, and Pow Wow Road;
- Construction of the Rivercrest Road extension connecting the existing Rivercrest Road to Sturgis Road;
- Reconstruction of Hagler Drive;
- Reclamation of four roads including Betsy Bob Road, Big Bear Drive, Yesebehena Circle, and Tomahawk Ridge;
- Improving Bike/Pedestrian Trail connectivity to create reservation-wide bikeable and walkability;
- John Brown Road reconstruction.

Introduction

Public safety is one of government's crucial responsibilities. In the context of transportation planning, there are two key elements to consider: *safety* and *security*. *Safety* measures, outlined in this chapter, are aimed at reducing injury and death to users of the transportation system. *Security* pertains to a region's ability to maintain mobility for its citizens, even in adverse conditions, by protecting the transportation system against threats and by providing multiple options for managing travel demand and destination routing.

Safety

The Highway Safety Improvement Program (HSIP) is a core Federal-aid program established to reduce traffic fatalities and serious injuries on all public roads, including non-State-owned roads and roads on tribal land. Additional programs target specific areas of concern, such as work zones, older drivers, and pedestrians, including children walking to school.

The HSIP program requires a data-driven, strategic highway safety planning approach with a focus on results. As mentioned in Chapter 3, state DOTs and MPOs are required to set annual safety performance targets in the HSIP Report. These annual measures include:

- **Number of fatalities**: The total number of persons suffering fatal injuries in a motor vehicle crash during a calendar year.
- **Rate of fatalities per 100 million vehicle miles traveled (VMT)**: The ratio of total number of fatalities to the number of vehicle miles traveled (VMT expressed in 100 Million VMT) in a calendar year.
- **Number of serious injuries:** The total number of persons suffering at least one serious injury in a motor vehicle crash during a calendar year. (The United States Department of Transportation's definition of a serious injury entails one or more of the following: severe laceration resulting in exposure of underlying tissues/muscle/organs or resulting in significant loss of blood; broken or distorted extremity; crush injuries; suspected skull, chest, or abdominal injury other than bruises or minor lacerations; significant burns; unconsciousness when taken from the crash scene; or paralysis.)

- **Rate of serious injuries per 100 million VMT:** The ratio of total number of serious injuries to the number of VMT (VMT expressed in 100 Million VMT) in a calendar year.
- **Number of non-motorized fatalities and number of non-motorized serious injuries combined:** The combined total number of non-motorized fatalities and non-motorized serious injuries involving a motor vehicle during a calendar year.

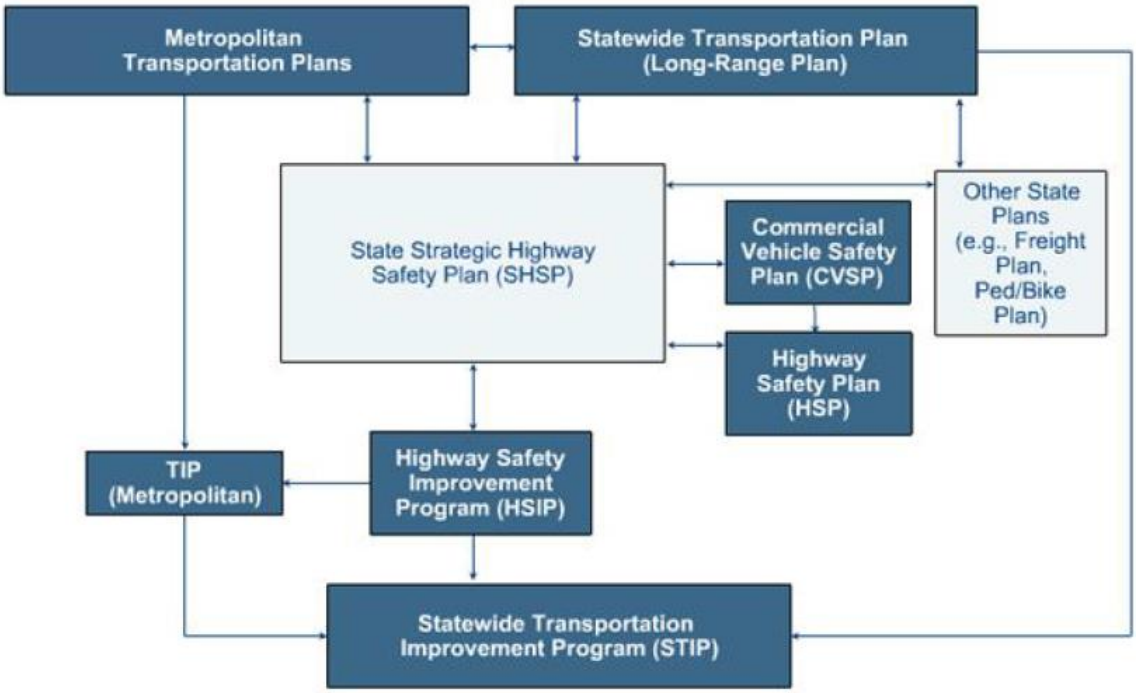
These measures are to be calculated based on the most recent five years of available crash data. While SCDOT's Strategic Highway Safety Plan reports these measures at the statewide level, RFATS coordinates with SCDOT to ensure each measure is tracked and reported at the regional level as well, consistent with applicable federal and state requirements.

Safety in the transportation network was identified as a performance measure in the RFATS Congestion Management Process (CMP); last updated in 2019. The CMP documents and recommends appropriate congestion management strategies and projects – both of which are further examined in the LRTP planning process.

Framework for Safety Planning

The key planning process for highway safety in the RFATS area is the development of the statewide highway safety plan. The most recent edition was published in 2015 as *South Carolina's Strategic Highway Safety Plan: Target Zero*. As **Figure 5.1** shows, the statewide highway safety plan provides the framework for SCDOT's partner agencies and their planning documents, including RFATS and its LRTP.

Figure 5.1 - Relationship between the Highway Safety Plan and Other Plans



Source: Federal Highway Administration

Statewide Conditions and Trends

Since South Carolina's last *Strategic Highway Safety Plan: The Roadmap to Safety*, published in 2008, the state saw an overall 20.4% reduction in roadway deaths between 2006 and 2012. Further goal setting was outlined in the 2015 update to the plan, the *Strategic Highway Safety Plan: Target Zero*. The ultimate goal of this plan is work towards zero traffic-related fatalities in South Carolina, and it outlines a variety of long-term goals, strategies, and coordination to achieve success. The State Highway Safety Report, published in 2018, included updates to various performance measure targets for the 2015-2019 time period. The FY 2020 Highway Safety Plan included data for the 2014-2018 time period.

Goals for 2015 through 2018 included:

- Reduce statewide traffic **fatalities** to a maximum of 575 **persons** per year by 2018, with an annual reduction of 48 fatalities. (In comparison, traffic fatalities numbered 863 persons in 2012.)

  - Preliminary state data compiled by the OHSJP's Statistical Analysis & Research Section (SARS) indicates there were 1,038 traffic fatalities in 2018, with an estimated five-year average of 969 for the 2014-2018 time period. This is an increase of 5.1% from the 988 traffic fatalities in 2017. If this trend continues, the state does not anticipate meeting its goal of 960 traffic deaths in 2019 and an average 988 traffic deaths for the 2015-2019 time period.

- Reduce the statewide number of **fatal crashes** per 100 million vehicle miles travelled to 1.17. (This number, referred to by the South Carolina Department of Public Safety as the mileage death rate, was 1.76 in 2012.)
  - Preliminary state data compiled by SARS indicates there was a mileage death rate of 1.85 in 2018, with an estimated five-year average of 1.81 for the 2014-2018 time period. This is an increase of 3.9% from 1.78 in 2017. If this trend continues, the state does not anticipate meeting its goal of 1.68 in 2019 and an average 1.79 for the 2015-2019 time period.
- Reduce statewide number of **serious injuries** to 2,265 incidents per year by 2018. (Total serious injuries numbered 3,397 persons in 2012.)
  - Preliminary state data compiled by SARS indicates there were 2,627 serious traffic injuries in 2018, with an estimated five-year average of 2,962 for the 2014-2018 time period. This is a decrease of 7.9% from the 2,851 serious traffic injuries in 2017, and the state does anticipate meeting its goal of 2,986 serious traffic injuries average for the 2015-2019 time period.
- Reduce the statewide number of **serious injury crashes** per 100 million vehicle miles travelled to 4.63. (This number was 6.95 in 2012.)
  - In 2017, the number of serious injury crashes per 100 million vehicle miles traveled was 5.38. The five-year average for the 2013-2017 period was 6.00. This is lower than the 5-year target for 2015-2019 outlined in the 2018 South Carolina HSIP report, which was 5.420. Note: this measure was not included in the FY 2020 report, and these numbers reflect the latest information available in the 2018 State Highway Safety Report.

Target Zero, in accordance with federal law, was developed collaboratively by a number of federal, state and local partners. SCDOT is the designated lead for the statewide implementation effort. RFATS participates in implementation by incorporating the relevant safety goals, priorities, countermeasures, and programs for the RFATS area into its own LRTP.

The four "E"s of safety, established by the HSIP, were maintained as guiding principles in the development of *Target Zero*:

- Engineering
- Enforcement
- Education
- Emergency Medical Services (EMS)

Nine emphasis areas were selected by the Strategic Highway Safety Plan Steering Committee to concentrate efforts and monitor performance. Each of these emphasis areas has been identified as a leading cause of traffic fatalities in South Carolina and has its own goals for reduction of fatalities and serious injuries, along with associated objectives and strategies. The following statewide statistics were drawn from 4,503 total fatal crashes and 4,848 total fatalities between 2014 and 2018.

- **Roadway Departure**
  - 2,530 fatal crashes (56% of all fatal crashes) involved a roadway departure.
- **Unrestrained Motor Vehicle Occupants;**
  - 1,588 motor vehicle occupants killed in a crash (33% of all fatalities) were not using a restraint at the time of the crash.
- **Age-Related Crashes** (Young Drivers: 15-20 years of age and Older Drivers: 65 or more years of age)
  - Young drivers led to 579 traffic fatalities (12% of all fatalities). For older drivers, the number was 799 (16%).
- **Speed Related Crashes;**
  - 1,776 crashes leading to fatalities involved excessive speeds (39% of all fatal crashes).
- **Vulnerable Roadway Users** (Motorcyclists, Pedestrians, Moped Operators and Bicyclists)**;**
  - 706 fatalities (15% of all fatalities) were pedestrians, 96 (2%) were pedalcyclists, and 784 (16%) were motorcyclists.

- **Intersection and Other High-Risk Roadway Locations** (Work Zones and Railroad Crossings)**;**
    - 909 fatal crashes (21% of all fatal crashes) occurred at an intersection, and 42 (1%) occurred in a work zone.
- **Impaired Driving** (BAC 0.01+)**;**
    - There were 1,624 incidents of impaired driving leading to a fatality (33% of all fatalities).
- **Commercial Motor Vehicle/Heavy Truck Crashes;**
    - 459 fatal crashes (10% of all fatal crashes) between 2014 and 2018 involved a large truck.
- **Safety Data Collection Access, and Analysis.**

Regional Conditions and Trends

Fatal Crashes

The RFATS region experienced a total of 114 traffic-related fatalities during the period of 2014 to 2018, according to the Fatality Analysis Reporting System (FARS) maintained by the National Highway Traffic Safety Administration.

Based on the reported characteristics of these fatal crashes, the following *Target Zero* emphasis areas have been identified as having particular relevance to the RFATS region. Also detailed in this chapter are potential strategies identified by *Target Zero* to reduce the likelihood of and/or mitigate the severity of each type of crash. RFATS and SCDOT officials should discuss the strategies most likely to be useful in the region as well as which locations exhibit the greatest need based on crash data.

Impaired Driving

More than one in four of the traffic deaths in the RFATS area between 2014 and 2018 resulted from a driver operating under the influence. This type of crash increases significantly over certain holidays and is more likely to involve a male driver.

While the strategies outlined in *Target Zero* to reduce fatalities involving impaired drivers do not involve physical changes to the roadway area, many can be implemented at a low cost within the RFATS region. Measures can be taken to deter drivers from operating vehicles while under the influence as well as to reduce harm to both drivers and passengers in the event of a crash.

STRATEGIES

- Enforce and educate drivers on DUI laws as well as the dangers of drinking and driving, with a special focus on reducing instances of underage drinking and driving.
  → Increase the number of nighttime public safety checkpoints
  → Publicize and enforce zero-tolerance laws for drivers under age 21
  → Conduct aggressive/increased enforcement targeting impaired drivers at high-crash/risk areas
  → Educate parents about the liability of social hosting
- Minimize risk of fatalities and serious injuries related to impaired driver collisions.
  → Implement roadway departure strategies, such as the "Safety Edge"
  → Develop and implement a corridor safety model in high-crash locations where data suggests a high rate of impaired driving collisions

Guidance from the Centers for Disease Control and Prevention (CDC) supports these strategies with low-cost recommendations that include media campaigns and school-based instructional programs to reduce or prevent drunk driving. These programs can also emphasize the importance of not entering a vehicle in which the driver is impaired, which can reduce fatalities for passengers.

Roadway design elements such as the "Safety Edge", which has been promoted by the FHWA and implemented in several states, can be effective in reducing roadway departure crashes – including those caused by impaired driving. With this asphalt paving technique, the road pavement edge is tapered at a 30-degree angle instead of being left as a vertical drop-off. When a driver's wheel drops off the road, the gentler angle helps prevent the driver from losing control when steering back onto the roadway.

Speed-Related Crashes

18 percent of recent fatalities in the RFATS area were related to speeding. Although increased, targeted enforcement is the traditional approach to managing speeding, many communities have begun to assess the impact of roadway design on drivers' speeds. Traffic calming techniques that can be employed on neighborhood streets include narrowing lanes and introducing mild curves into long, straight sections of roadway.

STRATEGIES

- Reduce speeding through enforcement activities and new partnerships.
  → Add high-visibility enforcement in critical areas
  → Expand corridor safety model to high-crash locations where data suggests a high rate of speeding-related fatal or serious injury crashes
- Use engineering measures to effectively manage speed.
  → Add roadway design features to influence speed in critical areas
  → Time and coordinate traffic signals to improve traffic flow, reduce red-light running, and manage speeds
- Increase public awareness of risk of driving at unsafe speeds.
  → Develop public education materials communicating specific concerns related to speeding, targeting both new and experienced drivers

Easing traffic congestion can also reduce speeding in some circumstances. Law enforcement officials note that on some roadways, drivers tend to speed once they get past a significant bottleneck, presumably with the idea of catching up on lost time.

Vulnerable Roadway Users

Pedestrians and bicyclists comprised roughly 15 percent of traffic-related deaths in the RFATS region between 2014 and 2018, with the majority of these deaths being pedestrians. Strategies to improve pedestrian and bicycle safety include expansion of the region's network of sidewalks and bike facilities, as well as raising awareness of traffic laws among motorists and non-motorists. In the past, local bicycle/pedestrian advocacy groups have helped to sponsor training for area law enforcement officers.

STRATEGIES

- Expand and improve bicycle and pedestrian facilities.
  → Install separated/dedicated paths/sidewalks and other pedestrian-friendly road features along corridors and at intersections where supported by crash analysis
  → Consider pedestrian safety and mobility during the needs assessment of all projects
  → Enhance intersection and roadway design to encourage livable communities
- Improve pedestrian and bicyclist safety awareness and behaviors.
  → Continue safety campaigns which promote the use of reflective apparel and/or lights (conspicuous enhancement)
  → Implement an awareness campaign emphasizing the risks to pedestrians and bicyclists on high-volume/speed roadways resulting from disabled vehicle, motorist assistance, crossing multi-lanes, etc.
- Increase the likelihood of pedestrian and bicyclist survival in the event of a collision.
  → Improve response times to rural collision sites

Older Drivers

Nearly one in four traffic fatalities in the region involved a driver 65 years or older. Physical changes to the transportation system, such as increasing visibility and improving legibility of signage, can help. Groups such as AARP may help to sponsor various trainings. Providing and publicizing public transit options is also important so that people feel they can relinquish driving without losing their participation in community life.

STRATEGIES

- Identify older drivers at an elevated risk.
  → Train law enforcement and medical professionals to recognize physical and cognitive deficiencies affecting safe driving in older drivers, including submitting reevaluation referrals to the DMV
- Plan for an aging population.
  → Establish a broad-based coalition to plan for addressing older adults' transportation needs.
- Improve the roadway and driving environment to better accommodate older drivers' special needs.
  → Provide more protected left-turn signal phases at high-volume intersections, where supported by collision data
  → Consider lighting and other engineering countermeasures at intersections, horizontal curves, and railroad grade crossings where supported by collision data
- Improve the driving competency of older adults in the general driving population
  → Provide education and training opportunities to the general older driver population

Regional Safety Performance Measures

Although the Fatality Analysis Reporting System provides data on fatal crashes at the MPO level, information on crash rates and serious injuries is currently available to RFATS only at the county level. To provide consistency in reporting, York and Lancaster counties are therefore the basis for the performance data shown in **Table 5.1**. These numbers represent the average of the most recent available five years of crash data reported as of April 2020.

Table 5.1: RFATS Safety Performance Measures (2013-2017)

Measure	York County 5-Year Avg.	Lancaster County 5-Year Avg.
Number of fatalities	26	14
Rate of fatalities per 100 million vehicle miles traveled (VMT)	1.180	2.010
Number of serious injuries	2,558	951
Rate of serious injuries per 100 million VMT	116.078	137.836
Number of non-motorized fatalities and number of non-motorized serious injuries combined	11.4	2.2

Sources: 2013-2017 fatalities and fatality rate from annual South Carolina Traffic Collision Fact Book. Non-motorized user fatalities from Federal Accident Reporting System (NOTE: 2014 and 2018 pedalcyclist data was not available). Number of non-motorized serious injuries provided by SCDOT (Note: 2015-2019 data was used for this measure).

Security

Key considerations in transportation security include "hardening" critical infrastructure against both man-made and natural threats and increasing the system's resiliency, i.e. its ability to resume normal function quickly after a major impact. The resiliency of a transportation network can be improved through pre-coordinated responses, which range from a pre-arranged plan to redirect traffic to streamlined procedures that would allow rapid re-construction of a critical bridge. System resiliency can also be improved by ensuring "redundancy," i.e. having multiple routes or more than one transportation mode serving key destinations.

Roles in Transportation Security

Most states, regions and local governments have a dedicated department or agency that handles emergency planning and response, and transportation agencies such as SCDOT and RFATS play important supporting roles.

The South Carolina Emergency Operations Plan is administered by the South Carolina Emergency Management Division, Office of the Adjutant General. Under the plan, SCDOT is responsible for the management of transportation assets and infrastructure during, or immediately following, a critical emergency or disaster incident. This function includes providing for coordinated plans, policies, and actions of state and local governments to ensure the access and safety of the public traveling on the transportation system during all hazards. Once the threat or hazard no longer exists, SCDOT performs prompt inspections of the transportation infrastructure and facilitates orderly re-entry into the area after an evacuation. Other missions may not involve evacuations but are equally important. These may include responding to severe weather conditions, or re-routing traffic to protect travelers from hazardous material.

Hazards requiring action by SCDOT and partner agencies include hurricanes, winter storms, tornadoes, wildfires, dam failures, flooding, earthquakes, and national security emergencies. They also have responsibilities in incidents involving the potential release of hazardous materials, an issue which received additional attention from Congress in the latest reauthorization of surface transportation funds. As part of the FAST Act, a new grant program was created for training programs related to community preparedness and response to incidents involving hazardous materials.

Regional Conditions and Trends

One of the unique concerns for emergency response in the RFATS area is maintaining an evacuation plan for the area around the Catawba Nuclear Power Station, located on a peninsula in Lake Wylie. Most of the RFATS planning area is within a 10-mile radius of the station. Related security issues include transportation of hazardous materials as well as local evacuation routes to be used in case of an incident.

Planning and response for incidents involving the Catawba station are the responsibility of the York County Emergency Management Office. Many of the designated evacuation routes (**Figure 5.2**) are part of the road system for which RFATS has responsibility to plan and program funds. York County Emergency Management is therefore a critical partner in the RFATS planning process, to help identify routes or areas of the transportation network that may not be adequate for emergency use. RFATS should continue to give funding priority to improving SC 160, US 21 North, and other key routes designated in the Catawba station evacuation plan.

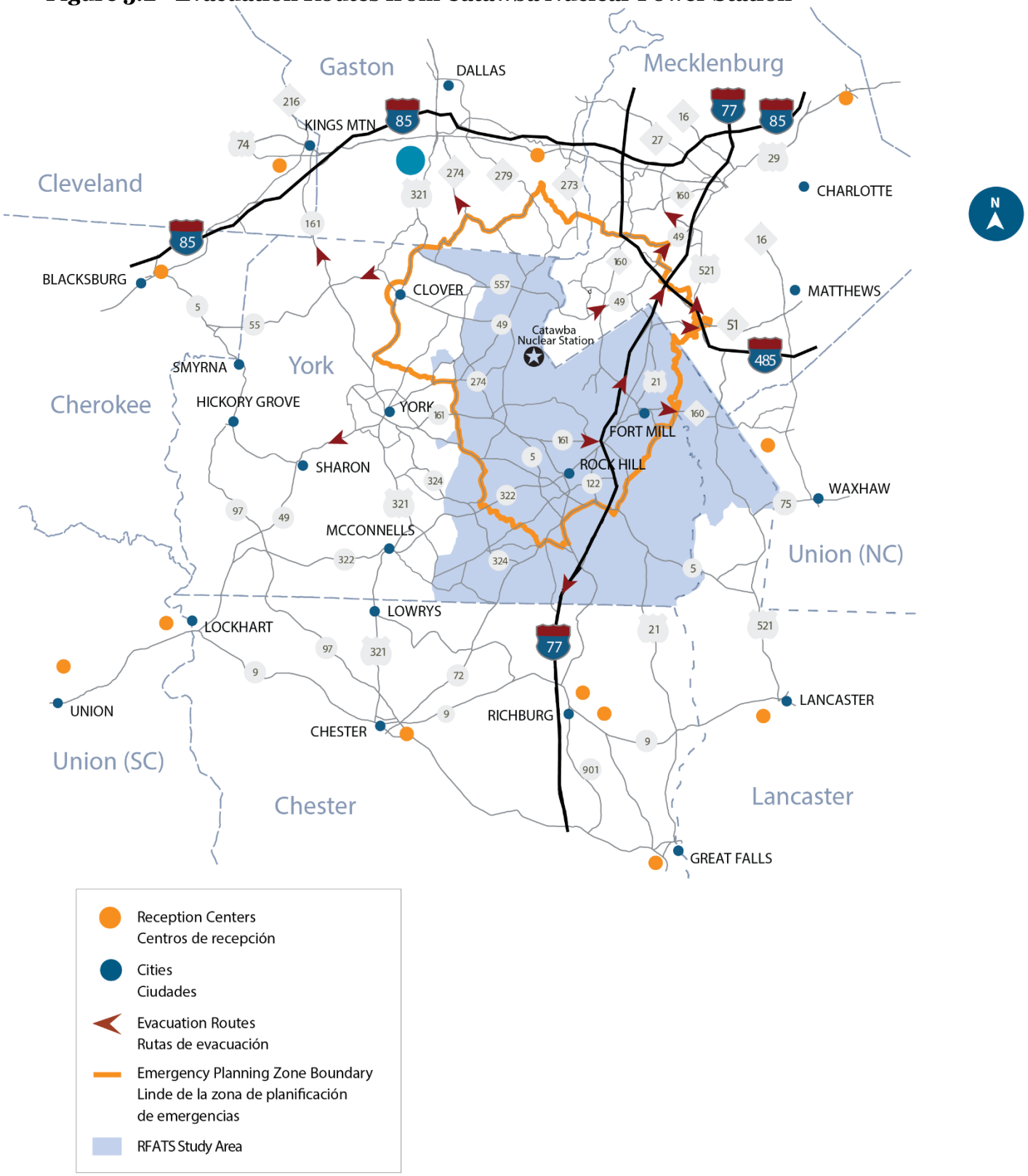
Resiliency

As new residential and commercial development continues, there is some risk that roads that were sufficient a decade ago will no longer have the capacity needed to quickly evacuate an increased number of residents and employees. However, local governments have considerable ability to improve the resiliency of the area's road network through their development policies, and the extent to which they follow the RFATS Collector Street Plan. As noted earlier, security is improved when a community has a more interconnected network; when one route is impacted by an incident, alternate routes are available. This is the reason that many communities require at least two entrances to large subdivisions: in dense areas, too many lives are at risk to rely on only one route for emergency responders to evacuate residents or reach them in case of disaster. The same concept holds true at a larger scale; a region is more secure with multiple connections among its major centers.

Non-Highway Modes

Transit security plans and training in the RFATS region are managed by the local operators (CATS and York County Council on Aging). Rock Hill/ York County Airport (Bryant Field) has its own emergency plan. Railroads must also perform comprehensive safety and security risk analyses to determine the safest routes for moving hazardous goods.

Figure 5.2 - Evacuation Routes from Catawba Nuclear Power Station



Sources: Duke Energy, York County Office of Emergency Management

Public transit is sometimes considered a more likely target for threats because of the concentration of people on vehicles and at stations. Each transit agency maintains security protocols and provides regular training for drivers and other staff. Most systems have also installed cameras and other security equipment such as automatic vehicle location (AVL) on their vehicles and at major facilities.

Public transit typically has a seat at the table for emergency planning because it offers critical resources to help emergency responders evacuate large numbers of people quickly from an area. Transit drivers also have a unique vantage point to help monitor area roadways and alert local officials to potential security concerns, since they are continually driving around the community's major routes. Many local transit agencies have implemented a version of the Federal Transit Administration's "Transit Watch" program, which encourages riders and drivers to report unattended packages or suspicious behavior.

Transit Watch

Introduction

As described in Chapter 4, traffic volumes on RFATS area roadways are increasing along with the growing number of people who live and work in the region. Locally, drivers currently spend more than a third of their time in stop-and-go conditions, which is bad not only for regional air quality, but also for economic productivity.

SC 160 and Sutton Road

As growth pressures are expected to continue throughout the region, some roadways in the RFATS network will still experience congestion which will cause below acceptable levels of service. With appropriate federal and state funding support consistent with growth activity, the region could make additional road capacity improvements. However, in some locations the limiting factor is not just funding, but physical constraints that prevent the addition of new lanes. Therefore, the region will need to incorporate a broader range of mitigation strategies for managing congestion. This chapter outlines various tools that are available, and how progress is being tracked.

The Congestion Management Process

Federal law requires a Congestion Management Process (CMP) to be maintained and used in transportation planning for all urbanized areas like RFATS that have a population greater than 200,000. RFATS is also required to maintain a CMP as it is the only MPO in the state of South Carolina that is designated as a Maintenance Area for Air Quality by the EPA. The intent of the Federal CMP requirement is to ensure that roadway congestion is examined, and identified improvements are developed as an integral part of the MPO transportation planning process. The process provides a framework for these ongoing examination and identification efforts as well as the evaluation of the effectiveness of implementation strategies.

A CMP is a continuous cycle of transportation planning activities designed to provide decision-makers with better information about transportation system performance and the effectiveness of various strategies to deal with congestion. A CMP has four main components:

- Measurement and identification of congestion,
- A matrix of congestion mitigation strategies,
- Monitoring of effectiveness after implementation, and
- An orderly evaluation process.

Figure 6.1 The Congestion Management Process

Source: FHWA, Congestion Management Process

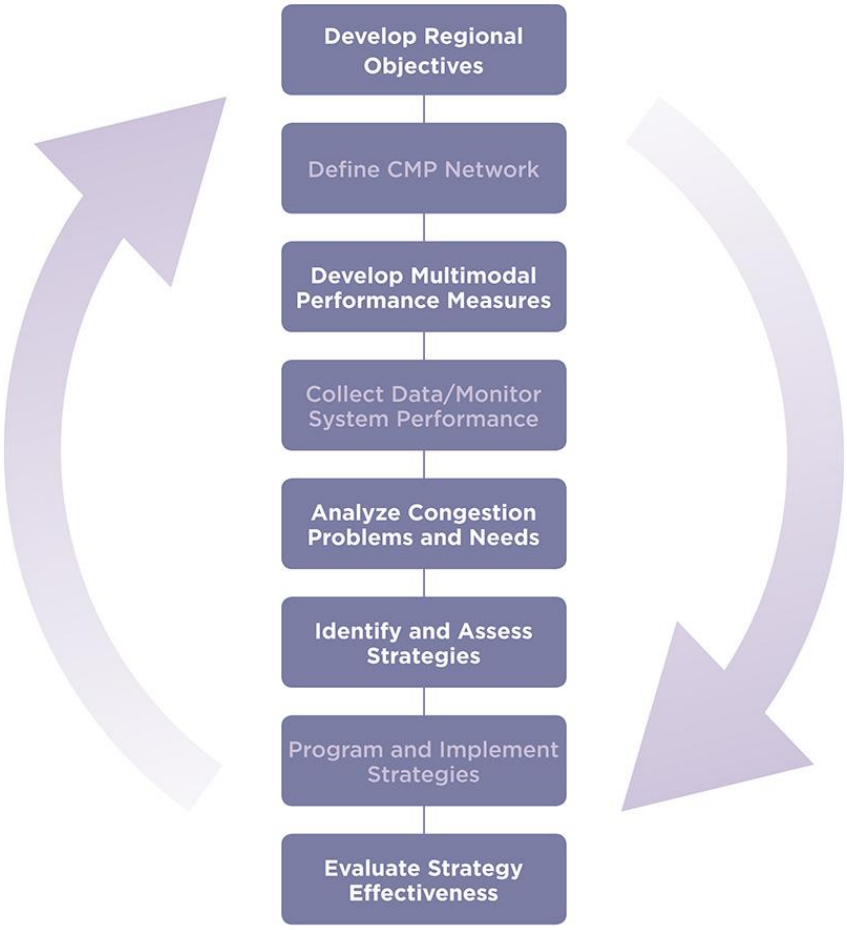
Like other components of the LRTP, the CMP reflects regional objectives for congestion management that are drawn from the regional vision and goals and are communicated through performance measures such as travel time and delay. The RFATS CMP was most recently updated in 2019 and it provides the framework for evaluating alternative strategies along RFATS' most congested corridors and intersections, in order to generate viable projects and programs for consideration in the LRTP.

shows these components and highlights the fact that a CMP is not a one-time exercise but an ongoing process of planning, action and review. It is also a learning process. By monitoring the effectiveness of congestion mitigation strategies and evaluating their benefits in an orderly, consistent manner, planners and decision-makers can improve their ability to select the most cost-effective strategies appropriate to their specific local conditions and needs.

Figure 6.1 The Congestion Management Process

Source: FHWA, Congestion Management Process

Like other components of the LRTP, the CMP reflects regional objectives for congestion management that are drawn from the regional vision and goals and are communicated through performance measures such as travel time and delay. The RFATS CMP was most recently updated in 2019 and it provides the



framework for evaluating alternative strategies along RFATS' most congested corridors and intersections, in order to generate viable projects and programs for consideration in the LRTP.

Congestion Monitoring Network

The RFATS CMP identifies particular roadways where traffic operations are to be evaluated on an annual basis. This "congestion monitoring network" consists of those core roadways which carry the majority of traffic such as Celanese Road, Cherry Road, SC 160, Gold Hill Road, US 21, Fort Mill Bypass,

SC 49, US 521, and Dave Lyle Blvd. Congestion levels on these roadways are monitored as development pressures and traffic conditions change with time. The Congestion Monitoring Network is shown in **Figure 6.2** and **Table 6.1**.

Performance Measures

A number of different data sources are utilized to monitor changes in congestion levels. These include Annual Average Daily Traffic Volumes, Volume to Capacity Ratios, and Travel Time Surveys. Current average speeds and travel times were collected in 2018 for twelve corridors distributed throughout the RFATS region. The data collected suggested that intersection-related delay continues to be one of the most significant contributors to the peak-hour congestion experienced by area motorists. It is worth noting that due to the extenuating circumstances regarding COVID-19 and the impact seen on travel in 2020, monitoring results from 2018 are utilized for this chapter, as it was used during the 2019 Update to the CMP. Data from 2020 is still being collected, and further analysis is needed to determine the long-term impact of the changes in travel patterns brought on by the events of 2020.

Another source of data available for use in congestion monitoring is the USDOT-sponsored National Performance Management Research Data Set (NPMRDS). This dataset is compiled from various sources such as cell phone locations, in-vehicle navigation systems, and Global Positioning Systems (GPS) devices used by trucking companies. However, this dataset has its limitations as it does not capture information needed for the entire Congestion Monitoring Network as it is based on corridor segments. Thus, for those corridors where NPMRDS data is not available, travel speeds are manually surveyed using the floating car method. Since the NPMRDS data is based on corridor segments, other tools may be needed to properly assess congested conditions in the RFATS region. RFATS will continue to track federal guidance and resources on performance measurement, as well as the experience gained by other MPOs using the new datasets, to help design its next full CMP update.

Figure 6.2: CMP Congestion Monitoring Network (source: 2019 CMP)

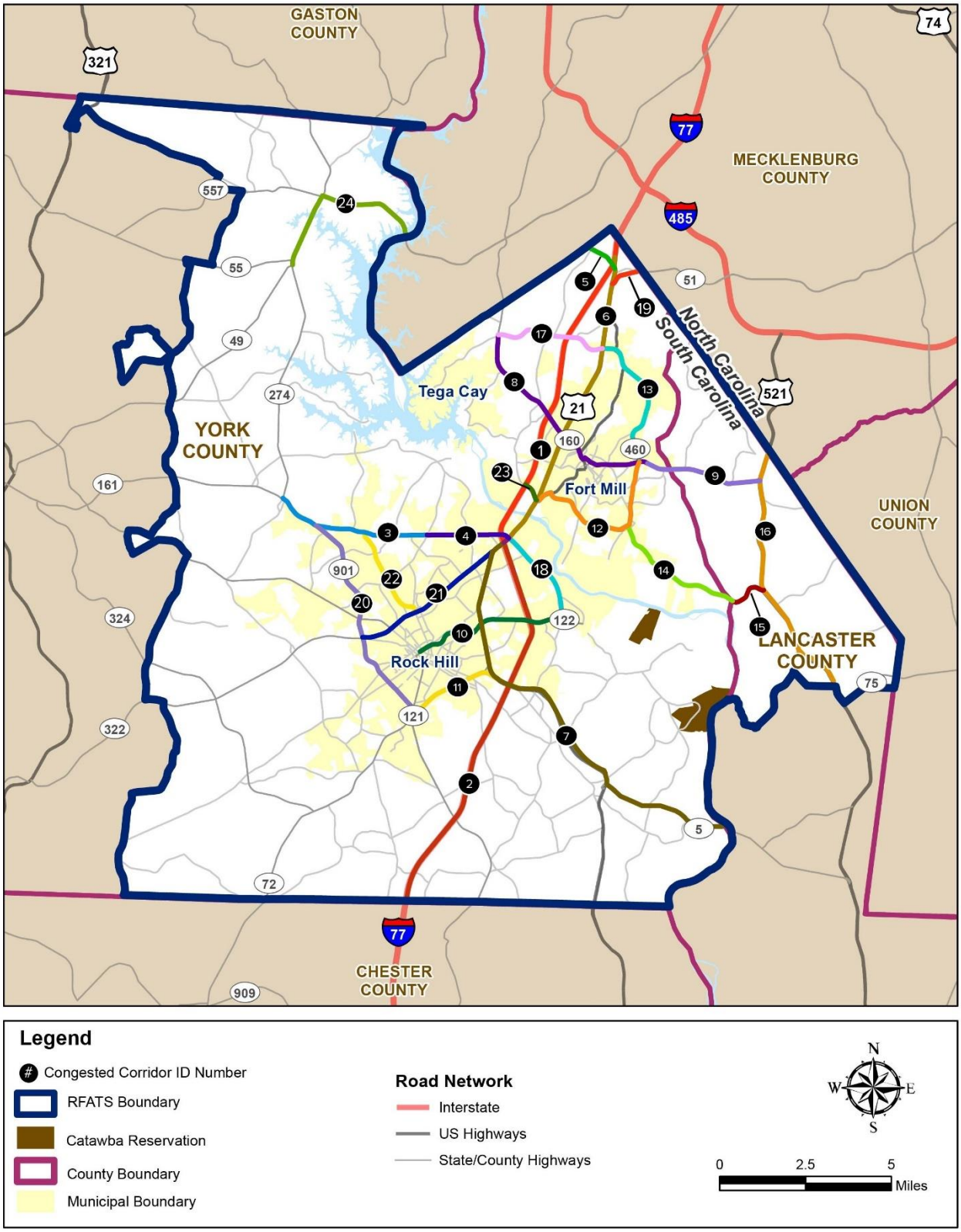


Table 6.1: CMP Congestion Monitoring Network Routes (source: 2019 CMP)

ID	Corridor	Termini	Miles
1	I-77 (north of US 21)	NC State Line to US 21	9.75
2	I-77 (south of US 21)	US 21 to York/Chester County Line	10
3	SC 161 (Old York Road/Celanese Road)	SC 274 to India Hook Road	2.07
4	SC 161 (Celanese Road)	India Hook Road to US 21	2.42
5	Carowinds Boulevard	NC State Line to US 21	1.05
6	US 21 (north of SC 161)	I-77 to SC 161	8.9
7	US 21 (south of SC 161)/SC 5	SC 161 to York/Lancaster County Line	9.7
8	SC 160	NC State Line to York/Lancaster County Line	9
9	SC 160	York/Lancaster County Line to US 521	2.73
10	Dave Lyle Boulevard	Main Street to Cel-River Road/Red River Road	5.74
11	SC 72/Albright Road	Mt. Holly Road to US 21	7.03
12	Fort Mill Bypass	US 21/Sutton Road to SC 160	5.41
13	Fort Mill Bypass	SC 160 to US 21/SC 460	4.21
14	Doby's Bridge Road	Fort Mill Bypass to York/Lancaster County Line	6.06
15	Doby's Bridge Road	York/Lancaster County Line to US 521	1.19
16	US 521	Waxhaw Highway to NC State Line	6.3
17	SC 460	SC 160 to US 21	3.3
18	Cel-River Road/Red River Road	Dave Lyle Boulevard to US 21/Cherry Road	3.61
19	SC 51	US 21 to NC State Line	1.0
20	SC 901 (Heckle Boulevard)	SC 161 to SC 72	6.62
21	Cherry Road	Cel-River Road/Red River Road to SC 901	5.24
22	SC 274 (Hands Mill Highway)	SC 161 to Cherry Road	2.74
23	Sutton Road	I-77 to US 21	0.59
24	SC 49 (Charlotte Highway)	NC State Line to SC 55	5.37

Congestion Management Strategies

Congestion is generally classified as either recurring or non-recurring. Strategies used to manage or mitigate congestion are dependent upon the cause and classification of that congestion. Examples of recurring congestion include peak period travel, bottlenecks, intersection operations, and school related traffic. Examples of non-recurring congestion include traffic accidents and special event traffic. Improving the operational efficiency of the RFATS transportation network relies on the different approaches to managing system resources, user demand, and adjoining development patterns. Selecting the appropriate strategy (or strategies) to manage or mitigate the different causes of congestion is done through detailed evaluation of each congested roadway and intersection. **Figure 6.3** shows the range of tools available.

Figure 6.3: Congestion Management Strategies

Access Management

- Access spacing
- Driveway spacing
- Safe turning lanes
- Median treatments

Transportation Systems Management and Operations

- Managed lanes (such as high-occupancy vehicle/toll lanes)
- Variable speed limits
- Changeable lane assignments
- Ramp metering
- Bicycle and pedestrian crossing improvements
- Adaptive traffic signals
- Dynamic messaging signs
- Real-time traveler information and re-routing systems
- Electronic commercial vehicle clearance and tolls

Incident Management

- Motorist assistance patrols
- Strategies to improve response times
- Strategies to reduce clearance times

Physical Roadway Capacity

- Intersection turn lanes
- Roundabout intersections
- Acceleration / deceleration lanes
- Hill-climbing lanes
- Grade-separated railroad crossings
- Grade-separated intersections
- New or converted HOV lanes
- New SOV travel lanes (widening)
- New location roadways

Travel Demand Management

- Added Park-and-Ride Facilities
- Increased ridesharing, vanpooling
- Flexible work location / telecommuting, shift work
- Alternative commute mode
- Land use management strategies

Access Management

Access Management Improvements at Baxter Village Town Center and SC 160

Many communities are beginning to look more seriously at access management to control the growing congestion on their arterial roadways. Access Management emphasizes the importance of maintaining each road's intended function. Roadways primarily intended to serve through-traffic – such as freeways and major arterial roads – offer only limited direct access to adjoining properties. This helps minimize the number of times that a driver must slow down because the vehicle ahead has either pulled out into the road or has braked to make a turn. In contrast to arterials, local streets are intended primarily for access to adjoining property. Through-traffic flow is less important; in fact, most communities set low speed limits and even implement traffic calming measures on local streets.

Access Management is defined as the management of vehicular operations into and out of land parcels along a given roadway. This includes the allowable number, location, and operational characteristics of both commercial driveways and entry / exit points for residential developments. Thus, access management strategies effectively seek to control all of the central variables influencing how efficiently and reliably a travel stream will operate – this is particularly important along corridors with higher levels of travel demand. Access Management techniques that jurisdictions can utilize include: access spacing, driveway spacing, safe turning lanes, median treatments, and right-of-way management.

As the RFATS region continues to grow at a rapid pace, it is important to consider improving access management strategies in key development areas. While specific access management policies will need to be implemented by the local jurisdictions with the RFATS region, RFATS must still play a role in working towards the implementation of effective access management strategies and coordinating the policy improvements implemented by each jurisdiction so that one locality does not appear to be more lenient than another. Supplemental to incorporating improved access management policies at the local level, specific consideration should be given to key growth areas and the congested corridors identified in the Congestion Monitoring Network.

Access management can be carried out through roadway design, access permitting, subdivision or site plan review, and access management plans and regulations.

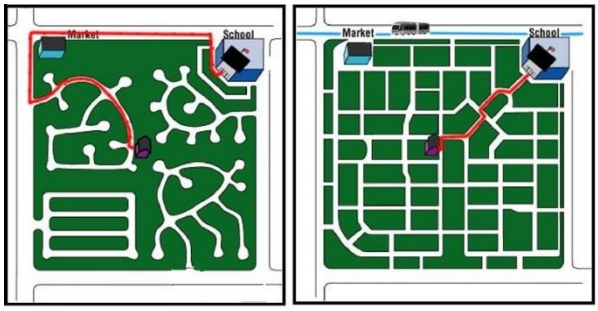
Collector Roads

One important component of Access Management is to continuously improve the collector road network. Collector roads are intended to balance the needs of access and through-movement. The general purpose of a collector road is to fill a gap between high-speed, high-volume arterial roadways and low-speed, low-volume local roads. Collector roads are integral linkages for efficient movement by effectively distributing travel demand across an appropriate network of supporting roads. Operationally, collector roads are characterized by moderate speeds with access to individual driveways. They provide some access to adjoining property, although not as much as a local street. Their function is to "collect" traffic from multiple local streets and then connect either to an arterial road, or to another collector.

Some parts of the RFATS region have a very limited number of collector roads. This situation can contribute to congestion because drivers cannot make most of their trips without first getting onto an arterial road. **Figure 6.4** shows the difference between a road network with a high number of connections, versus a network with many fewer route choices.

Given the growth projections with the RFATS region, the functional importance of identifying needed collector roads will serve an important role for both proper development and operational reasons. Congestion levels are projected to increase into 2050 and in order for the roadway network to function at its highest level of efficiency as a system, improvements to network connectivity such as the proper development of collector roads will be critical.

Figure 6.4: Network Connectivity



Travelers in the more highly connected road network (on the right) have more options to reach their destinations. Those using the network on the left must first drive to the arterial road that borders their neighborhood in order to reach other destinations.

Adaptive Traffic Control Signals

Another important aspect to managing congestion levels in the RFATS region is optimizing the efficiency with which traffic can flow along a corridor. Traffic signals are a key component to this. Traditional traffic signals are based on timing patterns and each movement at an intersection gets a dedicated amount of time when a signal turns from green to yellow to red. Traffic flow along a corridor can be impacted by these traditional traffic signals if these timing patterns are not adhering to the existing level of traffic at an intersection.

Adaptive Traffic Signal at SC 160 and Sutton Road/Pleasant Road

Adaptive Traffic Control Signal Systems allow traffic signals to adapt to the real time operational environment at an intersection. These adaptive systems can monitor traffic patterns and adjust the timing patterns for each phase of a signal cycle. These systems are able to extract further efficiency from a roadway system and enhance the flow of traffic along a corridor with several signals coordinating with one another. This helps to minimize delays, reduce the number of stops along a corridor, and improve travel time reliability. It is important to note that these systems cannot create more time for the signal cycle or add any more capacity to a roadway, however they can allocate time in a more efficient manner at an intersection.

It is important to note that the benefit realized with an adaptive signal system is dependent upon the roadway's capacity levels. Certain roadways may see minimal benefit from any adaptive traffic control signal improvements due to high levels of demand during peak periods. However, adaptive signal systems have helped to address school related congestion, special event related congestion, and corridor congestion during off-peak periods such as the lunch hour.

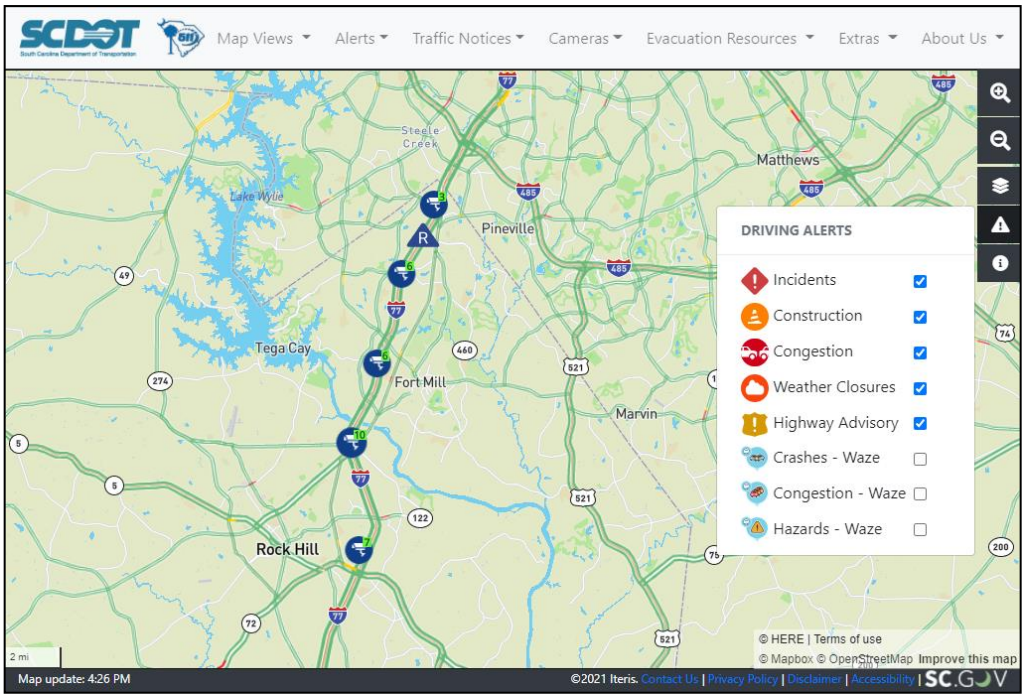
RFATS has recently coordinated with SCDOT to install the first of such projects within the MPO study area. The first system has been installed along Carowinds Blvd and US 21 near the N.C. state line to manage congestion associated with Carowinds Amusement Park. The second system has been installed along SC 160 between Pleasant / Sutton and US 21 to help manage congestion levels associated with the Baxter Village and Kingsley

developments. Further analysis is anticipated to verify that adaptive signal systems would be beneficial along other corridors throughout the region.

Incident Management

FHWA research has shown that more than 60 percent of congestion nationwide is non-recurring, as opposed to being linked with bottlenecks due to limited physical capacity. Much of this non-recurring congestion is related to vehicle crashes or other incidents. Worse, the traffic delays caused by the initial incident often result in secondary collisions due to inattentive or "rubbernecking" drivers.

SCDOT, like many states, has put increased emphasis on detecting incidents early and clearing them quickly before they significantly impact travel or result in secondary crashes. The real-time traffic monitoring information is also being made available to the traveling public so that drivers can learn of potential delays and have the opportunity to plan alternative routes or travel at a different time.



Real-time Traffic Conditions

I-77 through the RFATS region is monitored with video cameras and radar speed detectors to alert operators when a slowdown is occurring. 30 of these cameras are installed along I-77 in the RFATS area, and 2 cameras are also installed on US 21 at SC 160 and at the Catawba River bridge.

The resulting real-time traffic information is provided to the public on the SCDOT website (left) and via 511.

Incident management operations for the area are conducted by SCDOT from the District 4 Traffic Management Center (TMC), where camera and radar operators monitor traffic conditions.

The State Highway Emergency Program (SHEP) plays an important role in managing incidents and congestion on the I-77 corridor. Through this

program, SCDOT helps maintain safe traffic flow by assisting with traffic control and incident response and providing minor assistance to disabled vehicles. SHEP operates seven days a week along I-77 between Mt. Holly Road (Exit 73) and the North Carolina state line, primarily during daytime hours.

Regional Congestion Management Projects

The CMP lists projects that have been prioritized based on their potential to mitigate congestion. These include:

- **Intersection Improvement Analyses**
  - Cherry Road / Mount Gallant Road Intersection Improvement
  - SC 160 / Pleasant Road / Sutton Road Intersection Improvement
  - Marvin Road / Henry Harris Road Intersection Improvement
  - US 21 / Sutton Road / Spratt Street Intersection Improvement
  - Celanese Road / Mt. Gallant Road Intersection Improvement
  - SC 160 / Dave Gibson Blvd Intersection Improvement
  - SC 161 and Heckle Blvd
- **Adaptive Traffic Signals**
  - Cherry Road
  - Celanese Road
  - US 521
  - Dave Lyle Blvd
  - Albright Road
  - SC 160 West
  - SC 160 East
  - SC 460 (Gold Hill Road)
  - SC 49 (Charlotte Hwy)
  - Fort Mill Bypass
- **Access Management**
  - US 21
  - SC 460
  - SC 160
  - Albright Road
  - Celanese Road
  - Carowinds Blvd
  - SC 49
  - US 521
  - Cherry Road
  - Fort Mill Bypass
  - Harrisburg Road
  - Dave Lyle Blvd
- **Safety Audits**
  - Celanese Road and Mt. Gallant Road
  - Anderson Road and Mt. Gallant Road
  - US 521 and Waxhaw Hwy
  - US 21 and Sutton Road / Spratt Street

  - Heckle Blvd and Herlong Avenue
  - SC 160 and Pleasant Road / Sutton Road
  - SC 460 (Gold Hill Road) and Pleasant Road
  - Ebenezer Road and Herlong Avenue
- **Widenings**
  - US 21 (SC 160 to Catawba River Bridge)
  - Cel-River/Red River Road (Dave Lyle Blvd to Anderson Road)
  - Fort Mill Parkway from SC 160 to I-77
  - Sutton Road (6th Baxter to US 21)
  - US 521 from Jim Wilson Road to NC State line

Recommendations

- RFATS should continue to apply its Congestion Management Process, including:
  - Collection of vehicle travel time data annually, or at least biennially, on roads in the congestion monitoring network.
  - Before-and-after evaluation of congestion in corridors where improvements have been implemented.
  - Update of the CMP itself on a four-year cycle.
  - Collection of roadway network data (such as geometry and traffic volumes) in the expanded areas of the RFATS boundary as additional roads become regionally significant.
- As additional highly congested locations are identified through monitoring, continue to conduct the detailed studies necessary to recommend appropriate solutions/strategies.
- Implement Travel Demand Management Strategies that reduce the need for travel, increase vehicle occupancy, encourage alternative modes, and/or shift trips to off-peak travel times.
- Share information with local jurisdictions about ways to incorporate access management and network connectivity into their development regulations and reviews.
- Continue to publish the CMP Annual Evaluation Report given to the Policy Committee each year.

http://www.rfats.org/rfats-2019-congestion-management-process-update/

Introduction

Freight movement is a critical element of an advanced industrial economy, and the ease of freight movement is one component of a region's economic competitiveness for attracting and retaining heavy industry, manufacturing, warehousing and other light industrial functions.

This chapter provides the freight element of the RFATS 2045 Long Range Transportation Plan. It describes existing conditions and trends at the national level, at the statewide/regional level and within the RFATS area. It also summarizes findings and recommendations of the recently completed Greater Charlotte Regional Freight Mobility Plan, a planning effort in which RFATS has been an active participant.

Relevance to the Transportation System and the Plan

The FAST Act emphasizes the importance of freight and goods movement in regional transportation planning. Freight must be considered both in its own right and in terms of supporting an area's economic vitality and competitiveness. Building off provisions in MAP-21, the FAST Act continues to stress the importance of freight transportation at a national level through the development of a national freight network, a national multimodal freight policy and national freight strategic plan. The FAST Act also increases funding for freight projects through the formula-based National Highway Freight Program (NHFP), as well as the FASTLANE grant program (Fostering Advancements in Shipping and Transportation for the Long-term Achievement of National Efficiencies).

In addition, the FAST Act requires major metropolitan areas to set performance targets that are consistent with the national performance measures for freight, identify and recommend improvements that meet those targets, and report progress on the freight system's performance. A detailed summary of the performance measures can be found in the Greater Charlotte Regional Freight Mobility Plan.

Existing Conditions and Trends

The RFATS area's relationship to the greater Charlotte region is a key factor influencing the demand and location of freight supportive industries and facilities. However, the RFATS region itself has strong highway and rail connections for freight, including a major north-south interstate connecting Charlotte and Columbia, and main lines of two Class I railroads. These connections serve a wide range of industries, including distribution centers and automobile component manufacturers. The northern edge of the RFATS

region includes light industrial developments along I-77 and is impacted by similar developments along I-485 near Pineville.

Regional Freight Planning

RFATS and other partnering agencies in the 14-county Greater Charlotte Bi-State Region recently sponsored a regional planning effort focused on meeting the current and future needs of freight transportation. The *Greater Charlotte Regional Freight Mobility Plan* (also developed in cooperation with North Carolina and South Carolina statewide transportation planning studies) is intended to:

- Identify ways to effectively and consistently address freight congestion and key bottlenecks;
- Identify freight links that will connect mobility to regional economic development goals; and
- Identify and prioritize improvements for reducing congestion, addressing bottlenecks, and increasing efficiency.

The regional freight mobility plan analyzes movements and commodities in terms of tonnage, mode, direction and quantity, using the 2011 TRANSEARCH dataset (**Figure 7.1**). TRANSEARCH data is developed by IHS Global Insight and is a comprehensive database of North American freight flows, compiled from more than a hundred industry, commodity, and proprietary data exchange sources. TRANSEARCH combines primary shipment data obtained from some of the nation's largest rail and truck freight carriers with information from public, commercial, and proprietary sources to generate a base year estimate of freight flows at the county level.

As of 2011, the latest data available, over 375 million tons of freight moved across South Carolina's freight network. The largest mode share (80 percent) was trucking, followed by rail at 18.7 percent.

Another source of data is the Federal Highway Administration's Freight Analysis Framework (FAF), which examines freight movements for each mode of transportation. Although the database is not detailed enough to give specific data for the RFATS area, it does provide data for the greater Charlotte region.

Figure 7.2 shows the region's top rail freight commodities by weight. The largest commodity transported was cereal grains at 41 percent of the state's tonnage, followed by coal at 30 percent.

Figure 7.1: State Freight Tonnage, by Direction (2011)

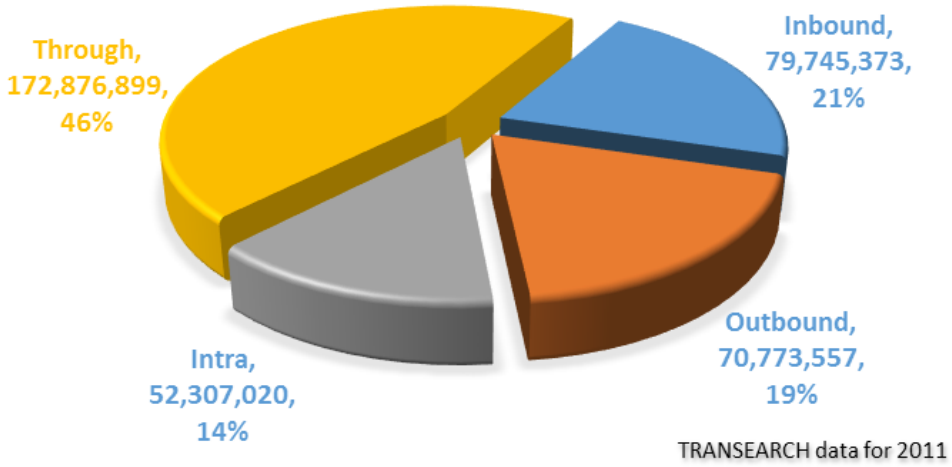
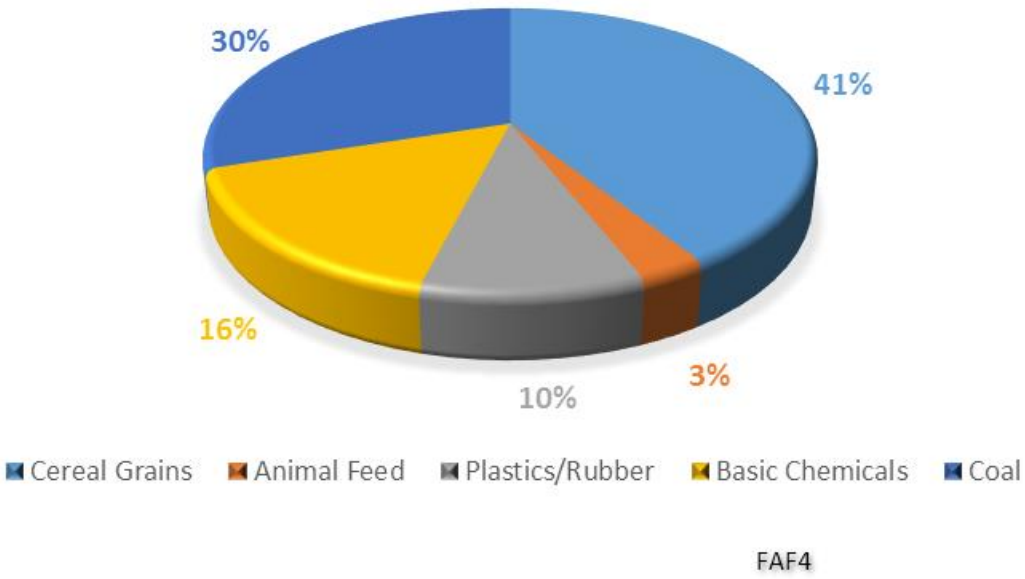


Figure 7.2: Top Commodities Shipped by Rail, by Weight



Figures 7.3 and **7.4** show the total value of regional freight shipments, inbound and outbound, by modal share. As shown, rail carries less than 5 percent of the value of freight, although it carries nearly 19 percent of freight by tonnage. As in other regions, rail tends to be the choice for shipping bulky, heavy goods while air is used for relatively high-value, time-sensitive freight.

Figure 7.3: Inbound Freight Value, by Modal Share

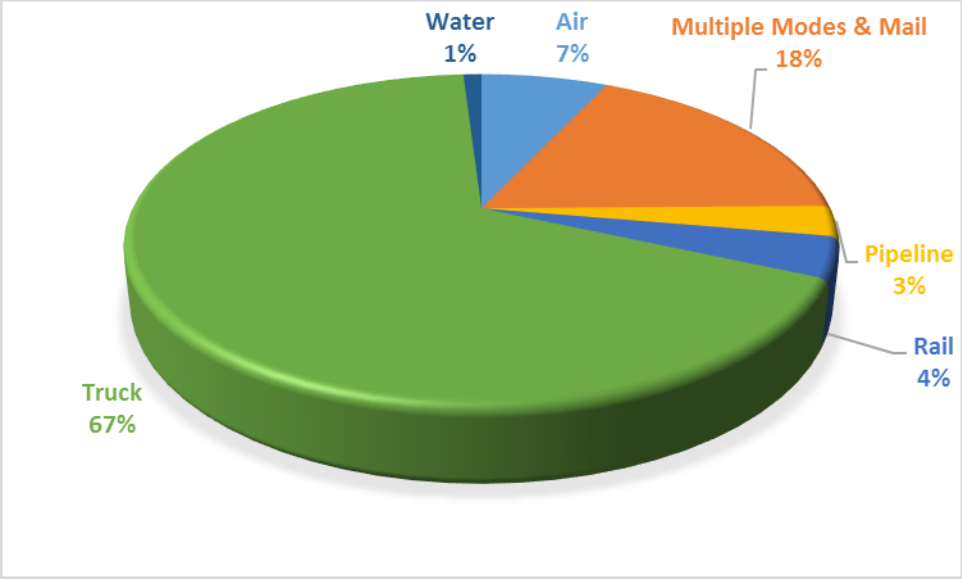
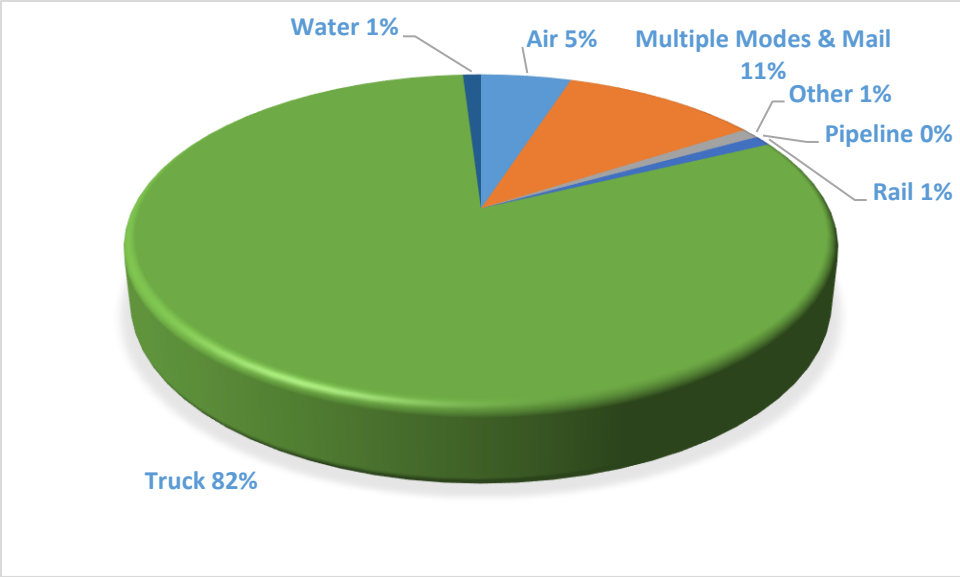


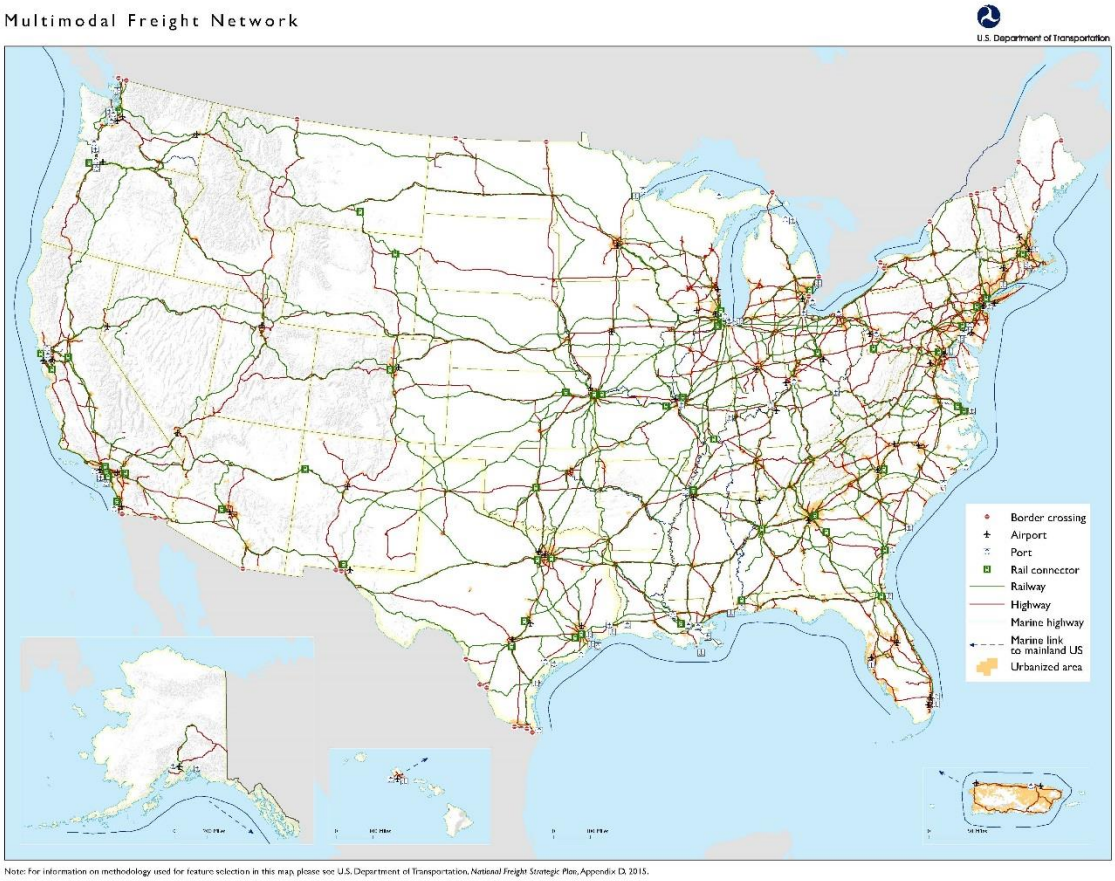
Figure 7.4: Outbound Freight Value, by Modal Share



Freight Strategic Network

The FAST Act directs federal resources and policies to improve freight movements on the nation's transportation system. U.S. DOT has designated a Multimodal Freight Network (**Figure 7.5**) which classifies the critical infrastructure for moving goods across the country.

Figure 7.5: National Multimodal Freight Network



The new Greater Charlotte Regional Freight Mobility Plan also identifies a strategic freight network where improvements are recommended to be focused. Within the RFATS area, the key facilities include I-77, US 521, SC 5 and the Norfolk Southern and CSX rail lines.

Highway Freight

National Conditions and Trends

Highway goods movement has been consistently increasing nation-wide over the past decades. Truck movement transports over 70 percent of all tonnage

in the U.S. The current dominance of this mode results through access and availability. Due to the nature of changing development patterns during the 20th century, the majority of shippers no longer have direct connection to ports or rail.

Urban freeways and arterials continue to become increasingly congested since many states have a hard time improving vehicle capacity at the same rate. Trucks will be affected just as much as commuters, with implications for freight travel times and reliability.

Nationally, issues of expanding capacity are increasingly being supplanted by a recognition that the existing highway network needs to be kept in a state of good repair and that existing funding streams may not be adequate, even without major capacity expansion.

Statewide and Regional Conditions and Trends

The port of Charleston is an important freight origin/destination for the state. However, the RFATS region also has close links to Charlotte and its intermodal terminals. CSX railroad operates a major rail-truck intermodal terminal in Charlotte, and Norfolk Southern relocated its Charlotte terminal to the Charlotte Douglas International Airport in December 2013, making the airport an air-rail-truck intermodal terminal.

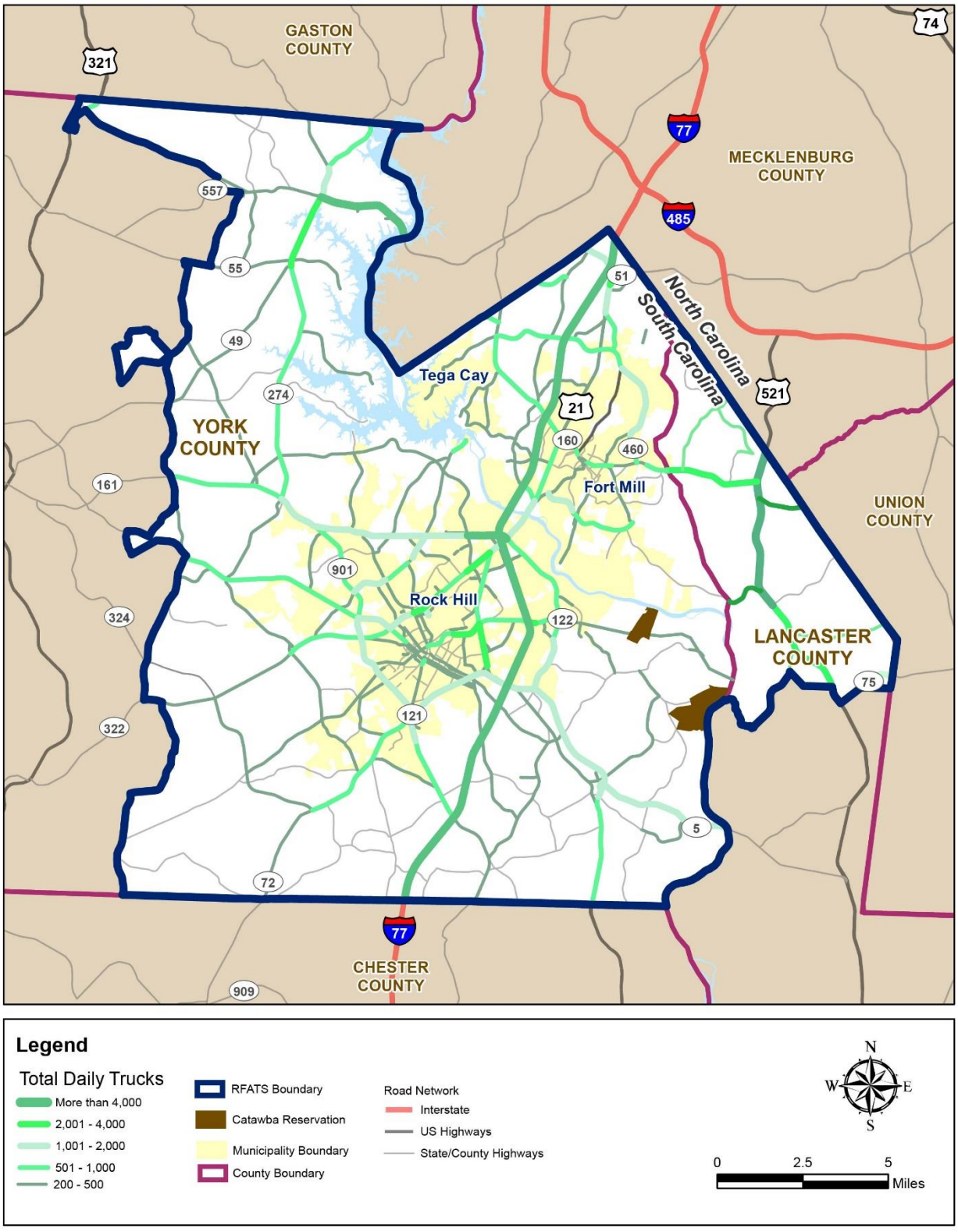
The state is also moving toward construction of a new intermodal facility in Dillon. The inland port would be the second one in South Carolina besides the Inland Port of Greer.

Conditions and Trends in the RFATS Region

Although I-77 carries the bulk of daily truck traffic, other roadways play a critical role to the movement of freight within RFATS, these include US 21, SC 5 and US 521. **Figure 7.6** shows routes within the region that carry higher daily volumes of truck traffic.

Identified truck bottlenecks within the RFATS area include the I-77 / US 21 interchange. It is also worth noting that just outside the RFATS planning area is one of the top 100 freight bottlenecks in the country: the I-77 at I-485 interchange. The prosperity of the RFATS region is strongly connected to the performance of its highway and rail access to the intermodal facilities in Charlotte. Existing and projected congestion on I-77 therefore represents a potential threat to the competitiveness of the RFATS area, as do bottlenecks that lie between area shippers within RFATS and their destinations.

Figure 7.6: Daily Truck Volumes on Area Roadways (2015)



Rail Freight

National Conditions and Trends

The US freight railroad industry is currently in a period of stability and growth following the major structural changes of the 1970s through the 1990s. The economic growth experienced in recent years has particularly benefited some freight flows, such as containers to and from the major ports, with the result that railroads have been adding or reinstating capacity on their main lines. Although there is a strong focus on unit trains (entire trains of a single commodity, such as coal or containers), the more traditional, smaller-scale traffic flows of single cars or small numbers of cars to/from local industries (carload freight) remains an important part of the industry.

Nationwide forecasts suggest that long-term economic growth will create demand for substantial additional capacity on the main rail corridors – and that the railroad industry will not be able to pay for all that capacity on its own. Public-private partnerships are therefore likely to be a key funding mechanism for achieving the necessary capacity, as shown in North Carolina where Norfolk Southern and NCDOT are investing more than $540 million in double tracking between Raleigh and Charlotte. Railroads are increasingly open to partnerships that combine public funding of public benefits (principally reductions in truck traffic) with railroad funding of private benefits. In particular, states and municipalities are increasingly recognizing the public benefit of diverting truck traffic from highways to railroads. Not only does it free up capacity on the highways, but it reduces impacts to the roadway surface itself, thereby extending its service life.

Statewide and Regional Conditions and Trends

Multiple state agencies are involved in activities influencing freight rail movement. SCDOT's Statewide Freight Plan addresses rail freight issues along key corridors. The South Carolina Department of Commerce also has a Division of Public Railways which promotes economic development interests by providing freight rail access to new and existing industries. The division has the authority to acquire rail corridors that may be at risk of abandonment or develop and construct new rail corridors.

As noted in SCDOT's Statewide Freight Plan, rail movements accounted for 70 million tons of freight, with through-state movements accounting for the largest directional movements. CSX Transportation handles the most tonnage through the state due to its larger rail network.

Over the past several years, multiple developments have either been completed or have been initiated that will greatly expand South Carolina's capacity and efficiency in accommodating freight rail movements:

- The Charleston Harbor is proposed to be deepened to accommodate larger ships that can now access the east coast due to the expansion of the Panama Canal. The project won congressional approval in December 2016 and is now awaiting federal funding.
- The Inland Port in Greer, opened in October 2013, connects directly to the Charleston Harbor and is served by rail.
- Plans are proceeding for the development of another inland port in Dillon.
- A new facility, the Navy Intermodal Container Transfer Terminal Facility (ICFT), is currently under construction in North Charleston. With the completion of the ICFT, no location in South Carolina would be more than 100 miles from an intermodal facility.

The RFATS region lies close to two major corridors that have been identified by railroads as potential partnership corridors. Both corridors are likely to involve increased capacity (additional tracks and/or improved signaling and speeds) as well as increasing clearances to allow double-stack container trains.

The **Norfolk Southern** (NS) main line through Blacksburg, west of the RFATS region, is part of its Crescent Corridor that runs from Washington, DC to New Orleans via Charlotte and Atlanta, paralleling I-85 and other congested routes. NS hopes to attract long-haul truck traffic on this corridor, which the railroad industry has historically not developed strongly. A major intermodal terminal was recently opened at Charlotte-Douglas International Airport as part of the corridor plan. **CSX**'s National Gateway corridor includes an axis from the port of Wilmington to Charlotte. Both railroads are currently working with state and municipal governments to develop plans and funding for these corridors.

Conditions and Trends in the RFATS Region

Figure 7.7 shows railroads in the RFATS region. These include routes owned by both Norfolk Southern (NS) and CSX, the two major railroads in the eastern US, as well as the Lancaster and Chester (L & C) Railroad.

The NS secondary main line from Charlotte to Chester and Columbia (known as the 'R' line, part of NS Piedmont Division) passes through Fort Mill and Rock Hill, serving a number of industrial customers with a small switching yard in Rock Hill. SCDOT's *Rail Right-Of-Way Inventory* identifies this as a

potentially important line because it follows the SC 72 highway corridor, and its future appears to be secure. Although a single-track line, it has automatic block signaling and a relatively high density of traffic. Passing sidings exist at the Rock Hill yard and in Fort Mill.

The CSX line from Monroe (NC) to Chester passes through Catawba, as part of CSX's mainline axis from Hamlet (NC) to Atlanta and New Orleans. This line has centralized traffic control and a high traffic density, and its future also appears secure.

NS also operates a local line (the 'SB' line) that connects with the main 'R' line at Rock Hill, extending west to Tirzah and east to meet the CSX line at Catawba. Also serving Catawba is the independent Lancaster and Chester Railroad (L&C), a shortline (minor railroad).

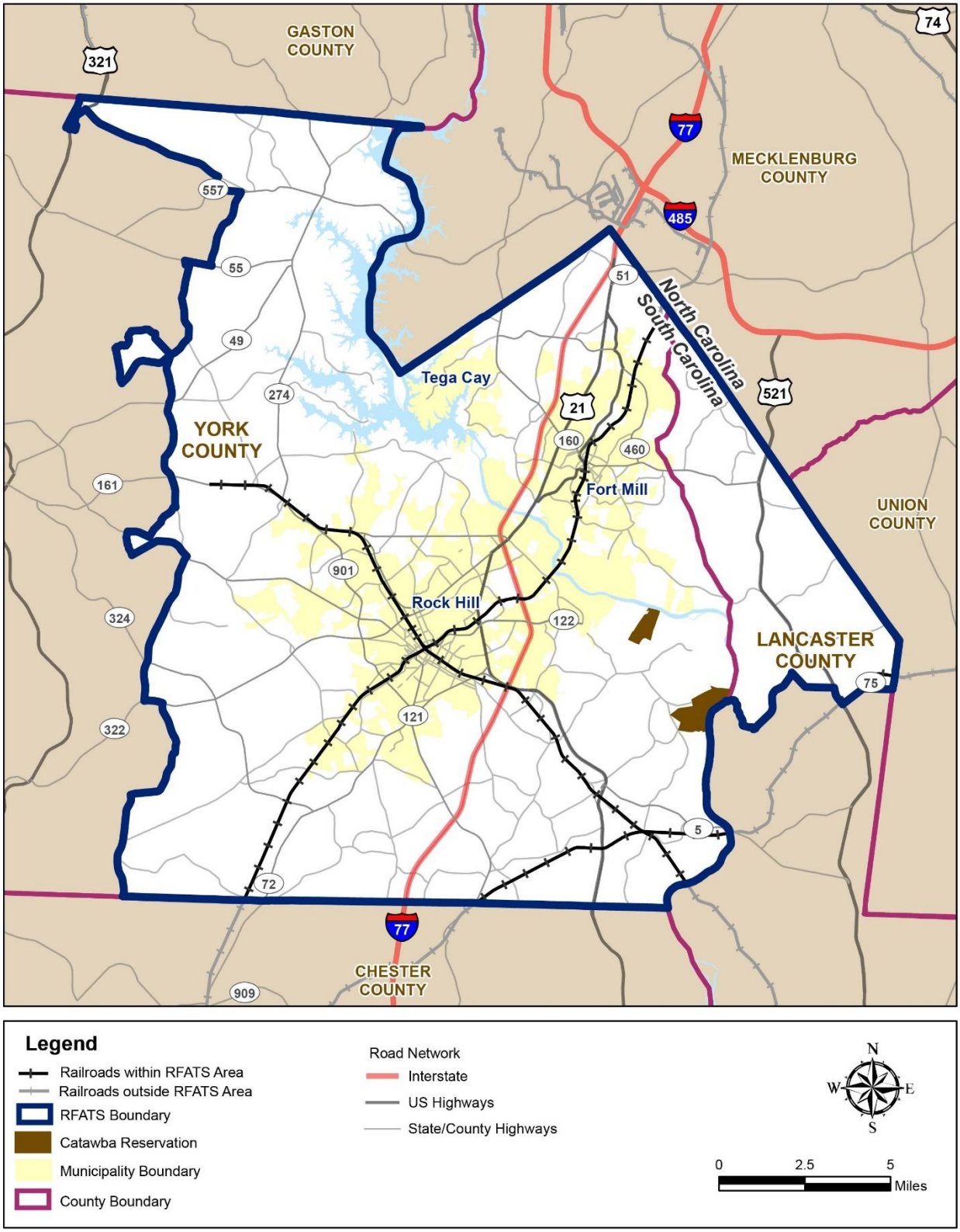
The rail lines within the RFATS region are not major inter-state corridors. Their future remains tied to the overall health of the railroad industry and to the decisions of individual customers along the route. Although the future of the two main lines through the RFATS region appears secure, the NS and L&C lines are, like any local routes, dependent on the presence of small numbers of individual customers, and changes in the industrial base can therefore easily affect those lines.

Highway-Rail Grade Crossings

The region includes a number of grade crossings where railroads and highways meet. Any future increase in train traffic may lead to additional congestion impacts on the highway network. In addition, grade crossings also represent a safety issue and have an impact on adjacent development. When individual crossings or entire corridors become busier, programs to upgrade, close or grade-separate the crossings are often introduced.

RFATS has funded a project to improve the efficient routing of area travel demand at / near several highway-railroad at-grade crossing points within downtown Rock Hill. The project includes a coordinated signal system and supporting electronic signage to alert drivers on preferred routing during train operations and related rail yard activities. Funding for this project came from the Congestion Mitigation and Air Quality Management (CMAQ) program.

Figure 7.7: Rail Corridors in the RFATS Region



Summary and Recommendations

Regional freight-related discussions should continue to focus on these goals:

- Identify ways to effectively and consistently address freight congestion and key bottlenecks.
- Identify freight links that will connect mobility to regional economic development goals.
- Identify and prioritize improvements for reducing congestion, bottlenecks, and efficiency.
- Promote effective land uses to support freight mobility, economic development, and job growth.

Recommendations

The Greater Charlotte Regional Freight Mobility Plan recommends a congestion and safety improvement project be undertaken at the freight bottleneck location on US 21 near I-77, as referenced earlier. This project would help mitigate any adverse impacts to freight movement and freight related land use. Other recommendations include:

- Identify areas of needed truck parking and rest areas along the region's Strategic Freight Network.
- Prioritize projects designed to improve freight mobility and eliminate freight bottlenecks.
- Address and prioritize functionally obsolete and structurally deficient bridges on the region's Strategic Freight Network.
- Expand the use of Intelligent Transportation Systems, technology, and innovation to improve the flow of freight.
- Encourage alternative options such as Compressed Natural Gas (CNG)/Liquefied Natural Gas (LNG) for trucks, including fueling stations, and participate in the FAST Act's Alternative Fuel Corridors program.
- Use technological solutions to address truck parking such as real time parking availability, reservation systems, cashless payment, and navigation using smart phone technology.
- Continue to identify and close any first/last mile gaps near major intermodal centers and manufacturing hubs.

- Identify corridors where congestion may be significantly reduced through non-traditional improvements such as Intelligent Transportation Systems, managed lanes, or value pricing.
- Work with the Class I railroads and local stakeholders to develop programs and policies to improve operational efficiencies.
- Retain existing rail corridors and halt track removal.
- Create rail-focused business parks.
- Develop local transportation plans for areas adjacent to freight intermodal facilities.

Introduction

This chapter covers the range of public transportation services currently operating within the RFATS Planning Area as well as recent initiatives to further strengthen overall availability, routing connections, and transportation network efficiency for all users of the system – both within RFATS as well as more broadly with other systems across the Greater Charlotte Region.

As a point of reference - key variables influencing public transportation's capacity to operate with the greatest efficiency and effectiveness include the following:

- **Population Density** - the population of the RFATS region is broadly distributed at relatively low densities. Transit, like other public services, is more cost-effective when it serves a higher number of residents per mile.
- **Bicycle / Pedestrian Infrastructure** - safe, comfortable transit use relies heavily on a network of sidewalks, safe street crossings, and lighting because most regular transit users walk or bike to and from a given stop.
- **Road Network Connectivity** - transit efficiency is improved when the area's road system is interconnected. This makes it easier to design efficient bus routes that do not require turnarounds or back-tracking.

Existing Public Transportation Services

MyRide

In June 2019, the City of Rock Hill began offering free bus service through MyRide, which operates four fixed routes along key corridors within the expanded downtown area of Rock Hill. These routes were based on recommendations outlined in the 2015 *Urbanized Area Transit Implementation Study completed by RFATS.*

As a point of reference – *this study comprehensively evaluated* those areas with the highest potential transit demand as well as the characteristics necessary to support fixed-route transit service. Key elements of the assessment included analysis of demographic characteristics, evaluation of land use and transportation infrastructure, as well as identification of key activity / destination centers.

The study also evaluated other existing transit services in the RFATS Planning Area, including the express bus route and demand response program. Specifically, existing ridership data was analyzed to determine utilization levels as well as the potential for further service expansion and/or initiation of new routing options.

The MyRide operational schedule runs from 7am to 7pm Monday through Saturday, with Sunday service between 9am and 5pm. MyRide is an all-electric system with buses equipped with free Wi-Fi, mobile charging ports, bike racks, and infotainment screens. The four routes have connecting destinations such as Winthrop University, Downtown Rock Hill, Piedmont Medical Center, Rock Hill Galleria, and other locations. While the current transit hub is located on Laurel Street near Family Trust Federal Credit Union headquarters, it will be relocated in the future to the ground floor of a planned parking deck at University Center.

Route information is as follows:

Route 1: Downtown/Knowledge Park Loop

- Loop connecting Winthrop University and Downtown Rock Hill, via Oakland Ave, Main St, Black St, Wilson St, and W. White St.
- Frequency—30 minutes

Route 2: Saluda/Heckle Loop

- Loop serving areas along Saluda St, Heckle Blvd, W. Main St, Herlong Ave, Piedmont Medical Center, Constitution Blvd, and W. Main St.
- Frequency—60 minutes

Route 3: Cherry/Riverwalk Line

- Out and back route connecting Downtown Rock Hill, Winthrop University and Riverwalk, via Cherry Road.
- Frequency—60 minutes

Route 4: Dave Lyle/Galleria Line

- Out and back route connecting Downtown Rock Hill and Galleria Mall, via Dave Lyle Blvd.
- Frequency—60 minutes

Figure 8.1 – MyRide Route 1

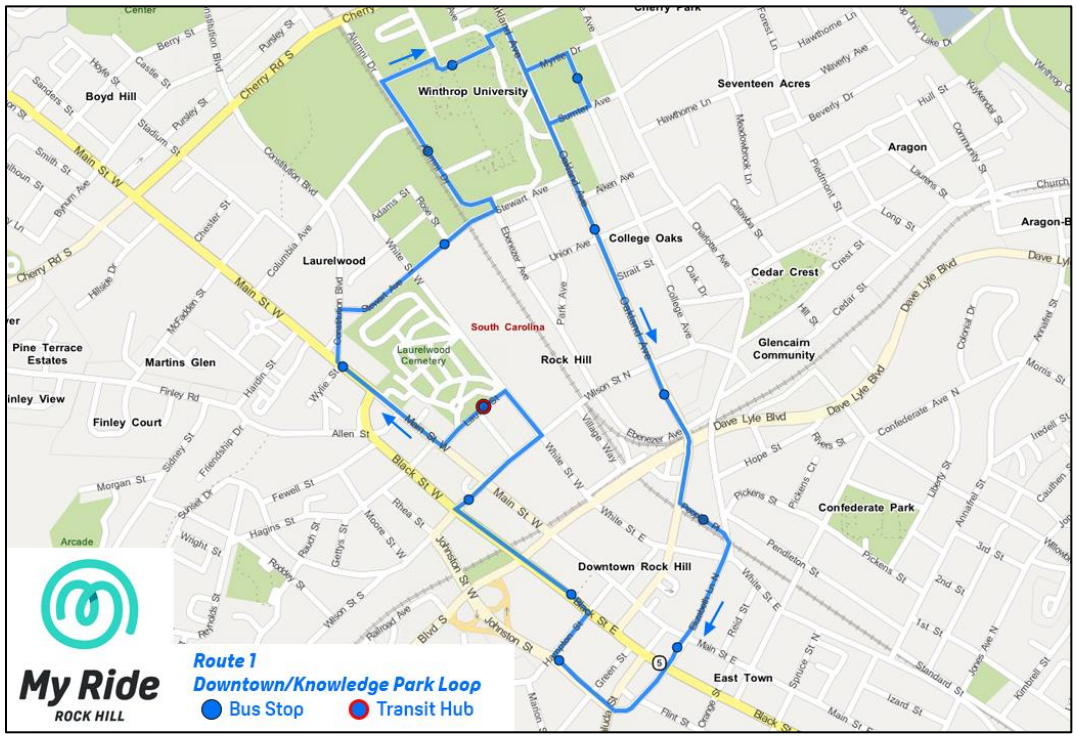


Figure 8.2 – MyRide Route 2

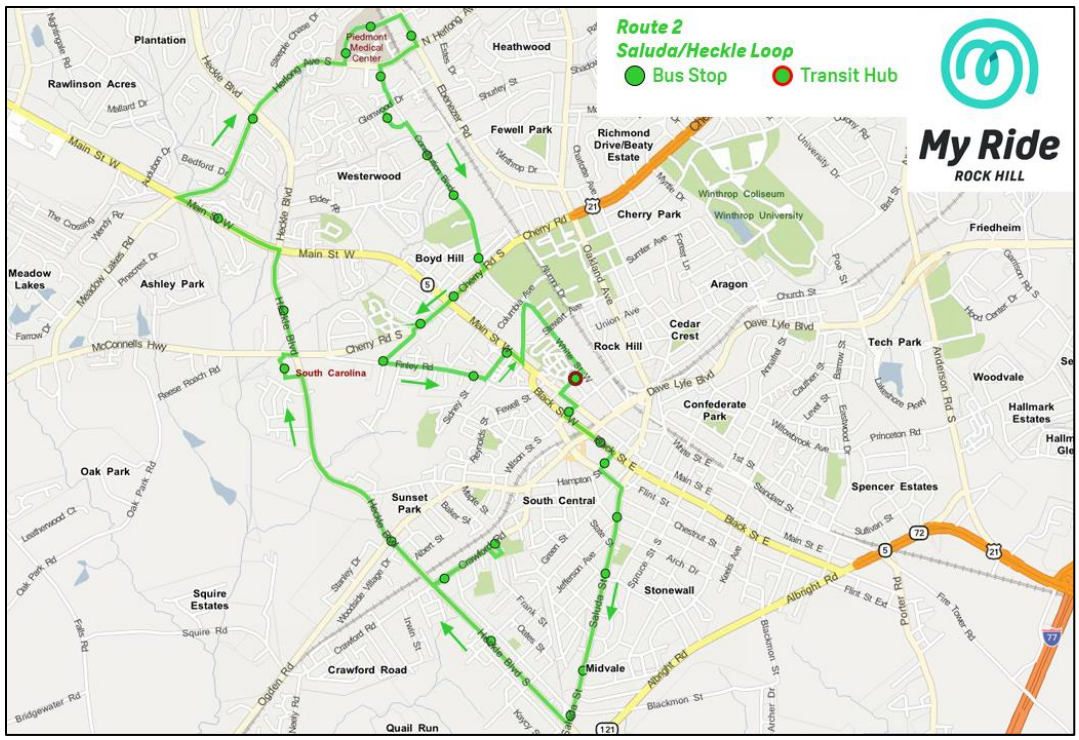


Figure 8.3 – MyRide Route 3

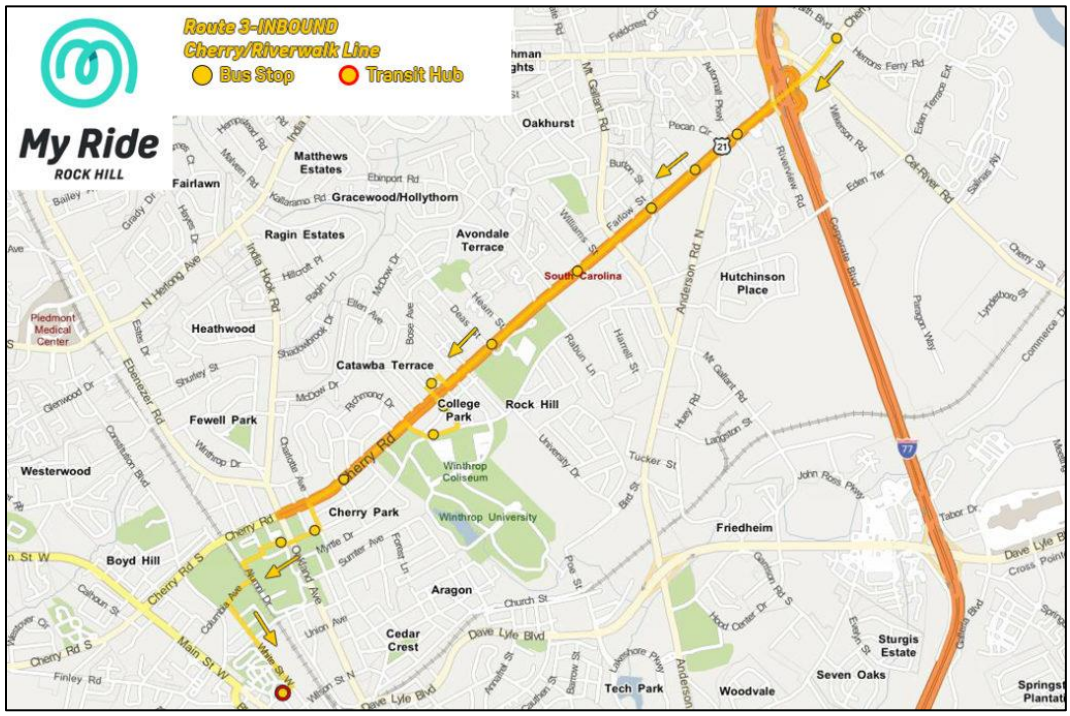
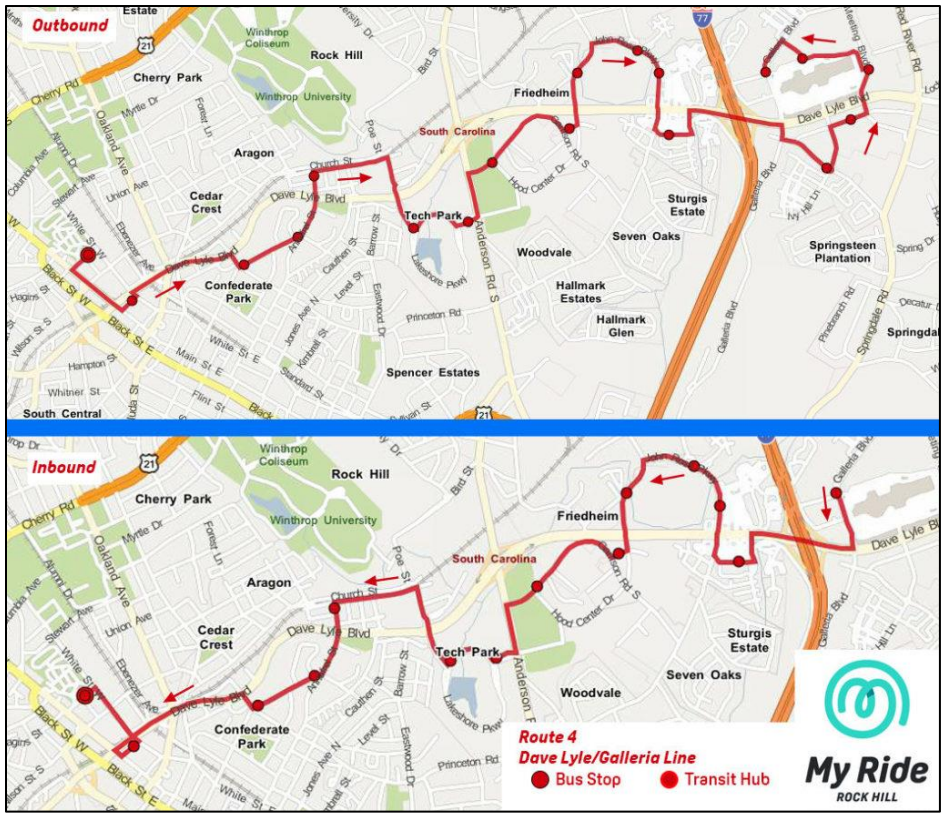
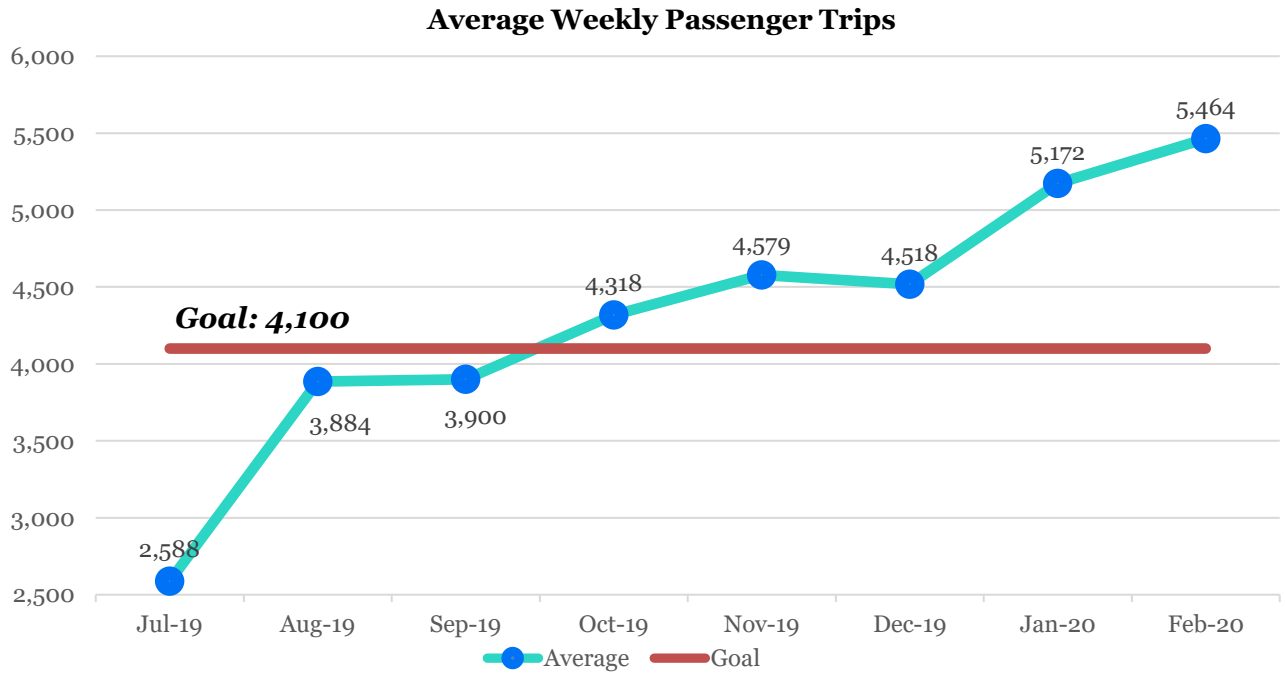
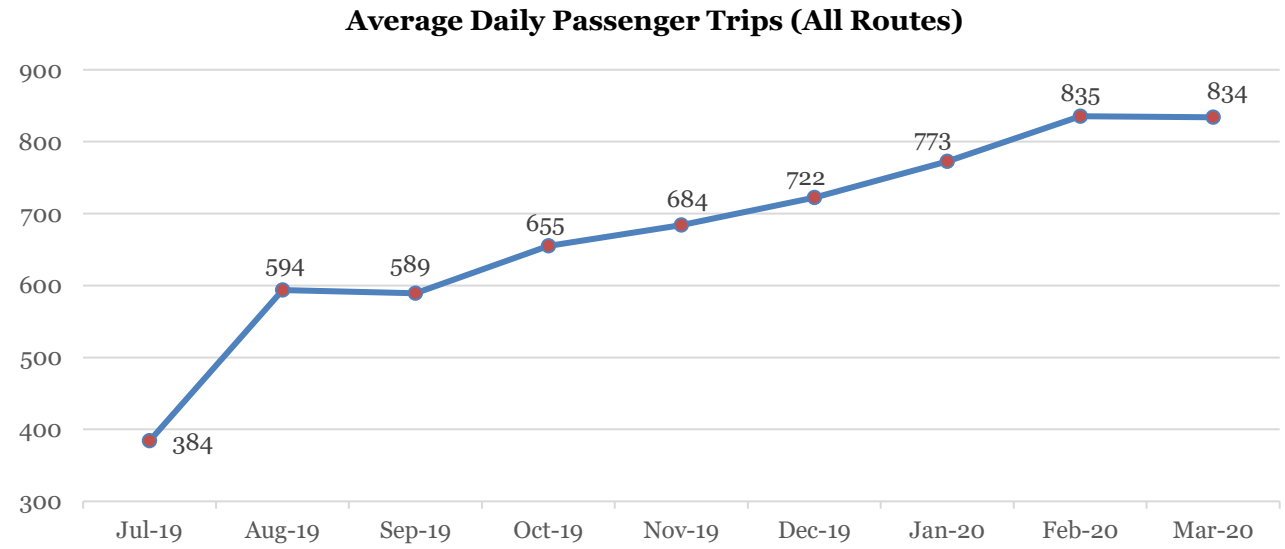


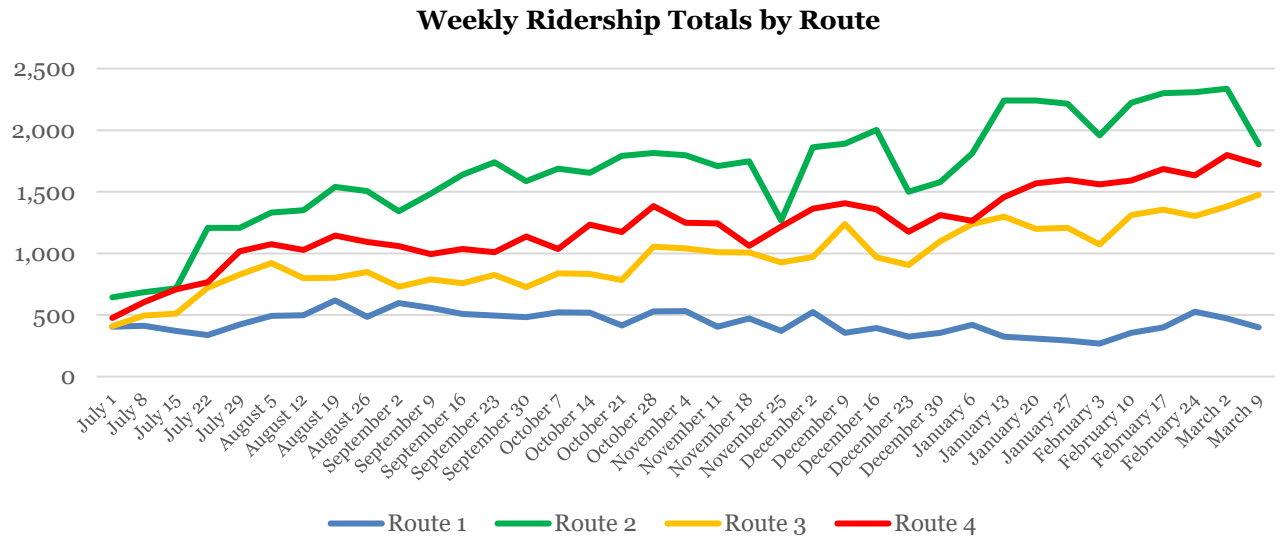
Figure 8.4 – MyRide Route 4



An operating goal averaging 4,100 passenger trips per month was set for this service. This goal was exceeded for the first time in October 2019 and again in each subsequent month in 2020. The graphs below reflect average weekly passenger trips per month, average daily passenger trips (all routes), and weekly ridership by route since the MyRide service began in July 2019.







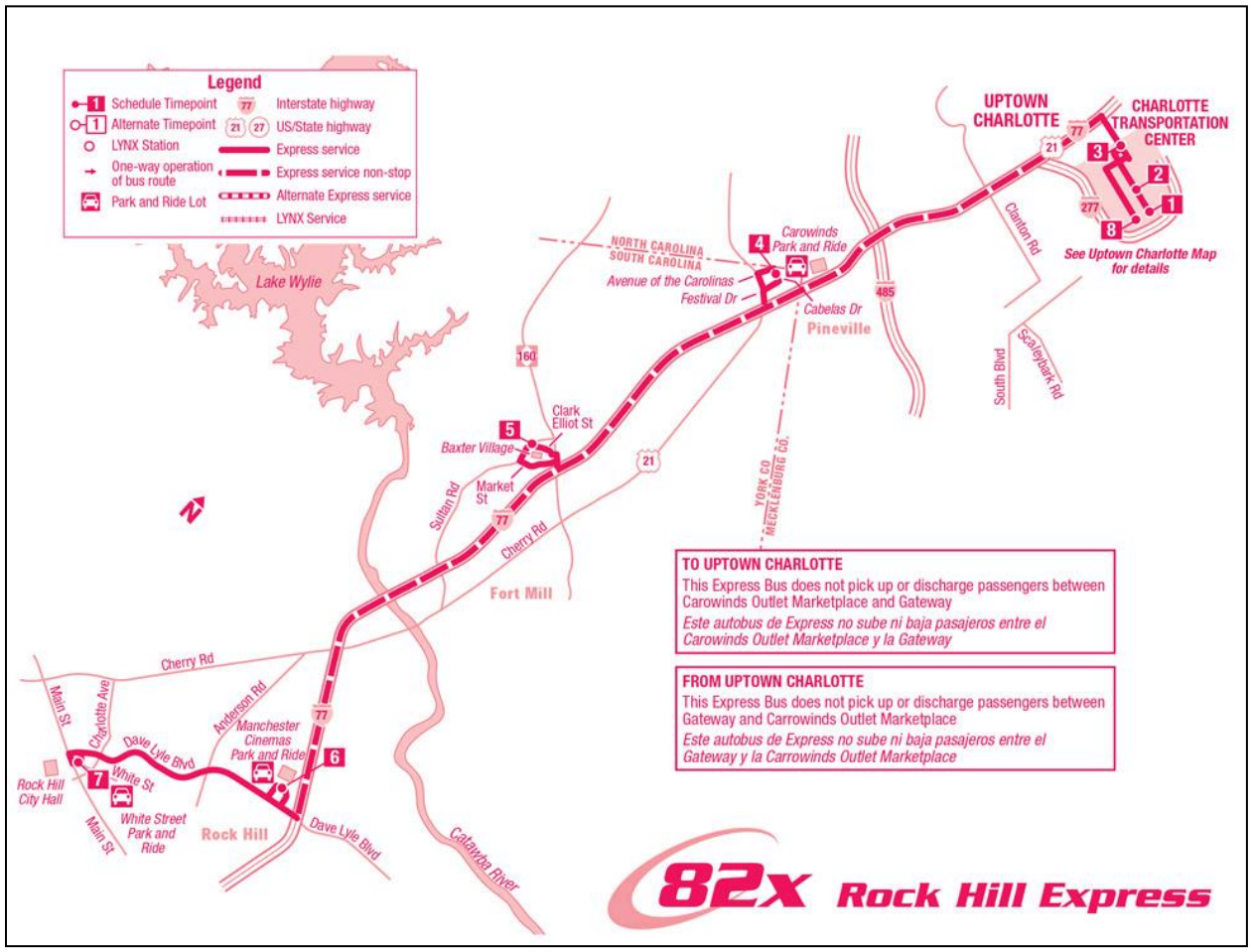
Rock Hill – Charlotte Express Bus Service

The CATS 82X Express Bus Route runs at peak hours on weekdays, connecting uptown Charlotte with several stops in the RFATS Study Area (**Figure 8.5**):

- Rock Hill Park and Ride lot in downtown Rock Hill,
- Manchester Cinemas (a park-and-ride lot adjacent to I-77),
- Baxter Village in Fort Mill, and
- Carowinds/Cabela's.

Established in 2001, this route provides service to area residents who commute to jobs in Charlotte and is funded through a cost-sharing arrangement between CATS and RFATS.

Figure 8.5 - CATS Express Bus Route 82X



To Uptown Charlotte

Weekdays / De Lunes a Viernes

White Street Park and Ride	Manchester Cinema	Baxter Village	Carowinds Park and Ride	Johnson & Wales Way	3rd & McDowell
7	6	5	4	3	8
5:40	5:50	6:04	6:15	6:32•	6:42•
6:10	6:20	6:34	6:48	7:11•	7:21•
6:30	6:42	6:57	7:11	7:41•	7:51•
7:00	7:12	7:27	7:44	8:14•	8:24•

pm times are shown in bold type

NOTES: • Actual times may vary due to changing traffic conditions

From Uptown Charlotte

Weekdays / De Lunes a Viernes

4th & McDowell	Charlotte Transportation Center	Johnson & Wales Way	Carowinds Park and Ride	Baxter Village	Manchester Cinema	White Street Park and Ride
1	2	3	4	5	6	7
4:10	4:15	4:23	4:52•	5:06•	5:19•	5:27•
4:40	4:45	4:53	5:31•	5:45•	5:58•	6:06•
5:10	5:15	5:23	6:01•	6:15•	6:28•	6:36•
5:45	5:49	5:55	6:20•	6:32•	6:44•	6:52•

pm times are shown in bold type

NOTES: • Actual times may vary due to changing traffic conditions

Source: CATS online schedules, as of May 2020

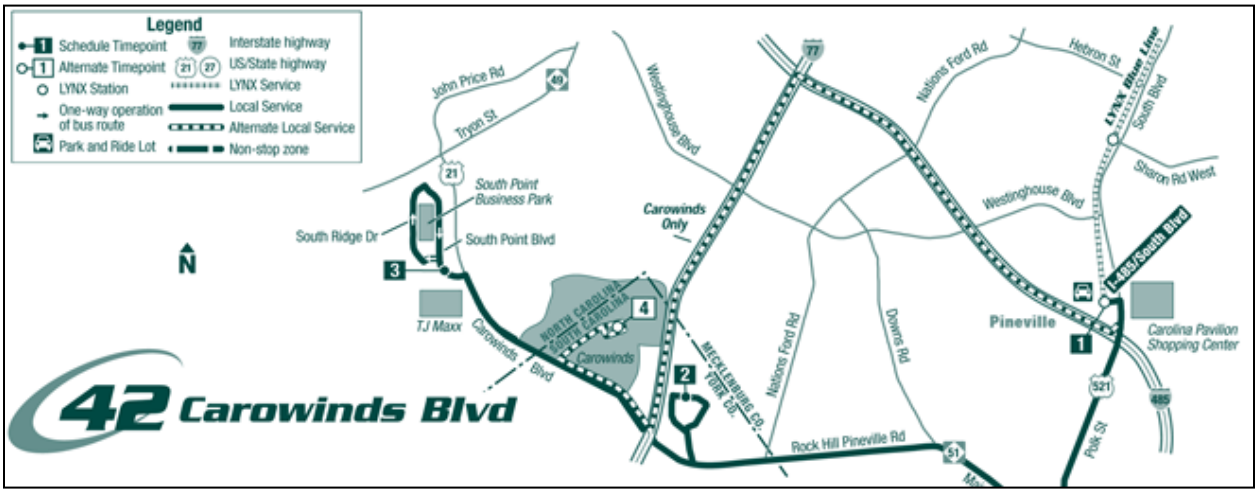
Recent MPO transit planning efforts have identified opportunities to expand the use of Route 82X to serve "reverse commuters." Currently, the AM bus arrives to the RFATS area empty with the sole mission of bringing workers into Charlotte. The reverse commute scenario would have the AM bus leave Charlotte with workers whose destination is within the RFATS region; such as the Kingsley Park area of Fort Mill or downtown Rock Hill. The AM bus would then operate its current route and provide service to RFATS residents who's work destination in uptown Charlotte.

The strategy could also be used in the late afternoon, bringing RFATS residents' home from uptown Charlotte and on the trip back to Charlotte picking up those workers who are heading back to Charlotte. This arrangement could yield increased revenue for the 82X and eliminate additional single-occupant highway trips.

Lynx Blue Line Feeder Bus Route

The northern end of the RFATS region has a bus service connection to the Charlotte LYNX Blue Line light rail system. (**Figure 8.6**). CATS Route 42 operates during weekday peak periods only from the I-485 light rail station to the Wells Fargo Home Mortgage office and South Point Business Park. It also provides service from the I-485 light rail station to the Carowinds amusement park. Service to Carowinds fluctuates based on park operating hours and is suspended when the park is closed during the off-season.

Figure 8.6: CATS Bus Route 42



42-Carowinds - *WEEKDAYS*		
Inbound		
3 Southpoint Business Park	2 Wells Fargo	1 LYNX I-485 Station
3:45 PM	3:59 PM	4:13 PM
4:15 PM	4:31 PM	4:49 PM
5:15 PM	5:31 PM	5:49 PM

42-Carowinds - *WEEKDAYS*		
Outbound		
1 LYNX I-485 Station	2 Wells Fargo	3 Southpoint Business Park
6:30 AM	6:42 AM	6:52 AM
6:45 AM	6:57 AM	7:07 AM
7:18 AM	7:30 AM	7:40 AM

Source: CATS online schedules, as of May 2020

Throughout the LYNX System Update, there was significant interest in adding rapid transit service between Charlotte and the Town of Pineville and community of Ballantyne. In early 2019, the LYNX System Update study was continued in order to evaluate rapid transit options, including a light rail extension, to these areas. These communities are close to the border with South Carolina, and additional service by LYNX would provide more transit connection options for Fort Mill and surrounding areas.

CATS Vanpool Program

CATS sponsors a vanpool program that makes 15-passenger vans and 7-passenger minivans available to commuters who wish to share rides to a common destination that is usually not served by regular CATS service. Riders are charged a monthly fee and CATS supplies the van, fuel, insurance and other administrative expenses.

Vanpool service consists of nine to 15 passengers with one rider agreeing to be the driver and at least one other rider agreeing to be the backup driver. The minivan service consists of four to seven passengers with one rider agreeing to be the driver and at least one other rider agreeing to be the backup driver, but they can be started with three to four passengers. The RFATS area currently has several active vanpools providing service to employment destinations such Duke Energy.

The 2015 *RFATS Urbanized Area Transit Implementation Study* outlines potential steps for a "piggy-back" vanpool program which would provide another option to commuters whose origin and destination are both within the RFATS region. In cases where vanpools originate in northern York and Lancaster counties, vanpool costs not covered by the riders themselves could come from the portion of Charlotte Section 5307 urbanized area funds that are distributed to South Carolina.

York County Access

York County Access is a demand-response service providing public transportation for residents of rural York County and the Rock Hill Urbanized

Area. York County Access is operated by the York County Council on Aging and represents a cooperative effort between York County and the City of Rock Hill. York County Access provides two types of services:

- **Essential Service:** The Essential Service provides transportation countywide for people who need a ride to the doctor, pharmacy, grocery store, or transportation to facilities for medical treatment such as dialysis, chemotherapy, etc. The service is available on weekdays between 6:00 AM and 6:00 PM, and rides must be scheduled 48 hours in advance.
- **Ride-to-Work Service:** Within the City of Rock Hill, a Ride-to-Work service is available and provides transportation to Rock Hill residents who need a transportation to work within the city. Operating hours are Monday-Friday, 5:30am to 9:00am and 3:30pm to 6:00pm, and rides must be scheduled at least 24 hours in advance.

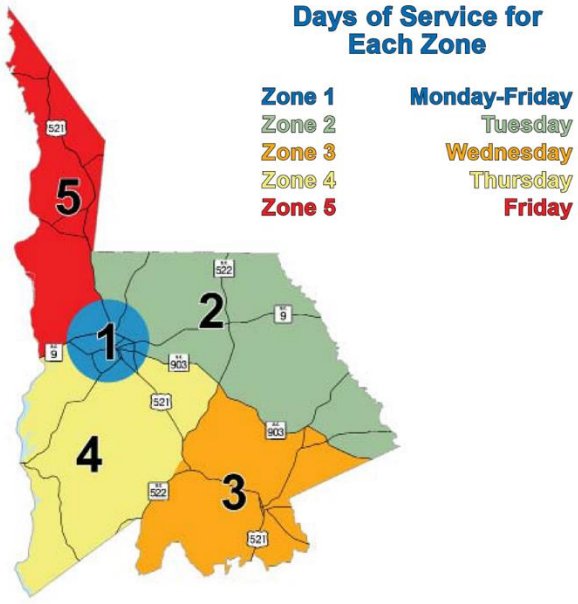
****Fares for both services are $2.50 each way****

While urbanized area designations have previously limited the ability to establish demand response service north of the Catawba River in Fort Mill and Tega Cay, planning steps are active to initiate this type of service consistent with applicable planning and funding requirements. It is expected that this work effort will result in the provision of demand response in the near future.

Lancaster Area Ride Service (LARS)

Similar to York County Access, the Lancaster Area Ride Service, or LARS, operates Monday through Friday from 9:00am to 3:00pm on a rotational basis in five different geographic areas of the county. The service is operated by the Lancaster County Council on Aging with funding from SCDOT and Lancaster County. Fares are charged each way at the following rates:

- Trips within Lancaster County: $2
- To and from Rock Hill: $5
- To and from Columbia or Charlotte: $10



This service provides a "dial-a-ride" option for residents who do not qualify for Medicaid, but do not have transportation alternatives needed for getting to medical appointments. As in the northern section of Lancaster County, prior planning and funding requirements limited the ability to provide federal funding support. With applicable changes in

these provisions having been made, federal funding support can be pursued consistent with changes in area demand levels.

AmbuStar Ambulance and Wheelchair Services

AmbuStar provides wheelchair transport to hospitals, nursing homes, dialysis clinics, doctor's offices and private practices in seven counties in South Carolina, including both Lancaster and York counties. Service is available 24 hours a day, 7 days a week (including holidays). AmbuStar is listed as an Advanced Provider by the SC Department of Health and Environmental Control and accepts Medicare, Medicaid, private insurance, and credit cards.

Inter-City Bus

Within the U.S., inter-city bus service has historically been provided mostly by Greyhound, its subsidiaries and its business partners. Together these services provide a nationwide city-to-city network, including stops at smaller locations that are not served by either air or rail. They are widely recognized as an affordable option for long-distance travel.

In the past few years, Greyhound has restructured many of its service patterns to concentrate on main flows and make fewer stops. Some smaller communities – including Rock Hill – have lost their inter-city transit connections as a result. The closest available service is now in the neighboring communities of Charlotte, Monroe, and Gastonia, NC and Spartanburg, SC.

Other companies such as Megabus have recently entered the Charlotte market, stimulating price competition. The connections currently offered by Megabus from Charlotte are to New York City, Philadelphia, Atlanta, Athens, Durham, Richmond, and Washington, D.C.

Inter-City / Commuter Rail

Inter-city passenger rail service is provided by Amtrak, an arm of the Federal government. Outside the northeastern U.S., the services fall into two kinds: long-distance services, often running once a day, and shorter-distance 'corridor' services, often with several trips per day and usually supported financially by states. Amtrak mostly operates over track owned by freight

railroads ('host' railroads). Although Amtrak's operations and expansion have been hampered by budget restrictions, there is increasing political recognition of inter-city rail's potential contribution to energy independence, offering an alternative to highway congestion, and providing resilience in the event of disruption to civil aviation.

The State makes no contribution to the capital or operating cost of the Amtrak service.

There are currently no passenger rail services within the RFATS region. The nearest Amtrak stations are Charlotte NC, Gastonia NC, Camden SC and Spartanburg SC. (In Charlotte, the new Gateway Station is due to be relocated to a new downtown intermodal center by 2024.) These stations are currently served by the following trains:

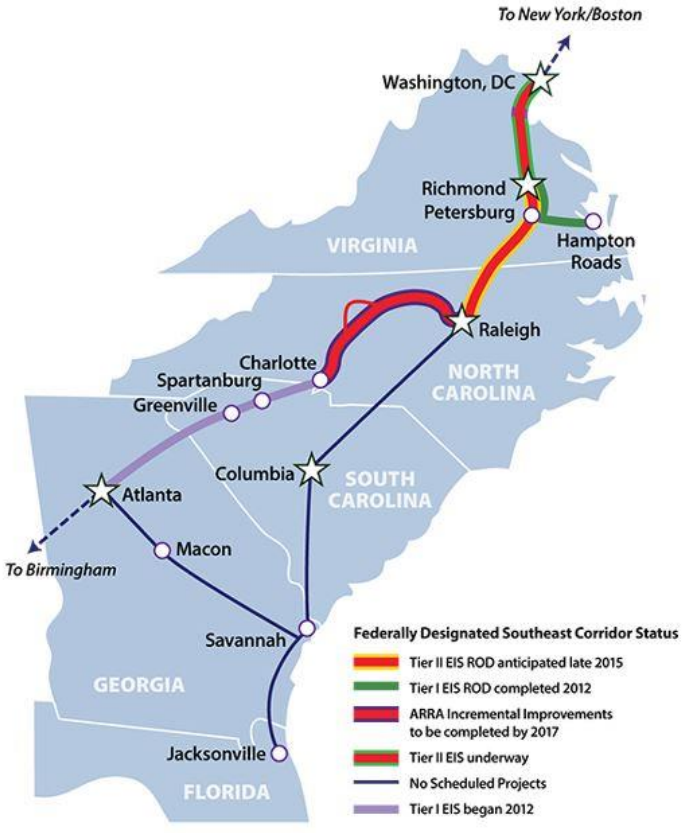
- *The Crescent* (serving Spartanburg, Gastonia, and Charlotte) – a long-distance service between New York and New Orleans. One train each way, daily. Other key destinations along this route include Atlanta, Baltimore, and Philadelphia. The schedule for this service is determined by the main points on the route, which leads the timings at the three stations near the RFATS area can be inconvenient; currently the train calls at these stations during the late night/early morning in both directions.
- *The Silver Star* (serving Camden) – a long-distance service between New York and Miami. One train each way, daily. Other key destinations on this route include Washington, DC, Savannah, and Orlando. The schedule for this service is determined by the main points on the route, and so the timings at the Camden Station can be inconvenient; currently the train calls at this station during the late night/early morning in both directions. (Additional services between New York and Florida operate through the eastern part of the state via Florence and Charleston.)
- *The Carolinian* (serving Charlotte) – a long-distance service between Charlotte and New York. One train each way, daily. This is potentially the most useful service for rail passengers living within the RFATS area, as it offers daytime service between Charlotte and the mid-Atlantic states. This train is supported financially by the North Carolina Department of Transportation (NCDOT).
- *The Piedmont (*serving Charlotte) – a short-distance ('corridor') service between Charlotte and Raleigh. This service is supported financially by NCDOT. There are currently three trains each way, daily. NCDOT plans to add a fourth frequency in 2023.

Planned, Potential, and Future Transit Opportunities

A step-change in inter-city rail service could come from the development of a national **high-speed passenger rail** (HSR) network. This network is similar in scope to the interstate highway system and similar in concept to the high-speed rail networks already in place in other advanced nations and being planned in California. One of the HSR corridors designated by the US Department of Transportation (USDOT) – the Southeast High-Speed Rail Corridor – would serve Charlotte, potentially providing access to RFATS area residents.

The Southeast HSR Corridor broadly shadows the Norfolk Southern (NS) main line and I-85. It was originally designated in a 2002 Tier I study as running from Washington, DC through Richmond, VA and Raleigh, NC to Charlotte, NC with maximum speeds of 110 mph. It is part of an overall plan to extend service from the existing high-speed rail on the Northeast Corridor (Boston, MA to Washington, DC) to points in the Southeast.

Extensions outlined in 1998 included a link from Charlotte through Spartanburg and Greenville, SC to Atlanta, GA and on through Macon, GA to Jacksonville, FL. While this extended corridor passes close to the RFATS region, there are no firm timelines for implementation on any segment for this region to plan around.



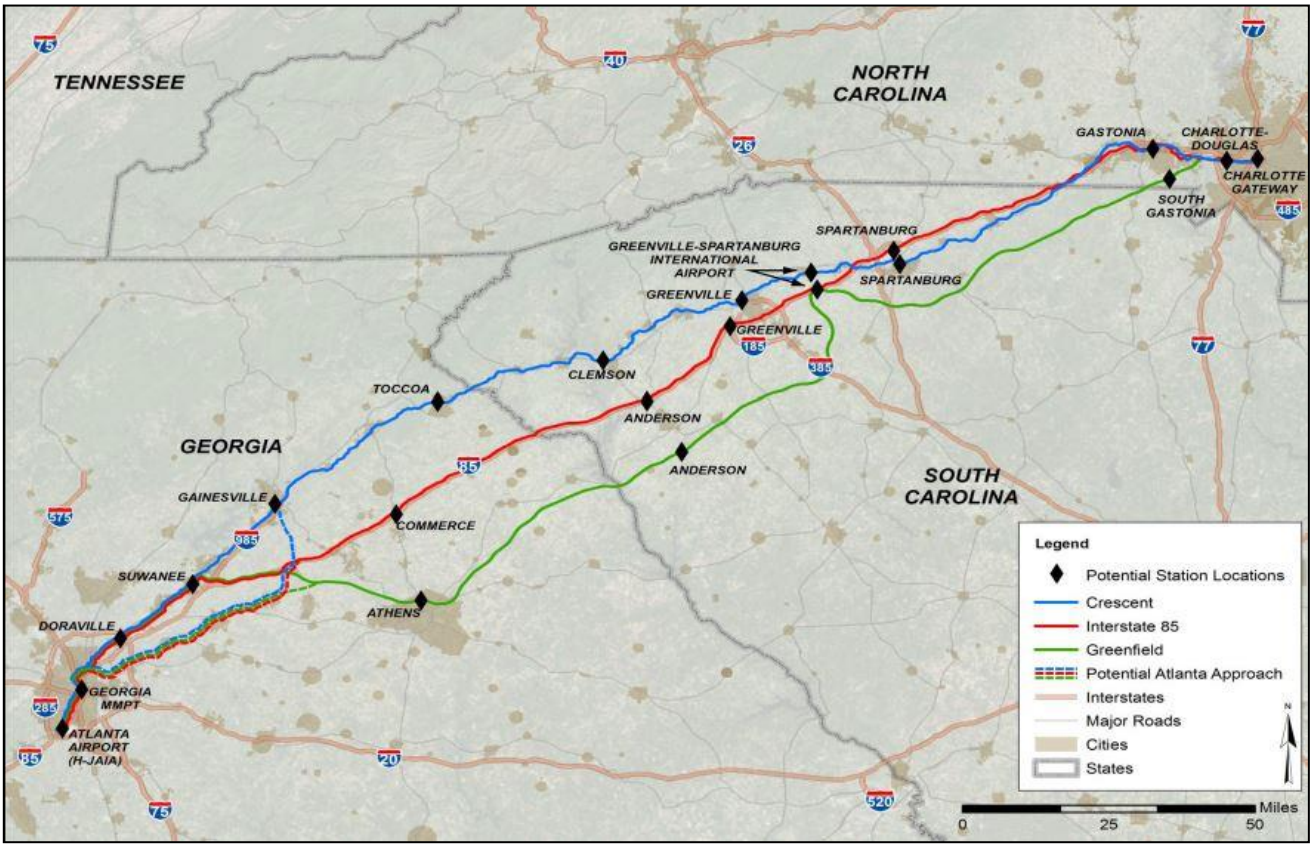
Environmental studies for the Raleigh-Charlotte segment are complete, and incremental improvements along this rail corridor have been completed as part of the Piedmont Improvement Program, which was largely funded through the American Recovery and Reinvestment Act. The initial technical work suggested that high-speed service could be extended from the new Charlotte Gateway station to a new station (and servicing facility) at Charlotte-Douglas International Airport.

The proposed extension through South Carolina to Atlanta was analyzed through a Tier I Environmental Impact Statement (EIS), which assessed potential route

alternatives and station locations and was completed in September 2019. Three potential alternatives were studied **(Figure 8.7)**:

- Alternative 1: The Norfolk Southern (NS) railroad corridor (also referred to as the Southern Crescent route);
- Alternative 2: The I-85 corridor; and
- Alternative 3: A "greenfield" corridor which offers the opportunity to define a fully grade-separated route alignment with optimal geometric characteristics for high-speed passenger rail service.

Figure 8.7: Potential High-Speed Rail Routes from Charlotte to Atlanta



Source: GDOT Project Facts Vol. 2, Atlanta to Charlotte Passenger Rail Corridor Investment Plan, Fall 2015.

Although the two HSR alternatives that would link Rock Hill and Columbia were not carried forward into the current study, the SCDOT *State Rail Plan* notes there is interest in connecting Columbia to the expanding passenger rail network being developed in the Charlotte region. The future Tier II study will further define the exact alignments and routes for the termini of the selected preferred alternative.

Additionally, the *Southeast Regional Rail Planning Study* is a fully funded, USDOT-led effort by the FRA that may lead to recommendations for the rail network within the RFATS region. The study, which began in fall 2016 and is expected to be complete by the end of 2020, is a multi-state planning study designed to explore the potential for a high-performance, multi-state intercity passenger rail network in the Southeast region. The study builds on current rail planning efforts within the six states of Florida, Georgia, North Carolina, South Carolina, Tennessee and Virginia and the District of Columbia, and explores the potential for a fully integrated rail network linking rail passengers and freight with intermodal transit and ports across the region.

In Phase II of the plan, which commenced in Fall 2019, has the potential to recommend changes to the proposed network based on a new model, the Conceptual Network Connections Tool (CONNECT). The study team will then work with project stakeholders to formalize a revised draft passenger rail network for the southeast.

Commuter rail services, which are intended to serve shorter distances within a major metropolitan area, have become increasingly common in recent years. There is now considerable experience in implementing these services on existing railroad corridors, in some cases shared with existing freight services. Typically, these new services are operated by local or state agencies as a part of the regional transit system, rather than by Amtrak.

SCDOT's Statewide Transit Plan (2014) does identify the Rock Hill to Charlotte corridor as having potential for commuter rail. Local support has grown for addition of a commuter light rail line from Rock Hill through Fort Mill ending at the new Gateway Station. This would allow passengers to connect to the Blue Line light rail or the future Silver Line that will extend from Matthews to Belmont in Gaston County, NC. This prospect has gained additional support following the pending move of team headquarters and practice facilities for the Carolina Panthers to Rock Hill.

CATS' Policy Board, the Metropolitan Policy Commission, has embarked on an 18-month study of transit options for the 12-county Charlotte region, which includes the urban areas of York and Lancaster counties.

An interim option could be to create a bus rapid transit (BRT) link between Rock Hill and Charlotte, as previously studied by the MPO and described further below. The BRT service could ultimately be replaced or supplemented by commuter rail service as ridership grows.

Rock Hill-York County-Charlotte Bus Rapid Transit (BRT) Service

In 2007 the MPO completed a study of various alternatives to provide high-capacity transit service to and from Charlotte. The *Rock Hill-York County-*

Charlotte Rapid Transit Study proposed a Bus Rapid Transit (BRT) line running from downtown Rock Hill via US-21 to the I-485 CATS LYNX Blue Line light rail station **(Figure 8.8)**. The BRT line would operate partly on a dedicated bus-way and partly in general traffic.

Starting in downtown Rock Hill, buses would operate in mixed traffic along White Street to Winthrop University. White Street would be extended to Cherry Road, with a station at the intersection of the two streets. From there, buses would operate in a dedicated guide-way along Cherry Road within the existing right-of-way. In locations on Cherry Road where roadway expansion is constrained, buses will operate in the general-purpose lanes, using queue-jump lanes and traffic signal pre-emption to increase bus travel speeds.

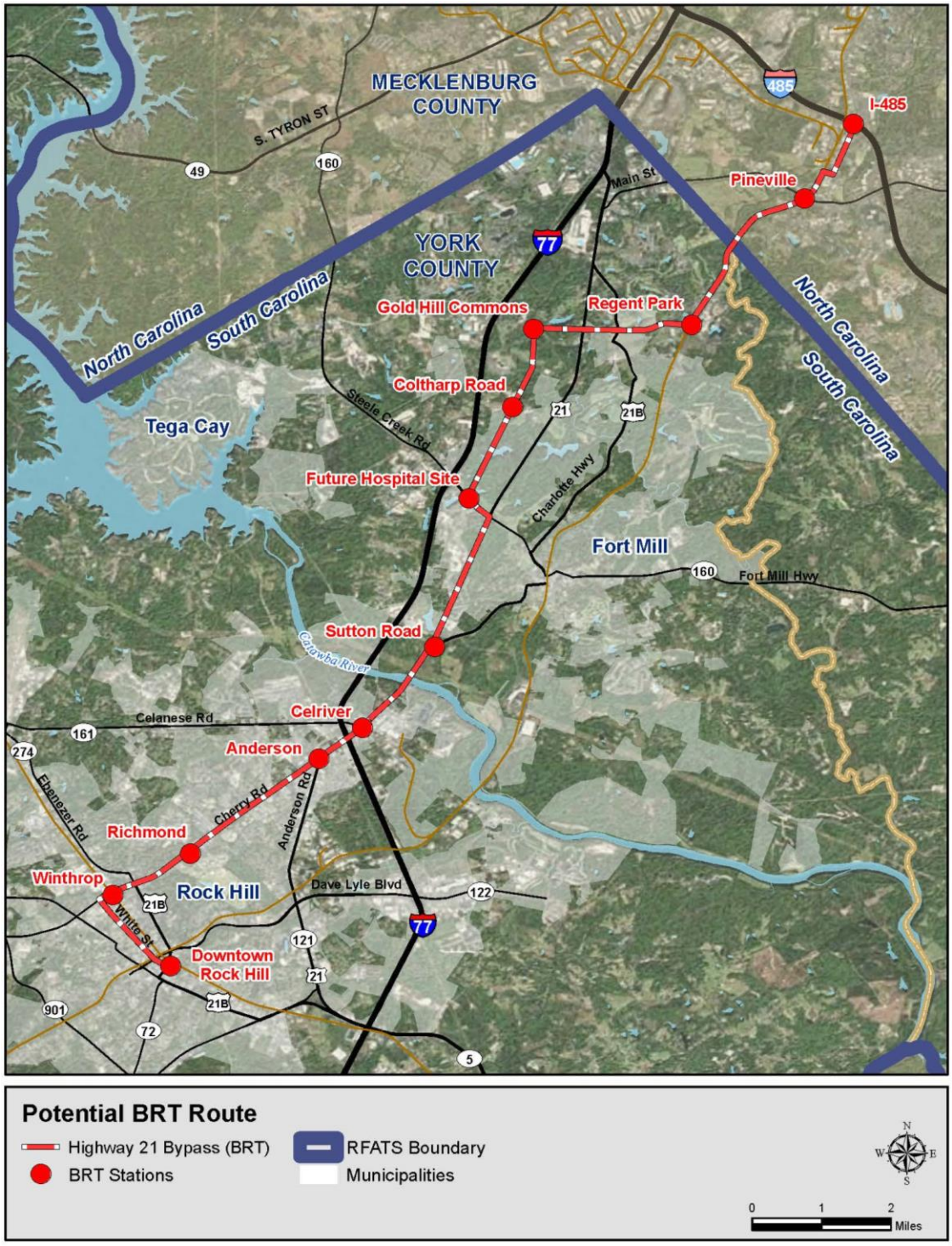
North of the Cherry Road / Anderson Road station, buses would operate in a dedicated guide-way along US-21 to SC-160 in Fort Mill. The service would then travel west a short distance on SC-160 to a new roadway, parallel to US-21 and I-77, extending from SC-160 to Gold Hill Road improving transit access in the Kingsley Park and former Knights Stadium areas.

The service would continue in mixed traffic along York Southern Road from Gold Hill Road toward the Norfolk Southern railroad corridor near Regent Parkway. Here, a dedicated two-lane guide-way would be built parallel to the railroad, extending north to Commerce Drive in Pineville. The service would then operate in mixed traffic along Commerce Drive and South Boulevard to the I-485 station on the CATS LYNX Blue Line.

The BRT scheme also includes a four-mile spur from the Cherry/Anderson station, along Anderson Road and Dave Lyle Boulevard to the Galleria Mall just east of I-77. The spur would have a dedicated two-lane guide-way.

The line would have service every 15 minutes at peak times and every 30 minutes at off-peak times. The hours of operation would match those of the Lynx Blue Line service.

Figure 8.8: Proposed Rock Hill-York County-Charlotte Bus Rapid Transit Service



Source: Rock Hill-York County-Charlotte Rapid Transit Study Locally Preferred Alternative Refined Screening Analysis Report, April 2007.

The study estimated the capital cost of the project between $511 and 516 million. It recommends four phases of implementation:

- Phase 1: start-up phase with all-day limited-stop service connecting the RFATS Study Area with the I-485 light rail station.
- Phase 2: Addition of local bus service to Tega Cay and Fort Mill and new connections to Gold Hill Commons.
- Phase 3: Implement first stage of exclusive BRT right-of-way segments.
- Phase 4: Implementation of the remaining exclusive BRT right-of-way segments.

The study also recommends focusing on appropriate transit supportive land use and development regulations, connecting major corridor destinations, and preserving rights-of-way for the transit alignment where appropriate through new development areas. These land use recommendations mirror Charlotte's initiatives to make land use and zoning policy changes early in the transit development process in order to make transit projects more viable and competitive for federal funds.

Transit planning efforts by RFATS' partners have echoed the long-term goal of operating BRT along this corridor. Multiple elements of the 2014 SCDOT *Statewide Multimodal Plan* address the issue:

- The *State Transit Plan* identifies BRT as a premium transit need for the Rock Hill/York County to Charlotte, NC corridor. In a statewide survey, BRT was one of the top three responses when respondents were asked what would encourage them to use public transit.
- The *Catawba Regional Public Transit and Human Health Service Coordination Plan*, incorporated as part of the SCDOT Statewide Multimodal Plan, proposes the integration of intercity bus service to connect patrons from the Rock Hill area to high speed rail along the I-85 corridor in Charlotte.

Due to continued changes in overall travel demand as well as land use characteristics, the Policy Committee requested that the key planning assumptions of the prior study be updated in cooperation with the Federal Transit Administration as well as other key planning partners. This work effort is being coordinated with the development of a Regional Transit Plan for the Greater Charlotte Area led by CATS and the Centralina Council of Governments. This is discussed in more detail below.

Development of Regional Transit Plan (CATS & CCOG)

In 2020, the Centralina Council of Governments (COG) began a regional transit study for the greater Charlotte area. The Regional Transit Plan (RTP) is intended to evaluate and develop a single, coordinated transit vision for the Metrolina Region. The study will identify rapid transit corridors and modes as extensions to the CATS 2030 plan and in coordination with other regional and local transportation plans. The study will develop action-oriented strategies to support improved mobility and access, effective and coordinated transit investments, and coordinated transit operations to meet the needs of a growing and changing population. The study will also identify key topics and methods for regional coordination as well as implementation strategies. The study should be completed by end of 2021.

2015 Urbanized Area Transit Implementation Plan (RFATS)

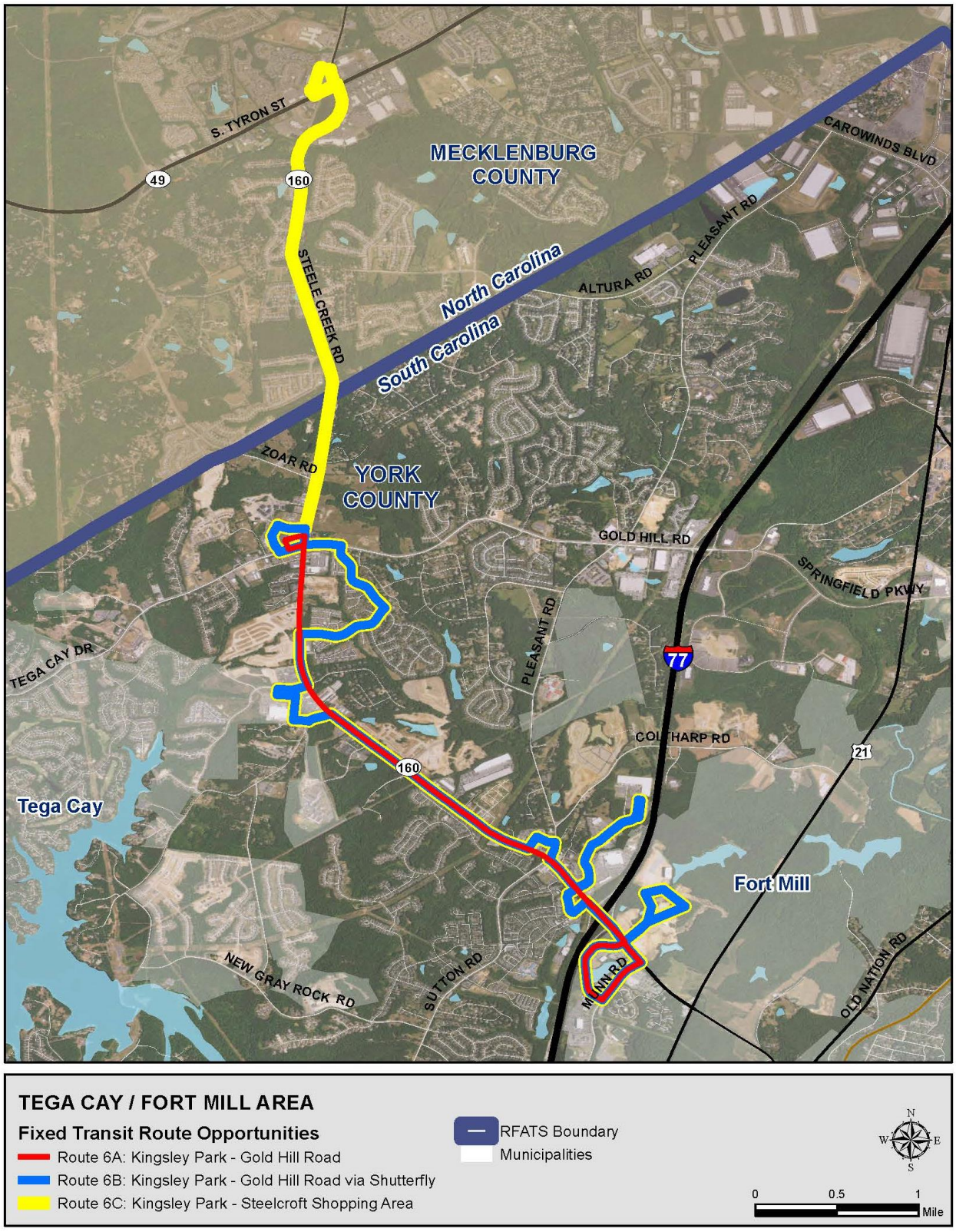
As noted earlier, RFATS completed the Urbanized Area Transit Implementation Plan in 2015 – one key recommendation that has not been covered yet, is the establishment of a circulator service along the SC 160 Corridor. Potential future routes include following (**Figure 8.9**):

Route 6A: Efficiency-Focused Approach (more direct)

Route 6B: Coverage-Focused Approach (less direct to provide easier access by pedestrians)

Route 6C: Regional Connectivity-Focused Approach (less direct, extends into southern Charlotte)

Figure 8.9: Potential Fixed Route Options, Fort Mill & Tega Cay Area



Resiliency of Public Transit Systems

Public transit systems are vulnerable to decreases or stoppages in ridership caused by natural disasters, public health crises, and other unpredictable large-scale events. While this leads to a significant loss of fare revenues for agencies in the short term, a long-term distrust of shared spaces among the public can also arise. Such crises place additional demands on transit staff, who may be required to comply with enhanced safety procedures while protecting their own personal health and continuing to link riders to medical appointments, jobs, and necessary errands. As witnessed in the 2020 outbreak of COVID-19, the rising costs incurred by these events can affect the ability of an agency to provide service as planned in the months or years that follow. They can also delay planned service expansion or improvements to transit facilities, further affecting ridership.

In the wake of COVID-19, transit agencies across the U.S. are reviewing and updating fiscal budgets and deciding how to utilize new CARES Act funds. Agencies must consider existing and potential federal, state, regional and local funding sources, both discretionary and formulaic; future stimulus bills and a possible FAST Act Reauthorization are on the horizon. There are also immediate actions that agencies can take to expedite recovery. Agencies operating within the RFATS area should prioritize financial tracking of all COVID-19-related incremental expenses to ensure eligibility for reimbursement. They should also take advantage of temporary program management changes and administrative relief steps taken by the FTA to ease regulatory burdens in the immediate term.

Lastly, crisis recovery can expedite the process of innovation in transit planning. Areas of innovation that could explored by agencies RFATS area include updating safety policies, revising design criteria/standards, and updating fare payment technology to replace aging systems and incorporate contactless features.

Recommendations

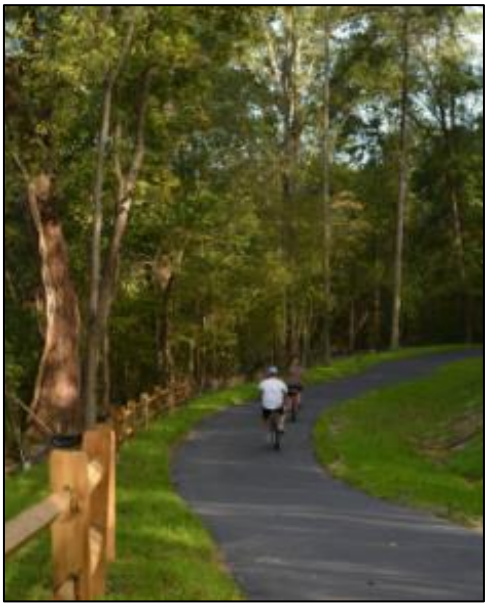
- RFATS should continue to assist in interagency negotiations to ensure demand-response service is available in areas where current funding arrangements and boundaries have created gaps in service.
- The region should pursue the options suggested in the *Transit Implementation Study* to make ridesharing programs available to commuters whose trips begin and end within the RFATS region. Ridesharing could help meet some trip needs for residents in areas where fixed-route public transportation is not yet available.

- RFATS should consider sponsoring efforts to raise local leaders' awareness of the role that public transportation and ridesharing play in economic prosperity. People with reliable access to transportation are better able to obtain – and maintain – employment, and workforce availability is important to the region's continued growth. Transit also plays an important role in quality of life, especially for people who do not, or cannot drive.
- RFATS and local jurisdictions should continue to explore opportunities for funding various elements of the *Transit Implementation Study* and the proposed BRT corridor during and after the completion of the update. This should include considering whether, and to what extent, the flexible surface transportation funds (which have traditionally been seen as highway funds) could increasingly also be used for public transportation projects.
- RFATS and local jurisdictions should monitor the extent to which the region is implementing the conditions needed for successful public transportation: higher-density development, a safe sidewalk and bicycling network, and a more interconnected road system.
- RFATS should consider recommendations that will stem from the CCOG Regional Transit Study, specifically relating to high capacity corridors, regional transit collaboration, and connecting to other regional and local transit service.

Introduction

The benefits of cycling and walking have become an integral part of discussions about shaping the built environment. Taking trips by bike or on foot promotes good health, saves money, does not negatively impact the environment, and can even ease some roadway traffic. In addition, cycling and walking can be accessible travel modes for children, persons with disabilities, some elderly persons, users of transit, and those without automobile access.

Road improvement projects that use federal funds are currently required to incorporate reasonable pedestrian and bicycle accommodations into their design and construction. This helps to prepare for future needs; however, the RFATS region has previously experienced decades of auto-oriented development to which such requirements were not applied. It takes a focused effort to increase safe walking and cycling opportunities in areas that were not originally planned to include dedicated facilities.



Due to increased public awareness of the health and economic benefits of living in a walkable, bicycle-friendly community, public support for expenditures for these facilities has grown. In a survey conducted as part of the RFATS Bicycle / Pedestrian Connectivity Study during the summer of 2016, more than 90% of area respondents agreed that tax dollars spent on the transportation system should include pedestrian and bicycle investments. This shift in local mindset has been reflected in the various programs and events in the RFATS area that aim to bring cycling and walking to the forefront of comprehensive, multi-modal transportation planning.

Since the City of **Rock Hill** first adopted its Trails and Greenways Master Plan in 2003, its trail network has significantly grown. In 2017, Rock Hill published the Connect Rock Hill: Bicycle and Pedestrian Master Plan. The 2017 Plan notes that there are now 210 miles of sidewalks, 35 miles of bikeways, and 23 miles of paths in the Rock Hill. The City has also earned designation as a bronze-level Bicycle Friendly Community, one of only five in the state.

Fort Mill's historic core has a grid pattern of streets that is supportive of cycling and walking, and the challenge in this area is connecting newer developments to the historic core and to

community facilities. Currently, Fort Mill has approximately 5 miles of sidewalk and approximately 15 miles of bike routes. The Ann Close Springs Greenway is an award-winning private greenway system which is open to the public and serves as a green belt around the town. The Greenway operates a trail system that is 36 miles long.

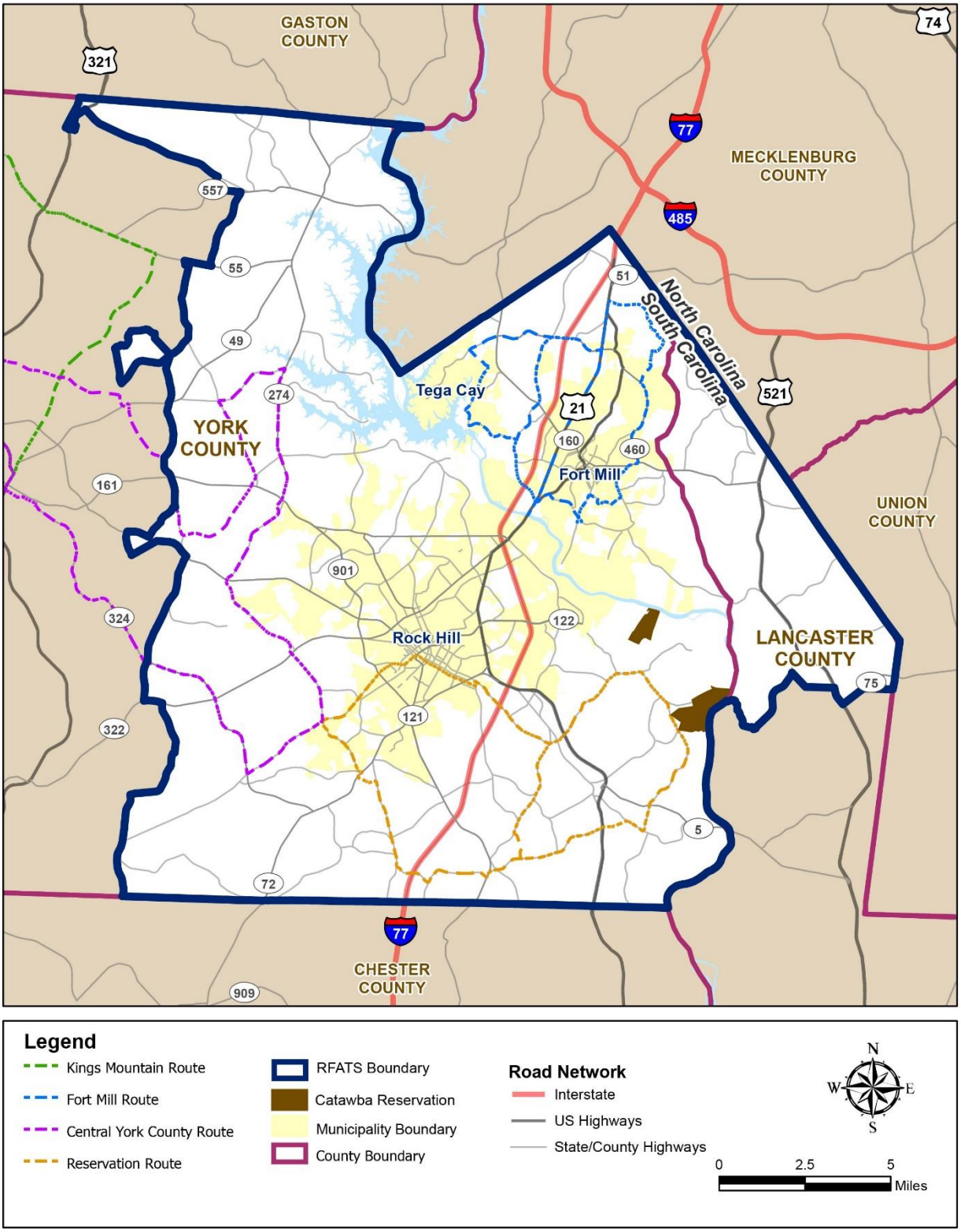
Much of the development in **Tega Cay** took place in the 1970s and 1980s, a time when sidewalks were not always constructed in residential subdivisions. However, all new subdivisions are now required to have bicycle and pedestrian facilities to suit the active lifestyle sought by many of the residents attracted to the lakeside community. The City of Tega Cay currently has approximately 35 miles of sidewalk, 7 miles of trails, and 5 miles of bike routes.

The RFATS Study Area expanded in 2013 to include the northern panhandle of **Lancaster County**. This eastern expansion extends the MPO boundary to areas east of Sugar Creek and the Catawba River, including the rapidly developing area of Indian Land along the US 521 Corridor. Recent plans suggest enhancing non-motorized access to the Catawba River as well as major parks, schools, and commercial nodes. Pedestrian and cyclist facilities should be incorporated into the design of facilities that cross local streams and rivers, including Hwy 5 (one of the only crossings of the Catawba River) and SC 160 (especially at the crossing of Sugar Creek). Lancaster County is also requiring sidewalks to be constructed along their heavier congested corridors within the RFATS boundary, such as US 521 and SC 160.

Multimodal design features that promote east-west connectivity will play an important part of the strategy to improve accessibility between York and Lancaster County destinations. The US 521/SC9 Corridor Study demonstrates a comprehensive multimodal strategy for the panhandle area of the county.

York County's one-cent sales tax program (Pennies for Progress) has been effective in providing funding for sidewalks to be constructed in conjunction with most road improvements. The program has also funded a large number of small-scale sidewalk and bicycle-shoulder projects on existing streets and includes bicycle lanes in some locations. As shown in **Figure 9.1**, there are five bike routes established in York County that were designed to link with other existing and planned routes in Rock Hill, Fort Mill, Tega Cay, and York.

Figure 9.1: York County Bicycle Routes



The Regional Plan: *Bike Walk RFATS*

Although each of the local governments within the RFATS area has some form of individual plan for bicycle and pedestrian facilities, RFATS developed a plan that outlines a regional priority network to better coordinate local investments and ensure an expanded range of connectivity for these facilities. *Bike Walk RFATS* (2016) was developed through collaboration with York and Lancaster counties, the Catawba Indian Nation, City of Tega Cay, City of Rock Hill and the Town of Fort Mill, along with other key local and regional organizations that advocate for active forms of mobility.

Figure 9.2: *Bike Walk RFATS* Vision Statement

> *Bike Walk RFATS* envisions a region of **healthy, vibrant, and prosperous communities** that support residents' daily mobility and access needs efficiently and effectively. A **connected, convenient, and safe network** of sidewalks, shared-use paths, transit, and on-street bicycle connections **link people of all ages and abilities locally and across the region**. The network serves **residents, commuters, students, and visitors** alike. Walking, biking and transit are valued transportation modes, priorities for investment, and integral to regional strategies for congestion reduction, **improved air quality, and economic opportunity**.

The Five E's

To evaluate opportunities for the RFATS region to improve its support for walking and biking, a scorecard was used to rank the area's current standing on the "five E's": engineering, education, evaluation, enforcement, and encouragement. These are the issues that historically have been used to determine whether an area qualifies as a Walk-Friendly or Bicycle-Friendly Community. As shown in **Figure 9.3**, a sixth "E" –equity—has recently been incorporated into the process after planners became familiar with its use as a metric in the Safe Routes to School program.

Figure 9.3: The "E's" in Community Assessment

Source: Bike Walk RFATS

Scorecards identified ***enforcement*** and ***evaluation*** as the RFATS region's greatest strengths. Rock Hill and York County public safety officers have participated in training related to bicycle and pedestrian traffic laws, and some communities have bike patrol officers. The City of Rock Hill has targeted the enforcement of crosswalks and passed local ordinances addressing bicyclists' right to the road. The area also has a number of bicycle/pedestrian and trail plans in place, as well as the Bike Ped Coalition of York County that aims to educate, advocate, and promote the benefits of bicycling and walking.

Education and ***encouragement*** are areas where the region has made progress and should pursue additional activity, according to *Bike Walk RFATS*. Outreach activities are currently being conducted through National Bike Month, children's bicycle rodeos, and similar events.

The region's lowest score was in ***engineering***, largely due to the relative lack of a comprehensive sidewalk and bicycle network, and the policies that would help implement these facilities as part of future construction. In June 2018, the RFATS Policy Committee (described in further detail in Chapter 2) put forth a resolution supporting sidewalks and other pedestrian facilities at all new school locations within the study area.

Additionally, as noted in the chapter introduction, road projects using federal funds are required to incorporate bicycle and pedestrian accommodations. However, there is not a consistent regional or local approach among RFATS jurisdictions to ensure that all road projects incorporate non-motorized facilities.

Equity is an overarching issue that considers whether safe walking and biking access is available to people who may have no other choice but to walk or bike in unsafe conditions to meet their daily needs. These vulnerable populations can include seniors, children, non-white persons, low-income persons, those without access to a motor vehicle, and those who are linguistically isolated.

Recommended Bicycle and Pedestrian Projects

Bike Walk RFATS has identified both linear and "spot" improvements to promote a safer and more connected network for non-motorized travel within the region.

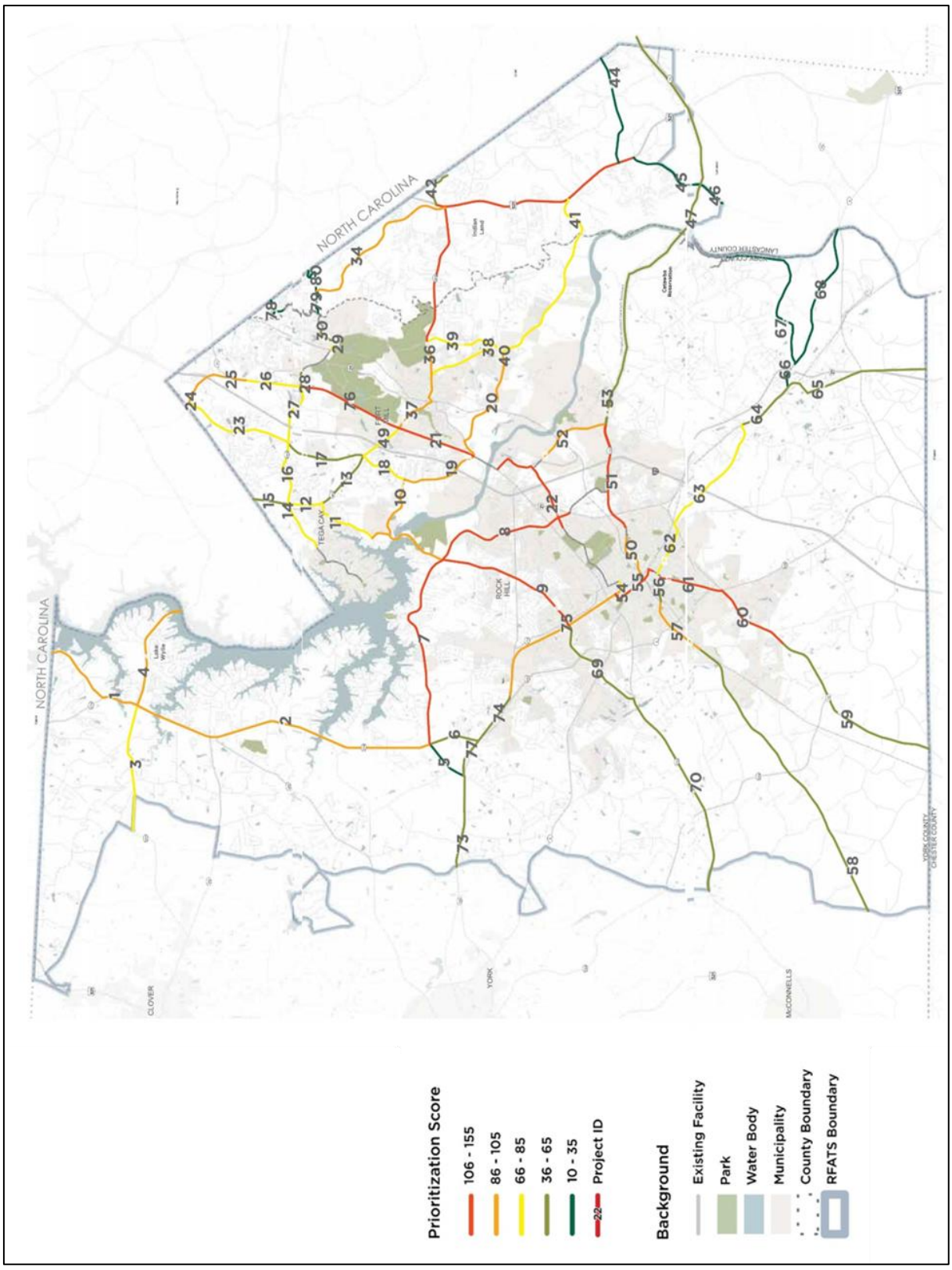
Identified improvements are based on a scoring system that considers factors such as:

- Improving safety
- Opportunity to close a gap in existing bicycle and pedestrian infrastructure, and/or incorporate these facilities into upcoming road projects
- Proximity to regional attractions, downtowns, and local civic facilities
- Level of demand /need in the area
- Proximity to transit

Based on this evaluation, a regional priority network has been identified for making targeted investments over time.

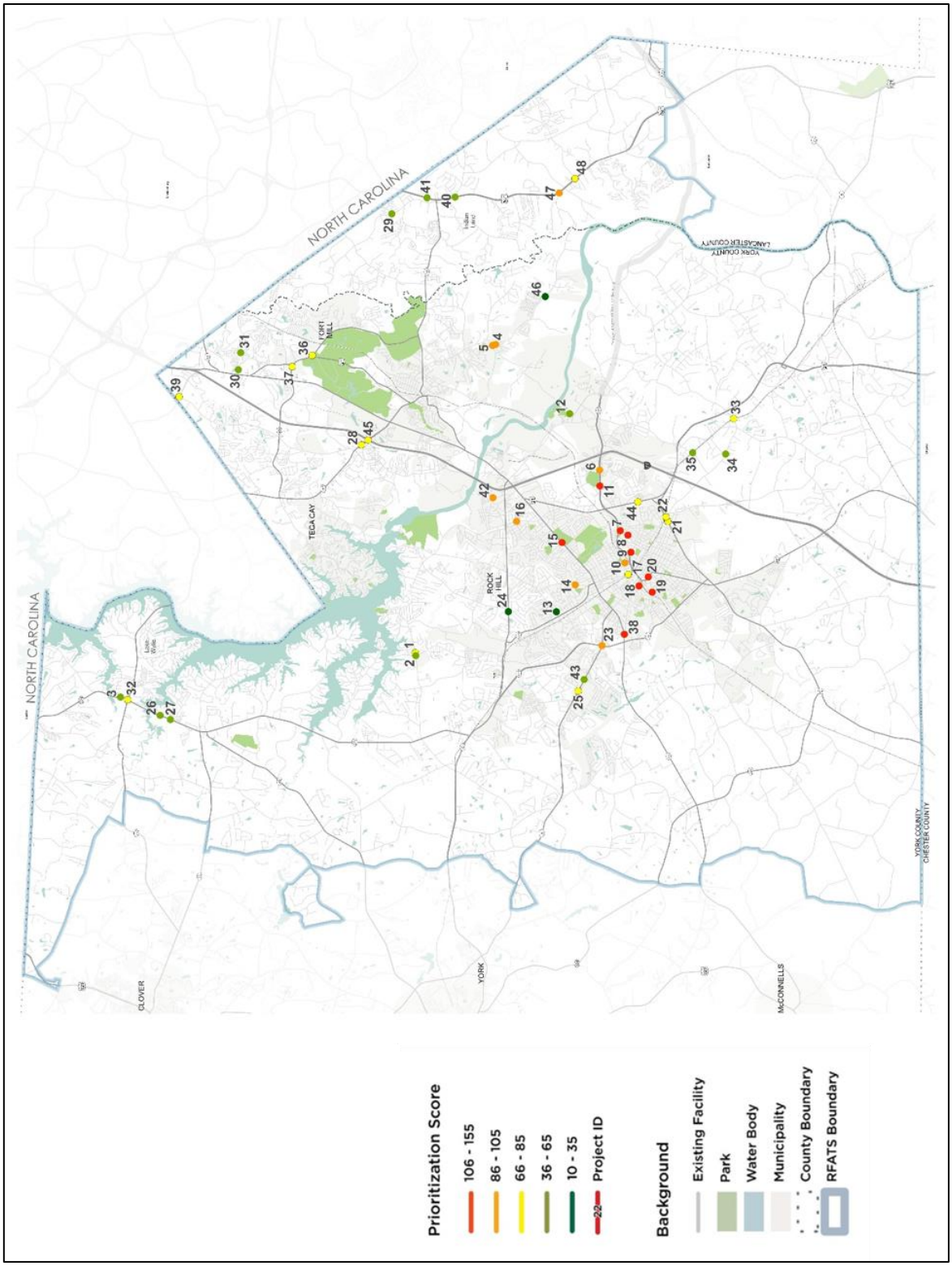
Figures 9.4 and **9.5** show the location of recommended project improvements. More detail for each project is provided in **Tables 9.1** and **9.2.**

Figure 9.4: Recommended Regional Bicycle/Pedestrian Network Projects



Source: Bike Walk RFATS (2016)

Figure 9.5: Recommended Bicycle/Pedestrian Spot Improvements



Source: Bike Walk RFATS (2016)

Table 9.1: Proposed Linear Bicycle and Pedestrian Improvements

Project Id	Score	Project Name	Start	End	Proposed FacilityType	Miles	Est. Cost
22	155	Eden Terrace Trail – Duncan's Ferry Road at Riverwalk	Cherry Road	Nations Ford Road	Shared-Use Path (Bike Lane + Sidewalk west of Cel-River Road)	2.87	$1,722,179
8	140	Mt Gallant Rd	India Hook Road	Celanese	Shared-Use Path + Sidewalk	2.3	$3,189,040
			Celanese	Anderson Rd	Bike Lane (with Shared-Use Path from Eden Terrace to Anderson Rd)	1.28	
55	135	Columbia Av	White Street	Alumni Dr	Sharrows + Sidewalk	0.18	$154,550
		White St E/W	Columbia Ave	Elizabeth Lane	Sharrows	1.11	
21	125	US 21	S Sutton Road	SC 160	Shared-Use Path	2.07	$1,242,618
61	125	Saluda St	Albright Road	Heckle Boulevard	Bike Lane	0.38	$55,234
		Saluda St	Heckle Boulevard	Johnston Street	Sharrows	1.26	
		N Elizabeth Ln	White Street	Main Street (End Of Existing Bike Lane)	Bike Lane	0.12	
76	125	US 21	Springfield Parkway	N White Street	Shared-Use Path	2.78	$1,670,380
9	120	Herlong Av - India Hook Rd	Mt Gallant Road	Rail Trail	Shared-Use Path	3.86	$2,315,989
7	115	Mt Gallant Rd	Hands Mill Highway	India Hook Road	Shared-Use Path	5.29	$3,172,729
51	110	Dave Lyle Blvd	Gateway Boulevard	Apex Drive	Shared-Use Path + Sidewalk	2.87	$3,843,504

Table 9.1: Proposed Linear Bicycle and Pedestrian Improvements (cont. from previous page)

Project Id	Score	Project Name	Start	End	Proposed FacilityType	Miles	Est. Cost
60	110	Albright Rd - Saluda Rd/St	Mt Holly Road	Rambo Road	Shared-Use Path	2.25	$1,350,523
35	105	Fort Mill Hwy	Harrisburg Road	Fort Mill Southern Bypass	Shared-Use Path	3.60	$2,160,845
43	105	Charlotte Hwy (US 521)	Potts Lane	Dobys Bridge Rd	Shared-Use Path	3.46	$2,076,988
48	105	Charlotte Hwy (US 521)	Dobys Bridge Rd	Van Wyck Rd	Shared-Use Path	2.06	$1,236,636
10A	105	New Gray Rock Road	Dam Road	N Sutton Road	Bike Lane + Sidewalk	2.16	$1,753,094
10B	105	India Hook Road	Mt Gallant Road	New Gray Rock Road	Shared-Use Path (with Trail Bridge)	1.76	$7,057,046
37	105	Tom Hall St	Dobys Bridge Road	Main Street	Bike Lane	0.61	$1,428,237
		York SC 160 - White St N	Main Street	US 21	Shared-Use Path	1.11	
		Main St	Tom Hall Street	White Street	Sharrows	0.15	
50	105	Jack White Trail - Northside Trail Ext	E White St	Iredell Street	Shared-Use Path	1.27	$1,527,006
4	100	Charlotte Highway (SC 49)	Pole Branch Road	Buster Boyd Bridge	Shared-Use Path	3.25	$1,948,835
20	100	Spratt St	US 21	Fort Mill Parkway	Shared-Use Path + Bike Lane	0.46	$1,970,314
		Brickyard Rd	Fort Mill Parkway	Dobys Bridge Road	Shared-Use Path	0.32	
		Whites Rd - Fort Mill Pkwy	Spratt Street	Holbrook Road	Shared-Use Path	2.45	
36	100	Tom Hall St	Fort Mill Southern Bypass	Dobys Bridge Road	Bike Lane	0.86	$61,063

Table 9.1: Proposed Linear Bicycle and Pedestrian Improvements (cont. from previous page)

Project Id	Score	Project Name	Start	End	Proposed FacilityType	Miles	Est. Cost
57	100	Ogden Rd	Heckle Boulevard	Squire Road	Sidewalk	1.08	$916,400
		Ogden Rd - Friedheim Rd	Wilson Street	Squire Road	Bike Lane	1.65	
75	100	Ebenezer Rail Trail	Rail Trail (Near Big Oak Lane)	Dave Lyle Boulevard	Shared-Use Path	9.83	$5,897,145
25	95	Carowinds Blvd	Pleasant Road	Regent Parkway	Shared-Use Path	1.86	$1,114,581
52	95	Cel-River Rd - Red River Rd	Dave Lyle Boulevard	Paragon Way (End Of Existing Bike Lane)	Bike Lane + Sidewalk	1.98	$1,600,606
2	90	Hands Mill Hwy	SC 557	Mt Gallant Road	Shared-Use Path	7.98	$4,785,747
1	90	Pole Branch Rd - York SC 274 W	State Border	Landing Pointe Dr	Bike Lane + Sidewalk	2.27	$2,235,795
		York SC 274 W	Landing Pointe Dr	SC 557	Shared-Use Path + Sidewalk	0.54	
19	90	Sutton Rd S	New Gray Rock Rd	US 21	Bike Lane + Sidewalk	1.84	$1,614,104
		Sutton Rd N	Sam Smith Rd	New Gray Rock Rd	Shared-Use Path + Sidewalk	0.09	
34	90	Harrisburg Rd	Carolina Thread Trail	Fort Mill Hwy	Shared-Use Path	4.50	$2,697,827
14	85	Gold Hill Rd – Tega Cay Dr	End of sidepath near Shoreline Pkwy	SC 160	Bike Lane	1.36	$96,721
18	85	Sutton Rd N	New Gray Rock Road	Willowbrook Drive	Shared-Use Path + Sidewalk	0.12	$872,515
		Sutton Rd N - Market St	SC 160	New Gray Rock Road	Shared-Use Path	1.18	
38	85	Dobys Bridge Rd	Tom Hall Street	Fort Mill Southern Bypass	Shared-Use Path	1.86	$1,117,258

Table 9.1: Proposed Linear Bicycle and Pedestrian Improvements (cont. from previous page)

Project Id	Score	Project Name	Start	End	Proposed FacilityType	Miles	Est. Cost
54	85	Stewart Av	W. White Street	Oakland Avenue	Sharrows	0.38	$6,019
63	85	Fire Tower Rd	E Main Street	Porter Road	Enhanced Shared Roadway + Sidewalk	0.12	$2,476,438
		Fire Tower Rd	Porter Road	Castle Heights School	Bike Lane + Sidewalk	1.47	
		Fire Tower Rd - Neelys Creek Rd	Castle Heights School	Lesslie Highway	Shared-Use Path	1.68	
62	85	E Black St	S Elizabeth Ln	Albright Rd	Bike Lane	1.24	$88,155
		Albright Rd – E Main St	E Black St	Firetower Rd	Shared-use Path + Sidewalk	0.23	$309,090
11	80	Dam Rd	New Gray Rock Road	Stonecrest Boulevard	Bike Lane + Sidewalk	0.69	$1,188,444
		Stonecrest Blvd	Dam Road	Hubert Graham Way	Bike Lane + Sidewalk	0.75	
		Stonecrest Blvd	Hubert Graham Way	SC 160	Bike Lane	0.26	
23	80	Pleasant Rd	Gold Hill Road	Carowinds Boulevard	Shared-Use Path	2.91	$1,748,696
39	80	Tom Hall St To Holbrook Rd	Tom Hall Street	Holbrook Road	Bike Lane + Sidewalk	1.87	$1,512,468
12	75	York SC 160	Gold Hill Road	Stonecrest Boulevard	Shared-Use Path	0.87	$522,826
16	75	Gold Hill Rd	Highway 160	Pleasant Road	Shared-Use Path	1.68	$1,006,601
26	75	Carowinds Blvd	Regent Parkway	Springfield Parkway	Shared-Use Path	1.39	$834,268
49	75	York SC 160	Pleasant Road	US 21	Shared-Use Path	1.18	$710,138
3	70	York SC 557 N	Charlotte Highway (SC 49)	Oakridge Road	Shared-Use Path	0.93	$1,969,049
		York SC 557 N	Oakridge Road	Riddle Mill Road	Bike Lane + Sidewalk	1.11	
		York SC 557 N	Riddle Mill Road	Cross Road (RFATS Border)	Wide Paved Shoulder	1.29	

Table 9.1: Proposed Linear Bicycle and Pedestrian Improvements (cont. from previous page)

Project Id	Score	Project Name	Start	End	Proposed FacilityType	Miles	Est. Cost
27	70	Springfield Pkwy – Gold Hill Rd	Pleasant Road	US 21	Shared-Use Path	1.49	$891,526
29	70	Springfield Pkwy	Railroad	A O Jones Blvd	Shared-Use Path	0.24	$144,467
40	70	Fort Mill Southern Bypass	Holbrook Road	Dobys Bridge Rd	Shared-Use Path	0.23	$136,182
41	70	Dobys Bridge Road	Fort Mill Southern Bypass	US 521	Bike Lane + Sidewalk	5.09	$4,120,228
17	65	Pleasant Rd	Gold Hill Road	SC 160	Shared-Use Path	2.10	$1,258,363
28	60	Springfield Pkwy	US 21	Old Nation Road	Shared-Use Path	0.37	$223,562
30	60	A.O. Jones Blvd	Springfield Parkway	Carolina Thread Trail - Nation Ford Greenway	Shared-Use Path	0.50	$300,614
47	60	Dave Lyle Blvd Ext	Current end of Dave Lyle Blvd	End Of Dave Lyle Boulevard Ext	Shared-Use Path	10.88	$6,530,519
53	60	Dave Lyle Blvd	Red River Road	Waterford Park Drive	Shared-Use Path + Sidewalk	1.22	$1,284,072
70	60	McConnells Hwy	Meadow Lakes Road	RFATS Boundary	WidePavedShoulder	5.60	$2,238,191
13	55	York SC 160	Stonecrest Boulevard	Sutton Road	Shared-Use Path	1.65	$987,271
15	55	York SC 160	Gold Hill Road	State Border	WidePavedShoulder	0.94	$375,249
24	55	Carowinds Blvd	Pleasant Road	State Border	Shared-Use Path	0.14	$82,798
58	55	Ogden Rd	Squire Road	Falls Road	Bike Lane + Sidewalk	1.32	$3,836,855
		Mobley Store Rd - Ogden Rd	Falls Road	RFATS Boundary	WidePavedShoulder	6.91	

Table 9.1: Proposed Linear Bicycle and Pedestrian Improvements (cont. from previous page)

Project Id	Score	Project Name	Start	End	Proposed FacilityType	Miles	Est. Cost
59	55	Saluda Rd	Rambo Road	RFATS Boundary	WidePavedShoulder	5.00	$2,000,906
69	55	Meadow Lakes Rd	McConnells Highway	W Main St	BikeLane+Sidewalk	1.15	$1,536,974
		Herlong Av S	W Main St	Heckle Boulevard	BikeLane	0.66	
		Herlong Av S	Heckle Boulevard	Rail Trail	Shared-Use Path	0.93	
65	50	Rail Corridor - Lesslie Hwy - Ole Simpson - Utility Row	Planned Carolina Thread Trail - Old Friendship Trail	RFATS Boundary	Shared-Use Path	3.85	$2,307,477
73	50	Ebenezer Rail Trail - Old York Rd	Mt Gallant Road	RFATS Boundary	Shared-Use Path	2.37	$1,423,404
74	50	Ebenezer Rail Trail	Hands Mill Highway	Rail Trail (Near Big Oak Lane)	Shared-Use Path	1.46	$875,456
77	50	Ebenezer Rail Trail	Mt Gallant Road	Hands Mill Highway	Shared-Use Path	1.04	$622,491
6	45	Hands Mill Hwy	Mt Gallant Road	Old York Road	Shared-Use Path	1.29	$775,116
42	45	Potts Lane	US 521	State Border	Shared-Use Path	0.94	$564,479
64	40	Lesslie Hwy	Neelys Creek Road	Planned Carolina Thread Trail – Old Friendship Trail	Shared-Use Path	1.58	$949,568
44	35	Jim Wilson Rd	US 521	State Border	Shared-Use Path	2.86	$1,718,689
67	35	Catawba River Ext - Six Mile Creek - Turkey Ln	Turkey Lane	Existing Carolina Thread Trail – Catawba Indian Nation - Greenway Trail	Shared-Use Path	4.5	$2,702,414

Table 9.1: Proposed Linear Bicycle and Pedestrian Improvements (cont. from previous page)

Project Id	Score	Project Name	Start	End	Proposed FacilityType	Miles	Est. Cost
5	30	Mt Gallant Rd	Hands Mill Highway	Old York Road	Shared-Use Path	1.24	$742,430
45	30	Van Wyck Rd	US 521	Sun City Boulevard	Shared-Use Path	0.63	$925,603
		Van Wyck Rd	Sun City Boulevard	W Rebound Road	Wide Paved Shoulder	1.37	
66	30	Old Friendship Road - SC 5	Old Friendship Road	Turkey Lane	Shared Use Path	0.72	$434,114
78	25	Little Sugar Creek	Nations Ford Greenway	State Border	Shared-Use Path	0.75	$449,292
46	20	Van Wyck Rd	Sun City Boulevard	W Rebound Road	Wide Paved Shoulder	0.76	$304,129
68	15	SC 5	Turkey Lane	Catawba River	Wide Paved Shoulder	3.82	$1,528,040
79	10	New Trail	Nations Ford Greenway	Harrisburg Road	Shared-Use Path	0.61	$364,031
80	10	McAlpine Creek - New Trail	Harrisburg Road	State Border	Shared-Use Path	0.93	$559,380

Table 9.2: Proposed Spot Bicycle/Pedestrian Improvements

Project ID	Score	Start	End
7	90	Iredell St	150 ft south of Montford Ave
8	90	Iredell St	Dunlap St
20	90	Hampton St	Johnston St
38	90	SC 322	Finley Road
9	85	N Confederate Ave	Willowbrook Ave
11	85	Mt Gallant Road	Dave Lyle Blvd
15	85	N Cherry Road	Deas Street
18	80	N Wilson St	W Johnston St
19	80	S Dave Lyle Blvd	Hampton St
16	70	Mt Gallant Road	Marett Blvd
4	65	Dobys Bridge Road	Dobys Bridge Elementary School
5	65	Ft Mill Southern Bypass	Dobys Bridge Road
10	65	Charlotte Ave	N Wilson St
14	65	India Hook Drive	Glendale Dr
6	60	Dave Lyle Blvd	John Ross Pkwy
23	60	Heckle Blvd	SC 5 W Main St
42	60	Lexington Commons Dr	Lexington Blvd
47	60	Dobys Bridge Road	US 521
17	50	N. Wilson Street	Railroad (near Ebenezer Ave)
22	50	Firetower Road	E Main Street
25	50	SC 5 (York Hwy)	Meadowlark Drive

Table 9.2: Proposed Spot Bicycle/Pedestrian Improvements

Project ID	Score	Start	End
28	50	SC 160	Carolina Place Dr (at Baxter Village)
33	50	Neelys Creek Road	Lesslie Hwy
36	50	US Bus 21 / Old Nation Rd	SC 460
39	50	Carowinds Blvd	Pleasant Road
44	50	Princeton Road	S Anderson Road
45	50	SC 160	I-77 Interchange
48	50	US 521 (Charlotte Hwy)	Shelley Mullis
1	45	Mt Gallant Road	Museum Road
21	45	Albright Road	E Main Street
2	40	Mt Gallant Road	Mt Gallant Elementary School
3	40	Landing Pointe Drive	SC 274
12	40	Red River Road	Carolina Thread Trail (at River Park)
26	40	SC 49	Marlin Drive
27	40	SC 49	Autumn Cove Drive
29	40	Harrisburg Road	Kariker Ct
34	40	Firetower Road	Edenvale Road
35	40	N Springdale Road	Lesslie Hwy
40	40	Charlotte Hwy (US 521)	Marvin Road
43	40	SC 5 (York Hwy)	The Crossing
30	35	Regent Pkwy	Township Drive
31	35	Regent Pkwy	Hadden Hall Blvd
41	35	Charlotte Hwy (US 521)	Potts Lane
13	30	Herlong Drive	Estes Drive
24	25	Twin Lakes Road	Celanese Road
46	25	Dobys Bridge Road	Kingston Way

Recommended Bicycle and Pedestrian Policies and Programs

BikeWalk RFATS recommends several policies and programs (**Table 9.3**) to strengthen the regional foundation for bicycle and pedestrian planning.

Table 9.3: "Top Ten" Priority Program and Policy Recommendations

Active Transportation Summit

- Host an annual, half- to full-day workshop for dialogue related to designing and building Complete Streets, local active transportation initiatives, and funding strategies.

Regional Safe Routes to School Coordination

- Develop a central repository of information about SRTS, from mapping, planning efforts, and funding
- Help jurisdictions build on lessons learned; provide local training to help schools understand the SRTS activities toolkit

Regional Active Transportation Safety Plan

- Develop an action plan that identifies crucial bike and pedestrian safety needs and develops clear actions to improve safety in the RFATS region.

Regional Bicycle & Pedestrian Count Program

- Provide training manuals to communities on how to conduct bicycle and pedestrian counts.
- Collaborate with local organizations to enlist volunteers to perform counts.
- Create funding incentives for communities to include permanent counters as part of implementing projects.

Region-wide User Maps and Guides

- Build on York County's successful effort to promote countywide bicycling routes and promote outdoor recreational attractions (Velodrome, Game On, Riverwalk and others)
- Develop publicly-distributed materials that describe safe and comfortable routes to local and visitor destinations.

Professional Training Opportunities

- Provide webinars, courses and other professional training opportunities to the region's city and county engineers, planners, police and other staff. Topics could include bike and ped design standards, funding opportunities, and interdepartmental coordination on bike/ped issues.

Adopt Regional Design Standards

- Promote adoption of the BikeWalk RFATS active transportation design guidelines by each local government in the RFATS region to promote consistency and efficient coordination of facilities.

Regional Complete Streets Policy

- Adopt a regional Complete Street policy to ensure all roadway users are considered in the planning, design, engineering and funding of capital projects.

Health and Equity-Based Project Prioritization

- Incorporate factors related to health and equity in the scoring and prioritization of RFATS projects.

Regional Target Zero Policy

- Support SCDOT efforts for the Target Zero Plan with a regional Vision Zero which targets the most dangerous corridors and crash hotspots for safety improvements.

Implementation

Funding for pedestrian and bicycle facilities can come from a variety of sources. Federal funds include Transportation Alternatives Program (TAP) grants; South Carolina Department of Parks, Recreation, and Tourism (SCPRT) Recreational Trail grants, safety funds for spot improvements such as pedestrian crossings, as well as Guideshare and CMAQ funds allocated to RFATS. Communities may also continue to use local and private funds to meet pedestrian and bicycle needs. In April 2021 RFATS has committed $10 Million of the allocated Guideshare funding towards bicycle and pedestrian facilities.

Federal and State Policies

Some of the proposed network and spot improvements can be built through the roadway projects included in the 2050 LRTP. In accordance with Federal Highway Administration requirements, bicycle/pedestrian facilities will be incorporated into all federally-funded projects in the RFATS area that reconstruct or widen a road. Similar policies exist at the state level, dating from 2003 when the SCDOT Commission directed that accommodating bicycles should be a routine part of the Department's planning, design, construction and operating activities. SCDOT is currently developing a Bicycle Pedestrian Safety Action Plan to enhance regional multimodal planning by MPOs and COGs; revise statewide design policies and provide training; outline strategies for engagement, education, enforcement, and outreach; and reform the Transportation Alternatives Program.

SCDOT's 2020 Comprehensive Multimodal Long-Range Transportation Plan recognizes cycling and walking as modes of transportation. The statewide plan notes that SCDOT works collaboratively with local jurisdictions to identify suitable bicycle improvements (such as shoulders or restriping with bike lanes) to incorporate in highway projects, as well as to identify funding for these projects. However, local support from MPOs, particularly in advance of the project design process, is seen as critical to implementing bicycle and pedestrian improvements. The responsibility is therefore on MPOs and municipalities to bring these issues to the table during project discussions.

Local Policies

Local policies are also an essential part of ensuring that the pedestrian and bicycle system expands as the area grows. As noted earlier, many of the area's less "walkable" communities were built at a time when local development regulations did not require sidewalks to be incorporated in new subdivisions or non-residential developments. Localities can disseminate important information about pedestrian improvement needs in the region to garner public support for funding and other steps necessary for implementation.

In addition, many of the region's important transportation projects are now constructed through locally-generated funds such as the Pennies for Progress program. By adopting Complete Streets design standards, the communities in the RFATS region can ensure that locally-funded transportation projects include facilities to allow safe travel by non-motorized users.

Introduction

The RFATS region benefits from proximity to a major international airport and is fortunate also to have its own corporate/business airport. The region's challenge is to maximize the benefits of both facilities to serve the needs of area residents and businesses.

Commercial aviation allows citizens to travel domestically and internationally for business or leisure. Commercial freight operations — including those carried out by major parcel companies — are a means of delivering commercial goods across the nation. Important niche operations such as medical helicopters also use the two facilities.

Aviation activities can affect many parts of the transportation system. For example, large airports and associated aviation-related businesses are significant generators of roadway travel demand for both customers and employees.

Existing Facilities and Conditions

Charlotte Douglas International Airport

Charlotte Douglas International Airport (CLT) is located just north of the state border in North Carolina. CLT serves as the region's primary commercial airport and offers direct service to 177 destinations. American Airlines uses CLT as a major hub for domestic and international air travel operations.

Between 2009 and 2019, CLT experienced an overall 41 percent increase in passenger traffic. In 2019 it ranked as the nation's 11th busiest airport, with more than 24 million enplanements (passengers boarded).[1]

To meet growing needs, CLT completed airfield and terminal capacity enhancement studies, which together form the airport's master plan. This plan outlines near- and long-term airfield and terminal updates, guiding construction and development at CLT through 2035.

[1] U.S DOT Bureau of Transportation Statistics.

Proposed improvements (shown in **Table 10.1)** include expansion of multiple concourses, terminal renovation and expansion, and addition of a fourth parallel runway.

Table 10.1: CLT Master Plan Projects

Proposed Improvement	Status	Completion
Elevated Roadway and Terminal Curb Front Improvements	Complete	Fall 2019
Concourse A Expansion - Phase I	Complete	Summer 2018
East Terminal Expansion - Phase II	Complete	Summer 2019
Air Traffic Control Tower	Complete – Awaiting Commissioning	Fall 2020
Terminal Renovations	Under Construction	2020
Concourse E Expansion - Phase VIII	Under Construction	Summer 2021
Terminal Lobby Expansion	Under Construction	2025
Concourse A Expansion - Phase II	Design	2023
Fourth Parallel Runway	Planning	2025
Concourse B Expansion	Planning	Spring 2026
Concourse C Expansion	Planning	Spring 2024

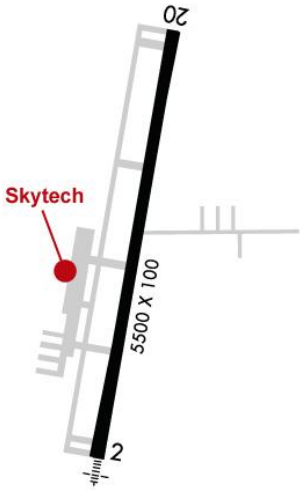
Rock Hill/York County Airport

Rock Hill/York County Airport is a general aviation SCII (corporate/business) classified airport located approximately four miles north of the center of Rock Hill and approximately 17 miles from Charlotte Douglas International Airport **(Figure 10.1)**. The airport property encompasses nearly 500 acres and includes a 5,500-foot runway. According to FAA statistics, it had more than 149 based aircraft and 33,000 aircraft operations for the year 2019.

Day-to-day airport business operations are managed by SkyTech, which leases the facilities on the west side of the airport from the City. Operations include general aviation local aircraft operations, general aviation itinerant operations, and a small number of military operations. Ground transportation includes rental car

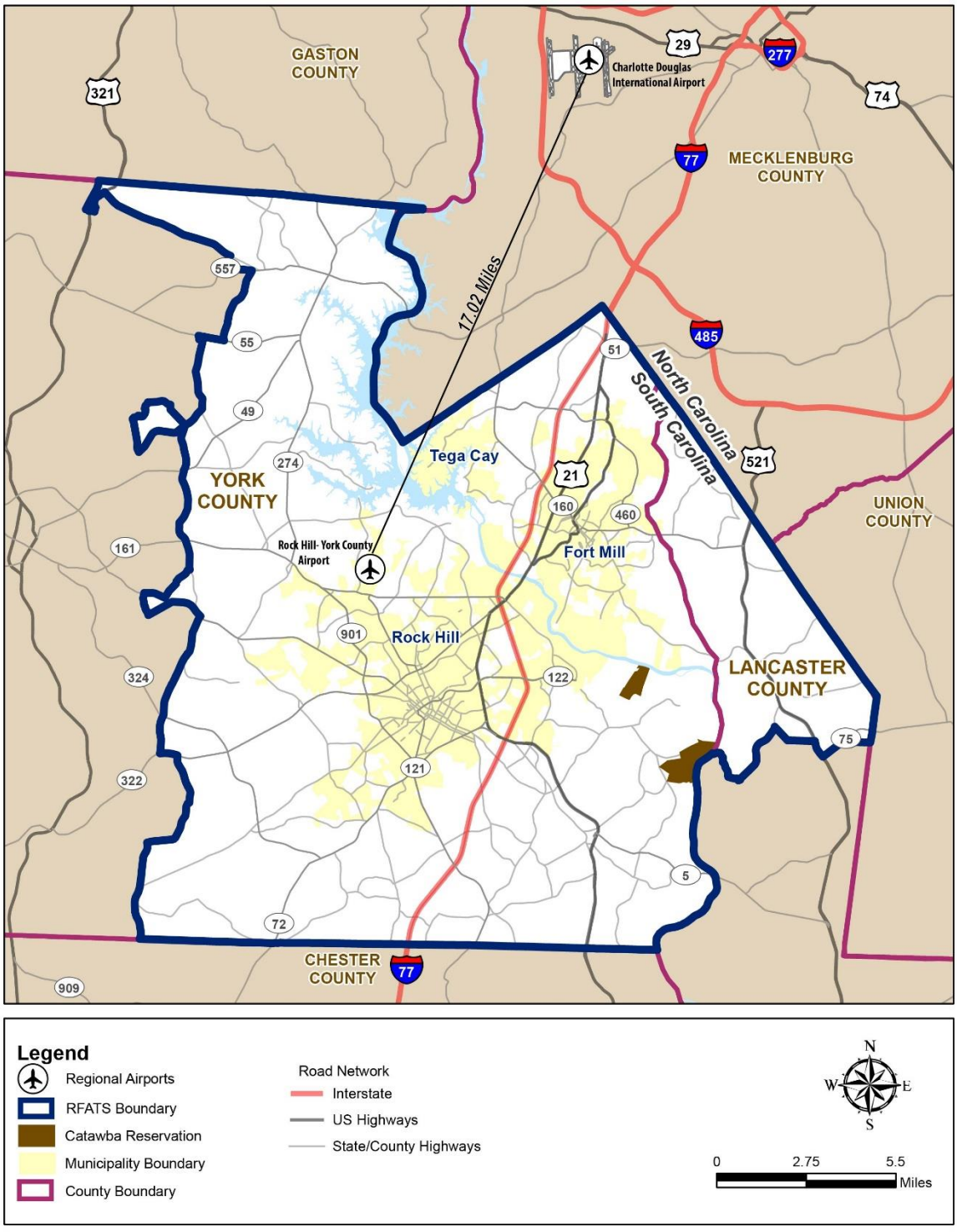
agencies and taxi service. The airport also offers flight training, ground schools, aircraft rental, and sightseeing flights.

Development of an airport to serve the Rock Hill area was first initiated in 1956 with the creation of an Airport Commission. Under a management agreement between the City of Rock Hill and York County, the City remains the official sponsor of the airport with both entities contributing equal funds. The Airport Commission makes recommendations to the City on the airport's policies and operations as well as advising the City and County on planning matters and capital improvements.



The City and County have contracted with SkyTech to handle day-to-day management of the airport.

Figure 10.1 – Physical Relationship of Charlotte-Douglas International and Rock Hill-York County Airports



Rock Hill-York County Airport's SCII classification indicates that it falls within the second of four tiers used to classify airports by level of activity and purpose. As explained in the South Carolina Airport Systems Plan (2008), the state's airports can be grouped into four categories:

- **Commercial Service Airports (SCI)** are airports with scheduled services and at least 10,000 passenger boardings annually.
- **Corporate/Business Airports (SCII)** are urban/multi-jurisdictional airports with a runway of at least 5,000 feet and full services. They are seen as having a high economic impact, and 30 to 50 percent of their activity is in corporate aviation. The Rock Hill-York County Airport falls into this category.
- **Business/Recreation Airports (SCIII)** are rural airports with a runway of at least 3,600 feet and moderate economic impact.
- **Recreational/Local Service Airports (SCIV)** are low-activity airports with a runway of less than 3,600 feet and limited facilities. They have a low economic impact and may have constraints to expansion.

The FAA designates Rock Hill-York County Airport as a "reliever" for Charlotte-Douglas International Airport. This reflects the potential to attract additional general aviation users who wish to avoid growing congestion at CLT as well as on surrounding roadways.

Aerial photo of the Rock Hill/York County Airport with 5,500' runway

Other Aviation Facilities in the Region

The RFATS region includes one privately-owned heliport located at Piedmont Medical Center in Rock Hill.

Lancaster County Airport-McWhirter Field, located outside the RFATS region, is a county-owned, public-use airport with one runway, facilities for fueling and maintenance, and a small terminal building.

Future Plans

Airport Master Plan for Rock Hill-York County Airport

Since its opening in 1960, Rock Hill-York County Airport facilities have expanded under the direction of a series of Master Plans and with the help of a series of federal grants. The airport experienced particularly rapid growth during the 1970s and early 1980s, both in operations and the number of aircraft based there. Subsequent Master Plans in 1983, 1994, and 2003 included further development of the airport infrastructure.

The current Airport Layout Plan was completed in June 2016. Its goal is "to provide guidelines for future airport development which will satisfy aviation demand in a cost-effective, feasible manner, while resolving aviation, environmental, and socioeconomic issues of the community."

Table 10.2 provides a summary of the forecasts for the Rock Hill – York County Airport throughout the 20-year Airport Layout Plan planning period. **Table 10.3** summarizes the airport's facility requirements and lists the phases in which various facilities will be needed, as driven by demand.

Proposed improvements in the 20-year airport improvement program are categorized into one of three development phases:

- Phase I (2016-2021)
- Phase II (2022-2026)
- Phase III (2027-2035)

The airport is not projected to reach its capacity or volume service limits within the 20-year planning period. However, it is anticipated that the composition of the based aircraft will become larger over time, requiring a longer runway and additional hangar space. Additionally, the Carolina Panthers, a professional football team and member of the National Football League, have negotiated a longer runway and other airport improvements. A timeline for these improvements is not currently known.

Table 10.2: Aviation Forecast Summary, Rock Hill-York County Airport

	2015 (Existing)		2016		2021		2026		2035	
	Forecast	TAF	Forecast	TAF	Forecast	TAF	Forecast	TAF	Forecast	TAF
BASED AIRCRAFT										
Single-Engine Piston	133		137		153		170		200	
Multi-Engine Piston	12		12		13		14		15	
Turboprop	0		0		2		3		5	
Jets	5		5		5		6		7	
Helicopters	2		2		3		3		5	
Total Based Aircraft	**152**	**133**	**156**	**133**	**176**	**133**	**196**	**133**	**232**	**133**
AIRCRAFT OPERATIONS										
GA Local	25,015	25,015	25,692	25,015	28,986	25,015	32,279	25,015	38,208	25,015
GA Itinerant	10,500	10,500	10,785	10,500	12,167	10,500	13,550	10,500	16,039	10,500
Air Taxi	400	400	410	400	463	400	516	400	610	400
Military	85	85	89	85	100	85	111	85	132	85
Total Operations	**36,000**	**36,000**	**36,972**	**36,000**	**41,712**	**36,000**	**46,452**	**36,000**	**54,984**	**36,000**
Operations per Based Aircraft	237	237	237	237	237	237	237	237	237	237

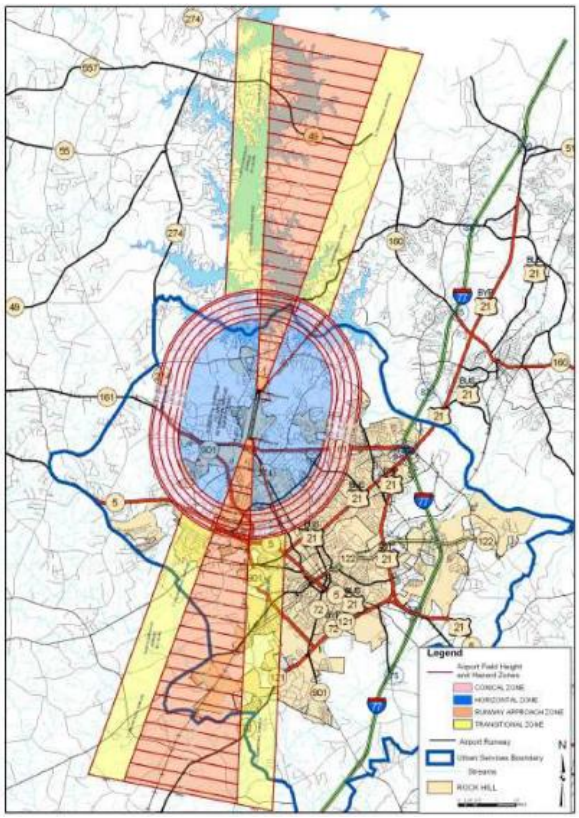
Source: Federal Aviation Administration, "FAA APO Terminal Area Forecast Detail Report," <http://aspm.faa.gov/>, accessed January 14, 2015.
Talbert, Bright & Ellington, Inc., January 2015.

Table 10.3: Facility Requirements Summary, Rock Hill-York County Airport

Facility	Existing	2016	Phase 1 2021	Phase 2 2026	Phase 3 2035
Runway 02/20	5,500' x 100'	5,500' x 100'	6,555' x 100'	6,555' x 100'	6,555' x 100'
Taxiway	1 Full-Parallel	1 Full-Parallel	1 Full-Parallel	1 Full-Parallel	1 Full-Parallel
T-Hangar Units	97	130	149	165	194
Conventional Hangar (sf)	36,900 sf	66,100 sf	84,712 sf	100,859 sf	130,050 sf
Total Apron Area (sf)	410,650 sf	76,478 sf	88,654 sf	98,507 sf	116,766 sf
Terminal (sf)	7,366 sf	7,366 sf	8,679 sf	11,264 sf	12,829 sf

Source: Talbert, Bright & Ellington, Inc., January 2015.

Based on these forecasted operations, the Airport Layout Plan calls for a range of improvements including a 6,555-foot runway and nearly 13,000 square feet of terminal area. The plan also recommends doubling the number of T-hangar units for aircraft storage by 2035.



Future Airport Development

Some additional land may be required to extend the runway as recommended in the 2016 Airport Layout Plan.

The City of Rock Hill and York County have adopted an Airport Overlay District aimed at protecting the interests of the airport and surrounding areas. This includes land use standards and restrictions for areas around the airport.

Recommendations

- RFATS should work with the Airport Commission to study whether, and how, the forecast congestion at Charlotte Douglas International Airport (CLT) will affect likely demand on the Rock Hill/York County Airport and its potential for growth.
- RFATS stakeholders should remain involved in the planning of any expansion at CLT. CLT has a major impact on both airspace management and the commercial prospects of Rock Hill-York County's public airport.
- The City of Rock Hill and York County should continue to protect citizens, businesses, and the airport itself from noise-incompatible land uses by approving development in accordance with the adopted Airport Zoning Overlay.

Introduction

This chapter outlines the growth trends and socioeconomic data used to project and evaluate future transportation needs. It also considers the human and natural environmental impacts of the recommended investments in the Long Range Transportation Plan and discusses ways to avoid or address potential adverse impacts.

Socio-Economic Information

Metrolina Model

In an effort to understand the influence of development on transportation needs, the RFATS long range planning process includes the ongoing collection and analysis of socio-economic data and other forecasting information. These data sets are important inputs to the regional travel demand model, which encompasses the RFATS study area as well as several other Metropolitan Planning Organizations (MPOs) and Rural Planning Organizations (RPOs) (specifically a North Carolina designation) in the greater Charlotte region.

The Metrolina Regional Travel Demand Model ('Metrolina model') is divided into Traffic Analysis Zones (TAZs), which are the basic geographic units for which forecasting is conducted. Based on the approximate population and employment in each Traffic Analysis Zone, the model estimates future travel demand within the RFATS area and greater Charlotte region. The model facilitates the generation of "volume/capacity ratios" that are used to identify areas where future traffic volumes may exceed the operating capacity of the roadway.

Data and Sources

As part of the greater Charlotte region, RFATS and the surrounding MPOs and RPOs participated in the development of a regional land use model using the CommunityVIZ application. The application allows planners in the region to better understand future growth and development scenarios within the greater Charlotte region.

The development of the application relies on the collection of various development status, existing and future land use designations, and future growth data. This data includes existing and projected population of MPOs, RPOs, and counties; employment data and household data; land use categories and development status (developed, agriculture, undeveloped,

under-developed, water, and permanent open space); place types (general development characteristics); and community types (urban, suburban, rural). The model allocates future residential and employment throughout each land use category to determine where the future growth will likely occur within each MPO.

For the 2050 LRTP, RFATS staff coordinated with the greater Charlotte region to update the CommunityVIZ data inputs relating to housing availability and occupancy, employment, and school enrollment to develop projections for the plan's "horizon years" of 2025, 2035, 2045, and 2050. RFATS staff also coordinated with the local municipalities to review the outputs for each horizon year to verify that future development and types were in-line with their comprehensive plans and local vision. The tables that follow summarize socio-economic projections as generated by the CommunityVIZ model for each horizon year.

Table 11.1: Subcategories of Socio-Economic Data

Housing	Employment	School Enrollment
• Households • Population • Population in Households • Population in Group Quarters • Mean Household Income	• Total Employment • Employment - Manufacturing, Industrial, Warehouse, Transportation, Communications, Utilities • Employment - Retail • Employment - Highway Retail • Low-Traffic Service Employment • High-Traffic Service Employment • Employment - Office & Government • Employment - Bank • Employment - Education	• Students - Grades K-8 • Students - High School • Students - College

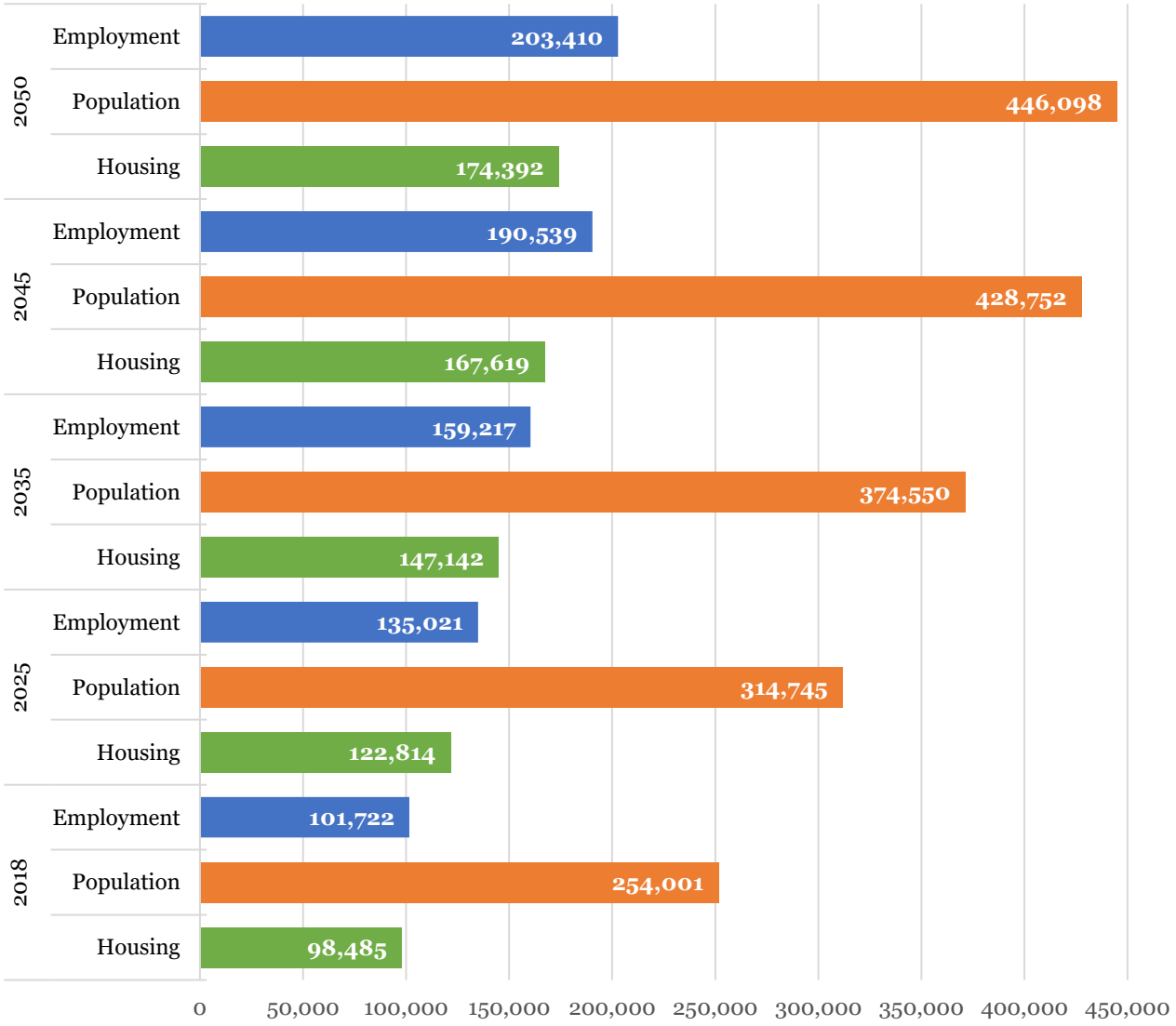
Socio-Economic Forecast

Table 11.**2** summarizes the socio-economic data used in the Metrolina model for the RFATS region. Total population is expected to increase from 254,001 in 2018 to 446,098 by the year 2050, a rise of 76%. Total employment is expected to increase from 101,722 in 2018 to 203,410 in 2050, an increase of nearly 100%. This increase is also shown in **Figure 11.1**.

Table 11.2: RFATS Area Population and Employment Forecasts

Year	Population	Employment
2018	254,001	101,722
2025	314,745	135,021
2035	374,550	159,217
2045	428,752	190,539
2050	446,098	203,410

Figure 11.1: RFATS Area Housing, Population and Employment Forecasts



On the following pages, **Figures 11.2 – 11.5** show the geographic distribution of growth in population and employment in each traffic analysis zone (TAZ) within the RFATS study area between 2018 and 2050. A TAZ is the unit of geography delineated by state and/or local transportation officials to assess traffic-related data – especially commuting and workplace statistics. A TAZ is typically comprised of one or more census blocks, block groups, or census tracts.

Figure 11.2: 2018 Population by Traffic Analysis Zone

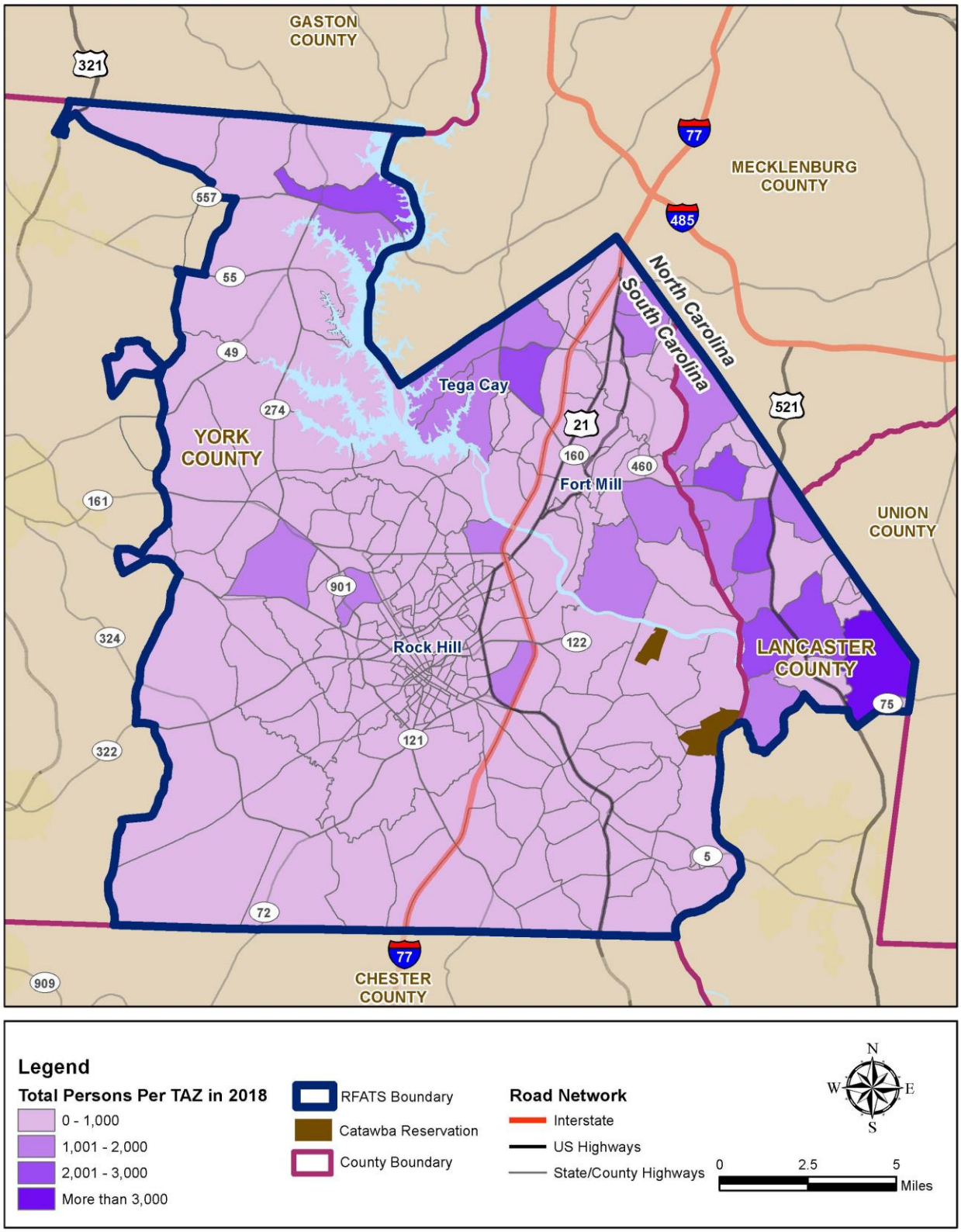


Figure 11.3: 2050 Projected Population by Traffic Analysis Zone

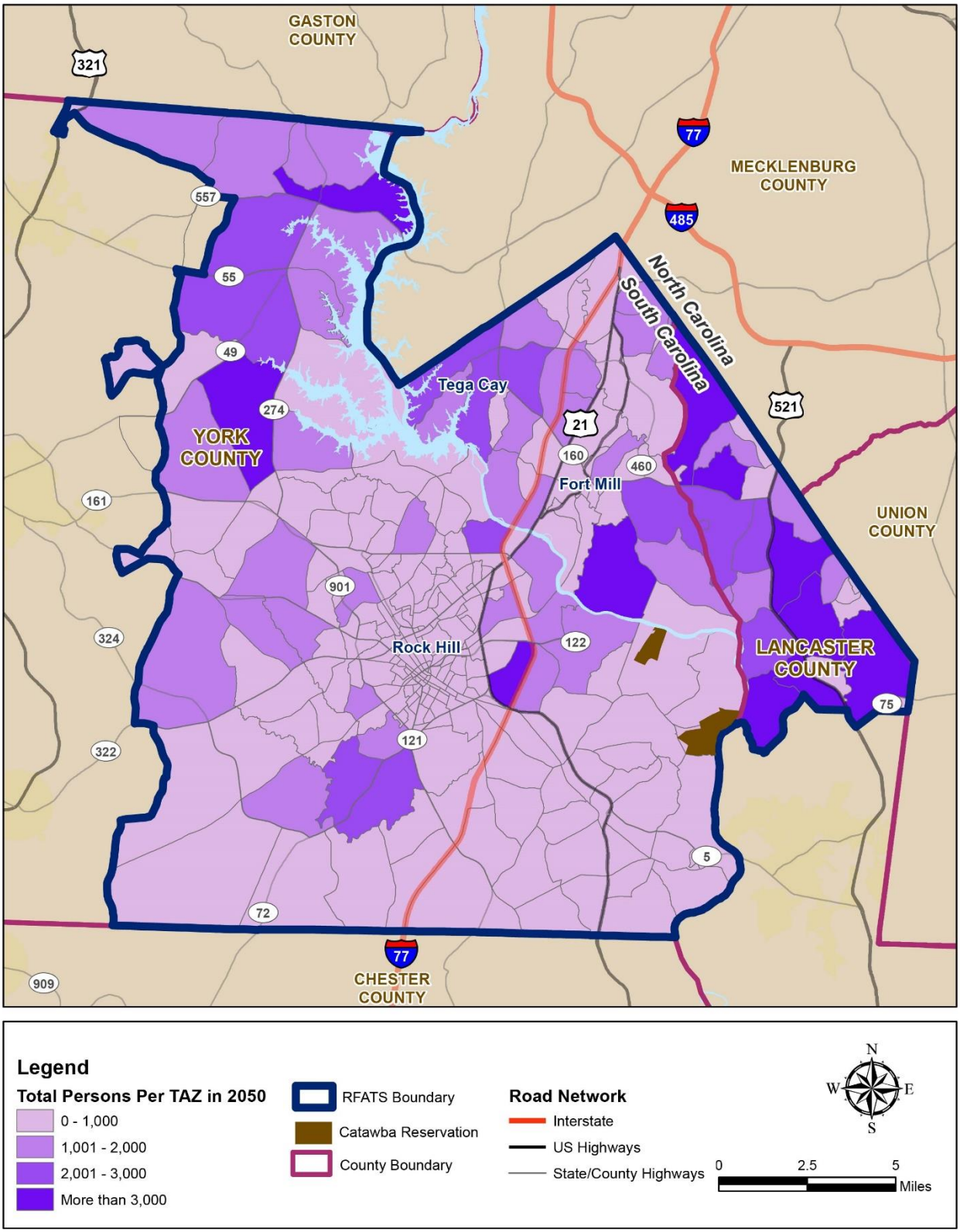


Figure 11.4: 2018 Employment by Traffic Analysis Zone

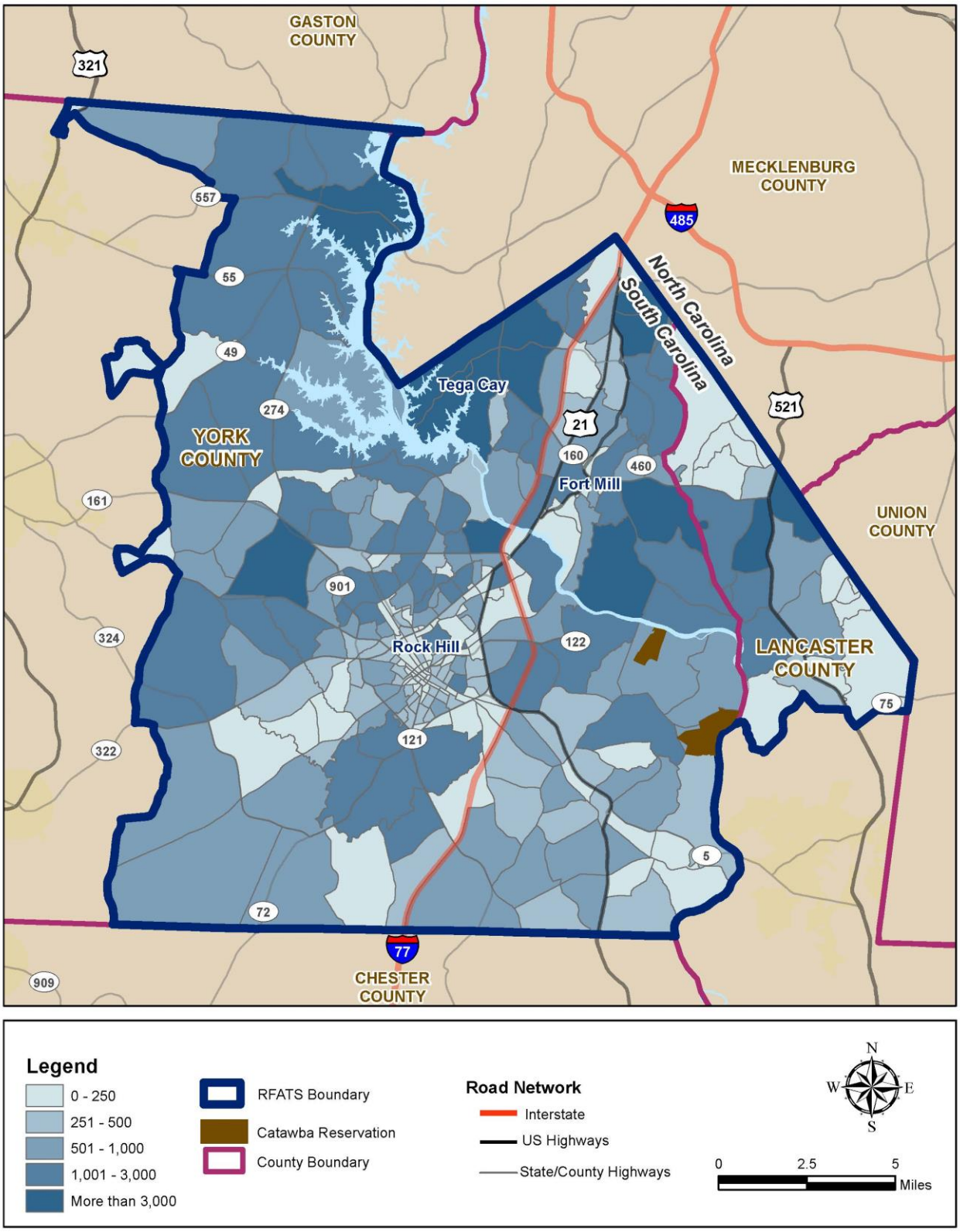
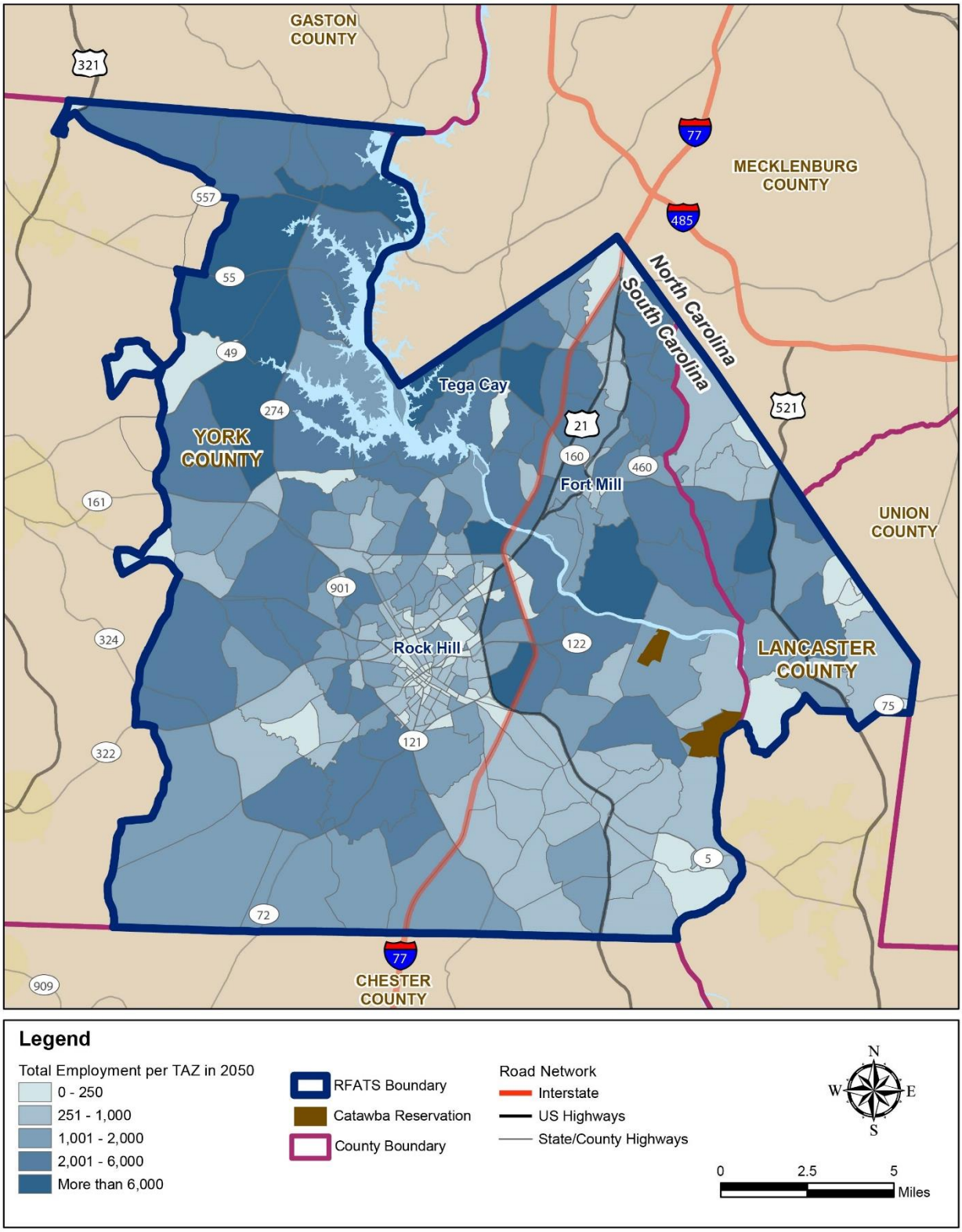


Figure 11.5: 2050 Projected Employment by Traffic Analysis Zone



Potential Impacts of the 2050 Plan

Projects included in the 2050 LRTP vary in scope from minor improvements to widening of major corridors. This section identifies areas where projects may impact sensitive natural and/or cultural resources, outlines potential impact types, and discusses planning-level policies and strategies that can be used to mitigate these impacts.

This section also assesses the extent to which the 2050 LRTP addresses the principles of the U.S. Executive Order on Environmental Justice. Geographic analysis is performed for proposed transportation investments to identify whether they could cause disproportionate impacts to minority or low-income populations through direct effects or due to a lack of transportation investment.

Environmental Screening and Mitigation

This section presents an overview of known environmentally sensitive areas in relation to the proposed projects and programs in the 2050 LRTP. This information can be used to assist in the project development process once a project has moved from the planning stage to the programming stage (the Transportation Improvement Plan, or TIP) for project implementation. Incorporating environmental considerations early in the transportation planning process helps to streamline project development by providing background information about potential impacts and mitigation costs.

As described in Chapter 4 (Roadways), one of the factors used to rank a proposed transportation project is its potential impacts to environmental, social, and cultural resources. This includes identifying major environmental impacts that diminish a project's feasibility.

The screening is not intended to replace a thorough evaluation of each project as it progresses. Most projects will require a more detailed environmental assessment as the project enters the development phase. Some of the projects listed in the LRTP have progressed beyond the design phase. For these projects, necessary environmental reviews and approvals have already occurred.

Air Quality Impacts

A dominant environmental issue for transportation projects across the world is impact to air quality. Vehicles that use fossil fuels produce chemical compounds that contribute to local air pollution. The amount of pollution generated by traffic typically increases with the number of miles being driven in the area as well as by driving conditions (e.g., stop-and-go traffic has been shown to produce higher levels of pollution).

Along with a number of adjacent planning partners within the broader Metrolina region, the RFATS region was designated as a "non-attainment area" for ground level ozone in 2004. In the years that followed, RFATS has implemented a series of targeted improvements to decrease impacts to air quality. In January 2016, the Environmental Protection Agency (EPA) officially recognized these efforts and re-designated RFATS as a "maintenance area" for ground level ozone. This status indicates that progress has been achieved and that there will be continued monitoring of transportation programs and project activity. This is commonly referred to as "transportation conformity", which means that RFATS will complete a comprehensive evaluation of planned improvements to ensure their compliance with applicable air quality standards over the duration of the 2050 Long Range Transportation Plan. This is documented in the "Conformity Demonstration Report", which is available from RFATS upon request.

Other Impacts

Roadway projects also have the potential to produce adverse environmental impacts through land clearing and grading, modification of natural drainage, increasing stormwater runoff, and generation of traffic. In addition, major roads can serve barriers within communities, affecting the way residents can travel and interact. It is also possible for the *absence* of roadway investment to have negative economic impacts within a community.

Sidewalks and bicycle facilities generally have relatively low negative impacts because of their small cross-sections and greater flexibility to avoid problem areas. They often have very positive effects, especially in areas where many people do not have ready access to a vehicle, because they provide safe facilities to make trips on foot or by bicycle.

Transit improvements that require only bus route and service expansions typically have minimal negative impacts. Dedicated fixed-guideway systems, such as the proposed bus rapid transit service, are likely to have greater environmental impacts and are typically evaluated in the same way as roadway projects. Generally, transit projects have a positive impact on the

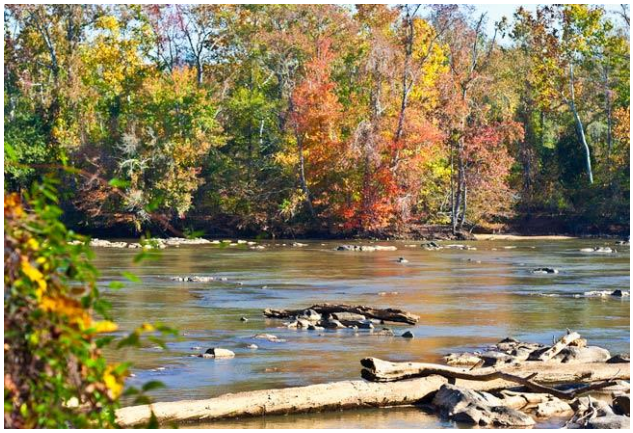
overall system by offering an additional mode choice and increasing the accessibility of the transportation network.

Consultation with Resource Agencies

To prepare this planning-level screening, RFATS staff consulted plans, geographic data, and other information from various agencies responsible for resource management and development. These include the South Carolina Department of Health & Environmental Control (DHEC); SC Department of Natural Resources (DNR); SC Department of Fish & Wildlife Services; SC Department of Archives and History; and EPA.

Items of note reviewed during this process included an environmental summary of natural resources and advisory guidance regarding identified endangered species within the study area. The draft LRTP was also sent to agency representatives to provide an opportunity for comments and additional information.

Natural and Cultural Resources



The planning area includes a variety of natural and cultural resources that should be considered when evaluating transportation projects. The Catawba River corridor and Lake Wylie provide unique natural habitats for a variety of species as well as recreational opportunities for residents and visitors alike. The U.S. Fish and Wildlife Service has not identified any critical habitat within the area, but there are nine species of concern which may be present within the planning region:

- Carolina Heelsplitter clam (endangered)
- Red-cockaded Woodpecker (endangered)
- Northern Long-Eared Bat (threatened)
- Dwarf-Flowered Heartleaf plant (threatened)
- Little Amphianthus plant (threatened)
- Schweinitz's Sunflower plant (endangered)
- Michaux's Sumac plant (endangered)
- Smooth Coneflower plant (endangered)
- Black Spored Quillwort (endangered)

The area is also home to many historic and cultural resources, including parks, several historic districts (such as downtown Fort Mill and Old Town in Rock Hill), and numerous individual historic buildings. The Bi-State Carolina Thread Trail that crosses the area is a burgeoning cultural resource due to the natural and recreational landscapes it traverses.

The presence of the Catawba Indian Nation is also an important cultural asset. The Catawba Cultural Center, located on the Catawba Indian Reservation, presents tours and programs.

The Bethel community in the northwest part of the RFATS planning area is one of the oldest in York County, having developed around Bethel Presbyterian Church (founded in 1764). The church, which is just outside the RFATS study area, was added to the National Register of Historic Places in 1980. Development around Lake Wylie is rapidly changing the rural character of this community. In addition, a 1992 inventory conducted by the South Carolina Department of Transportation identified a number of individual sites which are considered eligible for National Register nomination. These include Hill's Iron Works on Highway 264 at Allison Creek, where weapons were produced during the Revolutionary War. The ore for the iron works was mined at nearby Nanny's Mountain, making this another significant property. This mountain has been purchased by York County for public recreation. There are also several abandoned cemeteries in the area.

Bethel Presbyterian Church
(Photo: Bill Fitzpatrick)

Rock Hill has a variety of cultural resources. These include the Museum of York County, Winthrop University, York Technical College, Clinton Junior College, the Rock Hill Telephone Company Museum, Cherry Park, and the relatively new Center for the Arts. Within or near the City of Rock Hill, there are currently five historic districts, one historic complex, and fifteen individual sites on the National Register. The 1992 survey recommended that additional sites and historic districts be added to the Register and listed other sites as being worthy of additional investigation. This area also includes a number of abandoned cemeteries.

The cultural resources in and around the town of Fort Mill and the City of Tega Cay reflect the recent rapid growth in these areas. In addition to neighborhood parks, Confederate Park serves as a town square for Fort Mill and includes monuments to both the Catawba Indians and soldiers who died in the Civil War. The Anne Springs Close Greenway property, a protected natural area north of Fort Mill, includes several historically-significant buildings. In Fort Mill, National Register listings include the Downtown Historic District, the Unity Presbyterian Church Historic District, and ten individual listings. The 1992 survey recommended adding one additional listing and identified a number of other structures as worthy of further consideration.

Near Fort Mill, the prehistoric and historic site of Spratt's Bottom is located on the Catawba Valley floodplain. Nauvasee, the main village of the

Catawbas, was located less than a mile to the south of Fort Mill. There are also several abandoned cemeteries in this area.

There are a number of historically significant sites within the panhandle of Lancaster County. These include:

- The Old Six Mile Creek Presbyterian Church and Cemetery (circa 1800), located near the intersection of US 521 and Six Mile Creek Road;
- Sumter's Camp at Clems Branch (circa 1780), located on Harrisburg Road near Barberville Road, a Revolutionary War site which is included in the National War Memorial Registry;
- Culp House (circa 1860), located on Harrisburg Road near the intersection of SC 160; and
- Chaney Tavern site (circa 1800), located near the northeast quadrant of the intersection of US 521 and SC 75.

Natural resources in the panhandle area include a branch of Twelve Mile Creek Trail located north of SC 75 which provides connection to the Twelve Mile Creek Greenway in Waxhaw, NC. A 170-foot suspension bridge links the Twelve Mile Creek trail in SC to a segment of the trail in Waxhaw, NC, connecting two states by trail.

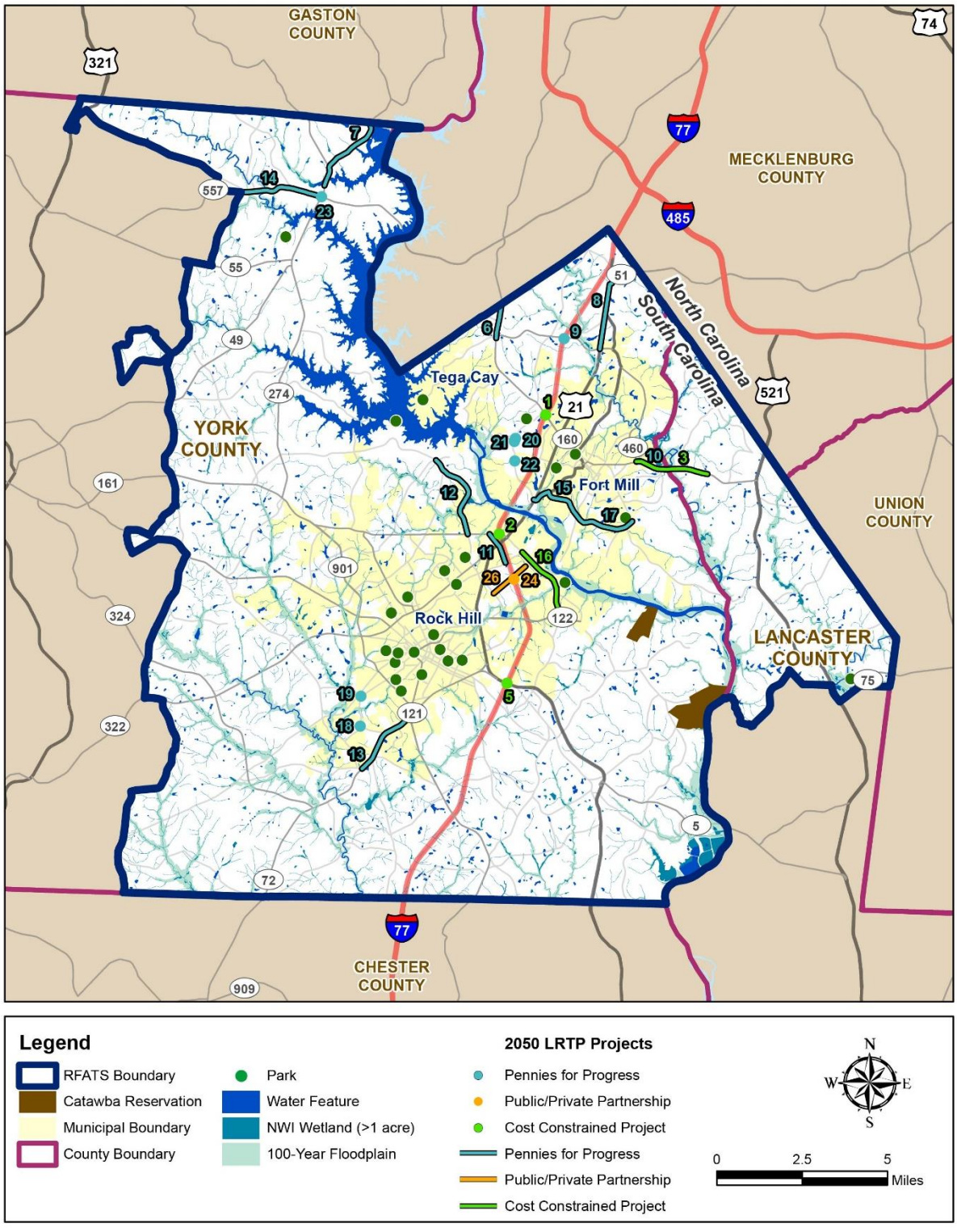
Analysis of Potential Resource Impacts

Figures 11.6 and **11.7** show the location of proposed projects in the 2050 LRTP in relation to known natural and cultural resources that may be sensitive to impacts. Through the high-level environmental screening process, no major project-related impacts to cultural resources were identified; however, further analysis will be required through the National Environmental Policy Act (NEPA) process. Projects with potential impacts to natural resources (primarily floodplains and/or wetlands larger than one acre) are shown in **Table 11.3**.

Table 11.3: Projects with Potential Impacts to Natural Resources

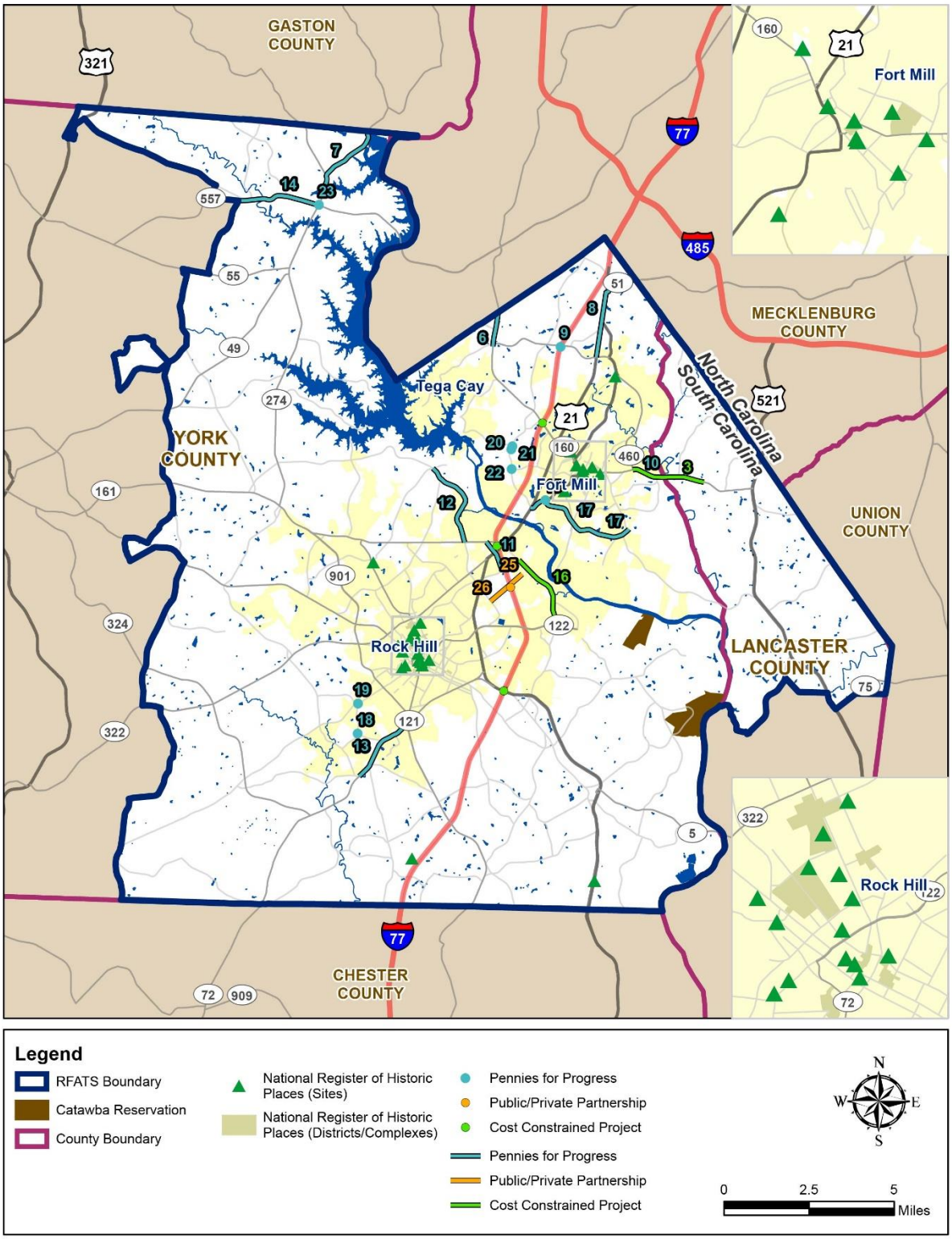
Project ID	Route	Project Description
3	SC 160 Widening	(Rosemont / McMillan to Springfield Parkway) - 5 Lanes
7	Highway 274 / 279	Highway 274 at Landing Pointe Drive to Pole Branch Road - 5 Lanes; Pole Branch Road to NC Stateline - 3 Lanes
10	SC 160 East	Springfield Parkway to Lancaster County Line - 3 Lanes
12	Mt Gallant Road	Celanese to Twin Lakes Road - 3 Lanes
14	Highway 557	Highway 274 to Kingsbury Road - Multilane

Figure 11.6: 2050 LRTP Projects in Relation to Sensitive Natural Resources



Sources: US Fish and Wildlife Service, National Hydrography Dataset, FEMA National Flood Hazard Layer

Figure 11.7: 2050 LRTP Projects in Relation to Sensitive Cultural Resources



Sources: South Carolina Institute of Archaeology and Anthropology, National Parks Service

Potential Mitigation Strategies

Mitigation measures aim to avoid or minimize a project's impact on the environment. These measures can include one or more of the following:

- Avoiding the impact altogether by not implementing a project or a specific element of a project,
- Minimizing impacts by limiting the degree or size of a project element,
- Rectifying the impact by repairing, rehabilitating or restoring an environment that has been affected,
- Reducing or eliminating the impact over time through preservation and maintenance operations during the life of the project, and
- Compensating for the impact by replacing or providing substitute natural resources or environments.

Not every project will require the same level of mitigation. All impacts on environmentally sensitive areas will be analyzed on a project-by-project basis to determine which mitigation strategies are appropriate.

Climate Change

Other environmental concerns relate to the effects of the built environment on the earth's climate. There is general scientific consensus that the earth is experiencing a warming trend and that human-induced increases in atmospheric greenhouse gases (GHGs) are the leading cause. The combustion of fossil fuels is the biggest source of GHG emissions. According to the United Stated States Environmental Protection Agency (EPA), nearly 30 percent of GHG emissions in the United States are from transportation sources.

Because greenhouse gas emissions from transportation sources (fuel combustion and vehicle air conditioning systems) account for a large percentage of the nation's total GHG emissions, the transportation sector will play a large role in the ongoing discussion of GHG reduction goals. Strategies to reduce transportation GHG emissions include:

- **Introduction of low-carbon fuels.** The advantages of using alternative fuels include lower carbon content and the generation of fewer GHG emissions. Currently available alternative fuels include ethanol, biodiesel, natural gas, liquefied petroleum gas, low-carbon synthetic fuels (such as biomass-to-liquids), hydrogen, and electricity.

Transit systems in particular can transition to using electric buses to eliminate emission of greenhouse gases, particulate matter, and other harmful substances. The City of Rock Hill's new MyRide fleet, for example, uses an all-electric system.

- **Increasing vehicle fuel efficiency and use of alternative fuels.** GHG emissions can also be reduced through vehicle improvements that allow less fuel to be used per mile traveled. Fuel efficiency improvements include advanced engine and transmission design, lightweight materials, improved aerodynamic design, and reduced rolling resistance.

- **Improving transportation system efficiency.** This group of strategies seeks to improve the operation of the transportation system through reduced vehicle travel time, improved traffic flow, decreased idling, and other efficiency improvements that result in lower energy use and GHG emissions. The 2050 LRTP recommends continued implementation of projects to improve traffic flow through signal system upgrades and intersection modifications. Efficiency can also be improved by shifting travel to more efficient modes when practical in terms of price and convenience (e.g. passenger vehicle to bus or truck to rail).

- **Reducing carbon-intensive travel activity.** This group of strategies seeks to influence travelers to shift to more efficient modes, increase vehicle occupancy, eliminate the need for some trips, or take other actions to reduce energy use and GHG emissions associated with personal travel. The 2050 LRTP proposes to increase the frequency and availability of public transit and continue to support ridesharing. Projects to improve and expand pedestrian and bicycle infrastructure will also provide more opportunities for sustainable travel.

Adapting to Climate Change Impacts

Climate change is likely to impact transportation infrastructure through increases in severe weather events and extreme temperatures. As a result, the LRTP has considered strategies to mitigate and adapt to these impacts as part of the planning process. The climate change challenges most likely to impact transportation infrastructure are:

- Increases in the number of very hot days and heat waves;
- Increases in Arctic temperatures;
- Increase in air quality issues related to ground-level ozone;
- Increases in the number of intense precipitation events; and

- Increases in hurricane intensity.

The transportation system in the RFATS region will be affected by more intense and longer lasting heat waves as well as by increases in the intensity of precipitation events. Both of these issues are further discussed below.

Managing Stormwater Impacts

The passage of the FAST Act required that Long Range Transportation Plans consider ways to reduce or mitigate stormwater impacts on surface transportation. Rapid flooding can occur when precipitation falls at an elevated rate or quantity. This is particularly common in urban areas where more of the earth's surface is paved and there is less opportunity for runoff to be absorbed, and urban areas across the country are experiencing more frequent flooding and other stormwater issues. Potential strategies for reducing stormwater- or flooding-induced damage include:

- Restricting development of floodplains along rivers and creeks to open space, greenways and other uses that can withstand periodic flooding. For example, the zoning ordinance of Evansville, Indiana, permits only some agricultural and public recreation uses.
- Installing real-time weather and hydrologic data monitoring equipment at area bridges to notify transportation and emergency agencies when they may need to check a particular location for flooding, scouring, or other problems. For example, the National Weather Service currently operates 9 river observation points within the RFATS region, but none of these are currently equipped for forecasting.
- Increasing the resources allocated to critical ongoing road maintenance activities such as street sweeping and clearing of clogged storm drains. Regular maintenance can reduce the risk of road closures or hazards from flooding. For example, the City of Florence, South Carolina has a preventative maintenance plan for its stormwater collection. These activities include ditch maintenance and clearing, routine street sweeping, and regular monitoring of "hot spots".

Flooding on Dave Lyle Boulevard, May 2016
(Photo by Jeff Sochko, Special to The Herald)

Improving Resiliency to Other Transportation System Impacts

Intense heat is damaging to transportation infrastructure, causing kinks in steel rails, placing stress on bridge joints, and softening asphalt. On routes with a large percentage of heavy truck traffic, it is not uncommon to see the roadway become rippled at the approaches to intersections. This damage is caused by the force of braking trucks on hot asphalt, and sustained heat waves could result in the need for more frequent road maintenance.

Under the FAST Act, MPOs are charged with planning for the resilience of transportation infrastructure. This can entail undertaking large-scale efforts to rebuild an important facility that could be impacted by climate change or building a new road or bridge as an alternative to that facility.

There are also relatively small decisions that can be made by individual agencies to increase system resiliency as they replace or upgrade equipment. For example, some traffic signals are activated by loop detectors. These are metal loops embedded in the pavement at an intersection that detect when a vehicle is located directly above. Loops embedded at intersections in an asphalt road can be easily damaged and broken on a hot day when the asphalt partially softens. If local temperatures rise, the region could experience more frequent loop damage. Rather than continue to repair and replace the loops, some cities are switching to alternatives, such as video, radar detection, or adaptive signal control technology.

Environmental Justice and Title VI

Environmental Justice (EJ) legislation originated in Title VI of the 1964 Civil Rights Act. This Act and subsequent legislation aim to ensure that services and benefits are fairly distributed to all people, regardless of race, national origin, or income, and that all people have access to meaningful participation.

Environmental Justice Executive Order (EO) 12898 calls for identifying and addressing disproportionately high and adverse human health or environmental effects of programs, policies and activities on minority and low-income populations. This includes metropolitan transportation plans that use federal funds to accomplish their goals.

A disproportionately high and adverse effect is one that is:

- Predominantly borne by a minority and/or low-income population; or
- Suffered by a minority and/or low-income population more severely or in greater magnitude than the adverse effect suffered by the non-protected population.

Disproportionately high and adverse effects are not determined solely by the size of the population, but rather by the comparative effects on these populations in relation to either non-minority or higher income populations. In this EJ assessment, U.S. Census data was used to identify the demographics of the area in order to recognize potential "communities of concern." Communities of concern are areas where the percentage of low-income households or minorities is greater than that of the entire MPO area.

It is important to note that the determination of what is disproportionately high and adverse human health or environmental effect is context-dependent. All block groups/tracts include some members of protected populations, and the approach used here is based only on Census data and the proportion of protected populations that they contain. As each project enters the development process, additional local knowledge of individual neighborhoods should be used to identify potential communities of concern that may not have been identified through this quantitative analysis.

Understanding the likelihood that a given project will have disproportionately high and adverse effects is crucial to calculating the likelihood that a project will be constructed as well as how and where it will be constructed. For federally funded projects, the design alternatives that avoid and minimize impacts to these populations can advance through the NEPA process and become preferred alternatives that advance to a more detailed level of design and potentially construction. The alternatives that have disproportional impacts will not.

Analysis

Minority Persons

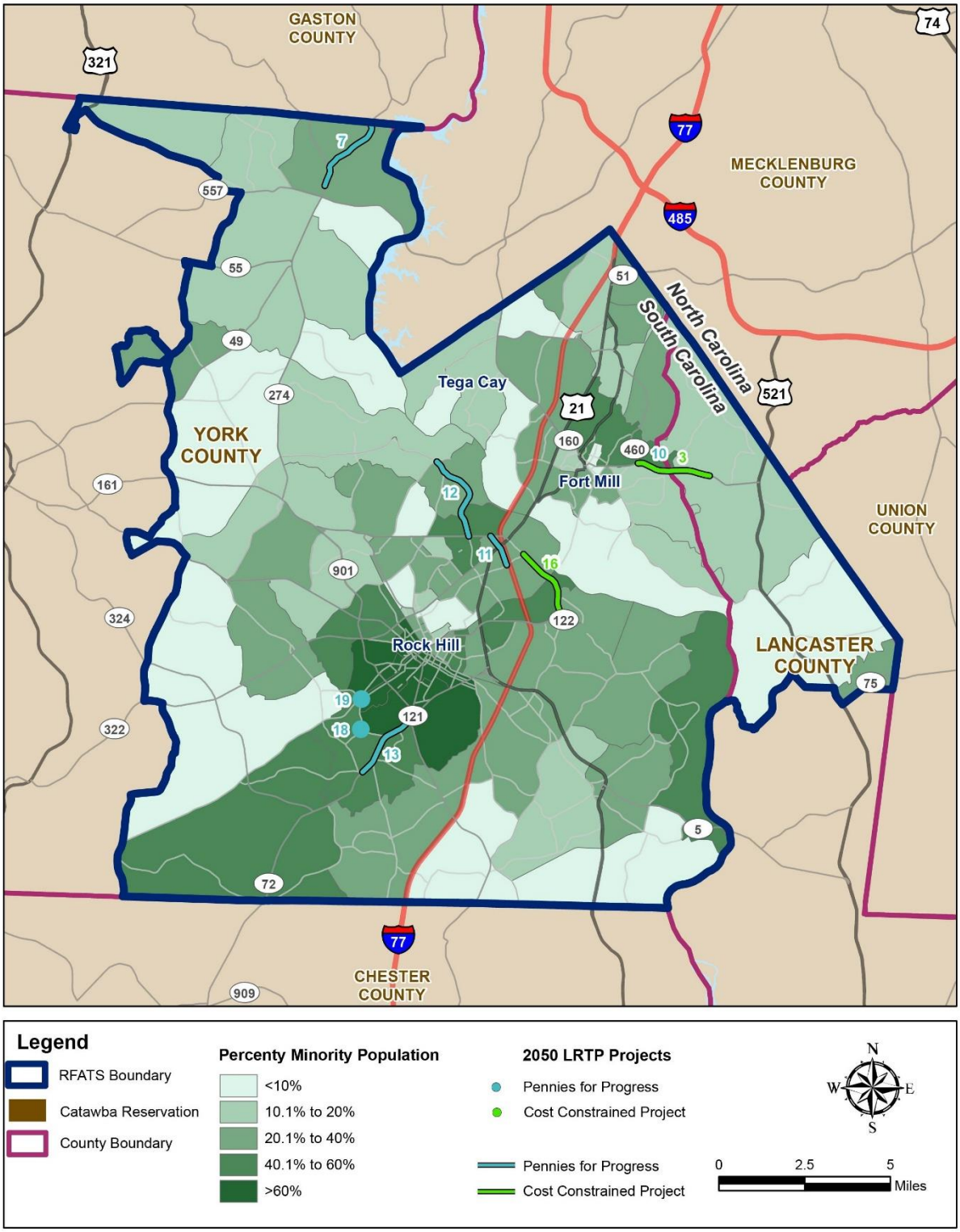
In this analysis, estimates of the minority population were obtained from Census data based on two types of survey responses: (1) persons identifying themselves as African American, Asian American, American Indian and Alaskan Native, Native Hawaiian or Other Pacific Islander; and (2) persons identifying themselves as being of Hispanic or Latino origin. The two categories are not mutually exclusive.

Figure 11.8 shows the distribution of minority populations in the RFATS area in relation to the locations of projects proposed in the 2050 LRTP. A complete list of the projects proposed can be found in Chapter 4. **Table 11.5** lists only the proposed projects within the potential affect areas with a relatively high percentage of minority residents as determined in this analysis.

Table 11.4: Projects with Potential Impact on Minority Communities

Project ID	Location	Project Description	Funding Type
3	SC 160 Widening	Rosemont / McMillan to Springfield Parkway - 5 Lanes	Federally Funded
4	Cel-River Road	S. Eden Terrace Extension to Dave Lyle Boulevard - 5 Lanes	Federally Funded
7	Highway 274 / 279	Highway 274 at Landing Pointe Drive to Pole Branch Road - 5 Lanes; Pole Branch Road to NC Stateline - 3 Lanes	Non-Federally Funded
10	SC 160 East	Springfield Parkway to Lancaster County Line - 3 Lanes	Non-Federally Funded
11	Riverview Road	From Eden Terrace to Celanese Road - 3 Lanes	Non-Federally Funded
12	Mt Gallant Road	Celanese to Twin Lakes Road - 3 Lanes	Non-Federally Funded
13	SC Highway 72	Highway 901 to Rambo Road - 3 Lanes	Non-Federally Funded
16	Cel-River Road	2 to 5 Lane Widening from S-645 (Southern Eden Terrace Extension) to S-122 (Dave Lyle Boulevard)	Non-Federally Funded
18	Neely & Rawlsville Road	Realignment and Improvement	Non-Federally Funded
19	Neely Road & Crawford Road	Realignment and Improvement; Adjustment for Railroad	Non-Federally Funded

Figure 11.8: 2050 LRTP Projects in Relation to Areas of Minority Residents



Source: American Community Survey 5-Year Estimates (Tables B02001 and B01002I, 2018)

Low-Income Persons

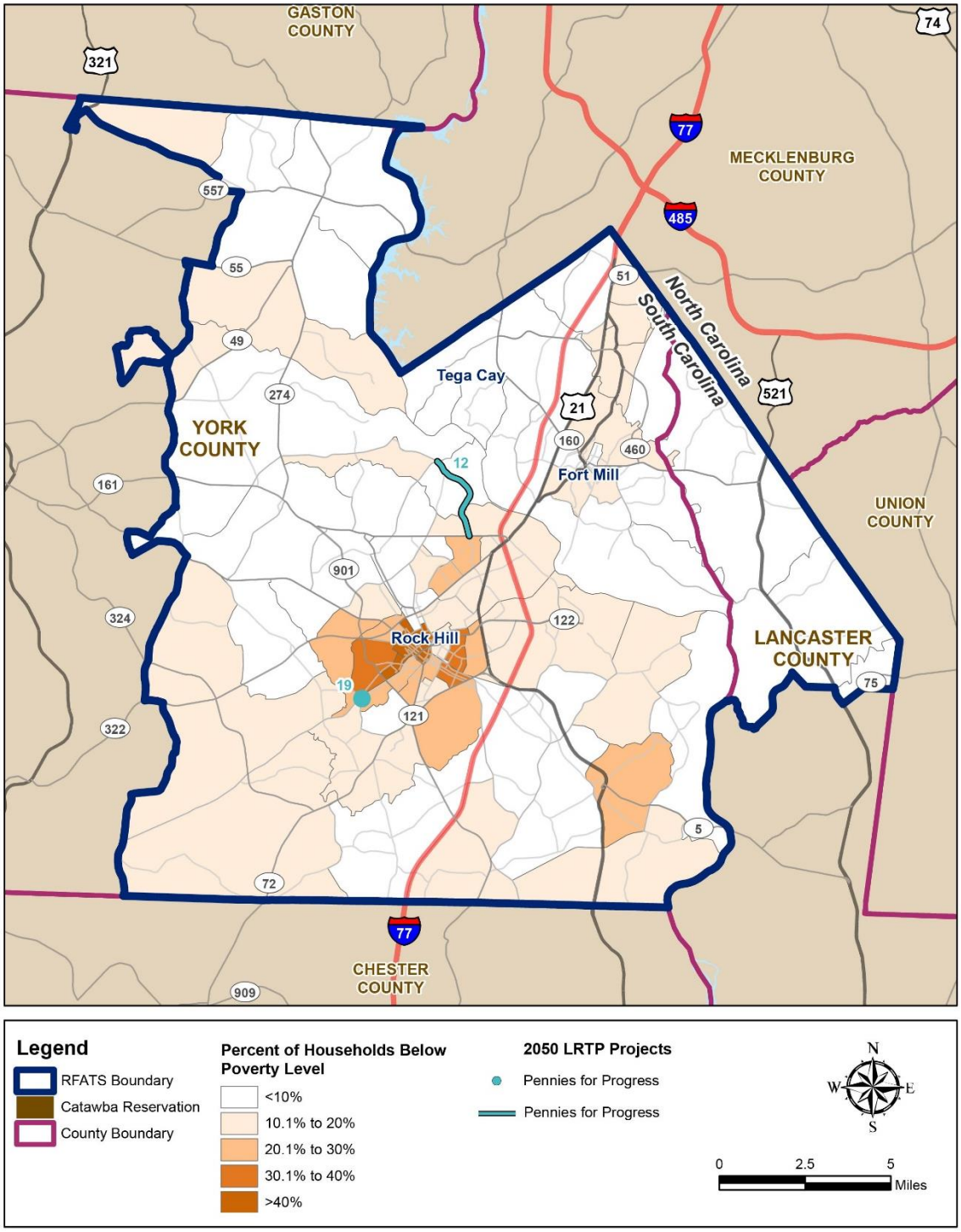
For purposes of this analysis, low-income households are defined as those whose income is at or below the Department of Health and Human Services poverty guidelines. Although these guidelines are referenced in the EJ Executive Order as the standard, they are actually simplified from the U.S. Census Bureau's poverty thresholds on which this plan's analysis is based. The Census Bureau's determination of whether an individual is living at or below the poverty level uses a set of dollar value thresholds that vary by family size and composition.

Figure 11.9 shows the distribution of low-income populations in the RFATS area in relation to the location of projects proposed and/or otherwise included in the 2050 LRTP (e.g., locally funded Pennies projects). **Table 11.5** lists projects with the potential affect areas with a relatively high percentage of low-income residents as determined in this analysis.

Table 11.5: Projects with Potential Impact on Low-Income Persons

Project ID	Location	Project Description
12	Mt Gallant Road	Celanese to Twin Lakes Road - 3 Lanes
19	Neely Road & Crawford Road	Realignment and Improvement; Adjustment for Railroad

Figure 11.9: 2050 LRTP Projects in Relation to Areas of Low-Income Persons



Source: American Community Survey 5-Year Estimates (Table B17017, 2018)

Persons with Limited English Proficiency (LEP)

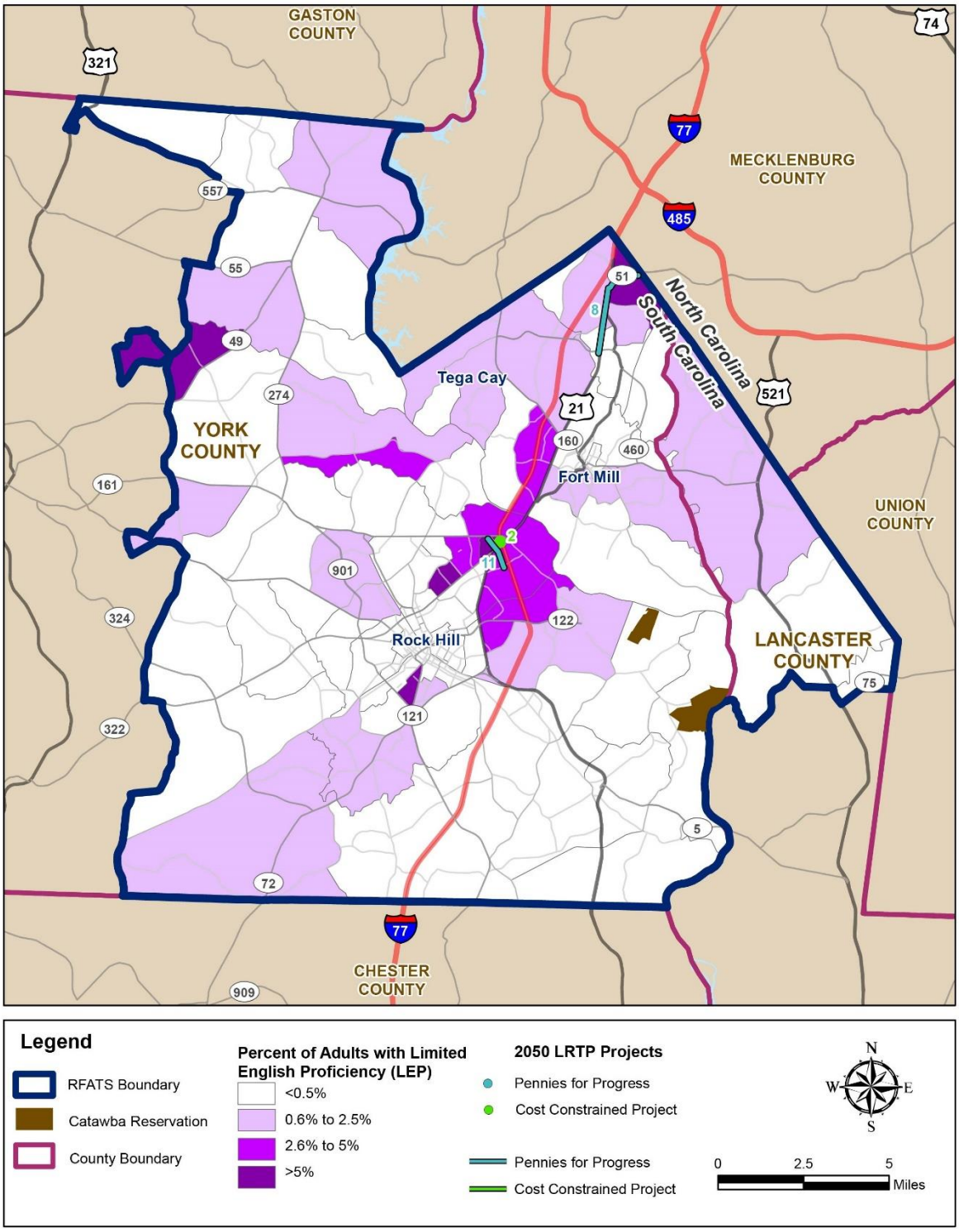
The U.S. Census Bureau definition of Limited English Proficiency applies to adults who indicate they speak English less than 'very well.' Given the low percentage of LEP in the region, broad measures such as translating all documents and providing interpreters for all RFATS public meetings may not be warranted. However, a review of the data does show some locations where adults with LEP make up at least five percent of the total adult population of a given Census block. (**See Figure 11.10**.)

When projects are under development in these areas, RFATS, SCDOT and other responsible agencies could consider targeted outreach requiring that an interpreter attend public meetings. **Table 11.6** lists those projects.

Table 11.6: Projects in Areas with High LEP Populations

Project ID	Location	Project Description
2	Celanese / I-77	Interchange Reconfiguration
8	US 21 North Phase I & SC 51	Springfield Parkway to NC State Line - 5 Lanes
11	Riverview Road	From Eden Terrace to Celanese Road - 3 Lanes

Figure 11.10: 2050 LRTP Projects in Relation to Areas of Persons with Limited English Proficiency



Source: American Community Survey 5-Year Estimates (Table B16004, 2018)

Introduction

Purpose of Chapter

The purpose of the Financial Plan is to demonstrate that the costs of proposed transportation improvements identified in the RFATS 2050 Long-Range Transportation Plan are consistent with projected revenues. Transportation needs in most localities, if not all, far exceed the funding resources available. For this reason, federal legislation requires financial planning to be performed as a component of Long-Range Transportation Plans. Plans must be "fiscally constrained," meaning that the costs of proposed improvements do not exceed the projected revenue stream.

This chapter provides an overview of projected revenues and costs, applicable assumptions (e.g., projected implementation, inflationary assumptions, etc.), and demonstrates that the proposed LRTP is fiscally constrained. Project costs have been developed at the planning level and will likely change as a project enters the formal development process, when more information becomes available about right-of-way, utilities, and other related factors. All project costs and assumptions provided should be re-evaluated in future plan updates.

Federal Funding Sources

Surface Transportation Block Grant Program (Guideshare)

Surface Transportation Block Grant (STBG) funds can be used for a broad range of transportation improvements including roadways, intersection upgrades, intelligent transportation system enhancements, transit, freight, as well as bicycle / pedestrian projects, among others.

A portion of the STBG funds distributed to the South Carolina Department of Transportation (SCDOT) are made available for transportation investments in the state's 11 Metropolitan Planning Organizations (MPOs).

SCDOT sets aside funds each year and then distributes this funding among the state's Metropolitan Planning Organizations (urbanized areas) and Councils of Government (rural areas). The allocation formula is based on the population totals within the urban and rural areas and/or region. RFATS current annual allocation is approximately $6.035 million dollars.

Projects Exempt from the SCDOT Guideshare

Certain projects are funded on a statewide basis through federal programs other than Guideshare. These include improvements on the Interstate

Highway System, for which SCDOT takes the lead to identify and address system needs. Other projects in this category include bridge replacements, resurfacing, safety and other statewide programs. Such projects are described in the RFATS Transportation Improvement Program as "exempt from Guideshare."

Transportation Alternatives

The Transportation Alternatives Program (TAP) or Transportation Alternatives (TA) as it is commonly known, is considered a set-aside of the Surface Transportation Block Grant (STBG) program. The RFATS region receives an annual allocation of TA funds from SCDOT to implement improvements to facilities for bicycles and pedestrians.

MPOs are able to use up to 50% of sub-allocated TA funds to any STBG-eligible purpose so long as a competitive project selection process is maintained. This includes activities that would have been funded under the Safe Routes to School program (since rolled into TA). State DOTs and MPOs produce annual reports detailing the applications for and projects that received TA funding.

Congestion Mitigation and Air Quality Improvement Funds

In 1990, Congress amended the Clean Air Act (CAA) to bolster America's efforts to attain the National Ambient Air Quality Standards (NAAQS). The amendments required further reductions in the amount of permissible tailpipe emissions, initiated more stringent control measures in areas that still failed to attain the NAAQS (nonattainment areas), and provided for a stronger, more rigorous link between transportation and air quality planning. In 1991, Congress adopted the Intermodal Surface Transportation Efficiency Act (ISTEA). This law authorized the Congestion Mitigation and Air Quality (CMAQ) program and provided $6.0 billion in funding for surface transportation and other related projects that contribute to air quality improvements and reduce congestion. The CAA amendments, ISTEA and the CMAQ program together were intended to realign the focus of transportation planning toward a more inclusive, environmentally-sensitive, and multimodal approach to addressing transportation problems.

The CMAQ program was reauthorized in 2015 under the FAST Act and provides funds that can be used by State DOTs, MPOs, and transit agencies for projects that reduce regulated air pollutants from transportation-related sources.

RFATS was designated by EPA as part of the Charlotte/Metrolina region's non-attainment area for ground-level ozone in 2004. Since this time, RFATS

has made a series of targeted improvements at key "hot spots" throughout the transportation network that have yielded favorable results. In 2016 EPA officially reclassified RFATS as being in "attainment" for ground level ozone and changed its air quality status to a "maintenance area." With this designation RFATS will continue to receive CMAQ funding to make further improvements to strengthen regional air quality.

Typical projects that qualify for CMAQ funds include:

- Improved and/or expanded public transit options,
- Traffic flow improvements and high-occupancy vehicle lanes,
- Shared-ride services,
- Bicycle/pedestrian facilities, and
- Flexible work schedules.

State Funding Sources

State Infrastructure Bank

This institution provides financing for a wide variety of highway and transit projects through loans and credit enhancements. The South Carolina State Infrastructure Bank (SIB) is designed to complement the traditional Federal Aid highway and transit grants administered by SCDOT. In 2016 York County submitted an application to the SIB Board for funding towards the I-77 Corridor. The application outlined the importance and need for improving key interchanges along I-77 in York County due to high growth - both residential and employment. These interchanges included:

- Exit 90 – Carowinds Boulevard
- Exit 88 – Gold Hill Road
- Exit 85 – SC 160
- Exit 82 A-C – Celanese Road and Cherry Road

At the time of the application, the interchanges were ranked on the SCDOT Interstate Interchange Management System Program (IMMS) most needed improvements. In 2020, the SIB authorized $82.1M towards two interchange locations:

- I-77 and SC-160 Interchange Reconfiguration and Fort Mill Highway (SC-160) from US 21 to Sutton Road: Widen to 6 lanes ($49.6M)
- Celanese / I-77 Interchange Reconfiguration ($32.5M)

The SIB award at these two locations is critical for improving operating efficiency and safety at critical convergence points within the transportation network; and it is hoped that adverse impacts from COVID-19 will turn out being less burdensome on overall funding availability to the SIB, so that further consideration of Carowinds Blvd / I-77 (Exit 90) can proceed at a later point.

C-Funds

The C-Funds Program is a partnership between SCDOT and the forty-six counties of South Carolina. The program is intended to fund local transportation projects and improvements to state and county roads as well as city streets. These funds are derived from state gasoline tax revenue. Funding amounts are then distributed to each of the 46 counties based on a three-part formula. The formula allocates (1) one third of the C funds based on the ratio of the land area of the county to the land area of the state, (2) one third based on the ratio of the county population to the state population as determined by the latest decennial census, and (3) one third based on the rural road mileage in the county to the rural road mileage in the state.

Local Funding Sources

Pennies for Progress

Pennies for Progress – more formally known as the York County Capital Projects Sales and Use Tax Program – was initiated by York County to provide its citizens with a safer and more efficient roadway system by supplementing other transportation funding sources.

Projects are chosen by a Sales Tax Commission representing the citizens of York County and then approved by York County voters. York County was the first in the State of South Carolina to pass this type of sales tax to improve the road system. A benefit of this tax is ninety-nine cents of every sales tax dollar raised in York County stays in York County.

Since its initial passage in 1997, this program has been renewed three additional times in 2003, 2011, and 2017. The following is a brief overview of the four programs:

	1997 Pennies for Progress	2003 Pennies for Progress	2011 Pennies for Progress	2017 Pennies for Progress
Referendum	November 1997	November 2003	August 2011	November 2017
Tax Expired	6 Years	No later than August 2011	April 2018	1st Quarter 2025
Budget	$185,751,077	$173,000,000	$161,000,000	$277,920,000
Number of Projects	14	25	14	16
Program Duration	1998 to 2009	2004 to 2013	2012 to 2018	2018 to 2025

Other Funding Sources

Private Funds

Since the previous LRTP was adopted, developers have directly completed several new road projects, as well as smaller scale location specific improvements (e.g., dedicated turn lanes, extension of storage capacity, etc.) at different points within the planning area as one component to mitigating operational impacts associated with new development activity. As the region continues to experience elevated growth pressures, partnering with the development community will be a critical element to being able to proactively plan for needed collector roads, protecting future thoroughfare corridors, and securing necessary right-of-way to reduce long term traffic congestion and best address overall transportation network needs. To accomplish this outcome, it will take a cooperative effort between local planning staff, SCDOT, and the development community.

Public/Private Partnerships

One recent successful example of a public-private partnership (P3) is in Rock Hill – where SCDOT, the City of Rock Hill, York County, and the Carolina Panthers partnered in developing a site for a future training facility for the team that will include new interstate access as well as two adjacent roadway connections at Paragon Way and Mt Gallant Road.

The project utilizes funding support from the Infrastructure For Rebuilding America (INFRA) grant program; the South Carolina Department of

Commerce; the Carolina Panthers; the City of Rock Hill as well as coordination with York County on a planned Pennies Project to strengthen the operating capacity of Mt Gallant Road. This project is one example of how public / private partnership as well as coordination at the federal, state and local level can be harnessed to facilitate both economic development and transportation system investments when "developments of regional impact" are conceptualized and built.

Projected Revenues

Guideshare Funding

Table 12.1 identifies projected Guideshare revenue available to RFATS for implementation of the plan. Guideshare funding is projected to increase by roughly 25% following the release and incorporation of the 2020 Census (e.g., 2022). Longer term adjustments reflecting subsequent census changes will be incorporated in future LRTP plan updates.

Debt service shown in Table 12.1 is for SCDOT's "27 in 7" program, through which 27 years of road and bridge work were completed in 7 years. This innovative program used future federal funds to retire state highway bonds. There were five separate bonding programs with one being dedicated to MPOs. The MPOs pay off that debt using future federal funds as shown in **Table 12.1**.

RFATS has committed $10 Million of the allocated Guideshare funding towards bicycle and pedestrian facilities. As described in Chapter 9, the RFATS region conducted as survey with more than 90% of area respondents agreeing that tax dollars spent on the transportation system should include pedestrian and bicycle investments. Therefore, RFATS will be working with the local jurisdictions and SCDOT to identify bicycle and pedestrian projects for possible funding within the allocated allotment.

In addition to the requirement that long-range plans must be fiscally constrained, they are also to take account of inflationary impacts. With this in mind, project costs are shown in year of expenditure or "YOE" dollars, reflecting the fact that project costs will likely be higher for projects that will not be implemented until later in the plan.

Table 12.2 presents current and funding year cost estimates of priority projects identified in the LRTP. Based on these estimates, projected revenues will be sufficient to fund the cost constrained projects of this plan.

Table 12.1: RFATS Guideshare Funding

Year	Guideshare	Debt Service	Available Funding
2021	$6,035,144	$844,925	$5,190,219
2022	$7,543,930	$180,266	$7,363,664
2023	$7,543,930	$180,253	$7,363,677
2024	$7,543,930	$0	$7,543,930
2025	$7,543,930	$0	$7,543,930
2026	$7,543,930	$0	$7,543,930
2027	$7,543,930	$0	$7,543,930
2028	$7,543,930	$0	$7,543,930
2029	$7,543,930	$0	$7,543,930
2030	$7,543,930	$0	$7,543,930
2031	$7,543,930	$0	$7,543,930
2032	$7,543,930	$0	$7,543,930
2033	$7,543,930	$0	$7,543,930
2034	$7,543,930	$0	$7,543,930
2035	$7,543,930	$0	$7,543,930
2036	$7,543,930	$0	$7,543,930
2037	$7,543,930	$0	$7,543,930
2038	$7,543,930	$0	$7,543,930
2039	$7,543,930	$0	$7,543,930
2040	$7,543,930	$0	$7,543,930
2041	$7,543,930	$0	$7,543,930
2042	$7,543,930	$0	$7,543,930
2043	$7,543,930	$0	$7,543,930
2044	$7,543,930	$0	$7,543,930
2045	$7,543,930	$0	$7,543,930
2046	$7,543,930	$0	$7,543,930
2047	$7,543,930	$0	$7,543,930
2048	$7,543,930	$0	$7,543,930
2049	$7,543,930	$0	$7,543,930
2050	$7,543,930	$0	$7,543,930
Total	$236,879,402	$3,246,777	$233,632,625

Table 12.2: RFATS Guideshare Projects

Project	Current Cost Estimate	Funding Year Cost Estimate
Roadway Widenings		
Fort Mill Highway (SC-160) from Springfield Pkwy (SC 460) to Rosemont Drive/McMillian Park Drive: Widen to 5 lanes	$28,500,000	$33,877,544
Interchange Projects		
I-77 and SC-160 Interchange Reconfiguration and Fort Mill Highway (SC-160) from US 21 to Sutton Road: Widen to 6 lanes	$23,400,000	$27,136,826
Celanese / I-77 Interchange Reconfiguration	$68,600,000	$79,554,968
I-77 and Anderson Road (SC 5/US 21) Interchange Reconfiguration	$5,700,000	$6,138,277
TOTAL	$126,200,000	$146,707,615

Federal & State Transit Funding

FTA & SMTF Funding

Transit funding for the RFATS area is provided by the Federal Transit Administration (FTA) and the South Carolina Department of Transportation (SCDOT) Office of Public Transit.

FTA Section 5307 Funding

The FTA administers the Section 5307 Urbanized Area Formula Funding Program. Section 5307 provides funding for planning and capital items at 80% of their cost, and the federal share may not exceed 50% of the net project cost of operating assistance. Funds are apportioned to urbanized areas using a formula based on population, population density, and other factors associated with transit service ridership such as bus revenue vehicle miles, bus passenger miles, fixed guideway revenue vehicle miles, and fixed guideway route miles.

These funds are apportioned annually and remain available for 6 fiscal years (the year of apportionment plus 5 additional years). The federal apportionment must be matched by state and local funds. Local matching funds can be cash or cash-equivalents, depending upon the expenditure. Non-cash shares such as donations, volunteered services or in-kind contributions are eligible to be counted toward the local match only if the value of each is formally documented and supported and represents a cost which would otherwise be eligible under the project.

Within the RFATS Planning Area, there are two 5307 funding allocations available for transit service planning and operations (e.g., the Rock Hill

Urbanized Area and a portion of the Charlotte Urbanized Area that extends into the northern section of the RFATS region). Listed in **Table 12.3** below are estimates of funding availability for each of these areas.

Table 12.3: FTA Section 5307 Transit Funding

Year	Allocations	
	Rock Hill UA	Charlotte UA
2021	$1,362,702	$167,474
2022	$1,382,325	$169,886
2023	$1,402,230	$172,332
2024	$1,422,423	$174,814
2025	$1,442,905	$177,331
2026	$1,463,683	$179,884
2027	$1,484,760	$182,475
2028	$1,506,141	$185,102
2029	$1,527,829	$187,768
2030	$1,549,830	$190,472
2031	$1,572,148	$193,215
2032	$1,594,786	$195,997
2033	$1,617,751	$198,819
2034	$1,641,047	$201,682
2035	$1,664,678	$204,586
2036	$1,688,649	$207,532
2037	$1,712,966	$210,521
2038	$1,737,633	$213,552
2039	$1,762,655	$216,628
2040	$1,788,037	$219,747
2041	$1,813,785	$222,911
2042	$1,839,903	$226,121
2043	$1,866,398	$229,377
2044	$1,893,274	$232,681
2045	$1,920,537	$236,031
2046	$1,948,193	$239,430
2047	$1,976,247	$242,878
2048	$2,004,705	$246,375
2049	$2,033,572	$249,923
2050	$2,062,856	$253,522

SMTF Funding

State Mass Transit Funds (SMTF) are allocated by the South Carolina Department of Transportation to urbanized areas as a portion of the matching funds needed to meet funding requirements to access federal transit funding sources (e.g., 5307 funds, etc). Similar to the two 5307 allocations, there are two SMTF amounts for these same two areas. Eligible assistance categories include capital, administration, and operations. Essentially, these categories correspond to the federal program category which the SMTF funds are matching.

SMTF funds are generated from highway use taxes on motor vehicle fuel. As a general rule, this generates approximately $6 million a year on a statewide basis. Funds are applied for through the Office of Public Transit at SCDOT. Listed below in **Table 12.4** are the SMTF allocation amounts for each of the two urbanized areas.

Table 12.4: State Mass Transit Funds

Year	Allocations	
	Rock Hill UA	Charlotte UA
2021	$145,395	$120,383
2022	$145,395	$120,383
2023	$145,395	$120,383
2024	$145,395	$120,383
2025	$145,395	$120,383
2026	$145,395	$120,383
2027	$145,395	$120,383
2028	$145,395	$120,383
2029	$145,395	$120,383
2030	$145,395	$120,383
2031	$145,395	$120,383
2032	$145,395	$120,383
2033	$145,395	$120,383
2034	$145,395	$120,383
2035	$145,395	$120,383
2036	$145,395	$120,383
2037	$145,395	$120,383
2038	$145,395	$120,383
2039	$145,395	$120,383
2040	$145,395	$120,383
2041	$145,395	$120,383
2042	$145,395	$120,383
2043	$145,395	$120,383
2044	$145,395	$120,383
2045	$145,395	$120,383
2046	$145,395	$120,383
2047	$145,395	$120,383
2048	$145,395	$120,383
2049	$145,395	$120,383
2050	$145,395	$120,383

FTA Section 5309 Funding

In addition, the FTA administers the Section 5309 Fixed Guideway Capital Investment Grants (CIG) program. This program provides assistance for fixed-guideway projects such as new and expanded rapid rail, commuter rail, light rail, streetcars, bus rapid transit, ferries, and bus rapid transit projects that feature qualities of rail.

The CIG has four categories of potential eligible projects:

- New Starts:
    - Eligible projects include the design and construction of new fixed-guideway systems or extensions to existing fixed guideway systems.
    - The total project cost must be equal to or greater than $300 million or total New Starts funding sought equals or exceeds $100 million.
    - New Starts projects are limited to a maximum Section 5309 CIG program share of 60%. The maximum Federal contribution from all Federal sources to a New Starts project is 80%.
- Small Starts
    - Eligible projects include design and construction of new fixed-guideway or extensions to fixed-guideways and the design and construction of corridor-based bus rapid transit projects operating in mixed traffic.
    - Projects must have total estimated capital costs of less than $300 million and be requesting less than $100 million in CIG funds.
    - CIG funds can make up no more than 80% of estimated project costs and total Federal funding may not exceed 80%.
- Core Capacity
    - Eligible projects include the design and construction of corridor-based investment in an existing fixed-guideway system that improves capacity at a minimum of 10% in a corridor that is at capacity or will be in five years.
    - Projects must have a total estimated cost of less than $250 million and be requesting less than $75 million in CIG funds.

  - CIG funds can make up no more than 80% of estimated project costs and total Federal funding can make up no more than 80% of estimated project costs.

- Programs of Interrelated Projects
  - Eligible programs include design and construction of two or more projects that have logical connectivity between them, and projects will have a majority of their construction timelines overlapping. Projects may include any of the eligible projects covered in New Starts, Small Starts, and/or Core Capacity.
  - CIG funds can make up no more than 80% of estimated project costs and total Federal funding may not exceed 80%.

The FAST Act approved a pilot program to streamline the regulatory process for up to eight grants. Federal funds can comprise no more than 25% of estimated total project costs made up of Federal funds. Projects must also feature a public-private partnership funding component and be operated and maintained by employees of an existing public transportation provider. In order for a fixed-guideway project to be recommended by the FTA to Congress for discretionary funding, it must receive favorable ratings on the following "New Starts" criteria:

- Level of mobility improvement provided by the project
- Extent to which land use policies are supportive of rapid transit
- Environmental benefits
- Congestion Relief
- Cost effectiveness (cost per trip)
- Economic Development

The local project must receive a favorable rating on the above criteria in comparison to competing projects seeking federal funds throughout the country. Section 5309 funds must be matched by state and local funds. Local matching funds can be cash or cash-equivalent, depending upon the expenditure. Non-cash shares, such as donations, volunteered services, or in-kind contributions, are eligible as local match only if the value of each share is formally documented. Capital assistance grants made to local agencies are funded up to 80% of net project costs, unless the grant recipient requests a lower federal grant percentage.

Any public body or agency is eligible to apply for "Small Starts" funds as long as it has the legal, technical, and financial capacity to carry out the project. If the grant applicant is not expected to be the project operator, the applicant

must demonstrate how the project will be operated and maintained and provide an executed agreement before a Project Construction Grant Agreement can be finalized.

In addition to the aforementioned cost and funding limits, a "Small Starts" bus project must be a fixed guideway for at least 50% of the project length in the peak period or a corridor-based bus project with the following minimum elements:

- Substantial Transit Stations
- Signal Priority/Pre-emption (for Bus/LRT)
- Low Floor / Level Boarding Vehicles
- Special Branding of Service
- Frequent Service - 10 min peak/15 min off peak
- Service offered at least 14 hours per day

Since the enactment of MAP-21 legislation (and continued in the FAST Act), all projects seeking Section 5309 Capital Program funds must be evaluated and rated according to the criteria specified in law either as a New Starts project, a Small Starts project, or a Core Capacity project. Programs of Interrelated Projects are comprised of any combination of two or more New Starts, Small Starts, or Core Capacity projects. (Under previous authorizing laws, projects seeking less than $25 million in Capital Investment Program funds could be exempt from evaluation and rating if they chose to be, but that option was discontinued in MAP-21.)

As the existing roadway network continues to experience increasing congestion and a reduced level of service (LOS), the need for further discussion about the role and function of a mass transit component continues to increase as one of a range of important strategies for meeting current as well as projected demand levels within the RFATS region.

FTA Section 5310 Funding

The FTA also administers the Section 5310 program. This program provides formula funding to states for the purpose of assisting private nonprofit groups in meeting the transportation needs of older adults and people with disabilities when the transportation service provided is unavailable, insufficient, or inappropriate to meeting these needs. Funds are apportioned based on each state's share of the population for these two groups. The program aims to improve mobility for seniors and individuals with disabilities by removing barriers to transportation service and expanding

transportation mobility options. Listed below in **Table 12.5** are the Section 5310 allocation amounts.

Table 12.5: Section 5310 Funding

Year	Allocation
2021	$22,300
2022	$22,635
2023	$22,974
2024	$23,319
2025	$23,668
2026	$24,023
2027	$24,384
2028	$24,750
2029	$25,121
2030	$25,498
2031	$25,880
2032	$26,268
2033	$26,662
2034	$27,062
2035	$27,468
2036	$27,880
2037	$28,298
2038	$28,723
2039	$29,154
2040	$29,591
2041	$30,035
2042	$30,485
2043	$30,943
2044	$31,407
2045	$31,878
2046	$32,356
2047	$32,841
2048	$33,334
2049	$33,834
2050	$34,342

Transportation Alternatives Funding

As noted previously, the RFATS region receives an annual allocation of Transportation Alternative (TA) funds from SCDOT to implement improvements to facilities for bicycles and pedestrians. MPOs are able to use up to 50% of sub-allocated TA funds to any STBG-eligible purpose so long as a competitive project selection process is maintained. This includes activities that would have been funded under the Safe Routes to School program (now reflected in TA). Listed below in **Table 12.6** are the TA allocation amounts. Since this funding program is periodically updated per the re-authorization of the federal transportation bill (currently the FAST Act) and assumed funding allocations is unknown, the yearly allocations are identified as a constant value related to the current allocation. This is due to the unknown future funding allocations and federal budgets.

Table 12.6: Transportation Alternatives Program Funding

Year	Allocation
2021	$115,000
2022	$115,000
2023	$115,000
2024	$115,000
2025	$115,000
2026	$115,000
2027	$115,000
2028	$115,000
2029	$115,000
2030	$115,000
2031	$115,000
2032	$115,000
2033	$115,000
2034	$115,000
2035	$115,000
2036	$115,000
2037	$115,000
2038	$115,000
2039	$115,000
2040	$115,000
2041	$115,000
2042	$115,000
2043	$115,000
2044	$115,000
2045	$115,000
2046	$115,000
2047	$115,000
2048	$115,000
2049	$115,000
2050	$115,000

Congestion Mitigation and Air Quality (CMAQ) Program

The use of CMAQ funds is also a permissible source of transit start-up and initial operating funding to enhance area mobility and transportation system efficiency through the use of public transportation. Although a smaller source of funding, it can nonetheless be considered as one element of transitional funding for further transit service development.

Listed below in **Table 12.7** are the CMAQ allocation amounts. Since this funding program is periodically updated per the re-authorization of the federal transportation bill (currently the FAST Act) and assumed funding allocations is unknown, the yearly allocations are identified as a constant value related to the current allocation. This is due to the unknown future funding allocations and federal budgets.

Table 12.7: Congestion Mitigation and Air Quality Program Funding

Year	CMAQ
2021	$2,300,000
2022	$2,300,000
2023	$2,300,000
2024	$2,300,000
2025	$2,300,000
2026	$2,300,000
2027	$2,300,000
2028	$2,300,000
2029	$2,300,000
2030	$2,300,000
2031	$2,300,000
2032	$2,300,000
2033	$2,300,000
2034	$2,300,000
2035	$2,300,000
2036	$2,300,000
2037	$2,300,000
2038	$2,300,000
2039	$2,300,000
2040	$2,300,000
2041	$2,300,000
2042	$2,300,000
2043	$2,300,000
2044	$2,300,000
2045	$2,300,000
2046	$2,300,000
2047	$2,300,000
2048	$2,300,000
2049	$2,300,000
2050	$2,300,000

State Infrastructure Bank

The South Carolina State Infrastructure Bank is an institution established to select and assist in financing major qualified projects by providing loans and other financial assistance to government units as well as private entities for constructing and improving highway and transportation facilities necessary for public purposes. These funds are potentially available for use in transit projects. Transit projects are only eligible for capital expenditures for transit equipment and facilities. Though it is important to note that no transit projects have been funded through the SIB to date.

Summary and Recommendations

Summary of Key Points

- Transportation needs in most, if not all localities far exceed the funding resources available,
- Revenue is provided through Federal, State and Local programs,
- "Year of Expenditure" costs were determined by assuming a 2.5% inflation rate per SCDOT,
- By reviewing revenues versus costs, a cost constrained financial plan can be developed to address transportation system needs in the RFATS Planning Area.
- RFATS has committed $10 Million of the allocated Guideshare funding towards bicycle and pedestrian facilities.

Recommendations

- Assist York County in pursuing a fifth "Pennies for Progress" program,
- Develop plans, regulations, policies, and procedures to protect future thoroughfare and collector street corridors and require contributions from developers,
- Assist City of Rock Hill in operating My Ride bus service,
- Continue to monitor the roadway congestion and evaluate mass transit opportunities,
- Continue the Capital Sales and Use Tax Program as a local funding source to leverage federal and state funds for road improvements,

- Continue to integrate new and/or improved pedestrian and bicycle facilities along with road improvements proposed in the "Pennies for Progress" program,
- Assist York County in supporting the South Carolina State Infrastructure Bank (SIB) for funding of I-77 Exit 90 (Carowinds Boulevard).

APPENDICES

APPENDIX 1

Transportation Conformity Analysis Report and Conformity Determination for the 2050 Long Range Transportation Plan and Metropolitan Transportation Improvement Program and Respective Resolutions

Rock Hill - Fort Mill Area Transportation Study

Transportation Conformity Analysis Report and Conformity Determination for the 2050 Long Range Transportation Plan and FY 21 - 27 Transportation Improvement Program

Adopted by RFATS Policy Committee April 23, 2021

This report was coordinated by the Rock Hill - Fort Mill Area Transportation Study (RFATS), in cooperation with the South Carolina Department of Health and Environmental Control, South Carolina Department of Transportation, and other agencies.

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Introduction

The purpose of this report is to document compliance with the provisions of the Clean Air Act Amendments of 1990 (CAAA) and the FAST Act legislation of 2015. The conformity determination for the 2050 Long-Range Transportation Plan (LRTP) and reaffirmation of the FY 2021-2027 Transportation Improvement Program (TIP) are based on a regional emissions analysis that utilized the transportation networks in those plans and emissions developed by S.C. Department of Health & Environmental Control (SCDHEC). All regionally significant federally funded projects in areas designated by the United States Environmental Protection Agency (EPA) as air quality non-attainment or maintenance areas must come from a conforming LRTP and TIP.

Transportation conformity is required to be performed every four years as a component of the LRTP/TIP update (required by June 10, 2021). This conformity determination meets those requirements. Furthermore, a recent D.C. Circuit Court Ruling (i.e., SCAQMD v EPA) has effectively reinstated the continued applicability of the 1997 ozone standard, in addition to the 2008 ozone transportation requirements. This conformity determination satisfies both requirements of the 1997 and 2008 ozone standards.

The Metropolitan Planning Organization (MPO) is required by FAST Act § 1114; 23 U.S.C. 149 to make a conformity determination on any newly adopted or amended fiscally-constrained LRTPs and TIPs. The intent of this report is to document the conformity determinations for the 2050 LRTP and reaffirm the 2021-2027 TIP for the Rock Hill – Fort Mill Area Transportation Study (RFATS) MPO. In addition, the United States Department of Transportation (USDOT), specifically, the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA), must make a conformity determination on the LRTPs and TIPs in all non-attainment and maintenance areas. In 2016 EPA officially reclassified RFATS as being in "attainment" for ground level ozone and changed its air quality status to a "maintenance area."

The MPO Conformity Determination for the 2050 LRTP and reaffirmation of the FY 2021-2027 TIP was approved on April 23, 2021. By this action, the MPO demonstrated that the 2050 LRTP and FY 2021-2027 TIP are consistent with Section 176(c) of the Clean Air Act, the State Implementation Plan, FAST Act § 1114; 23 U.S.C. 149, and 40 CFR Parts 51 and 93. The conformity demonstrations are documented by the MPO and SCDHEC in this report. It includes the regional emissions test comparison prepared for the 2050 LRTP and 2021-2027 TIP, demonstrating compliance with the applicable motor vehicle emissions tests.

In addition, this report documents the interagency consultation process, public participation process, and analysis methodology used to demonstrate transportation conformity.

USDOT made its conformity determination on the 2050 LRTP and reaffirmation of the FY 2021-2027 TIP on June 17, 2021. A copy of the letter and resolution approving the conformity determination are included in Appendix A.

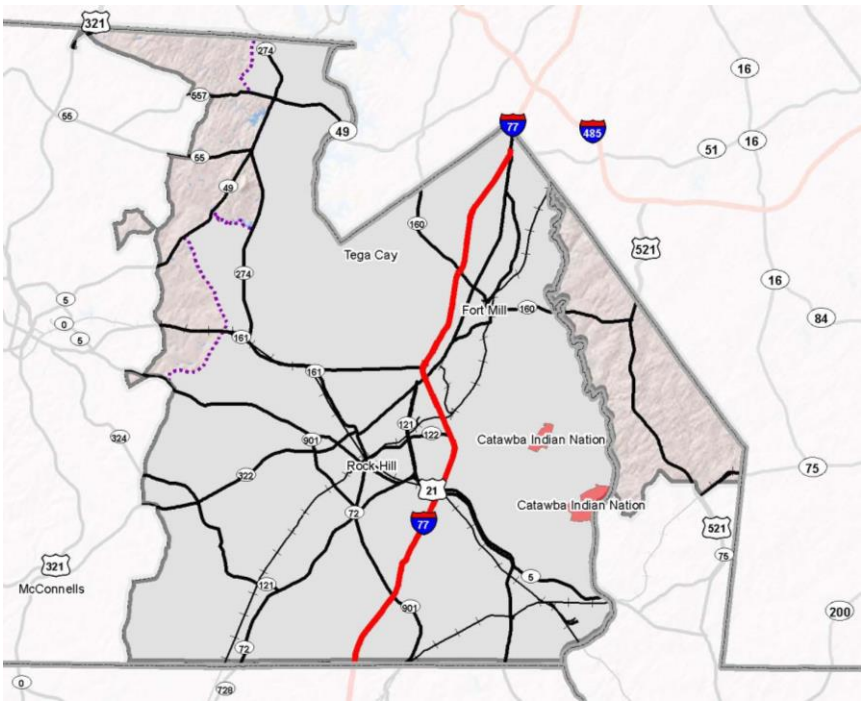
The LRTP is a federally-mandated, long-term planning document detailing the transportation improvements and policies to be implemented in the RFATS Study Area. In addition, it outlines the region's goals and objectives, and addresses transportation related issues and impacts over a 20-year minimum horizon. The LRTP is updated on a four (4) year cycle. This 2050 LRTP is an update to the 2045 LRTP plan.

Air Quality Planning

On July 28, 2015, the EPA re-designated to attainment the North Carolina portion of the Charlotte-Rock Hill, NC-SC, nonattainment area for the 2008 8-hour ozone National Ambient Air Quality Standards (NAAQS), effective August 27, 2015. This was published in the Federal Register (80 FR 44873). On December 11, 2015, the EPA redesignated to attainment the South Carolina portion of the Charlotte-Rock Hill, NC-SC, nonattainment area for the 2008 8-hour ozone NAAQS, effective January 11, 2016, as shown in Appendix F. This was published in 80 FR 76865. The EPA determined that this area attained the 2008 ozone NAAQS by the applicable attainment date in order to satisfy the agency's obligation under CAAA section 181(b)(2)(A).

Figure 1 to the right depicts the RFATS Study Area as compared to the designated non-attainment area. It is important to note that the Catawba Indian Nation, shown in red, while inside the boundary non-attainment area is excluded from the non-attainment designation. The area shown in grey is the non-attainment area and the area in the red shaded area is the RFATS boundary.

The new RFATS Study Area exceeds the non-attainment area in the Lancaster County panhandle area and along the western side. As noted, those areas are shown with the red shading.



Latest Planning Assumptions

The planning assumptions and travel forecasts used in the Metrolina model to develop the 2050 LRTP and 2021-2027 TIP were also used in this conformity analysis. These are the latest planning assumptions as required in 40 CFR 93.110. They include estimates of future population, employment, travel and congestion, and are less than five years old.

The RFATS Study Area is a rapidly growing area within the Charlotte, NC metropolitan statistical area (MSA). Mobility has been focused on a highway network to support single occupancy vehicles. Existing transit services are limited but include express bus service between Rock Hill and Charlotte; vanpools; and a demand response transportation service.

The RFATS Study Area is part of the Metrolina Regional Travel Demand Model (MRM), which continues to be used as part of the regional emissions analysis. The MRM is a regional travel demand model that was developed for use in regional planning applications and air quality conformity. It covers all of Mecklenburg County (NC), Union County (NC), Cabarrus County (NC), Rowan County (NC), Lincoln County (NC), Gaston County (NC), Stanly County (NC), York County (SC), Iredell County (NC), Cleveland County (NC), and portions of Lancaster County (SC). Thus, the model covers an area larger than the RFATS area and larger than the maintenance area. Appendix B lists the projects that were included in this model for the purposes of the regional emissions analysis.

MRM20v1.0 is a simplified tour-based model with a 2018 base/validation year and horizon years of 2025, 2035, 2045, and 2050. 2026 is also modeled for the purpose of air quality conformity. MRM20v1.0 builds on the major model update process undertaken with the 2010 Census that included the collection of new travel behavior data as well as building on previously collected data. Tour frequency, destination choice, and time of day models are calibrated based on data collected in the 2012 Household Travel Survey. The mode choice component of the model remains trip-based and is calibrated based on data collected in the 2012 Household Travel Survey and the 2013 Transit On-Board Survey.

Latest Emissions Model

Conformity analysis used the MOVES 2014b model. MOVES 2014b is the emissions modeling software used in the region's conformity determination, as was with the 2050 LRTP Conformity Report.

For on-road mobile sources, the emissions reduction target is encapsulated into an area's motor vehicle emissions budget (MVEB), which identifies the allowable on-road emissions level at which the required air quality standards can be maintained. These budgets are, in effect, a cap on emissions representing the holding capacity of the area. While the MVEBs are based on the emissions inventory projection, they may not be identical. There is an established Motor Vehicle Emissions Budget (MVEB) for the RFATS maintenance area, shown in **Table 1**. Air quality modeling results from each analysis year were compared with the MVEB to determine if the standard can be maintained if the proposed transportation projects are implemented.

Table 1 – RFATS Maintenance Area Motor Vehicle Emission Budgets (MVEBs)		
Year	**NOx, kg/day**	**VOC, kg/day**
2014	9,112	3,566
2026	9,998	2,955

Off-Model Calculations

There were no off-model calculations performed as a part of this analysis.

Interim Emissions Tests

Since the RFATS maintenance area has an established Motor Vehicle Emission Budget, no interim emissions test was required.

Transportation Control Measures

As required in 40 CFR 93.113, the LRTP must provide for timely completion or implementation of all Transportation Control Measures (TCMs) in the applicable Statewide Implementation Plan (SIP), and nothing in the LRTP may interfere with the implementation of any TCM in the SIP. It is important to note that there are currently no TCMs applicable to York County approved in the SC SIP.

Interagency Consultation

The 2050 LRTP and FY 2021 - 2027 TIP and Conformity Determination have undergone interagency consultation as required in 40 CFR 93.112. Regular interagency consultation meetings involving RFATS, SCDOT, FHWA, SCDHEC, EPA, and York County have been held. Interagency consultation began in February 2, 2020 with monthly meetings to discuss and agree upon the LRTP and TIP update schedule, model parameters, latest planning assumptions, horizon years, exempt projects, and regionally significant projects.

The Interagency Consultation Committee (IAC) selected horizon years for the emissions reduction test in accordance with the requirements of 40 CFR Part 93.106. Specifically, the selected analysis years are 2025 (interim year), 2026 (budget year), 2035 (interim year), 2045 (interim year), and 2050 (plan horizon year).

The IAC determined exempt projects using Table 2 of 40 CFR Part 93.126 and Table 3 of 40 CFR 93.127. The IAC defined regionally significant projects using the definition of regionally significant projects in 40 CFR Part 93.101.

A summary of issues raised and responses, along with any written agency comments, are provided in Appendix D.

Public Participation

The 2050 LRTP and FY 2021-2027 TIP were reviewed by the public in accordance with RFATS' Public Participation Plan. This Conformity Determination Report was also made available for public review. A public hearing was held on March 26, 2021. Copies of citizen comments and agency responses to them are attached to this report in Appendix E.

Financial Constraint

The 2050 LRTP and FY 2021-2027 TIP are fiscally constrained in accordance with 40 CFR 93.108.

Finding of Conformity

The Rock Hill – Fort Mill Area Transportation Study finds that the 2050 LRTP meets the conditions described earlier in this document and thus conforms to the intent of the Clean Air Act and the requirements of 40 CFR 93. **Table 2** shows the results for each analysis year compared with the MVEB.

Table 2 – York County 8-Hour Ozone Maintenance Area Transportation Conformity Analysis

Year	Source	NOx		VOC	
		Emissions, kg/day	MVEB, kg/day	Emissions, kg/day	MVEB, kg/day
2025	MOVES2014b	3,446	9,112	1,589	3,566
2026	Interpolated	3,235	9,998	1,502	2,955
2035	MOVES2014b	2,396	9,998	1,170	2,955
2045	MOVES2014b	2,595	9,998	1,269	2,995
2050	MOVES2014b	2,845	9,998	1,388	2,995

Copies of the adopting resolution and conformity finding are attached in Appendix A.

Cross-Reference Index

Table 3 below charts RFATS compliance with applicable federal requirements.

Table 3 – Cross-Reference Index	
Conformity Requirement	**Page # or Appendix**
Formal findings of conformity	5
The purpose of this report is to comply with the requirements of the CAAA, FAST Act, and 40 CFR 51 and 93	1
The former and current classification of the air shed and the pollutants for which the air shed was classified as maintenance	1
The date the region was designated maintenance	1
The emissions expected from implementation of the long-range plan are equal to, or less than, the Motor Vehicle Emissions Budget	5
The adopted long-range plan is fiscally constrained (§93.108)	5
The latest planning assumptions were used in the conformity analysis (§93.110). The latest emissions model was used in the conformity analysis (§93.111)	3
The list of federally funded T.C.M. activities included. (§93.113)	5
Conformity determined according to §93.105 and the adopted public involvement procedures	5
Dates of the Technical Coordinating Committee reviews of the conformity determination and the recommendation	4
SIP emissions budget test or baseline comparison demonstrates conformity of the adopted long-range transportation plan	5
Listing of projects in each analysis year (highway)	Appendix B
VMT & Summary	Appendix F
Off-model analysis performed	N/A
Significant comments of reviewing agencies addressed by the MPO, or a statement that no significant comments were received	Appendix D
Emissions Calculations	N/A

Appendix A: Adoption and Approval Resolutions / Letters

RESOLUTION ADOPTED BY THE ROCK HILL-FORT MILL AREA TRANSPORTATION STUDY (RFATS) POLICY COMMITTEE APPROVING THE 2050 LONG RANGE TRANSPORTATION PLAN UPDATE AND REAFFIRMING THE FY 21-27 TRANSPORTATION IMPROVEMENT PROGRAM

WHEREAS, the Rock Hill-Fort Mill Area Transportation Study (RFATS), and the South Carolina Department of Transportation are actively involved in transportation planning for the Rock Hill-Fort Mill Study Area; and

WHEREAS, the Rock Hill-Fort Mill Study Area has an existing Long Range Transportation Plan and Transportation Improvement Program; and

WHEREAS, the RFATS Policy Committee is the duly recognized transportation decision making body for the 3–C transportation planning process in the Rock Hill-Fort Mill Study Area as required by 23 CFR Part 134; and

WHEREAS, the RFATS Technical Team and the Policy Committee for the Study Area have prepared an update to the 2050 Long Range Transportation Plan and reaffirm the FY 2021-2017 Transportation Improvement Program; and

WHEREAS, it is recognized that the proper movement of traffic within and through the Rock Hill-Fort Mill Study Area is a highly desirable element of the Long Range Transportation Plan for the orderly growth and development of the Study Area; and

WHEREAS, after the full study of the updated Long Range Transportation Plan and reaffirmation of the Transportation Improvement Program, the RFATS Policy Committee of the Rock Hill-Fort Mill Study Area agrees it to be in the best interests of the Study Area to adopt said Plan and Program; and

WHEREAS, the public has had the opportunity to review and comment on the Long Range Transportation Plan and Transportation Improvement Program through public meetings and document sharing.

NOW, THEREFORE, BE IT RESOLVED that members of the RFATS Policy Committee approve and endorse the updated 2050 Long Range Transportation Plan and reaffirm that the FY 2021-2027 Transportation Improvement Program meets conformity as prepared by the RFATS Technical Team and the South Carolina Department of Transportation on this 23rd day of April, 2021.

BE IT FURTHER RESOLVED that the RFATS Policy Committee authorizes the Chairman to sign said Resolution on behalf of all the membership.

ATTEST:

David F. Hooper 4/23/21
David F. Hooper, MPO Administrator

APPROVED:

David O'Neal
David O/Neal, Chair

RESOLUTION FINDING THE ROCK HILL-FORT MILL AREA TRANSPORTATION STUDY (RFATS) 2050 LONG-RANGE TRANSPORTATION PLAN AND REAFFIRM THE FY 21-27 TRANSPORTATION IMPROVEMENT PROGRAM IN CONFORMITY WITH THE SOUTH CAROLINA STATE IMPLEMENTATION PLAN FOR AIR QUALITY

WHEREAS, the Policy Committee is the duly recognized decision-making body of the 3-C transportation planning process for the Rock Hill-Fort Mill Area Transportation Study; and

WHEREAS, the updated RFATS 2050 Long Range Transportation Plan meets the planning requirements of 23 CFR Part 450.322; and

WHEREAS, the FY 2021-2027 Transportation Improvement Program is a subset of the 2050 Long Range Transportation Plan; and

WHEREAS, the United States Environmental Protection Agency (USEPA) designated RFATS as maintenance for ozone on December 11, 2015; and

WHEREAS, the transportation conformity analysis of the RFATS 2050 Long Range Transportation Plan is based on the most recent estimates of population, employment, travel, and congestion; and

WHEREAS, the RFATS 2050 Long Range Transportation Plan is financially constrained; and

WHEREAS, there are no transportation control measures in the South Carolina State Implementation Plan (SIP) that pertain to the RFATS area; and

WHEREAS, the most recent vehicle emissions model was used to prepare the quantitative emissions analysis dated April 23, 2021; and

WHEREAS, those projects and programs included in the RFATS 2050 Long Range Transportation Plan contribute to annual emissions reductions as shown by the quantitative emissions analysis dated April 23, 2021

NOW, THEREFORE BE IT RESOLVED, that the RFATS Policy Committee reaffirms the FY 2021-2027 Transportation Improvement Program and finds that the RFATS 2050 Long Range Transportation Plan conform to the purpose of the South Carolina State Implementation Plan in accordance with the Clean Air Act as amended (CAAA), and the Fixing America's Surface Transportation (FAST) Act on this 23rd day of April, 2021.

BE IT FURTHER RESOLVED, that the RFATS Policy Committee authorizes the Chairman to sign said Resolution on behalf of all the membership.

ATTEST:

David Hooper

David F. Hooper, MPO Administrator

APPROVED:

David O'Neal

David O'Neal, Chair

METROLINA REGIONAL MODEL ASSUMPTIONS for RFATS 2050 LRTP Update and Conformity Determination 2021

Updated 10/30/2020

2025 Metrolina Regional Model Build Network

EMISSION COMPARISON YEAR

Regionally Significant	Exempt	Non-Exempt	Outside of Non-Attainment Area	STREET NAME	PROJECT LIMITS	RFATS STUDY AREA	PROJECT LENGTH (Mi.)	Existing	Proposed	FACILITY TYPE	Federal Functional Classification	Project Manager	Actual Completion Date	Model Network Year	Cost Feasible 2045 LRTP	Pennies For Progress
X		X		US 21 North	Fort Mill Northern Bypass to SC 51	Yes	2.1	2	5	C	Minor Arterial		RW 2017, CON 2021	2025	No	Yes
X		X		US 21 North	Fort Mill Northern Bypass to SC 160	Yes	2.8	2	5	C	Minor Arterial			2025	No	Potential PIV
X		X		Tega Cay- Gold Hill Connector	SC 160 to Gold Hill Road	Yes	0.5	N/A	New 2 lane	U	Collector			2025	No	Yes
X		X		Springhill Farm Road	US 21 to SC 51	Yes	0.7	2	5	C	Major Collector			2025	No	Yes
X		X		Fort Mill Southern Parkway (Ph. 2)	Dobys Bridge Road to SC 160	Yes	2	N/A	New 2 lane	U	Minor Arterial	Steven Moss		2025	No	Yes
	X			Ebinport Road	Cherry to India Hook	Yes	2.0	2	3	C	Minor Arterial			2025	No	Potential PIV
	X			SC 160	Gold Hill to Zoar Road	Yes	0.5	2	3	C	Other Principal Arterial	Jim Gaddy		2025	No	Yes
X		X		SC 160	Gold Hill Road to NC State Line	Yes	1.0	2	5	C	Other Principal Arterial		RW 2016; CON 2019	2025	No	Yes
X		X		Celriver Road S-50 (Phase 2)	0.100 miles north of S-645 to SC 122	Yes	2.1	2	5	C	Collector			2025	Yes	Potential PIV
X		X		Fort Mill Southern Parkway	I-77 to Holbrook Road	Yes	3.0	2	5	C	Minor Arterial			2025	No	Potential PIV
X		X		SC 51	US 21 to NC Line	Yes	1.3	2	5	C	Minor Arterial	Ron Smith	RW 2017; CON 2021	2025	No	Yes
	X			SC 72	SC 901 to Rambo Road	Yes	2.0	2	3	C	Other Principal Arterial	Jim Gaddy	RW 2019; CON 2022	2025	No	Yes
X		X		New Roadway Segment #1	New Interchange Connection to Paragon Way / Celriver	Yes	0.8	N/A	3	C	Major Collector			2025	Developer	
X		X		New Roadway Segment #2	New Interchange Connection to Mt Gallant Road	Yes	0.8	N/A	4	C	Major Collector			2025	Developer	
	X			Mt. Gallant Rd.	SC 161 to Twin Lakes Road	Yes	2.5	2	3	C	Minor Arterial	Jim Gaddy	RW 2019; CON 2022	2025	No	Yes
X		X		Zoar Road Extension	SC 160 to Gold Hill Road	Yes	0.8	N/A	New 2 lane	C	Collector			2025	No	Potential PIV
	X			Riverview Road	Eden Terrace to Celanese Road	Yes	0.8	2	3	C	Collector			2025	No	Yes
X		X		Celriver Road S-50 (Phase I)	US 21 to 0.100 miles north of S-645	Yes	0.9	2	5	C	Collector	Ivan McCorkle	RW 2015; CON 2018	2025	Yes	Yes
X		X		SC 557	Kingsbury to SC 49	Yes	2.1	2	5	C	Minor Arterial		RW 2018; CON 2021	2025	No	Yes
X		X		SC 274/279 (S-133 Pole Branch Rd)	SC 274 from Landing Pointe Dr to Pole Branch Rd	Yes	0.6	2	5	C	Collector		RW 2017; CON 2020	2025	No	Yes
	X			SC 274/279 (S-133 Pole Branch Rd)	Pole Branch Road to NC State Line	Yes	1.9	2	3	C	Collector		RW 2017; CON 2020	2025	No	Yes
X		X		SC 160	US 21 to Sutton Road	Yes	1.0	4	6	C	Other Principal Arterial		ROW 2018; CON 2023	2025	No	Yes
	X			SC 160	Sugar Creek / Co. Line to Fort Mill N. Bypass	Yes	0.8	2	3	C	Other Principal Arterial		ROW 2020; CON 2021	2025	No	Yes
	X			McConnells Hwy.	Heckle to Falls Road	Yes	2.1	2	3	C	Major Collector	Jim Gaddy	RW 2015; CON 2019	2025	No	Yes
	X			Mt. Gallant Rd.	Dave Lyle Blvd to Anderson Road	Yes	0.3	2	3	C	Major Collector	Jim Gaddy	RW 2015; CON 2019	2025	No	Yes
	X			Mt. Gallant Rd.	John Ross Pkwy to Anderson Road	Yes	1.2	2	5	C	Major Collector					
X		X		Riverview / Riverchase Area Ph III	Automall and Riverview Road	Yes	0.2	N/A	New 2 lane	U	Collector			2025	No	
	X			Sutton Road	US 21 to Sixth Baxter Crossing	Yes	2.2	2	3	C	Collector			2025	No	Potential PIV
X		X		****Eden Terrace	Anderson to Dunkins Ferry	Yes	1	N/A	New 3 lane	C	Collector			2025	No	
X		X		****Riverview Rd. Extension	Eden Terrace to Mt. Gallant Rd.	Yes	1.2	N/A	New 3 lane	C	Major Collector			2025	No	No
X		X		****Corporate Connector	Cel-River & Commerce (Riverwalk Industrial)	Yes	1.3	N/A	New 3 lane	C	Major Collector			2025	No	No
X		X		****Galleria	Meeting and Cel-river @ Waterford Ext.	Yes	1.3	N/A	3	B	Minor Arterial			2025	No	No
X		X		****Galleria Extension	US 21 to Galleria	Yes	0.5	N/A	2	C	Collector			2025	No	No
	X			Ebenezer Road	Frank Gaston(Old Pointe) to SC 161 Celanese	Yes	1.1	2	3	C	Minor Arterial		RW 2021; CON 2023	2025	No	Potential PIV

*Project identified in I-77 Traffic Study

**** Projects identified in I-77 Traffic Study & privately funded.

2035 Metrolina Regional Model BuildNetwork

EMISSION COMPARISON YEAR

Regionally Significant	Exempt	Non-Exempt	Outside of Non-Attainment Area	STREET NAME	PROJECT LIMITS	RFATS STUDY AREA	PROJECT LENGTH (Mi.)	Existing	Proposed	FACILITY TYPE	Federal Functional Classification	Project Manager	Actual Completion Date	Model Network Year	Cost Feasible 2045 LRTP	Pennies For Progress
	X			Mt. Gallant Rd.	Twin Lakes Rd. to Museum Rd.	Yes	2.3	2	3	C	Minor Arterial			2035	No	
	X			White Street	McCammon to US 21 Bypass	Yes	0.9	2	3	C	Principal Arterial			2035	No	
	X			N. White Street	US 21 to Old Nation Road	Yes	2.1	2	3	C	Collector			2035	No	
	X			N. Dobys Bridge Road	SC 160 to Fort Mill Southern Parkway	Yes	2.0	2	3	C	Minor Arterial			2035	No	
X		X		S. Dobys Bridge Road	Fort Mill Southern Pkwy to Lancaster County Line	Yes	3.7	2	5	C	Collector			2035	No	
X		X		Dobys Bridge Road (Lancaster Co.)	US 521 to York County Line	Yes	1.2	2	5	C	Collector			2035	No	
X		X		SC 72 (supplement to 2003 PFP)	SC 901 to Rambo Road	Yes	2.0	3	5	C	Other Principal Arterial			2035	No	
X		X		Fort Mill Southern Parkway	Holbrook Road to SC 160	Yes	2.0	2	5	C	Minor Arterial			2035	No	
X		X		US 21 North	Sutton Road to SC 160	Yes	2.1	2	5	C	Minor Arterial			2035	No	Potential PIV
	X			Munn Road	Harris St. to Fort Mill High School	Yes	0.5	2	3	C	Collector			2035	No	
X		X		SC 160	Rosemont Drive to Fort Mill N. Bypass	Yes	2.1	3	5	C	Other Principal Arterial			2035	Yes	
X		X		John Ross Parkway	Dave Lyle to Mt Gallant Road	Yes	0.5	2	4	C	Collector			2035	No	
	X			Springsteen Road	US 21 to Dave Lyle Blvd.	Yes	1.4	2	3	C	Collector			2035	No	
	X			Marvin Road	US 521 to Union County Line	Yes	1.3	2	3	C	Collector			2035	No	
	X			Possum Hollow Road	US 521 to SC 160	Yes	3.3	2	3	C	Collector			2035	No	
	X			Pleasant Road	Gold Hill Road to SC 160	Yes	5.1	2	3	C	Collector			2035	No	
X		X		SC 49	SC 274 to SC 557	Yes	2.1	5	7	C	Other Principal Arterial			2035	No	
	X			Harrisburg Road	SC 160 to Mecklenburg County Line	Yes	4.6	2	3	C	Collector			2035	No	
X		X		Fort Mill Northern Bypass (Springfield	SC 160 to I-77	Yes	4.0	2	5	C	Minor Arterial			2035	No	
X		X		India Hook Road	Celanese Road to New Bridge	Yes	2.8	2	5	C	Major Collector			2035	No	
	X			River Parkway	Banks Road to Dobys Bridge Road	Yes		N/A	2	C	Collector			2035	No	
	X			Cel-River / Red River Road	SC 122 to US 21 (moving south from SC 122)	Yes	2.2	2	3	C	Collector			2035	No	
X		X		****New Connector Across RR	Riverwalk Spine Rd & Galleria Blvd.	Yes	0.3	N/A	3	C	Collector			2035	No	No
X		X		*Galleria to Manchester Flyover	Commerce to John Ross Parkway	Yes	1.5	N/A	4	D	Minor Arterial			2035	No	

**** Projects identified in I-77 Traffic Study & privately funded.

2045 Metrolina Regional Model BuildNetwork

EMISSION COMPARISON YEAR

Regionally Significant	Exempt	Non-Exempt	Outside of Non-Attainment Area	STREET NAME	PROJECT LIMITS	RFATS STUDY AREA	PROJECT LENGTH (Mi.)	Existing	Proposed	FACILITY TYPE	Federal Functional Classification	Project Manager	Actual Completion Date	Model Network Year	Cost Feasible 2045 LRTP	Pennies For Progress
	X			Mt. Gallant Rd.	Museum Road to SC 274	Yes	2.3	2	3	C	Minor Arterial			2045	No	
	X			Pleasant Road	Carowinds Blvd to Gold Hill Road	Yes	5.1	2	3	C	Collector			2045	No	
X		X		US 521	Jim Wilson Road to NC State Line	Yes	5.8	5	7	C	Other Principal Arterial			2045	No	
	X		X	Ridge Road	SC 557 to US 321	No	5.0	2	3	C	Collector			2045	No	
X		X		Henry Harris Road	Jim Wilson Road to Marvin Road	Yes	4.3	2	5	C	Major Collector			2045	No	
	X			Whites Road	Fort Mill Southern Pkwy to JW Wilson Road	Yes	1.1	2	3	C	Collector			2045	No	
	X			Eden Terrace	Bradley to Anderson	Yes	1.5	2	3	C	Major Collector			2045	No	
	X			Barberville Road	SC 160 to Mecklenburg County Line	Yes	2.8	2	3	C	Collector			2045	No	
	X			Shelley Mullis Road	US 521 to Union County Lines	Yes	2.5	2	3	C	Collector			2045	No	

2050 Metrolina Regional Model BuildNetwork

EMISSION COMPARISON YEAR

Regionally Significant	Exempt	Non-Exempt	Outside of Non-Attainment Area	STREET NAME	PROJECT LIMITS	RFATS STUDY AREA	PROJECT LENGTH (Mi.)	Existing	Proposed	FACILITY TYPE	Federal Functional Classification	Project Manager	Actual Completion Date	Model Network Year	Cost Feasible 2045 LRTP	Pennies For Progress
	X			Mt. Gallant Rd.	Museum Road to SC 274	Yes	2.3	2	3	C	Minor Arterial			2045	No	
	X			Pleasant Road	Carowinds Blvd to Gold Hill Road	Yes	5.1	2	3	C	Collector			2045	No	
X		X		US 521	Jim Wilson Road to NC State Line	Yes	5.8	5	7	C	Other Principal Arterial			2045	No	
	X		X	Ridge Road	SC 557 to US 321	No	5.0	2	3	C	Collector			2045	No	
X		X		Henry Harris Road	Jim Wilson Road to Marvin Road	Yes	4.3	2	5	C	Major Collector			2045	No	
	X			Whites Road	Fort Mill Southern Pkwy to JW Wilson Road	Yes	1.1	2	3	C	Collector			2045	No	
	X			Eden Terrace	Bradley to Anderson	Yes	1.5	2	3	C	Major Collector			2045	No	
	X			Barberville Road	SC 160 to Mecklenburg County Line	Yes	2.8	2	3	C	Collector			2045	No	
	X			Shelley Mullis Road	US 521 to Union County Lines	Yes	2.5	2	3	C	Collector			2045	No	

Appendix C: Emissions Calculation Spreadsheet and MOVES Input

York County, SC Nonattainment Area 2021 LRTP Conformity Test December 2020							
		NOx			VOC		
Year	Source	Emissions, kg/day	2008 Ozone Std Maintenance Plan MVEB, kg/day	Budget Test	Emissions, kg/day	2008 Ozone Std Maintenance Plan MVEB, kg/day	Budget Test
2025	MOVES2014b	**3,446**	**9,112**	***pass***	**1,589**	**3,566**	***pass***
2026 (budget year)	MOVES2014b	**3,235**	**9,998**	***pass***	**1,502**	**2,955**	***pass***
2035	MOVES2014b	**2,396**	**9,998**	***pass***	**1,170**	**2,955**	***pass***
2045	MOVES2014b	**2,595**	**9,998**	***pass***	**1,269**	**2,955**	***pass***
2050	MOVES2014b	**2,845**	**9,998**	***pass***	**1,388**	**2,955**	***pass***

MOVES Technical Guide references and inputs/selections made for the MOVES analysis for the RFATS 2021 LRTP

Area to be modeled

York County maintenance area for the 2008 8-hour ozone standards (partial York County)

Model version

MOVES2014b

Scale

County

Calculation Type

Inventory mode

Motor Vehicle Emissions Budgets (MVEB or budget)

The budgets are from the 2008 Ozone Std Maintenance Plan.

2014 budgets:

- NOx 9,112 kg/day
- VOC 3,566 kg/day

2026 budgets:

- NOx 9,998 kg/day
- VOC 2,955 kg.day

Analysis Years

2025, 2026 (budget year) 2035, 2045, 2050.

Time Spans

- *For SIP and regional conformity analysis, hour should be selected for Time Aggregation Level.*
- *Users should choose the appropriate months for the pollutant being analyzed, i.e., the summer ozone season for NOx and hydrocarbons, or the winter CO season.*
- *Weekday data should be used for any inventory that represents a typical summer or winter day.*
- *To properly estimate emissions for a day, month or year, the user must select all 24 hours. (2.3, technical guide)*

Time Spans selections:

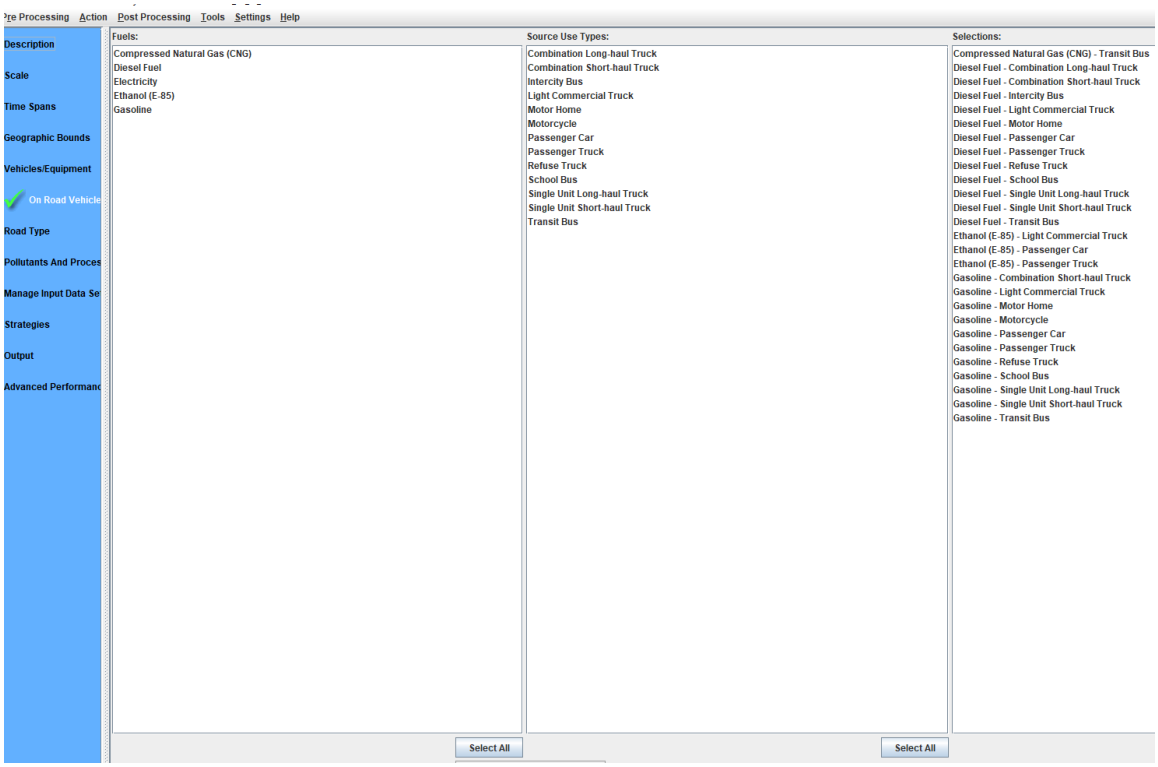
- Aggregation level: Hour
- Months: July
- Day type: Weekdays
- Hours: 24 hours

Vehicles/Equipment

For SIP and regional conformity analyses, users must select the appropriate fuel and vehicle type combinations in the On Road Vehicle Equipment panel to reflect the full range of vehicles that will operate in the county. In general, users should simply select all valid diesel, gasoline, ethanol (E85) and CNG (only

transit buses) vehicle and fuel combinations. Ethanol should be selected even if there is no E85 fuel sold in the area. Flex-fueled E-85 capable vehicles are a component of the vehicle fleet in every county in the U.S. and MOVES automatically assigns some VMT to these vehicles (3.5, technical guide)

The vehicle equipment selection includes all diesel, gasoline, ethanol (E85) and CNG vehicle and fuel combinations.



Road Type

All SIP and regional conformity analyses must include the Off-Network road type in order to account for emissions from vehicle starts, extended idle activity, and evaporative emissions (for hydrocarbons). (3.6, technical guide)

All road types (1,2,3,4,5) have been added.

Pollutants/processes

Processes in MOVES are mutually exclusive types of emissions and users must select all processes associated with a particular pollutant in order to account for all emissions of that pollutant. For example, there are 11 separate pollutant processes in MOVES for hydrocarbon emissions. All 11 of these processes must be selected to properly account for all hydrocarbon emissions from motor vehicles. (3.7, technical guide)

All processes for total gaseous hydrocarbons, non-methane hydrocarbons, VOC and NOx have been selected, except refueling emissions, since these are already captured in our area source inventory. (EPA is aware of this selection.)

Output Emission Detail

Output at the Hour level is recommended for Time unless the user is certain that emission results are not needed by time of day. (2.10.4, technical guide)

24-Hour Day has been selected.

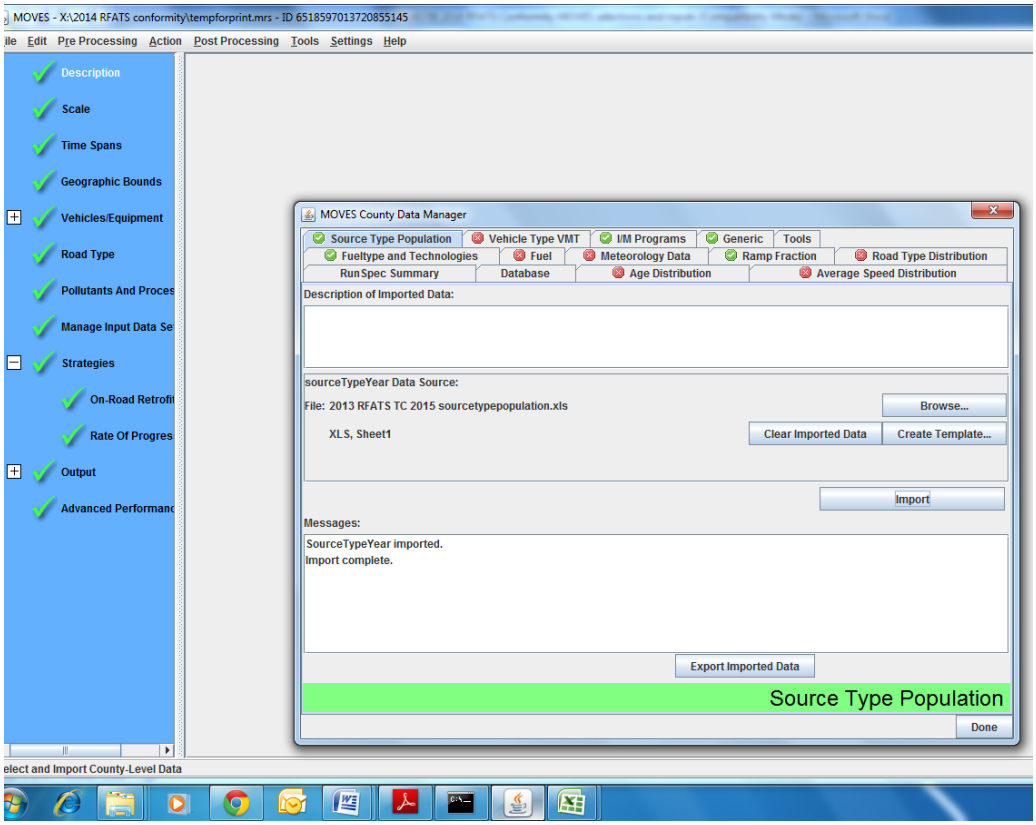
Units

Kilograms have been selected. Kg/day has been used since the RFATS Attainment Demonstration submitted in 2007.

Source Type Population

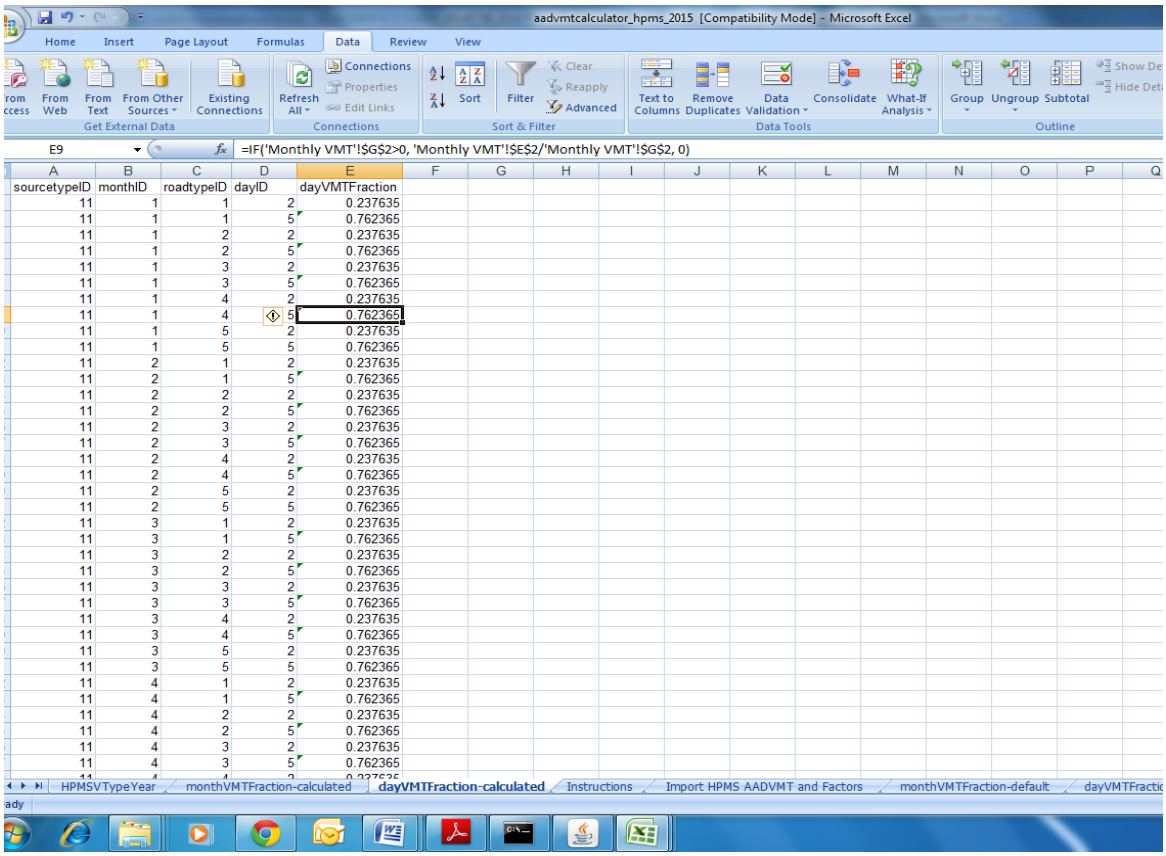
Source type (vehicle type) population is used by MOVES to calculate start and evaporative emissions. Because vehicle population directly determines start and evaporative emission, users must develop local data for this input. If population is not available for a particular source type, users could estimate population for that source type based on the MOVES default split of that source type within the HPMS vehicle class. In the absence of any other source of population data, users could base population estimates on the VMT estimates for a particular source type and the ratio of MOVES default population to VMT by source type. (3.3, technical guide)

Input files will be developed using the most recent available July 31 or August 1 SCDMV snapshot of York County vehicle population and the default York county source type population data from the same year, exported from MOVES. For this conformity, analysis, August 1, 2020 data was used. SCDMV data does not provide the detail that would allow vehicles to be assigned to the MOVES vehicle types for this input. For this reason we use the total vehicle population from SCDMV, and use the default distribution from MOVES as needed to assign the vehicles. Motorcycle population from the SCDMV snapshot can be used as is. The total passenger vehicle population from the SCDMV data is distributed among cars and trucks in the same ratio as cars and trucks are distributed in the MOVES default population. Vehicles designated as "trailers" are removed from the SCDMV population total. The remaining vehicles are assigned to the other MOVES categories in the same proportions as they are distributed in MOVES. Currently the ratio of 2010 RFATS population to 2010 York County population is used to apportion vehicles to RFATS. (When 2020 Census data is available, the ratio of 2020 *maintenance area population* to 2020 York County population should be used - the nonattainment/maintenance area was originally based on the RFATS boundary, but the RFATS boundary has since changed.) Past vehicle population trends will be applied to future years.



Vehicle Type VMT

VMT data from the Metrolina model and averaged data from three consecutive SCDOT functional class annual reports, years 2011-2013, is used for the VVMT files. The SCDOT functional class annual report data used for this input is sparse and represents the entire state. Based on two three-year averages (2008-2010 and 2011-2013), it seemed apparent that averaging three years was not sufficient to mitigate the variability. At the time of the redesignation request for the 2008 ozone standard, submitted in 2015, the IAC agreed to use the same three-year average for all comparison to the **2008 budgets** (2014 and 2026) for the sake of consistency.



Fuel Formulation and Supply

In general, users should first review the default fuel formulation and fuel supply data, and then make changes only where local volumetric fuel property information is available. The lone exception to this guidance is in the case of RVP where a user should change the value to reflect the regulatory requirements and differences between ethanol- and non-ethanol blended gasolines. (3.9, technical guide)

RVP default changed to required RVP of 9.0.

Meteorology

Local temperature and humidity data are required inputs for SIP and regional conformity analyses with MOVES….MOVES requires a 24-hour temperature and humidity profile to model a full day of emissions on an hourly basis.

For ozone season analysis, users can enter the local average temperature profile (which could be based on average minimum and maximum temperatures) for July, or for the three month period that best represents the area's ozone season (typically June, July and August; or July, August, and September). 4.2, technical guide)

Surface hourly data for the Charlotte International Airport is used. Average hourly temperatures and relative humidity were calculated for the month of July using the years 2004 – 2010.

Road Type Distribution

The road type distribution files represent averaged data from three consecutive SCDOT functional class annual reports, years 2011-2013. The SCDOT functional class annual report data used for this input is sparse and represents the entire state. Based on two three-year averages (2008-2010 and 2011-2013), it seemed apparent that averaging three years was not sufficient to mitigate the variability. At the time of the redesignation request for the 2008 ozone standard, submitted in 2015, the IAC agreed to use the same three-year average for all comparison to the **2008 budgets** (2014 and 2026) for the sake of consistency.

Age Distribution

For SIP and conformity purposes, EPA recommends and encourages states to develop local age distributions. If users are unable to acquire data to develop a local age distribution or have reason to believe that data about locally registered vehicles is not necessarily representative of that entire portion of the fleet then MOVES national default age distributions can be used. (3.4, technical guide)

Defaults are used for age distribution. The South Carolina DMV does not have reliable vehicle age data. There is no VIN decoder available. In addition, most of the heavy-duty diesel traffic traveling through York County on I-77 is not registered in South Carolina, making default data more representative than SCDMV data.

Average Speed Distribution

Average speed files are created using data from the Metrolina model. The model provides VMT and speeds for twelve road types and four time periods (a.m. peak, midday, pm peak and night.) Vehicle hours traveled (VHT) for each Metrolina model road type is calculated, and each Metrolina model road type, for each time of day, is assigned to a speed bin. The fraction of VHT in each speed bin for each MOVES road type is entered into the average speed input file. The same fractions are used for all vehicle types.

Appendix D: Interagency Consultation Meeting Minutes and Agency Comments

Metrolina Region Conformity Discussion
September 30, 2020

Attendees:
David Hooper, RFATS; Alex Riemondy, CDOT; Mark Kinnamon, CDOT; Randi Gates, GCLMPO; Leslie Coolidge, SC DHEC; Anna Gallup, CDOT; Catherine Mahoney, CRTPO; Dianna Myers, EPA; Andy Bailey, NCDOT; Dominique Boyd, NCDOT; Sarah Larocca, EPA; Phil Conrad, CRMPO; Shelia Blanchard, NCDAQ; Phyllis Jones, NCDDOT; Jill Vitas, NCDAQ; Yolanda Morris, FHWA-SC, Suzette Morales, FHWA-NC; Loretta Barren, FHWA-NC; Richard Wong, EPA; Brian Phillip, NCDAQ; Tammy Manning, NCDAQ; Samuel Christmas, SC DHEC; George Hoops, FHWA-NC

Purpose - To discuss the upcoming conformity process schedules and concerns for SC and NC MPOs

The RFATS MTP conformity process is about to get underway. Anna Gallup should have model runs completed mid to late October. The model runs will utilize the latest planning assumptions from all 4-MPOs, and have a 2050 horizon year. The MTP process should be complete by June 2021.

NCDOT has proposed TIP amendment changes impacting CRTPO (approx. 15 projects), CRMPO (approx. 2 projects) and GCLMPO (approx. 3 projects). There remains the potential for additional changes in future TIPs that could impact transportation conformity.

Anna was concerned about having and using 2-different models. The current model has a 2045 horizon year and coincides with all the current 2045 MTPs. The RFATS model will have a 2050 horizon year and is updated with the latest SE data from all 4-MPOs. The NC MPOs have adopted new SE data but have not used it for modelling purposes. Dianna, explained that based on the conformity regulation the MPOs would need to use the latest and available SE data for transportation conformity. Based on that discussion it was determined that the updated 2050 model would become the official and only model for the region.

Loretta explained that the NC MPOs are in a SIP revision process to increase budgets. Dianna stated that the SIP revision is an 18-month process, and will require an approval from EPA, adequacy is not an option. She further stated that, she would work with us as much as possible on the approval date. She will coordinate internally and let us know the schedule.

Loretta ask Phil and Randi if they wanted to move forward with their TIP amendments, since SIP budgets are not a concern for their areas. Randi indicated there was no urgency, so she would recommend waiting. Phil wanted to think further about it. He also asked, if a test model run could be conducted to see if CRTPO could pass without budget changes. Anna, indicated she could do the model runs but would need assistance from NCDAQ for the Moves process. Tammy stated that further discussions with Todd Paisley with NCDAQ would be needed.

Next Steps:

1. Anna will move forward with the RFATS transportation conformity process, including the NC amendments as a test.
2. Anna will contact Randi and Tammy with NCDAQ to discuss running the Moves model for the NC test runs

3. Anna will contact Loretta when test runs are complete, so that at least a conference call can be scheduled to discuss next steps
4. Dianna Myers will let us know the NC SIP revision schedule

York County Interagency Consultation Meeting Notes

December 2, 2020

Attendees:

Yolanda Morris (YM), FHWA
Roger Jerry (RJ), DHEC
Heinz Kaiser (HK), DHEC
Sarah Larocca (SL), EPA
Jerome Pearson (JP), SCDOT
Christopher Stevens (CS), York County
David Hooper (DH), RFATS
Henry Phillips (HP), SCDOT
Diana Myers (DM), EPA
Samuel Christmus (SC), DHEC
Richard Wong (RW), EPA
Leslie Coolidge (LC), DHEC
Steve Allen (SA), CRCOG

2050 LRTP Update:

(DH) provided a brief overview of recent activity in the LRTP Update process as things continue to progress toward our customary completion period slated for May / June 2021. Given the number of recent LRTP / Conformity Amendments, it was noted that both the SC 160 Interchange Reconfiguration Project as well as the new interchange planned at Exit "81" have met their associated planning requirements covering targeted capacity additions on supporting area collector roads.

(DH) then transitioned to a recent joint meeting in late September with our NC Metrolina Modeling Partners (that included representation from RFATS; SCDHEC; FHWA-SC; and EPA) regarding the RFATS LRTP Update timeline; and the applicable horizon years for NC and SC agencies. Specifically, it was discussed that the RFATS model will have a 2050 horizon year and will be based on the latest SE data from all MPO planning parnters.

As a point of reference, it was noted that this joint meeting was scheduled largely due to needed adjustments in NC modeling project assumptions related to budgetary challenges at NCDOT (i.e, impact of significant weather events as well as the MAP Act last year – in addition to COVID-19 this year), that has effectively consumed a quarter of the state budget. As such, NCDOT has made the decision to place a number of transportation projects (approximately 20 at this point, though subject to increase) on hold, thus necessitating new model runs.

Discussion then followed regarding review of the regional emissions spreadsheet and analysis planning assumptions. While no new projects are slated to be added to the regional modeling network that differs from the recently completed conformity amendments referenced earlier; the regional emissions spreadsheet will be distributed following this call providing members an opporunity to further reflect on the existing horizon year breakdown of identified projects. Additionally, (DM) noted discussion between EPA and DHEC regarding elements of the MOVES data inputs and assumptions; and that, further discussion should occur at the next IAC meeting.

(DH) then confirmed that he would distribute the following materials (i.e., Regional Emissions Spreadsheet; Moves Data and Input Assumptions; and an overview of the remaining schedule steps in the process).

Recent Air Quality Data:

(RJ) briefly reviewed recent air quality readings; specifically, it was noted that there was only one exceedance of the ozone NAAQS (N. Spartanburg Fire Station) and all sites attained the NAAQS. As a point of reference, it was noted that our neighboring states (NC and Georgia), also attained the NAAQS at all sites, including those more problematic locations in the Charlotte and Atlanta Metro Areas.

Next Meeting:

The next regular meeting of the RFATS Interagency Consultation Group is slated for Wednesday, January 6th at 9:00am.

RFATS Interagency Consultation Meeting Notes

February 3, 2021

Attendees:

Dianna Myers (DM), EPA
Henry Phillips (HP), SCDOT
Roger Jerry (RJ), SCDHEC
Heinz Kaiser (HK), SCDHEC
Chris Cooper (CC), SCDOT
Mark Pleasant (MP), FHWA
Leslie Coolidge (LC), SCDHEC
Richard Wong (RW), EPA
Christopher Stevens (CS), York County
David Hooper (DH), RFATS

FY 21-22 CMAQ Evaluation Methodology

(DH) provided an overview of the CMAQ Evaluation Methodology for completing Air Quality Benefit Analyses on CMAQ funded projects. As a point of reference, it was noted that there are four project types: (1) Traffic Flow Improvement Efforts; (2) Bicycle/Pedestrian Improvements; (3) Alt Fuel Vehicles / Retrofit Technology; and (4) Outreach / Pilot Projects. Discussion then briefly followed regarding the predominant project type and associated variables. Discussion completed with support for the continued application of the current evaluation methodology.

FY 21-27 TIP Update

(DH) reviewed discussion from the January IAC call regarding presentation of the FY 21-27 TIP Update with the supporting conformity analysis documentation to the Policy Committee for approval at their next meeting, contingent on any submitted comments being received. As a point of reference, it was noted that the 30-day public comment period is slated for completion on February 13th. (MP) then asked whether any comments had been submitted to date? (DH) stated that no comments have been received.

2050 LRTP Update

(DH) provided an update on the next steps for the 2050 LRTP Update. Specifically, it was noted that the Technical Team is finalizing their review of all draft chapters, and the project ranking process is similarly being completed. With this in mind, (DH) noted that the draft plan is slated for review with the IAC at their March meeting, along with presentation to the Policy Committee to initiate a 30-day public comment period. It was noted that final approval slated for the April meeting. As a point of reference, it was noted that final USDOT approval is due on or before June 17, 2021.

MOVES 3 Official Notice

(RW) briefly highlighted that the official notice regarding the release of MOVES 3 has occurred, initiating the grace period until conformity must be completed prior to January 9, 2023. (DM) then noted that the MOVES list serve is an excellent way to stay informed about the latest developments on this topic – in addition to IAC discussion.

Next Meeting:

The next regular meeting of the RFATS Interagency Consultation Group is slated for Wednesday, March 3rd at 9:00am.

RFATS Interagency Consultation Meeting Notes

March 3, 2021

Attendees:

Dianna Myers (DM), EPA
Henry Phillips (HP), SCDOT
Richard Wong (RW), EPA
Chris Cooper (CC), SCDOT
David Hooper (DH), RFATS
Mark Pleasant (MP), FHWA
Roger Jerry (RJ), SCDHEC
Sarah Larocca (SL), EPA
Scot Sibert (SS), WSP

2050 LRTP Update

(DH) briefly reviewed work completed to date on the 2050 LRTP Update, and then covered applicable planning assumptions for the conformity determination. (SS) then provided an expanded summary of modeling coordination with our Metrolina Modeling partners in NC. Discussion then followed regarding SCDHEC's most recent data inputs given the range of modeling adjustments over the last six months (e.g., new Panthers site; NC adjustments related to NCDOT budgetary challenges; FY 21-27 TIP Update Conformity Documentation, etc). (DM) indicated the advisability of circulating modeling assumptions for a subsequent review by the IAC to ensure appropriateness and accuracy as things progress towards assembly of the draft plan. (DH) then confirmed that this information will be distributed.

Next Meeting:

The next regular meeting of the RFATS Interagency Consultation Group is slated for Wednesday, April 7th at 9:00am.

RFATS Interagency Consultation Meeting Notes

April 7, 2021

Attendees:

Dianna Myers (DM), EPA
Chris Cooper (CC), SCDOT
David Hooper (DH), RFATS
Roger Jerry (RJ), SCDHEC
Sarah Larocca (SL), EPA
Leslie Coolidge (LC), DHEC

2050 LRTP Update

(DH) provided an overview of key milestones and planning assumptions on the 2050 LRTP and Draft Conformity Report. Discssusion then followed regarding suggested updates to the narrative text and incorporating DHEC's full summary of data inputs rather than a focus on the principal modeling outputs. (DH) then asked members to submit any additional comments over the next seven to ten days.

Next Meeting:

The next regular meeting of the RFATS Interagency Consultation Group is slated for Wednesday, May 5th at 9:00am.

Appendix E: Summary of Public Comments

Public comments relating to the 2050 Long Range Transportation Plan are summarized as follows:

- Support for investing $10 million of Guideshare funds towards bicycle & pedestrian improvements
- The 2050 LRTP is focusing more on multimodal recognition, recommendations, and improvements
- Support for focusing on improving connectivity from not only a collector street need, but with bicycle and pedestrian projects
- Support for focusing on improving and investing in transit to enhance mobility choices and reduction in congestion
- Support for improving connections to transit stops
- Emphasis on roadway projects to be multimodal in nature and account for bicycle and pedestrian facilities through design standards for enhancing safety

Appendix F: Federal Register Designation Notice

standard. On May 15, 2014 (79 FR 27830), the EPA proposed to rescind the CDD for the area based on the fact that the area was no longer attaining the 1997 8-hour ozone standard, and the EPA proposed a SIP Call for submittal of a new ozone attainment demonstration for the NY-NJ-CT area for the 1997 ozone NAAQS. As an alternative to submitting a new attainment demonstration for the 1997 ozone NAAQS, the EPA proposed to permit the relevant states to respond to the SIP Call by voluntarily requesting to be reclassified to Moderate for the 2008 ozone standard (*see* CAA section 181(b)(3)) and to prepare SIP revisions demonstrating how they would attain the more stringent 2008 standard as expeditiously as practicable, but no later than the Moderate area attainment date in 2018. The EPA explained in the May 2014 proposal that, because the 2008 standard is more stringent than the 1997 standard, the area would necessarily attain the 1997 standard once the area adopted a control strategy designed to achieve the tighter standard. Moreover, where state planning resources were constrained, those resources were better used focused on attaining the more stringent standard.

In the agency's August 27, 2015, proposal regarding determinations of attainment of the 2008 Marginal ozone areas, the EPA discussed how its proposed actions affected the May 2014 proposed options for responding to a SIP Call for the 1997 8-hour ozone NAAQS. Specifically, the proposed option to permit the relevant states to respond to the final SIP Call by requesting reclassification to Moderate for the 2008 ozone standard [*see* CAA section 181(b)(3)] would consequently require that the states submit SIPs demonstrating how they would attain the more stringent 2008 standard as expeditiously as practicable. We explicitly noted in the August 2015 proposal that, if we were to finalize the determination that the NY-NJ-CT area failed to attain the 2008 ozone NAAQS by the Marginal area attainment date, the area would be reclassified by operation of law, and thus effectively eliminating the need for the three states to voluntarily request reclassification. The area would then be subject to Moderate nonattainment area planning requirements, and the subsequent submission of Moderate area attainment plans for the 2008 ozone standard would necessarily satisfy a final SIP Call for the NY-NJ-CT area on the 1997 ozone standard, because an approvable plan would demonstrate attainment of a more stringent NAAQS. We also noted that either of the proposed 2008 ozone attainment plan due dates would meet the statutory timeframe for the SIP revision due subsequent to a SIP Call for the 1997 ozone NAAQS for the area.

II. Final Actions

The publication of the EPA's proposed rule on August 27, 2015, (80 FR 51992) started a public comment period that ended on September 28, 2015.[5] The comments received during this period may be found in the electronic docket for this action. A majority of commenters supported the EPA's actions as proposed to determine that certain areas attained the 2008 ozone NAAQS by the applicable attainment date, to provide 1-year attainment date extensions to the identified areas, and to reclassify to Moderate the non-attaining areas that do not qualify for an attainment date extension. Additional significant comments pertinent to each proposed action are addressed in the following appropriate sections. Included in the docket for this action is a full summary of significant comments received on the EPA's proposal and our responses to those comments. To access comments and the Response to Comment document, please go to *http://www.regulations.gov* and search for Docket No. EPA–HQ–OAR–2015–0468, or contact the person listed in the **FOR FURTHER INFORMATION CONTACT** section.

TABLE 4—2008 OZONE MARGINAL NONATTAINMENT AREA FINAL ACTION SUMMARY

Nonattainment area	Determination of attainment by the attainment date	Determination of failure to attain by the attainment date	Extension of the marginal area attainment date to July 20, 2016
Allentown-Bethlehem-Easton, PA	X		
Atlanta, GA		X	
Baton Rouge, LA	X		
Calaveras County, CA	X		
Charlotte-Rock Hill, NC-SC[a]	X		
Chicago-Naperville, IL-IN-WI		X	
Chico (Butte County), CA	X		
Cincinnati, OH-KY-IN	X		
Cleveland-Akron-Lorain, OH			X
Columbus, OH	X		
Denver-Boulder-Greeley-Ft. Collins-Loveland, CO		X	
Dukes County, MA	X		
Greater Connecticut, CT		X	
Houston-Galveston-Brazoria, TX			X
Imperial County, CA		X	
Jamestown, NY	X		
Kern County (Eastern Kern), CA		X	
Knoxville, TN[b]	X		
Lancaster, PA	X		
Mariposa County, CA		X	
Memphis, TN-MS-AR[c]	X		
Nevada County (Western part), CA		X	
New York, N. New Jersey-Long Island, NY-NJ-CT		X	
Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE			X

[5] The EPA offered to hold a public hearing on the proposed actions, but no one requested such a hearing.

TABLE 4—2008 OZONE MARGINAL NONATTAINMENT AREA FINAL ACTION SUMMARY—Continued

Nonattainment area	Determination of attainment by the attainment date	Determination of failure to attain by the attainment date	Extension of the marginal area attainment date to July 20, 2016
Phoenix-Mesa, AZ		X	
Pittsburgh-Beaver Valley, PA			X
Reading, PA	X		
San Diego County, CA		X	
San Francisco Bay Area, CA	X		
San Luis Obispo (Eastern San Luis Obispo), CA			X
Seaford, DE	X		
Sheboygan County, WI			X
St. Louis-St. Charles-Farmington, MO-IL			X
Tuscan Buttes, CA	X		
Upper Green River Basin Area, WY	X		
Washington, DC-MD-VA			X

[a] On July 28, 2015, the EPA redesignated to attainment the North Carolina portion of the Charlotte-Rock Hill, NC-SC, nonattainment area for the 2008 8-hour ozone NAAQS, effective August 27, 2015. *See* 80 FR 44873. On December 11, 2015, the EPA redesignated to attainment the South Carolina portion of the Charlotte-Rock Hill, NC-SC, nonattainment area for the 2008 8-hour ozone NAAQS, effective January 11, 2016. *See* 80 FR 76865. The EPA is herein determining that this area attained the 2008 ozone NAAQS by the applicable attainment date in order to satisfy the agency's obligation under CAA section 181(b)(2)(A).

[b] On July 13, 2015, the EPA redesignated to attainment the Knoxville, TN, nonattainment area for the 2008 8-hour ozone NAAQS, effective August 12, 2015. *See* 80 FR 39970. Given that this area was still designated nonattainment as of July 20, 2015, the EPA is herein determining that this area attained the 2008 ozone NAAQS by the applicable attainment date in order to satisfy the agency's obligation under CAA section 181(b)(2)(A).

[c] On February 10, 2016, the EPA proposed to redesignate to attainment the Arkansas portion of the Memphis, TN-MS-AR, nonattainment area for the 2008 8-hour ozone NAAQS. *See* 81 FR 7046. On February 11, 2016, the EPA proposed to redesignate to attainment the Mississippi portion of the Memphis, TN-MS-AR, nonattainment area for the 2008 8-hour ozone NAAQS. *See* 81 FR 7269.

A. Determinations of Attainment

Pursuant to section 181(b)(2)(A) of the CAA and 40 CFR 51.1103, the EPA is making a final determination that the 17 Marginal nonattainment areas listed in Table 1 attained the 2008 ozone NAAQS by the applicable attainment date of July 20, 2105. We received no adverse comments on this proposal.

Once effective, this action satisfies the EPA's obligation pursuant to CAA section 181(b)(2)(A) to determine, based on an area's air quality as of the attainment date, whether the area attained the standard by that date. The effect of a final determination of attainment by the area's attainment date is to discharge the EPA's obligation under CAA section 181(b)(2)(A), and to establish that, in accordance with CAA section 181(b)(2)(A), the areas will not be reclassified for failure to attain by the applicable attainment date. These determinations of attainment do not constitute a redesignation to attainment. Redesignations require states to meet a number of additional statutory criteria, including the EPA approval of a state plan demonstrating maintenance of the air quality standard for 10 years after redesignation. As for all NAAQS, the EPA is committed to working with states that choose to submit redesignation requests for the 2008 ozone NAAQS.

B. Extensions of Marginal Area Attainment Dates

Pursuant to CAA section 181(a)(5), the EPA is making a final determination to grant 1-year attainment date extensions of the applicable attainment date from July 20, 2015, to July 20, 2016, for the 8 Marginal nonattainment areas listed in Table 2. The EPA received a number of comments on its proposal to extend the Marginal area attainment dates for the areas listed in Table 2. We summarize and respond to some of the key comments. The docket for this action contains a more detailed Response to Comment document.

Comment: One commenter claimed that the EPA's proposed 1-year extension of the attainment date for the Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE area is unlawful and arbitrary because the state of Delaware did not request an extension of the attainment date. The commenter argued that granting an attainment date extension to a multi-state area when all states have not requested the extension is inconsistent with the EPA's failure to grant the state of New York's most recent voluntary reclassification request with regard to the 1997 8-hour ozone NAAQS.[6] The commenter stated that there, the EPA refused to grant New York's request because the agency's position was that voluntarily reclassifying the area required all states with jurisdiction over the multi-state area to request the reclassification. The commenter noted that in that case the EPA interpreted CAA section 182(j)(1) "to require coordination and unanimity among the affected states," and the commenter stated that the provision "seemingly has equal bearing" on a request to extend the attainment date.

Response: The EPA disagrees with the commenter that a request for voluntary reclassification under CAA section 181(b)(3) and a request for an extension of the attainment date under CAA section 181(a)(5) both require "unanimity" among the affected states. The EPA also does not agree that granting an extension of the attainment date to all states with jurisdiction over the Philadelphia multi-state nonattainment area is inconsistent with its prior reading of CAA section 182(j)(1).

The statutory provisions governing voluntary reclassifications and requests for 1-year attainment date extensions differ in key respects regarding the question of whether all states in a nonattainment area need to request the action before the EPA may grant such requests. CAA section 181(b)(3), which governs voluntary reclassifications, states that "the Administrator shall grant the request of any State to reclassify a nonattainment area *in that State* [in accordance with the area's

[6] Letter from Joseph J. Martens, Commissioner, New York Department of Environmental Conservation, addressed to the EPA Administrator Lisa Jackson. June 20, 2012.

Appendix G: Vehicle Type VMT

Vehicle Type VMT

Daily weekday VMT and speed data was obtained from the Charlotte Department of Transportation (CDOT), which is the lead agency for maintaining the Metrolina Travel Demand Model (see Table 1). The CDOT data was used to compile the average daily VMT by MOVES2014 road type. VMT was distributed to the MOVES2014 source types. Because SCDOT collects limited functional class data, and the data varies considerably from year to year, data from the three most recent years was averaged to inform the development of VMT fractions to be applied to each MOVES source type. To convert the daily VMT data to an annual value, which is required by MOVES2014, the EPA's aadvmt-converter-tool-moves2014.xlsx VMT converter tool was used. This tool used default monthly, daily, and hourly ratios to create an annual VMT profile from an average daily profile. The resulting files (filenames HPMSVTypeYear-calc, monthVMTFraction-calc, dayVMTFraction-calc, and hourVMTFraction-calc) were exported from the converter tool and used in the MOVES2014 modeling.

Table 1: York County Nonattainment Area VMT and Speed Data Provided by the Charlotte Department of Transportation (Future Years)

2025	AM Peak		Midday		PM Peak		Night	
York (NA part)	VMT	Spd	VMT	Spd	VMT	Spd	VMT	Spd
Rural Interstate	300,990	56.7	377,818	63.4	298,932	55.1	217,362	63.7
Rural Principal Art.	34,670	27.3	49,465	44.2	34,918	24.2	23,384	57.4
Rural Minor Art.	96,364	26.4	142,897	27.7	103,270	22.9	85,195	40.3
Rural Major Collect.	98,891	37.1	138,945	39.7	103,172	33.4	76,232	45.9
Rural Minor Collect.	11,885	14.1	17,976	16.6	12,717	12.8	10,047	28.6
Rural Local	148,218	25.8	252,545	25.2	167,059	24.7	128,567	27.4
Urban Interstate	266,958	54.6	336,050	60.1	272,895	53.0	207,672	60.4
Urban Frwy/Exprwy	23,868	43.9	35,948	44.8	26,736	42.2	16,932	45.0
Urban Principal Art.	252,767	26.5	401,306	29.2	271,792	23.6	241,545	38.0
Urban Minor Art.	207,999	25.7	334,038	26.2	230,198	22.9	178,530	35.7
Urban Collector	104,184	21.8	167,834	22.7	115,988	19.7	79,005	33.8
Urban Local	200,550	23.9	376,539	23.7	229,773	23.4	180,193	24.9
Urban HOV	0	0.0	0	0.0	0	0.0	0	0.0
Rural	691,018	35.4	979,646	36.5	720,067	32.4	540,787	42.8
Urban	1,056,326	29.1	1,651,716	29.4	1,147,382	26.6	903,877	36.5
County	1,747,344	31.3	2,631,362	31.7	1,867,449	28.6	1,444,665	38.6

2026	AM Peak		Midday		PM Peak		Night	
York (NA part)	VMT	Spd	VMT	Spd	VMT	Spd	VMT	Spd
Rural Interstate	304,414	56.2	383,340	63.3	301,746	54.6	221,307	63.7
Rural Principal Art.	35,027	25.7	50,555	42.8	35,096	23.1	23,793	57.4
Rural Minor Art.	97,520	26.1	145,893	27.2	104,541	22.6	86,545	40.0
Rural Major Collect.	100,894	36.4	141,860	39.1	104,859	32.9	77,512	45.7
Rural Minor Collect.	12,300	14.1	18,708	16.5	13,218	13.1	10,343	28.5
Rural Local	152,456	25.7	259,805	25.0	171,559	24.7	131,734	27.4
Urban Interstate	270,103	54.4	342,378	60.0	275,798	52.5	212,674	60.4
Urban Frwy/Exprwy	24,658	43.6	36,971	44.7	27,427	41.7	17,489	45.1
Urban Principal Art.	255,936	25.9	407,098	28.6	274,591	23.1	247,117	37.7
Urban Minor Art.	210,684	25.3	340,883	25.8	232,836	22.6	181,533	35.4
Urban Collector	106,140	21.6	171,540	22.4	118,046	19.6	80,948	33.6
Urban Local	204,819	23.9	385,452	23.7	234,647	23.3	183,994	24.9
Urban HOV	0	0.0	0	0.0	0	0.0	0	0.0
Rural	702,611	35.0	1,000,161	36.0	731,018	32.0	551,235	42.7
Urban	1,072,340	28.8	1,684,321	29.1	1,163,344	26.3	923,755	36.4
County	1,774,951	31.0	2,684,482	31.3	1,894,362	28.3	1,474,989	38.5

2035	AM Peak		Midday		PM Peak		Night	
York (NA part)	VMT	Spd	VMT	Spd	VMT	Spd	VMT	Spd
Rural Interstate	330,063	49.1	426,729	62.4	328,517	47.3	247,356	63.8
Rural Principal Art.	35,581	20.3	54,736	33.5	36,220	17.6	26,502	57.2
Rural Minor Art.	107,419	24.9	163,364	26.6	114,551	21.0	99,372	39.9
Rural Major Collect.	110,346	32.5	162,345	34.8	116,966	29.0	87,627	44.9
Rural Minor Collect.	15,911	15.1	25,456	16.7	17,345	13.6	13,251	29.2
Rural Local	190,991	24.8	319,849	24.0	211,033	22.9	158,133	27.1
Urban Interstate	296,691	48.8	385,670	59.3	303,136	45.5	235,015	60.3
Urban Frwy/Exprwy	28,034	40.0	43,387	43.0	30,586	37.3	21,480	45.1
Urban Principal Art.	285,693	22.3	462,407	24.3	306,871	19.5	287,534	36.3
Urban Minor Art.	243,742	23.1	400,057	23.4	269,824	20.2	211,995	33.1
Urban Collector	128,966	22.3	213,045	23.1	146,714	20.3	96,656	33.2
Urban Local	242,901	23.4	455,439	23.0	279,516	22.7	215,154	24.8
Urban HOV	0	0.0	0	0.0	0	0.0	0	0.0
Rural	790,310	31.7	1,152,479	33.8	824,632	28.5	632,242	41.9
Urban	1,226,027	26.5	1,960,005	26.9	1,336,646	23.8	1,067,835	35.3
County	2,016,337	28.3	3,112,484	29.1	2,161,278	25.4	1,700,077	37.5

2045	AM Peak		Midday		PM Peak		Night	
York (NA part)	VMT	Spd	VMT	Spd	VMT	Spd	VMT	Spd
Rural Interstate	345,958	41.0	479,707	59.3	344,672	39.9	273,466	63.9
Rural Principal Art.	37,937	15.7	60,580	21.8	38,650	13.0	31,711	50.7
Rural Minor Art.	118,355	22.1	185,489	23.6	125,521	18.1	116,218	38.8
Rural Major Collect.	136,141	28.2	209,219	28.8	145,684	25.1	115,066	43.8
Rural Minor Collect.	19,570	15.1	31,700	16.0	20,453	13.3	16,579	28.3
Rural Local	242,210	23.2	417,834	22.1	269,758	21.0	200,746	26.7
Urban Interstate	311,692	44.1	434,907	57.3	322,758	39.0	257,958	60.2
Urban Frwy/Exprwy	30,524	35.8	49,074	39.0	33,082	32.0	25,562	44.9
Urban Principal Art.	314,262	19.1	514,824	20.3	339,125	16.6	321,084	34.2
Urban Minor Art.	278,927	20.9	466,069	20.8	310,639	18.2	251,601	32.0
Urban Collector	153,429	20.4	256,483	21.0	175,255	18.5	116,427	31.8
Urban Local	289,129	22.7	543,697	21.8	332,565	21.6	253,262	24.8
Urban HOV	0	0.0	0	0.0	0	0.0	0	0.0
Rural	900,171	27.5	1,384,529	29.5	944,739	24.4	753,787	40.5
Urban	1,377,962	23.8	2,265,054	24.2	1,513,422	21.1	1,225,894	34.1
County	2,278,133	25.1	3,649,583	25.9	2,458,161	22.3	1,979,681	36.3

2050	AM Peak		Midday		PM Peak		Night	
York (NA part)	VMT	Spd	VMT	Spd	VMT	Spd	VMT	Spd
Rural Interstate	360,196	27.1	524,314	47.9	354,210	33.0	303,970	63.9
Rural Principal Art.	38,217	15.7	63,104	19.3	38,143	13.0	34,255	50.0
Rural Minor Art.	121,686	21.1	191,900	21.9	126,523	17.5	120,891	37.8
Rural Major Collect.	146,724	27.3	226,200	26.2	152,351	23.7	122,835	41.5
Rural Minor Collect.	22,285	14.2	34,269	16.1	21,968	14.2	18,165	28.5
Rural Local	267,063	22.5	463,834	21.2	293,964	20.1	223,002	26.5
Urban Interstate	319,065	40.3	469,104	53.4	326,646	37.1	281,289	60.2
Urban Frwy/Exprwy	33,095	31.8	51,582	36.7	33,714	30.5	28,057	44.8
Urban Principal Art.	338,646	17.2	540,860	18.9	350,457	15.9	336,849	33.2
Urban Minor Art.	307,790	19.9	495,556	19.8	324,543	17.8	269,113	31.5
Urban Collector	178,209	18.4	277,473	20.0	188,041	17.5	123,793	31.1
Urban Local	312,791	22.2	581,693	21.2	352,367	21.2	269,208	24.8
Urban HOV	0	0.0	0	0.0	0	0.0	0	0.0
Rural	956,170	23.7	1,503,622	27.0	987,159	22.7	823,119	39.9
Urban	1,489,595	21.9	2,416,268	23.0	1,575,767	20.3	1,308,310	33.7
County	2,445,766	22.6	3,919,890	24.4	2,562,926	21.2	2,131,429	35.8

APPENDIX 2

RFATS Policy and Technical Committee Minutes

POLICY COMMITTEE WORKSHOP
SUMMARY MINUTES
October 23, 2020 – 12:00 p.m.
Rock Hill City Hall – Council Chambers

COMMITTEE MEMBERS PRESENT: David O'Neal; Michael Johnson; Kathy Pender; Jim Reno (proxy); John Gettys; Bill Harris; Britt Blackwell; and Brian Carnes.

ADMINISTRATIVE / TECHNICAL / MANAGEMENT STAFF PRESENT:
Jessica Hekter (FHWA); Patrick Hamilton (York County); Diane Dil (York County); Alex Moore (Town of Fort Mill); Vic Edwards (SCDOT); Berry Mattox (SCDOT); Diane Lackey (SCDOT); Erin Porter (SCDOT); Allison Love (SCDOT); David Gamble (SCDOT); Bill Meyer (City of Rock Hill); Christopher Stephens (York County); Dean Hendrix (York County); David Hudspeth (York County); Josh Meetze (SCDOT); Kara Drane (CRCOG); Dennis Fields (City of Rock Hill); David Vehaun (City of Rock Hill); Rob Ruth (City of Rock Hill); Jimmy Bagley (City of Rock Hill); Cindi Howard (City of Rock Hill); Chris Herrmann (RFATS); and David Hooper (RFATS).

CITIZENS / VISITORS PRESENT: Steve Yaffe (Bike Ped Coalition of York County); Scot Woodward; Scot Sibert (WSP); Frank Myers (CAC); Jim Van Blarcom (CAC); Cleopatra Allen (CAC); David Keely (CAC); Frieda Price (CAC); Carol Jones (Mead Hunt); William Jordan (AECOM); Michael Dennis (Ramey Kemp); John Fargher (ESP Associates); Ed Evans (Mattern & Craig); and Phil Conrad (Mobility Solutions).

1. CALL TO ORDER:
a. Welcome – Vice-Chair O'Neal called the meeting to order at 12:10 P.M. and welcomed all in attendance.

2. 2050 LONG RANGE TRANSPORTATION PLAN (LRTP) UPDATE:
a. Overview and Purpose of Work Session – Mr. Hooper provided a brief overview of the LRTP process and the necessary components and explained that transportation conformity continues to apply to the RFATS Area due to the maintenance area status regarding air quality.

b. Update on Public Participation / Outreach Activities – Mr. Herrmann briefly reviewed the public participation process specifically noting a comprehensive outreach to all stakeholder groups requesting input and guidance; as well as virtual outreach meetings that were held requesting input from all interested parties. Mr. Herrmann then summarized the common themes received. Topics of discussion did include:

- Operations & Maintenance (Dobys Bridge Road, Cel-River Road, Sutton Road)
- Road Widening (US 21 from the Catawba River to SC 160)
- Bicycle / Pedestrian (Access & Safety; Improved System Connectivity)
- Public Transit – Network availability; access to rapid transit options such as the LYNX LRS; Commuter Rail, etc.
- Concerns about the impact of the Dave Lyle Blvd extension
- Concern regarding the impact COVID-19 has had on funding
- Connected & Autonomous Vehicles

- Role of Collector Street Planning

Mr. Hooper then noted that the public input received represented a rotation from the majority of comments received during the 2045 LRTP Update focused on traditional operational improvements and road widenings – with the majority of comments received this cycle focusing on a broader mix of improvement strategies such as bicycle and pedestrian enhancements; proactive collector street planning, and augmenting transit services.

c. Socio-Economic Data & Horizon Year Projections – Mr. Sibert briefly reviewed the socio-economic data projections from the Metrolina Regional Model; specifically, population and employment, as well as the build-out projections for the planning area through 2050. Mr. Sibert then explained that the horizon year projections portray a robust development pattern through 2025; and then leveling out longer term. Discussion then followed regarding the continuation of expected growth into western York County, and extending further down beyond the panhandle in Lancaster County. Lastly, Mr. Hooper noted the continued operational and planning importance both Hwy 49 and US 521; particularly in how and on what conditions subsequent development occurs (i.e., commitment on collector roads positioning prior to approval, etc).

d. Regional Initiatives – Mr. Hooper briefly summarized a number of cooperative planning initiatives with adjacent agency partners (CRAFT), in North Carolina. As a point of reference, these include the Connect Beyond Initiative (regional transit plan); Beyond I-77 (corridor study from RFATS to I-40); continued planning coordination on the development of a bi-state ITS / TIM Strategic Action Plan as well as ongoing work on the evolving technological and operational innovations related to connected and autonomous vehicles. Lastly, Mr. Hooper noted that he is a member of the steering committee of the Catawba Crossings Feasibility Study (Gaston, NC), which is evaluating a potential new bridge crossing from New South Hope Road to I-485. Mr. Hooper stated that such a network addition would likely influence driver behavior in the Lake Wylie area; and will of course provide more information as it becomes available.

e. Potential Projects and Needs – Mr. Hooper briefly reviewed the existing cost constrained project list which includes: the SC 160 / I-77 Interchange Reconfiguration; Celanese / Cherry Road / I-77 Interchange Reconfiguration; Cel-River Road Widening (Phase II); SC 160 Widening (Phase II); and an Exit 77 Interchange Upgrade. As a point of reference, Mr. Hooper noted that SIB funding has been awarded for the SC 160 / I-77 Interchange Reconfiguration and RFATS funding has been approved for the 4 to 6 lane widening component of this project from Pleasant / Sutton to US 21.

Mr. Hooper then highlighted that SIB funding has also been awarded for the Celanese / Cherry / I-77 Interchange Reconfiguration project; though it was noted that following completion of the alternatives analysis phase, supplemental funding from RFATS is expected. Therefore, the recent SIB award and the existing project funding commitment should be maintained until a final recommended alignment has been reviewed and finalized. Mr. Hooper then noted that the widening of Cel-River Road from Eden Terrace to Dave Lyle Blvd was approved for Pennies IV and is fully funded at this point.

Mr. Hooper then reviewed the Draft Project List for the 2050 LRTP Update, which includes road widenings, new alignments, intersection improvements, bicycle / pedestrian improvements, and public transit services. Mr. Hooper noted that these projects are drawn from plans and studies such as the Collector Road Plan, Bicycle/Pedestrian Connectivity Plan; corridors studies as well as input from the Technical Team and public outreach meetings. As a point of reference, Mr. Hooper noted that the Policy Committee had previously requested that the unfunded road and intersection improvement sections be condensed to focus on a more focused list of projects likely to be funded by either RFATS or Pennies during the next 5 to 7 years – rather than a more comprehensive listings of likely unfunded needs that

would extend beyond this time period. With this in mind, Mr. Hooper then reviewed relevant changes and project specific emphasis points across the transportation network. Mr. Hamilton then highlighted those projects on the updated project list that appeared to represent the types of projects typically selected for inclusion with the Pennies Program for funding consideration. Specifically, Mr. Hamilton described the following project needs: US 21 Widening (Sutton Road to SC 160); Sutton Road (6th Baxter to I-77); Fort Mill Parkway; Mt Gallant / Cherry Road Intersection as well as Gold Hill / Pleasant Road Intersection. Lastly, Mr. Hooper then requested that the Policy Committee review the draft project list for any potential additions and/or adjustment that they may want considered prior to a request for final approval – which is slated for the Friday, November 20th meeting.

Mr. Johnson then noted the recent approval on the Lancaster County Local Option Sales Tax Program for partial funding of a US 521 infrastructure improvement effort from the state line to Marvin Road; and the need to ensure all relevant operational and planning data is gathered and updated down of Waxhaw Hwy – so that we're proactively planning for consideration of all potential upgrade options as well as funding sources much further down consistent with current and projected growth patterns as outlined earlier. Mr. Hooper then stated that he would recommend completing a comprehensive corridor study from the State Line past Waxhaw Hwy to gather all relevant data. Mr. Johnson and Mr. Carnes then agreed that this is desired to be added to the Comprehensive Project List for November.

Mr. Gettys then asked whether bicycle and pedestrian improvements listed on the Comprehensive Project List have been ranked and funding identified? Mr. Hooper responded that no ranking or funding has been completed to date, rather cost estimates have been provided as a reference point. Mr. Hooper then noted that historically the Policy Committee has funded bicycle and pedestrian improvements though a grant specific sources such as TAP and/or CMAQ programs. That said, Mr. Hooper noted that if the Policy Committee would like to consider incorporating a specific funding commitment as part of the overall Guideshare allocation, that is a permissable option.

In closing, Mr. Hooper emphasized that in addition to project specific improvement efforts, that there are a range of supporting policy and programmatic actions can that assist in addressing operational challenges in the built environemnt, by evaluating for appropriateness the positioning of collector roads; application of access management strategies and related actions during the development review and approval process. Such action would advance the linkage between expected operational outcomes related to a specific development – with how the transportation network will be impacted more broadly than has traditionally been completed in prior planning periods more generally among different agency and planning area geographies.

f. RFATS Financial Status and Revenue Forecasting – Mr. Hooper briefly reviewed the current financial outlook and expected funding availability over the 2050 LRTP planning period. As a point of reference, Mr. Hooper noted relevant variables to these assumptions as including the decennial census and impacts from COVID-19 on broader budgetary planning at the state and federal levels. Mr. Hooper then noted that while long-term it seems that there is a large amount of uncommitted funds, given annual cash flow projections, the significant budgetary commitment related to upgrading the SC 160 / I-77; Celanese / I-77 Interchange as well as the new interchange at "Exit 81" – that if history is any guide, that one of these project locations (while currently fully funded), may need supplemental funding at a later point. Therefore, it would be prudent to maintain on a transitional basis a higher level of uncommitted funds until all three have passed meaningful project milestones.

g. Project Ranking Criteria – Mr. Hooper briefly reviewed Act 114 regarding project ranking and its applicability to the programming of Guideshare funded projects.

h. Next Steps – Mr. Hooper briefly reviewed next steps in the update proces, and that approval of the draft project list will be requested at the November Policy Committee meeting.

6. ADJOURNMENT:

The motion to adjourn was made by Mr. O'Neal and seconded by Mr. Gettys; the motion was unanimously approved and the meeting was adjourned at 1:20 P.M.

POLICY COMMITTEE MEETING
SUMMARY MINUTES
November 20, 2020 – 12:00 p.m.
Rock Hill City Hall – Council Chambers

COMMITTEE MEMBERS PRESENT: Guynn Savage; David O'Neal; Kathy Pender; Jim Reno; John Gettys; Bill Harris (proxy); Britt Blackwell; Wes Climer (proxy); and Brian Carnes.

ADMINISTRATIVE / TECHNICAL / MANAGEMENT STAFF PRESENT:
Berry Mattox (SCDOT); Yolanda Morris (FHWA); Patrick Hamilton (York County); Vic Edwards (SCDOT); Penelope Karagounis (Town of Fort Mill); Diane Lackey (SCDOT); Cliff Goolsby (City of Rock Hill); Josh Meetze (SCDOT); Diane Dil (York County) Bill Meyer (City of Rock Hill); Allison Love (SCDOT); Leah Youngblood (City of Rock Hill); Erin Porter (SCDOT); Christopher Stephens (York County); Kara Drane (CRCOG); Dean Hendrix (York County); Rob Ruth (City of Rock Hill); Chris Herrmann (RFATS); and David Hooper (RFATS).

CITIZENS / VISITORS PRESENT: Liz Duda (Bike Ped Coalition of York County); Scot Sibert (WSP); Frank Myers (CAC); Luther Dasher (CAC); Cleopatra Allen (CAC); Carol Jones (Mead Hunt); Michael Dennis (Ramey Kemp); John Fargher (ESP Associates); Ed Evans (Mattern & Craig); Brandon Murr (Kimley-Horn); Colleen Dick (York County Chamber); Dave Kerns (HDR); James Dowdy (HDR); John Marks (The Herald); Marie Sugar; and Matthew Kreh (WRHI).

1. CALL TO ORDER:

a. Welcome – Chair Savage called the meeting to order at 12:01 P.M. and welcomed all in attendance.

b. Citizen Comment Period – No comments were made at this time.

2. REVIEW / APPROVAL OF MINUTES

Ms. Savage asked if there were any changes, deletions, or comments to the minutes of the September 25th, 2020 meeting. Mr. Carnes then made a motion to approve the minutes as presented; this was seconded by Mr. O'Neal and the motion was unanimously approved.

3. REPORTS:

a. SCDOT Project Status Report – Mr. Mattox provided a brief update on the following projects:

- Clebourne / N White Street Intersection Improvement – construction is currently underway with completion anticipated by the end of 2020.
- US 521 / Marvin Road Intersection Improvement – ROW Acquisition is currently underway and construction is anticipated to begin in 2021.
- Celanese / India Hook Road Intersection Improvement – ROW Acquisition is currently underway, utility coordination is being finalized, and construction is anticipated to begin in 2021.

Ms. Pender then asked for an update on the ROW Acquisition process. Mr. Mattox noted that SCDOT is progressing through the acquisition of the few outstanding properties that remain. Mr. Mattox then noted that the utility relocation involved with the project may deter the schedule more than ROW Acquisition. Mr. Mattox explained that upon further review, SCDOT has found that an asbestos cement water line is

located under the roadway and is required to be replaced; the City of Rock Hill is currently in the design process of this aspect of the project.

- Carowinds / Pleasant Intersection Improvement – ROW Acquisition is currently underway; initiation of construction is dependent upon the completion of the Gold Hill Road Interchange Improvement. Mr. Mattox noted that an increase to construction funding has been identified and a request for additional CMAQ funding is anticipated from York County.
- SC 160 Phase 2 Widening Project – construction is currently underway and is anticipated for completion by the end of 2020.

Mr. Carnes then inquired as to the certainty of reaching completion by the end of 2020. Mr. Mattox noted that the project has experienced delays but construction activities should be completed by the end of the year. Mr. Mattox then noted that the new traffic signal installed at Rosemont / McMillan is not yet operational and may not be until after the start of 2021.

- SC 160 Adaptive Signals Project – all equipment has been installed and the system is currently operational. Mr. Hooper noted that this project should see progress reached at extracting further efficiency from the system during the mid-day, making the flow of traffic more functional during the lunch hour.
- SC 160 / I-77 Interchange Reconfiguration – preliminary design and environmental permitting is currently underway. ROW Acquisition is anticipated to begin in FY 2021. Construction obligation is anticipated to begin in FY 2022.
- Exit 82 Interchange Reconfiguration – while there are related variables that remain active, project activity has not been initiated. Mr. Hooper noted that while the SIB award has provided funding in the amount of $38.5M; it is safe to assume that the total cost for this project will be higher than that and thus require a commitment of Guideshare funding in addition to the SIB award. Mr. Hooper then noted that the Policy Committee will undertake review of the design alternatives for Exit 82 in 2021.

Mr. Mattox then gave brief updates on Area Federal Aid Bridge Projects including: US 21 BUS over Steele Creeek, S-654 over Burgis Creek, SC 72 over Stony Fork, S-50 over Manchester Creek, S-1069 over Manchester Creek, S-103 over Fishing Creek, S-560 over Stony Fork, and S-55 over Twelve Mile Creek.

Mr. Mattox then summarized project coordination regarding projects impacting the I-77 Corridor including Carowinds / Pleasant, SC 160 Widening, Gold Hill / I-77 Interchange Improvement, US 21 Widening through Pennies for Progress, and the SC 160 / I-77 Interchange. Mr. Mattox noted that the SC 160 / I-77 Interchange project is anticipated to have minimal impact to daily traffic as the construction of the directional interchange will mostly be focused on the two new bridge components. Mr. Mattox also explained that the Exit 81 Interchange should not impede daily traffic as the majority of work will involve new construction.

b. Congestion Management Process: Annual Evaluation Report – Mr. Herrmann briefly reviewed the purpose of the Congestion Management Process and noted that an annual evaluation of project activity as well as an assessment of shifts in operating conditions is completed each year on those principal arterial roadways carrying the highest demand volume. As a point of reference, Mr. Herrmann noted that this information is provided from the National Performance Management Research Data Set, and is collected through Bluetooth technology and tracks travel patterns from both passenger and freight vehicles on the National Highway System. Mr. Herrmann highlighted that this data allows an examination of the reliability of travel times along the major corridors in the RFATS Area as recently as the previous month.

Mr. Herrmann then reviewed the latest data for reliability in the morning and evening peak periods along target segments within the planning area – including I-77, US 521, SC 160, US 21, Celanese Road, and Dave Lyle Blvd. Mr. Herrmann also highlighted the impact that COVID-19 has had on reliability levels throughout the region over the past year.

4. PROPOSED POLICY COMMITTEE ACTION ITEMS:

a. Conformity Amendment – Mr. Hooper briefly summarized the LRTP & Conformity Amendment reflecting the planned 5-lane widening of Mt Gallant Road from Anderson Road to John Ross Parkway. As a point of reference, this is associated with the planned interchange at Exit 81 and the new connecting roadways to Mt Gallant on the west and to Paragon Way on the east. Mr. Hooper then noted that this has been reflected in the modeling process and has passed the conformity analysis. Mr. Hooper also noted that a 30-day public comment period has been completed and no comments were received. Mr. Gettys then made a motion for approval; seconded by Mr. Carnes and the motion was unanimously approved.

b. 2050 Long Range Transportation Plan Update – Mr. Hooper briefly reviewed the Draft Project List for the 2050 LRTP Update which was reviewed during the October Workshop. This list includes road widenings, new alignments, intersection improvements, bicycle / pedestrian improvements, and public transit services. As a point of reference, Mr. Hooper noted that the Policy Committee had previously requested that the unfunded road and intersection improvement sections be condensed to a more focused list of projects likely to be funded by either RFATS or Pennies during the next 5 to 7 years – rather than a more comprehensive listing of likely unfunded needs that would extend beyond this time period. With this in mind, Mr. Hooper then reviewed relevant changes and project specific emphasis points across the transportation network.

Ms. Pender then asked whether these projects were prioritized or ranked? Mr. Hooper responded that the only ranked projects were those listed in the Cost Constrained Section as those are the only projects where the Policy Committee has made a budgetary commitment. All other projects are listed in no specific order or ranking at this time, but updated project ranking will be completed prior to finalization of the LRTP Update. Discussion then followed on the best way to portray to the public that this list of projects is not ranked or prioritized. Mr. Hooper then noted that a short reference on the project list can be included addressing this point. All those in attendance agreed that this would be sufficient.

Mr. Hooper then requested that the Policy Committee grant approval and endorsement of the Draft Project List for the 2050 LRTP Update. Mr. Carnes then made a motion for approval; seconded by Ms. Pender and the motion was unanimously approved.

c. TIP Amendment (FTA Funding Awards) – Mr. Herrmann briefly reviewed the TIP Amendment reflecting the FY 20-21 FTA funding allocations, as well as recently awarded CARES Act Funding. Mr. Herrmann noted that no RFATS funding was associated with this TIP Amendment but it is federal funding that must be reflected in the TIP. Mr. Herrmann then explained that a 21-day public comment period has been completed and no comments were received. Mr. Reno then made a motion for approval; seconded by Mr. Gettys and the motion was unanimously approved.

d. Public Participation Plan – Mr. Herrmann briefly reviewed the update to the RFATS Public Participation Plan, outlining changes regarding the use of Virtual Meetings as an alternative meeting format. Mr. Herrmann then requested preliminary approval of the PPP Update and authorization to initiate a 45-day public comment period. Mr. Carnes then made a motion for approval; seconded by Mr. Reno and the motion was unanimously approved.

e. 2021 Policy Committee Meeting Schedule – Mr. Hooper briefly reviewed the proposed meeting schedule for 2021 and then requested consideration of its approval. Mr. O'Neal then made a motion for approval; seconded by Mr. Carnes and the motion was unanimously approved.

5. OTHER BUSINESS:

a. Administrative Report – Mr. Hooper briefly reviewed the Administrative Report.

b. Recognition of Dr. Blackwell – Mr. Hooper presented a plaque recognizing Dr. Blackwell for his 10 years of service. Dr. Blackwell then thanked all associated with this process and noted the importance of the work that RFATS carries out.

c. Next Meeting – Ms. Savage noted that the next Policy Committee meeting is scheduled for January 22, 2021.

6. ADJOURNMENT:

The motion to adjourn was made by Mr. O'Neal and seconded by Ms. Pender; the motion was unanimously approved and the meeting was adjourned at 1:13 P.M.

POLICY COMMITTEE MEETING
SUMMARY MINUTES
March 26, 2021 – 12:00 p.m.
Rock Hill City Hall – Council Chambers / Zoom

COMMITTEE MEMBERS PRESENT: David O'Neal; John Gettys; Guynn Savage; Tom Audette; Kathy Pender; Jim Reno (proxy); Bill Harris (proxy); Joel Hamilton; and Brian Carnes.

ADMINISTRATIVE / TECHNICAL / MANAGEMENT STAFF PRESENT:
Berry Mattox (SCDOT); Mark Pleasant (FHWA); Patrick Hamilton (York County); Penelope Karagounis (Town of Fort Mill); Diane Lackey (SCDOT); Susan Britt (City of Tega Cay); Christopher Stephens (York County); Rob Ruth (City of Rock Hill); Dean Hendrix (York County); Vic Edwards (SCDOT); David Hudspeth (York County); Allison Love (SCDOT); Jonathan Buono (York County); Erin Porter (SCDOT); Steve Allen (Catawba COG); Josh Meetze (SCDOT); Chris Herrmann (RFATS); and David Hooper (RFATS).

CITIZENS / VISITORS PRESENT: Scot Sibert (WSP); Jim Van Blarcom (CAC); Luther Dasher (CAC); Cleopatra Allen (CAC); Brandon Murr (Kimley-Horn); Hisham Abdelaziz (CDM Smith); Phil Leazer (KCI); John Fargher (ESP Associates); Ed Evans (Mattern & Craig); Dave Kerns (HDR); Rae'l Jackson (CN2 News); John Marks (The Herald); Matthew Kreh (WRHI); Liz Duda; Vivian Weinberg; and Bill Jordan (AECOM).

1. CALL TO ORDER:

a. Welcome – Chair O'Neal called the meeting to order at 12:02 P.M. and welcomed all in attendance.

b. Citizen Comment Period – No comments were made at this time.

2. REVIEW / APPROVAL OF MINUTES

Mr. O'Neal asked if there were any changes, deletions, or comments to the minutes of the February 26th, 2021 meeting. Mr. Gettys then made a motion to approve the minutes as presented; this was seconded by Mr. Carnes and the motion was unanimously approved.

3. REPORTS:

a. Celanese / I-77 Interchange Evaluation – Mr. Hooper provided a planning overview of prior work completed assessing operating conditions at the Celanese / I-77 Interchange as well as current and projected demand levels along both the Celanese and Cherry Road corridors. As a point of reference, Mr. Hooper then reviewed applicable federal and state requirements associated with any modification to an interchange (e.g., impact on mainline traffic flow; alternatives analysis, etc). Mr. Mattox next reviewed the initial alternative configuration reflected in the York County SIB application (e.g., Dual Diverging Diamond); and that, part of the planned interchange evaluation will be updating existing planning assumptions and cross checking current and projected demand levels in and around this interchange as well as adjacent interchanges in both directions along the interstate.

Mr. Mattox then transitioned to a review of the current funding available for this project – which includes $6M in Guideshare funding, $5.7M from York County contained in the SIB application, as well as $32.4M awarded from the State Infrastructure Bank. Mr. Hooper emphasized that dependent on the selection of a preferred interchange configuration other than a dual DDI, would likely result in a higher overall project cost; and that, such an adjustment had been discussed during the Policy Committee's Workshop in October as part of the 2050 Long Range Transportation Plan Update. Mr. Mattox then briefly summarized potential ROW and geographical constraints related to the Catawba River that may impact the overall cost of the project.

Mr. Mattox then briefly summarized the working schedule for this project. Specifically, that the alternatives analysis is expected to occur in 2022; design is anticipated between 2023 and 2025; ROW acquisition between 2024 and 2026; and finally, the construction phase is anticipated to be initiated in 2026. Mr. Mattox added that construction should take approximately two years to complete. As a point of reference, Mr. Mattox highlighted how this project schedule compares to interchange projects at Exits 88, 81, and 85.

Mr. Gettys then asked how much ROW may be needed for the various alternatives that will be analyzed? Mr. Hooper responded that while most configurations should fit within the existing ROW; there is the potential for a unique configuration to emerge that may require additional ROW. Mr. Gettys then emphasized the importance of proactive coordination among and between the affected agencies / jurisdictions / property owners / stakeholders in and around the project area. Mr. Hooper noted that this will be discussed at the Technical Team level with this point being emphasized as things progress on this work effort. Mr. Gettys then asked whether the work at this location may impact traffic at Exit 77? Mr. Mattox responded that interstate traffic impacts are not expected south of Exit 79, but that further analysis would be needed; and this of course will be reported back to the Policy Committee once available.

4. PROPOSED POLICY COMMITTEE ACTION ITEMS:

a. 2050 LRTP Update – Mr. Hooper provided a brief summary of the LRTP update process and the steps completed to date. Mr. Hooper then reviewed projected roadway conditions through 2050 – which reflect both increasing levels of travel demand (consistent with projected growth rates), as well as a shift in demand levels away from I-77 and toward arterial roadways reflecting more trips that both begin and end within the regional transportation network.

Mr. Sibert then briefly reviewed the socio-economic data projections from the Metrolina Regional Model; specifically, population and employment, as well as the build-out projections for the planning area through 2050. Mr. Sibert explained that the horizon year projections portray a robust development pattern through 2025; and then leveling out longer term. Discussion then followed regarding the continuation of expected growth into western York County, and extending further down beyond the panhandle of Lancaster County.

Mr. Hooper next transitioned to summarize the development of the draft project list; highlighting unfunded needs in terms of road widenings and new alignments, intersection improvements, bicycle and pedestrian improvements, public transit and policies / programmatic actions. Mr. Hooper emphasized the importance of policy and programmatic actions in terms of the overall planning process and impacts to transportation system efficiency. As a point of reference, these include recommendations noted in the RFATS Collector Street Plan, Access Management Control Procedures, Commercial Property Connections, Driveway Consolidation & Closures, and Regional TIA Procedures. Mr. Hooper then summarized Transportation Performance Management requirements that must be reflected in the LRTP. Mr. Hooper then briefly reviewed Act 114 project ranking and its applicability to the programming of Guideshare funded projects.

Mr. Hooper briefly reviewed the existing cost constrained project list which includes: the SC 160 / I-77 Interchange Reconfiguration; Celanese / Cherry Road / I-77 Interchange Reconfiguration; Cel-River Road Widening (Phase II); SC 160 Widening (Phase II); and an Exit 77 Interchange Upgrade. As a point of reference, Mr. Hooper also highlighted the Panthers development and the roadway improvements associated with this development which include the new interchange at Exit 81 and connecting infrastructure to Paragon Way and Mt Gallant Road. Mr. Hooper noted that while RFATS funding is not reflected in these projects, this is a development of regional significance and therefore should constitute a priority focus point of the 2050 LRTP.

Mr. Hooper then transitioned to briefly summarize the current financial outlook and expected funding availability over the 2050 LRTP planning period. Specifically, Mr. Hooper noted the project estimates in "year of expediture" or YOE dollars for the key transportation improvements included in the cost constrained section of the plan:

- Exit 82 / I-77 Interchange Reconfiguration – Current Cost Estimate: $79.5M
- Exit 77 Interchange Reconfiguration – Current Cost Estimate: $6.1M
- SC 160 East Road Widening -- Current Cost Estimate: $33.8M
- Exit 85 Interchange Reconfiguration – Current Cost Estimate: $27.1M

Mr. Hooper then outlined a few contingency elements contained in the funding projections through 2050; in particular, that while approximately $32.8 is currently classified as unprogrammed, it is important to note that this funding is not currently available but will accumulate over time. Additionally, Mr. Hooper noted that with three active interchange projects expected over the next 6 to 8 years, it would not be unexpected that one or more may need supplemental funding during this period – therefore, it is prudent to maintain a reasonable unprogrammed budgetary component during this time. As a point of reference, it was also noted that the funding currently programmed on Cel-River Road (Phase II) should be viewed in the same manner until the final interchange configuration is selected at the Celanese / I-77 location.

With this in mind, Mr. Hooper then transitioned to the Policy Committee's prior discussions about strenthening the bicycle / pedestrian network in an effort to increase safety, network connectivity, and overall transportation system efficiency. As such, Mr. Hooper recommended that the Policy Committee consider incorporating a specific budgetary commitment of $10M to undertaking bicycle / pedestrian projects in the 2050 Long Range Transportation Plan – utilizing a small portion of the unprogrammed balance noted earlier. Discuss then followed with Ms. Savage stating her support for allocating Guideshare funding for these types of multimodal improvements as well as transit oriented improvements. Mr. Gettys stated that he believes it is important to support bicycle / pedestrian improvements as well as emphasized the need for specific juridictional coordination to advance our rapid transit planning efforts.

Mr. Hooper then requested preliminary approval of the draft 2050 LRTP Update and authorization to initiate a 30 day public comment period. Mr. Hooper added that a public hearing will be scheduled prior to the next meeting on April 23rd from 10:00am to 11:30am. Ms. Pender then made a motion to approve the draft 2050 LRTP with the allocation of $10M in Guideshare funding through 2050 for bicycle and pedestrian projects; as well as authorize a 30-day public comment period and public hearing. Mr. Carnes seconded and this motion was unanimously approved.

b. FY 21-23 UPWP – Mr. Hooper briefly summarized principal work activities outlined in the FY 21-23 UPWP, as well as ongoing administration of grant programs and support of the regional travel demand model. Mr. Hooper then requested preliminary approval of the Draft UPWP and initiation of a 30-day public comment period. Mr. Gettys then made a motion for approval; seconded by Ms. Pender and the motion was unanimously approved.

c. Coronavirus Relief & Recovery Act Funding – Mr. Hooper noted that RFATS is slated to receive $613,000 in Coronavirus Relief & Recovery Act Funding. Mr. Hooper stated that guidance from SCDOT has been received which recommended allocating this funding toward existing debt service and existing project priorities. Mr. Hooper highlighted that SCDOT has recommended the application of $360,000 to retire remaining debt from the 27 & 7 Program; and to allocate the remaining $253,000 to support the US 521 / Marvin Road Intersection Improvement Project. Mr. Gettys then asked if there was potential for additional funding to be designated to RFATS? Mr. Hooper noted that no such guidance has been provided by our federal or state partners at present, though a subsequent funding announcement would not be entirely unexpected in the emerging COVID-19 planning environment. As a point of reference, Mr. Hooper added that independent of COVID-19; financial adjustments following incorporation of 2020 Census data is envisioned, though no guidance is available at this time. Mr. Carnes then made a motion for approval; seconded by Ms. Pender and the motion was unanimously approved.

d. Title VI Plan – Mr. Herrmann briefly summarized the update to the Title VI Plan; highlighting recommended changes. Mr. Herrmann then requested that the Policy Committee grant preliminary approval and authorize a 21-day public comment period. Ms. Savage then made a motion for approval; seconded by Ms. Pender and the motion was unanimously approved.

5. OTHER BUSINESS:

a. Next Meeting – Mr. O'Neal noted that the next Policy Committee meeting is scheduled for April 23, 2021.

6. ADJOURNMENT:

The motion to adjourn was made by Mr. O'Neal and seconded by Mr. Hamilton; the motion was unanimously approved and the meeting was adjourned at 1:31 P.M.

POLICY COMMITTEE MEETING
SUMMARY MINUTES
April 23, 2021 – 12:00 p.m.
Rock Hill City Hall – Council Chambers / Zoom

COMMITTEE MEMBERS PRESENT: David O'Neal; John Gettys; Guynn Savage; Tom Audette; Kathy Pender; Jim Reno; Bill Harris; Wes Climer; Gary Simrill (proxy); and Brian Carnes.

ADMINISTRATIVE / TECHNICAL / MANAGEMENT STAFF PRESENT:
Berry Mattox (SCDOT); Mark Pleasant (FHWA); Patrick Hamilton (York County); Penelope Karagounis (Town of Fort Mill); Diane Lackey (SCDOT); Susan Britt (City of Tega Cay); Christopher Stephens (York County); Rob Ruth (City of Rock Hill); Dean Hendrix (York County); Vic Edwards (SCDOT); David Hudspeth (York County); Allison Love (SCDOT); Jonathan Buono (York County); Erin Porter (SCDOT); Steve Allen (Catawba COG); Josh Meetze (SCDOT); Chris Herrmann (RFATS); and David Hooper (RFATS).

CITIZENS / VISITORS PRESENT: Scot Sibert (WSP); Jim Van Blarcom (CAC); Luther Dasher (CAC); Cleopatra Allen (CAC); Brandon Murr (Kimley-Horn); Hisham Abdelaziz (CDM Smith); Phil Leazer (KCI); John Fargher (ESP Associates); Ed Evans (Mattern & Craig); Dave Kerns (HDR); Rae'l Jackson (CN2 News); John Marks (The Herald); Matthew Kreh (WRHI); Liz Duda; Vivian Weinberg; and Bill Jordan (AECOM).

1. CALL TO ORDER:

a. Welcome – Chair O'Neal called the meeting to order at 12:01 P.M. and welcomed all in attendance.

b. Citizen Comment Period – No comments were made at this time.

2. REVIEW / APPROVAL OF MINUTES

Mr. O'Neal asked if there were any changes, deletions, or comments to the minutes of the March 26th, 2021 meeting. Mr. Gettys then made a motion to approve the minutes as presented; this was seconded by Ms. Savage and the motion was unanimously approved.

3. REPORTS:

a. York County Pennies for Progress Status Report – Mr. Hamilton provided a brief update on the following projects:

- SC 274 / Pole Branch Road – construction is currently underway. Bridge replacements have been initiated.
- Gold Hill / I-77 Interchange – construction is currently underway. Mr. Hamilton noted that project completion is still anticipated for 2021.
- Galleria Blvd Extension – project has been bid, construction is anticipated to begin in the coming months.
- Fort Mill Parkway / Spratt Street Intersection – project has been bid, construction has been delayed so as to coordinate with rehab work by SCDOT on the I-77 Bridge and associated detours scheduled for May. Construction for the intersection is anticipated to take 12-15 months once initiated.

- Hubert Graham Way Extension – design plans are being finalized. Project is anticipated to be bid in summer 2021 with construction anticipated to begin in 2022.
- SC 160 East Widening – project is anticipated to be bid out in fall 2021.
- US 21 / SC 51 Widening – ROW acquisition is being finalized, project is anticipated to be bid out late in 2021.
- SC 27 Widening – ROW Acquisition and design plans are being finalized, project is anticipated to be bid out late in 2021.
- Riverview Road Widening – ROW Acquisition and design plans are being finalized, project is anticipated to be bid out late in 2021.
- Sutton Road Intersection Improvements (New Gray Rock Road & Harris Road) – ROW Acquisition is currently underway.
- SC 49 / 274 / 557 Intersection Improvement – design plans are being finalized, ROW Acquisition is anticipated to begin in summer 2021.
- Celanese / Cherry Intersection Improvement – design plans are being finalized, ROW Acquisition is anticipated to begin in summer 2021.
- Flint Hill Street Community Drainage Project – ROW Acquisition is anticipated to begin in summer 2021.
- Mt Gallant Road Widening (Celanese Road to Twin Lakes Road) – ROW Acquisition is anticipated to begin in fall 2021.
- Cel River Road Widening Phase II – ROW Acquisition is anticipated to begin in fall 2021.

4. PROPOSED POLICY COMMITTEE ACTION ITEMS:

a. 2050 LRTP Update – Mr. Hooper provided a brief summary of the LRTP update process. Mr. Hooper then reviewed key milestones and initiatives that are highlighted within the 2050 LRTP Update. These include significant progress at multiple interchange locations, the planned new interstate access at Exit 81,the planned Corridor Study of US 521, the initiation of the MyRide Fixed Route Service, the completion of the Hwy 49 Corridor Study, and the adoption of a Complete Streets Policy by SCDOT. Mr. Hooper then summarized public involvement noting virtual public meetings conducted in October 2020, social media and website outreach, advertisements to local newspapers, and a virtual public hearing held on April 23rd prior to the Policy Committee meeting.

Mr. Sibert then explained the federal requirements of performance-based planning summarizing performance goals reflected in the LRTP Update for Safety, Infrastructure Condition, Congestion Reduction, System Reliability, Freight Movement & Economic Vitality, Environmental Sustainability, and Reduced Project Delivery Delays. Mr. Sibert then continued and summarized the policy recommendations outlined in the individual chapters of the LRTP Update. Mr. Sibert highlighted that based on discussion from the previous meeting, RFATS is committing $10M of Guideshare funding towards bicycle and pedestrian facilities as a part of the 2050 LRTP Update.

Mr. Hooper briefly summarized the current financial outlook and expected funding availability over the 2050 LRTP planning period. Specifically, Mr. Hooper noted the project estimates in "year of expenditure" or YOE dollars for the key transportation improvements included in the cost constrained section of the plan:

- Exit 82 / I-77 Interchange Reconfiguration – Current Cost Estimate: $79.5M
- Exit 77 Interchange Reconfiguration – Current Cost Estimate: $6.1M
- SC 160 East Road Widening – Current Cost Estimate: $33.8M
- Exit 85 Interchange Reconfiguration – Current Cost Estimate: $27.1M
- Bicycle / Pedestrian Infrastructure – Current Cost Estimate: $10M

Mr. Hooper then outlined a few contingency elements contained in the funding projections through 2050; in particular, that while approximately $22.8M is currently classified as unprogrammed, it is important to note that this funding is not currently available but will accumulate over 29 years. Additionally, Mr. Hooper noted that with three active interchange projects expected over the next 6 to 8 years, it would not be unexpected that one or more may need supplemental funding during this period – therefore, it is prudent to maintain a reasonable unprogrammed budgetary component during this time. As a point of reference, it was also noted that the funding currently programmed on Cel-River Road (Phase II) should be viewed in the same manner until the final interchange configuration is selected at the Celanese / I-77 location.

Mr. Audette then asked if the funding projections reflect any potential changes that may come from the release of the 2020 Census Data? Mr. Hooper responded that reasonable assumptions for this have been made and are reflected. Mr. Audette then asked if these funding projections reflect any impact from recommendations for public transit made from the Connect Beyond Initiative? Mr. Hooper responded that the current assumption is that any funding allocation would be reflected beyond the Guideshare allocations outlined for this LRTP Update. As a point of reference, Mr. Hooper noted that it is expected that the Connect Beyond Initiative will recommend a multi-jurisdictional transit tax to be utilized to fund the public transit recommendations formed in the study.

Mr. Hooper then reviewed the public comments provided as part of the Public Hearing, highlighting support for allocating Guideshare funding for bicycle and pedestrian infrastructure. Mr. Hooper noted that multiple comments recognized the importance of multimodal improvements to the regional transportation network. Ms. Savage then inquired as to the level of public participation that was received as a part of the LRTP Update process. Mr. Hooper responded by reviewing the individual comments provided, noting that a number of advocacy groups and businesses provided comments through one person on their behalf. Mr. Hooper also explained that due to circumstances involved with COVID-19, considerable social media and website outreach was completed as a part of the process. Mr. Herrmann noted that social media ads reached over 25,000 people throughout the RFATS region.

Mr. Hooper then requested final approval and adoption of the 2050 LRTP Update and Air Quality Conformity Determination as well as reaffirmation of the FY 21-27 TIP. Discussion then followed regarding the allocation of $10M of Guideshare funding for bicycle and pedestrian infrastructure. Mr. Gettys then emphasized the importance of acting with expediency in regard to improving the multimodal network as they can be completed on a more short term basis. Mr. Gettys then made a motion for approval and adoption with the stipulation that RFATS make an allocation decision on the $10M in Guideshare funding within two years from date of adoption. Mayor Savage agreed and seconded this motion. Mr. Reno then asked if it would be beneficial to allocate $8M in Guideshare funding within two years due to growth being experienced throughout the region and ongoing project needs? Mr. Gettys noted that he would like for staff to evaluate a potential retainer and provide further information for the Policy Committee to discuss at a future meeting. The motion then passed unanimously.

b. FY 21-23 UPWP – Mr. Hooper briefly summarized principal work activities outlined in the FY 21-23 UPWP, as well as ongoing administration of grant programs and support of the regional travel demand model. Mr. Hooper then requested final approval of the Draft UPWP contingent upon completion of the 30-day public comment period. Mr. Carnes then made a motion for approval; seconded by Chief Harris and the motion was unanimously approved.

c. Title VI Plan – Mr. Herrmann briefly summarized the update to the Title VI Plan; highlighting recommended changes. Mr. Herrmann then requested that the Policy Committee grant final approval contingent upon completion of the 21-day public comment period. Ms. Savage then made a motion for approval; seconded by Chief Harris and the motion was unanimously approved.

5. OTHER BUSINESS:

a. Next Meeting – Mr. O'Neal noted that the next Policy Committee meeting is scheduled for May 21, 2021.

6. ADJOURNMENT:

The motion to adjourn was made by Mr. O'Neal and seconded by Ms. Savage; the motion was unanimously approved and the meeting was adjourned at 1:15 P.M.

Technical Team Conference Call
Summary Minutes
April 2, 2020 – 1:30 p.m.

Conference Call Attendees: Vic Edwards (SCDOT); Christopher Stephens (York County); Diane Dil (York County); Stephen Allen (Catawba COG); Penelope Karagounis (Fort Mill); Bill Meyer (Rock Hill); Cliff Goolsby (Rock Hill); Patrick Hamilton (York County); Berry Mattox (SCDOT); Jonathan Guy (Kimley Horn); Rox Burhans (Lancaster County); Yolanda Morris (FHWA); Jerome Pearson (SCDOT); Diane Lackey (SCDOT); Susan Britt (City of Tega Cay); Josh Meetze (SCDOT); Chris Herrmann (RFATS); and David Hooper (RFATS).

I. Review of Minutes

Mr. Hooper asked if there were any additions, corrections, or deletions from the March minutes. The minutes were then accepted as presented.

II. Old Business

A. SC 160 Interchange Project – Update from SCDOT & Consultant Team

1. **Interchange Design Process–** Mr. Mattox very briefly reviewed the public outreach meeting for this project which was held on January 30th. Mr. Mattox noted that there was overwhelmingly positive feedback regarding the project and the meeting; also highlighting that the majority of comments received were concerning the bicycle and pedestrian component of the project and overall project timeline. Mr. Mattox then noted that SCDOT is close to finalizing the environmental documents needed for a preferred alternative for the project.

   Discussion then transitioned to the useful life of the directional interchange compared to the SPUI. Mr. Guy noted that the projections show that both alternatives begin to break down around horizon year 2035. Mr. Guy then reviewed the operational benefits and challenges with all of the alternatives being considered. Mr. Guy then highlighted that traffic analysis completed on the directional interchange option has shown the need to eliminate a right-turn movement from the southbound off ramp; noting this degraded operational efficiency of the interchange near Assembly Drive. This right-turn movement from the southbound off ramp has instead been transitioned to be paired with the left-turn movement closer to Kingsley.

   Mr. Guy then reviewed the multi-modal component of the design thus far; noting that a Shared-Use Path has emerged as the preferred approach. Mr. Guy reviewed the initial design which shows the Shared-Use Path on the south side of SC 160 connecting to Assembly Drive, a crossing at the interchange, and then the Shared-Use Path continues on the north side of SC 160 to Kingsley and on to US 21. Discussion then followed regarding the crossing location at the interchange instead of locating this closer to Baxter or Kingsley. Mr. Guy highlighted challenges with grading, natural gas lines, and protected historical grounds. Mr. Edwards then suggested that the consultant team examine a possible pedestrian crossing signal being added at Kinglsey Park Drive and Textile Way instead of the pedestrian crossing being located at the interchange.

Mr. Mattox then transitioned to discuss the bridge component of this project; noting that the existing bridge on SC 160 over I-77 will need to be widened to accommodate the directional interchange. Mr. Mattox then explained that the cost associated with widening the existing bridge is approximately $4M; adding that replacing the bridge entirely would cost approximately $7M. Also noting that the remaining lifespan left on this bridge is estimated at 25 years. Mr. Mattox then inquired whether it would be beneficial to move forward with replacing the existing bridge? Mr. Edwards noted that from a safety standpoint, it would make sense to replace the existing bridge with wide shoulders rather than squeezing additional lanes and a shared-use path in the existing bridge structure. Mr. Mattox then added that doing that may be the best use of money for this situation. Mr. Hooper then asked if SCDOT would be willing to provide the additional funding to improve the bridge through the federal bridge replacement program? Mr. Mattox noted that he will initiate those discussions at SCDOT.

Mr. Mattox then reviewed preliminary project cost estimates including bridge modifications; noting that the cost range for all the alternatives has shifted to between $45M to $73M. Mr. Hooper then stated that further discussion with the Policy Committee would be the logical next step regarding these additional elements discussed today, as well as the cost implications of each.

2. **SC 160 / US 21 Intersection Component –** Mr. Mattox reviewed preliminary design elements for the directional interchange; noting that initial traffic analysis has shown that the widening component for SC 160 may need to extend past US 21 to add additional storage for the intersection and taper off near Horse Road. Ms. Karagounis added that the Town of Fort Mill would be in support of the added extension past US 21. Mr. Hooper then asked Ms. Karagounis about the current working schedule for the hospital? Ms. Karagounis replied that the overall goal is to start construction later this year with the hope of opening in 2021. Mr. Hooper then noted the need to receive guidance from FHWA on whether extending the project past US 21 would require any additional modeling or follow-up.

B. Transit Coordination Follow-Up – Status Update

1. **Planning Coordination –** Mr. Hooper briefly noted that the mayors are working together regarding the initiation of Demand Response service north of the Catawba River.

2. **Funding Variables –** Mr. Hooper also noted that he has submitted an email to the SCDOT Office of Public Transit regarding our interest in utilizing a portion of the SMTF funds designated for use in the Charlotte NC-SC UZA in South Carolina to assist in managing the budgetary costs. As a point of reference, Mr. Hooper noted that he has received a favorable response from the Mass Transit Office.

C. 2050 LRTP Update

1. **SE Data and Network Updates –** Mr. Hooper noted that the socio-economic jurisdictional reviews are largely complete. Mr Hooper then thanked everyone for taking time to meet with Mr. Sibert individually.

2. **Public Outreach Meetings –** Mr. Hooper noted that the Public Outreach Meetings that were scheduled for April have been cancelled and will be re-scheduled. Given the impact of COVID-19, Mr. Hooper added that these may be rescheduled for the fall.

3. **Draft Chapters –** Mr. Hooper noted that the first slate of draft chapters will be distributed for initiatl review later this month.

III. New Business

A. Policy Committee Agenda Items for April 24, 2020

1. **Pennies for Progress Report –** Mr. Hooper stated that a Project Status Report from Mr. Hamilton is scheduled for the April Policy Committee Meeting. Mr. Hamilton noted that current decreases in traffic have allowed contractors to take advantage of opportunities to work on projects.

   Mr. Hamilton briefly noted that a SIB meeting was scheduled for March 19th during which applicants would present to the SIB Board, however that meeting was cancelled.

B. 2045 LRTP & TIP Amendment – Mr. Hooper briefly noted that the project covering new interstate access between Exits 79 & 82 remains active, pending receipt of SCDOT's funding notification letter; as such, this action is slated to occur at the next Policy Committee meeting following its receipt.

C. TIP Amendment – Mr. Hooper noted that this agenda item relating to the funding of the SC 160 Interchange Reconfiguration remains active, pending finalization of the SIB Board's evaluation of submitted applications.

D. TIP Amendment – Mr. Hooper noted that the TIP Amendment reflecting $2.28M in additional construction funding for the US 521 / Marvin Road Intersection Improvement Project will be considered for final approval at the next Policy Committee meeting.

E. TIP Amendment – Mr. Hooper noted that the TIP Amendment reflecting the $830,458 in FTA 5339 funding for the City of Rock Hill's My Ride Transit Service will be considered for final approval at the next Policy Committee meeting.

F. CAC Appointment – Mr. Hooper noted that staff continue work to fill a vacancy on the Citizens Advisory Committee. Mr. Herrmann stated that he has discussed the vacancy with a potential applicant and is waiting for their response.

G. Administrative Report – Mr. Hooper briefly noted that the Administrative Report will be provided to the Policy Committee at their April meeting (e.g., administrative adjustments, etc).

IV. Other Business

A. Transportation Alternatives Program – Mr. Herrmann asked for those jurisdictions developing applications to please notify him by the April 10th deadline; adding that staff are offering an extended time period to submit final applications by April 30th due to current constraints being experiencing by those working remotely from home.

B. Next Technical Team Meeting – Mr. Hooper noted that the next Technical Team meeting is scheduled for May 7, 2020.

V. Adjourn – The meeting was adjourned at 3:11 PM.

Technical Team Zoom Meeting
Summary Minutes
June 4, 2020 – 1:30 p.m.

Conference Call Attendees: Berry Mattox (SCDOT); Josh Meetze (SCDOT); Patrick Hamilton (York County); Jerome Pearson (SCDOT); Christopher Stephens (York County); Rox Burhans (Lancaster County); Penelope Karagounis (Fort Mill); Bill Meyer (Rock Hill); Yolanda Morris (FHWA); Diane Dil (York County); Vic Edwards (SCDOT); Chris Herrmann (RFATS); and David Hooper (RFATS).

I. Review of Minutes

Mr. Hooper asked if there were any additions, corrections, or deletions from the May minutes. Ms. Karagounis noted a spelling error on page 2. Mr. Hooper stated that this would be corrected. The minutes were then accepted as amended.

II. Old Business

A. Policy Committee Follow-up

1. TIP Amendment – Mr. Hooper noted that the TIP Amendment reflecting $2.28M in additional construction funding for the US 521 / Marvin Road Intersection Improvement received final approval at the Policy Committee meeting.

2. TIP Amendment – Mr. Hooper noted that the TIP Amendment reflecting $830,458 in FTA 5339 funding for the City of Rock Hill's My Ride Transit Service received final approval at the Policy Committee meeting.

3. TIP Amendment – Mr. Herrmann noted that the TIP Amendment reflecting $100,000 in SCPRT Recreational Trails funding received preliminary approval at the Policy Committee meeting.

4. FY 20-21 TAP Project Recommendations – Mr. Herrmann briefly reviewed the recommendations made by the TAP Sub-Committee to allocate $48,400 in TAP funding for the City of Tega Cay's project and $64,587 in TAP funding for the City of Rock Hill's project. Mr. Herrmann stated that both the Heron Harbor Drive / Tega Cay Drive project and the Oakland Ave Streetscape received preliminary approval at the Policy Committee meeting. As a point of reference, Mr. Hooper also noted that SCDOT believes that a subsuquent study on the results of the Tega Cay project would be beneficial, and he stated that such a study will indeed be completed by RFATS – both for site specific feedback; but also for the potential application of this technology elsewhere within the planning area.

5. FY 21-27 TIP Update – Mr. Herrmann briefly noted that the TIP Update received approval contingent on any comments that may be submitted through the completion of the public comment period.

B. Transportation Performance Management –

Mr. Herrmann briefly reviewed the FAST Act requirements for performance measurement. As a point of reference, Mr. Hooper noted that this process is designed to improve both accountability and transparency in planning decisions by clearly tracking the performance of transportation system investments. Mr.

Herrmann then summarized the CMAQ Performance Measures that have been established by USDOT. These include Peak Hour Excessive Delay (PHED) and Non-Single Occupancy Vehicle Travel (Non-SOV). Mr. Herrmann noted that FHWA has required that both NCDOT & SCDOT, as well as all MPOs in the Charlotte UZA coordinate and agree on the unified targets for these measures. Mr. Herrmann explained that we are approaching the mid-year performance period when reporting on these measures is due to FHWA; also noting that members of CRAFT have met to review all of the relevant data.

Mr. Herrmann then reviewed the criteria used to establish targets for both metrics; highlighting the use of NPMRDS Data. Mr. Herrmann next highlighted the trendline data for Peak-Hour Excessive Delay from 2014-2017, noting that the increasing trend caused all parties involved to set a four-year target for 2022 of 34 hours. Mr. Herrmann then noted that the NPMRDS data used since that time has transitioned from HERE Data to INRIX Data and the new numbers for 2017-2019 exhibit a decrease in the annual hours of Peak Hour Excessive Delay.

Mr. Herrmann then transitioned to review the trendline data for the Non-SOV metric from 2012 – 2016 which showed a decline from 21.8% to 21.5% in non-single occupancy vehicle travel due to continued population growth and increases in VMT. Mr. Herrmann explained that a two-year target for 2018-2020 and a four-year target for 2018-2022 were required for the Non-SOV metric. It was noted that both targets were set at 21.0% based on the trendline data. Mr. Herrmann then reviewed trendline data for 2017 (21.4%) and 2018 (21.6%) and highlighted that the Charlotte UZA is expected to be above the two-year target and appears likely to stay above the four-year target.

Mr. Herrmann then summarized that a unanimous decision was made by members of CRAFT to not make any adjustments to the four-year targets at this time. Next steps include updating the RFATS CMAQ Performance Plan and providing the updated plan to SCDOT for their report to FHWA, due on October 1, 2020.

C. 2050 LRTP Update – Mr. Hooper briefly noted that the first draft chapters were shared with Technical Team members last month and thanked those that were able to provide feedback. Mr. Hooper next noted that four additional chapters (Freight Element, Aviation Element, Goals / Performance Objectives Element, & Bicycle / Pedestrian Element) are ready for review, and will be distributed shortly with the Technical Team. Mr. Hooper then asked everyone to submit their comments or observations on or before Thursday, June 18th.

III. New Business

A. Policy Committee Agenda Items for June 19th or 26th, 2020 – Mr. Hooper explained that a virtual meeting is expected to be scheduled for June utilizing the Zoom Webinar App.

1. **SCDOT Project Status Report –** Mr. Hooper stated that a Project Status Report is slated for the next Policy Committee meeting. Mr. Mattox then provided a brief update. Specifically, that Riverview / Riverchase and E White / Firetower are both substantially complete. Clebourne / N White Intersection Improvement has been awarded and construction is anticipated to begin soon. ROW negotiations continue on the US 521 / Marvin Road Intersection Improvement. Design plans are being finalized on India Hook / Celanese and coordination continues with the City of Rock Hill for utility relocation.

   Mr. Mattox next explained that an additional funding need was identified for Carowinds / Pleasant; adding that he will coordinate with Mr. Hamilton once a more precise estimate

is available. Mr. Mattox then transitioned to give a brief update on the Adaptive Signals Project on SC 160; noting that the Blue Toad detection equipment has been ordered and is expected to be installed in the coming months. Once this is installed then the system can analyze traffic patterns in order to devise the initial signal plans. Lastly, Mr. Mattox reviewed a cost overrun of $350,000 that has been identified for the widening of SC 160 in Lancaster County. Discussion then followed regarding overall project coordination and scheduling.

B. SC 160 Interchange Project – Mr. Hooper briefly reviewed previous discussion from the Policy Committee meeting regarding the SC 160 Interchange Project; specifically noting that they expressed caution on making any funding commitment before a decision is made by the SIB Board.

C. LRTP / TIP Amendment – Mr. Hooper briefly reviewed the New Interchange Project related to the Panthers facility; noting that this agenda item is tentative.

D. FY 2020 – 2021 TAP Project Recommendations – Mr. Herrmann briefly noted that the TIP Amendment reflecting the Tega Cay Drive / Heron Harbor Drive project and the Oakland Ave Streetscape Improvement will be considered for final approval at the June meeting.

E. TIP Amendment – Mr. Herrmann noted that the FTA Funding Awards for the new fiscal year are anticipated to be released soon; also highlighting that a TIP Amendment is required to reflect the utilization of this federal funding within the planning area.

F. CAC Appointment – Mr. Herrmann noted that multiple applications have been submitted for the vacancy on the CAC, and a recommendation to the Policy Committee is slated for the June meeting.

G. Administrative Report – Mr. Hooper briefly noted that the Administrative Report will be provided to the Policy Committee at their June meeting (e.g., administrative adjustments, etc).

IV. Other Business

A. CRAFT – Mr. Hooper briefly reviewed recent meetings at CRAFT, highlighting area and regional initiatives. Specifically, the Regional Transit Plan being developed for the Greater Charlotte Region. Mr. Hooper then summarized funding challenges currently being experienced by NCDOT and expected delays to projects on NC 160 and US 521 in North Carolina.

B. Lancaster County Local Option Sales Tax Program – Mr. Hooper noted that Lancaster County Sales Tax Commission has included partial funding to widen US 521 on their short list as their continue their work.

C. Bike Ped Coalition of York County – Mr. Herrmann summarized the most recent meeting of the Bike Ped Coalition of York County, noting their interest in both of the FY 20-21 TAP Projects and their continued focus and engagement in the overall transportation process.

D. Next Technical Team Meeting – Mr. Hooper noted that the next Technical Team meeting is scheduled for Thursday, September 3, 2020.

V. Adjourn – The meeting was adjourned at 2:55 PM.

Technical Team Zoom Meeting
Summary Minutes
October 1, 2020 – 1:30 p.m.

Conference Call Attendees: Berry Mattox (SCDOT); Josh Meetze (SCDOT); Patrick Hamilton (York County); Jerome Pearson (SCDOT); Rox Burhans (Lancaster County); Penelope Karagounis (Fort Mill); Cliff Goolsby (Rock Hill); Bill Meyer (Rock Hill); Susan Britt (Tega Cay); Yolanda Morris (FHWA); Stephen Allen (Catawba COG); Diane Lackey (SCDOT); Erin Porter (SCDOT); Betsy McCall (SCDOT); Chris Herrmann (RFATS); and David Hooper (RFATS).

I. Review of Minutes

Mr. Hooper asked if there were any additions, corrections, or deletions from the September minutes. The minutes were then accepted as presented.

II. Old Business

A. Policy Committee Follow-up

1. Transportation Conformity Amendment – Mr. Hooper briefly summarized the LRTP & Conformity Amendment reflecting the planned 5-lane widening of Mt Gallant Road from Anderson Road to John Ross Parkway. Mr. Hooper noted that preliminary approval was granted by the Policy Committee at the September meeting for this amendment and the public comment period is being initiated on October 7th.

2. CMAQ Performance Plan Update – Mr. Herrmann briefly noted that the Policy Committee gave final approval of the updated CMAQ Performance Plan and this has been forwarded to SCDOT for their reporting which is due to FHWA.

3. TIP Amendment – Mr. Herrmann noted that the Policy Committee gave preliminary approval of the TIP Amendment reflecting the annual FTA Funding Awards and the recently awarded CARES Act Funding. Mr. Herrmann explained that the public comment period for this amendment would begin on October 7th.

B. Hwy 49 Corridor Study –

Mr. Hooper provided a brief overview of this work effort; specifically, a focused examination of area operating conditions and the development of feasible improvement options for strenghthening network reliability, pedestrian safety, and connectivity. As a point of reference, Mr. Hooper noted the adverse impact of COVID-19 on the existing conditions assessment; but that, a blended approach with historical travel demand patterns and usage levels will be utilized as a way to fairly reflect current conditions. Mr. Hamilton then provided the latest information on Pennies projects currently active and/or planned for the study area. Ms. McCall then asked about the CMP and its utilization as a contributing variable in completing the study.

C. 2050 LRTP Update

1. Draft Project List – Mr. Hooper briefly reviewed the input provided by Technical Team members regarding the Draft Project List for the LRTP Update. Mr. Hooper noted that progress has been realized in trying to condense the list of Unfunded Road Widenings and

Unfunded Intersection Improvements, as previously requested by the Policy Committee. Mr. Hooper then explained that the Draft Project List will be reviewed with the Policy Committee at the October Workshop.

2. Public Outreach / Engagement – Mr. Herrmann noted that two virtual meetings have been scheduled. These will be held on Tuesday, October 13th from 1:30PM to 3:00 PM and Thursday, October 15th from 6:00PM to 7:30PM on Zoom. Mr. Herrmann asked Technical Team members to assist in distributing this information. Mr. Herrmann lastly summarized the Facebook Boosting ads which will be utilized to help increase public awareness through social media.

3. Projects that cross and / or adjoin MPO Planning Areas – Mr. Hooper provided a brief review of key projects at or near planning area boundaries. Highlighted projects included: (1) the planned widening of NC 160 from the stateline north toward Hwy 49; (2) the widening of US 521 from the stateline to Ballantyne Commons Parkway; and (3) the Catawba Crossings project which is evaluating the construction of a new bridge from New South Hope Road to I-485. As a point of reference, Mr. Hooper noted that project #3 is currently a feasibility study being lead by the Gaston MPO; and that, he is a member of the steering committee on this work effort.

4. Project Ranking – Mr. Hooper briefly summarized the Act 114 Ranking process that requires all projects of all types to be evaluated and ranked prior to be included in the cost constrained section of the LRTP.

5. Financial Status & Projections – Mr. Hooper reviewed the revenue forecast from 2020 to 2050 which is being completed for the LRTP Update. As a point of reference, the projections completed for the 2045 LRTP Update totaled $217M, of which over $172M was committed to interchange improvements at Exit 85 & Exit 82, the widening of SC 160 from Sutton Road to US 21, the widening of SC 160 to US 521, the widening of Cel-River Road to Dave Lyle Blvd, and ramp improvements at Exit 77. Mr. Hooper then noted that a more complete overview will be reviewed with the Policy Committee at the workshop on expected funding availability levels and the applicable time frames.

6. Modeling Analysis – Mr. Hooper noted that a modeling analysis reflecting existing and planned projects will be reviewed with the Policy Committee reflecting network operating conditions currently as well as over the next few decades.

7. Regional Initiatives – Mr. Hooper explained that he will also provide an overview to the Policy Committee highlighting the various regional initiatives that remain active. These initiatives include the Connect Beyond Regional Transit Plan, Beyond I-77 Corridor Study, continued efforts to complete a Bi-State Regional ITS / TIMS Strategic Action Plan, the Connected & Autonomous Vehicles Taskforce, and the Catawba Crossings Project.

III. New Business

A. Policy Committee Workshop for October 23, 2020 – Mr. Hooper noted that a workshop is scheduled for October 23rd to review work on the LRTP Update with Policy Committee members.

IV. Other Business

A. Community Viz – Mr. Hooper noted that Mr. Herrmann, Ms. Dil, and Mr. Stephens were taking part in a training opportunity for Community Viz. Mr. Herrmann briefly noted that

Community Viz can be a helpful tool for analysis in development and re-development planning.

B. Next Technical Team Meeting – Mr. Hooper noted that the next Technical Team meeting is scheduled for November 5, 2020.

V. Adjourn – The meeting was adjourned at 2:30 PM.

Technical Team Zoom Meeting
Summary Minutes
November 5, 2020 – 1:30 p.m.

Conference Call Attendees: Berry Mattox (SCDOT); Patrick Hamilton (York County); Josh Meetze (SCDOT); Cliff Goolsby (Rock Hill); Diane Dil (York County); Jerome Pearson (SCDOT); Rox Burhans (Lancaster County); Yolanda Morris (FHWA); Penelope Karagounis (Fort Mill); Bill Meyer (Rock Hill); Leah Youngblood (Rock Hill); Dean Hendrix (York County); Vic Edwards (SCDOT); Susan Britt (Tega Cay); Chris Stephens (York County); Stephen Allen (Catawba COG); Diane Lackey (SCDOT); Erin Porter (SCDOT); Betsy McCall (SCDOT); Chris Herrmann (RFATS); and David Hooper (RFATS).

I. Review of Minutes

Mr. Hooper asked if there were any additions, corrections, or deletions from the October minutes. The minutes were then accepted as presented.

II. Old Business

A. Policy Committee Workshop

1. Draft Project List – Mr. Hooper summarized planned points of discussion slated for the Policy Committee's October Workshop; and specifically noted the review / approval of the draft project list. Discussion then followed regarding the various sections (i.e., additions; deletions and recommended adjustments, etc). Lastly, Mr. Hooper asked that Technical Team members complete one last review and to be submit any additional comments to him over the next week.

2. Conformity Analysis – Mr. Hooper then noted that a conformity analysis will be completed and reviewed by the Interagency Consultation Committee consistent with applicable air quality and metropolitan planning requirements.

3. Plan Elements – As a point of reference, Mr. Hooper noted that most draft chapters have been reviewed by the Technical Team; and with the approval of the draft project list the remaining chapters covering roadways and funding assumptions will be undertaken next.

4. Project Ranking – Mr. Hooper briefly summarized discussion at the Policy Committee Workshop regarding the inclusion of the Carowinds Blvd / I-77 interchange in the ranking process. Mr. Hooper noted that feedback from Mr. Johnson highlighted the need for projects to be ranked in order to receive further consideration from the State Infrastructure Bank. Mr. Hooper then emphasized the importance of the US 521 Corridor, and the need for an study/analysis, followed by subsequent ranking and inclusion in the 2050 LRTP.

B. Hwy 49 Corridor Study –

Mr. Herrmann provided a brief overview of work completed thus far. Specifically, Mr. Herrmann reviewed the Traffic Volume Development Methodology that has been completed as part of the existing conditions assessment. Mr. Herrmann then explained that a blended approach of historical travel demand pattern analysis and current turning movement counts have been utilized to fairly capture current conditions amidst the impact of COVID-19. Mr. Herrmann then outlined next steps which include the completion

of the existing conditions assessment, crash & safety analysis, traffic operations analysis, and the drafting of the technical report.

C. CMP Annual Evaluation Report – Mr. Herrmann reviewed the purpose of the Congestion Management Process and summarized the importance of completing an annual progress evaluation to assess relevant project and planning activity undertaken over the last year. Mr. Herrmann then briefly reviewed relevant allocation and programming of funding, project types and timelines, as well as anticipated improvements currently underway.

Mr. Herrmann then reviewed NPMRDS data on the Congestion Monitoring Network. Mr. Herrmann explained that overall the interstate and non-interstate system in the RFATS Planning Area is operating reliably, while noting that there are key points within the system where congestion is intensifying and creating non-reliable segments of roadway. Mr. Herrmann then highlighted corridors where reliability has been fluctuating over the past year, given the circumstances and impacts of COVID-19.

III. New Business

A. Policy Committee Meeting for November 20, 2020 – Mr. Hooper explained that a virtual meeting is expected to be scheduled for November 20th with a hybrid approach utilizing both in-person and Zoom.

1. **SCDOT Project Status Report** – Mr. Hooper stated that an SCDOT Project Status Report is slated for the next Policy Committee meeting, and asked Mr. Mattox if there were any items he wanted to briefly review today. Mr. Mattox highlighted that the CMAQ improvement at the intersection of Clebourne / N White is anticipated for completion by the end of 2020. Mr. Mattox then noted complications regarding ROW Acquisition for intersection improvements at US 521 / Marvin and Celanese / India Hook; though he noted this is not anticipated to significantly alter project budgets or schedules. Mr. Mattox also highlighted a need for additional funding for the intersection improvement at Carowinds / Pleasant; this information has been forwarded to York County.

   Mr. Mattox then noted that the Adaptive Signals System on SC 160 has been installed. Mr. Edwards noted that the system is working and through movement along the corridor does seem to be improved especially during off-peak times. However, Mr. Edwards noted that as was expected, during congested conditions in the peak hours the through movement is so heavy that there is no further efficiency to be drawn out by the adaptive signals system.

   Mr. Hooper then made an inquiry regarding the bridge component of the SC 160 Interchange Reconfiguration. Mr. Hooper asked whether the total project cost of $73M reflected the replacement of the bridge as has been recommended by SCDOT? Mr. Mattox then confirmed this and noted that he has been inquiring whether there are funds available from the Federal Aid Bridge Program which can be utilized in this project.

B. Transportation Conformity Amendment – Mr. Hooper noted that final approval will be requested reflecting the three to five lane widening of Mt Gallant Road in Horizon Year 2025.

C. 2050 LRTP Update – Mr. Hooper briefly noted that the draft project list will be reviewed with the Policy Committee, and their final approval requested at the November meeting.

D. **CMP Annual Evaluation Report** – Mr. Hooper noted that Mr. Herrmann will review the CMP Annual Evaluation Report with the Policy Committee at the November meeting.

E. **Amended Public Participation Plan** – Mr. Herrmann noted that the amended PPP will be reviewed reflecting requested changes from FHWA regarding the use of virtual meetings.

F. **TIP Amendment (FTA Funding Awards)** – Mr. Hooper noted briefly that staff will be reviewing the TIP Amendment reflecting this year's annual FTA funding awards for final approval at the November meeting.

G. **2021 Policy Committee Meeting Schedule** – Mr. Hooper noted that staff will review the 2021 Policy Committee Meeting Schedule and requesting approval at the November meeting.

H. **Administrative Report** – Mr. Hooper briefly noted that the Administrative Report will be provided to the Policy Committee at their November meeting (e.g., administrative adjustments, etc).

IV. Other Business

A. **Development Proposals –** Ms. Karagounis reviewed a townhome development proposed along US 21 and Springfield Parkway. Ms. Karagounis then asked Mr. Hamilton for information regarding the pedestrian improvements included on the widening of US 21. Mr. Hamilton responded that the widening project will include a shared-use travel lane for both vehicles and cyclists, as well as sidewalks on both sides.

B. **Staff Changes –** Mr. Hooper noted the upcoming retirement of Mr. Meyer in December. Mr. Hooper thanked Mr. Meyer for his contributions over his 14 years serving as a member of the Technical Team and noted his valuable planning wisdom and practical judgment. Mr. Meyer then noted that it has been his pleasure to work with everyone.

C. **Next Technical Team Meeting –** Mr. Hooper noted that the next Technical Team meeting is scheduled for January 5, 2021.

V. Adjourn – The meeting was adjourned at 3:20 PM.

Technical Team Zoom Meeting
Summary Minutes
March 4, 2021 – 1:30 p.m.

Conference Call Attendees: Berry Mattox (SCDOT); Penelope Karagounis (Fort Mill); Josh Meetze (SCDOT); Patrick Hamilton (York County); Rox Burhans (Lancaster County); Jerome Pearson (SCDOT); Susan Britt (City of Tega Cay); Mark Pleasant (FHWA); Diane Dil (York County); Cliff Goolsby (Rock Hill); Chris Stephens (York County); Vic Edwards (SCDOT); Leah Youngblood (Rock Hill); Stephen Allen (Catawba COG); Dean Hendrix (York County); Erin Porter (SCDOT); Betsy McCall (SCDOT); Chris Herrmann (RFATS); and David Hooper (RFATS).

I. Review of Minutes

Mr. Hooper asked if there were any additions, corrections, or deletions from the February minutes. The minutes were then accepted as presented.

II. Old Business

A. Policy Committee Meeting

1. **2045 LRTP Amendment –** Mr. Hooper briefly reviewed the LRTP Amendment reflecting the adoption of the 2021 State Safety Targets. Mr. Hooper noted that a 30-day public comment period will be initiated on March 10th.

2. **FY 21-22 TAP Funding Cycle –** Mr. Herrmann briefly reviewed the approved application process and schedule; noting the deadline for submitting applications will be April 9th. As a point of reference, Mr. Herrmann stated that the TAP federal allocation for this year is $112,987. Mr. Herrmann then highlighted coordination requirements for all applicants including documented coordination and agreement with SCDOT TAP Coordinator Amy Blinson and SCDOT Program Manager Berry Mattox in terms of scope and cost of all potential projects. Mr. Herrmann then asked for updates on potential project applications. Mr. Hamilton noted that York County is anticipating submission of an application for a sidewalk project on Whites Road near Catawba Ridge High School. Mr. Goolsby then explained that the City of Rock Hill is anticipating submission of an application for a sidewalk project on Eden Terrace between Riverview Road and Cel-River Road.

3. **FY 21-22 CMAQ Funding Cycle –** Mr. Herrmann briefly reviewed the approved application process and schedule; noting the deadline for submitting applications will be April 9th. Mr. Herrmann stated that the estimated allocation for this year is $2M. Mr. Herrmann then highlighted coordination requirements for all applicants. Mr. Herrmann then asked for updates on potential project applications. Ms. Britt noted that the City of Tega Cay will be applying for a sidewalk project on New Gray Rock Road from Strafford Run Dr to Bluebell Way. Mr. Goolsby explained that the City of Rock Hill will likely apply for additional funding for the existing Downtown Traffic Management Project. Mr. Hooper then noted that the sidewalk project on Whites Road may be a candidate for a potential CMAQ project as well, noting the impact on Air Quality of reducing cold start trips near schools.

4. **FY 21-27 TIP Amendment –** Mr. Hooper briefly noted that the Policy Committee granted final approval for the TIP Amendment which reflected the addition of three new Federal Aid Bridge Projects.

B. Hwy 49 Corridor Study – Mr. Herrmann noted that the results of the Hwy 49 Corridor Study were shared with the Policy Committee at the February meeting. Mr. Herrmann stated that it seemed that the recommendations were well received and Policy Committee members seemed interested in potential next steps. Mr. Hooper then asked for Mr. Edwards to outline his sense of which of the improvement strategies highlighted in the study would be best to initiate first. Mr. Edwards responded that he views the new roadway connections that were recommended as being high in the priority list in order to provide east-west connectivity off of SC 49. Mr. Herrmann then noted that the potential crossing from Bonum to Montgomery also impacts the location of a potential signal which was recommended for full evaluation by SCDOT. Mr. Hamilton then explained that York County staff have already initiated discussions about how to approach the property owner where the potential crossing from Bonum to Montgomery is located. Mr. Edwards then explained the second step may be the intersection improvements, specifically the right-turn lanes at signalized locations which can ease delay at intersections as well as along the corridor. Discussion then followed regarding the potential implementation of an Adaptive Signal System on this corridor and the required updates to infrastructure that would be needed first.

C. 2050 LRP Update – Mr. Hooper explained that the Draft 2050 LRTP; FY21-27 TIP and Conformity Report is slated to be presented to the Policy Committee at their March meeting.

III. New Business

A. Policy Committee Meeting for March 26, 2021

B. 2050 LRTP Update – Mr. Hooper briefly noted that the draft 2050 LRTP; FY 21-27 TIP and Conformity Report will be presented to the Policy Committee for preliminary approval at the Policy Committee meeting in March.

C. Celanese / I-77 Interchange Evaluation– Mr. Hooper noted that information will be reviewed with the Policy Committee covering the planned initation of the Interchange evaluation at Celanese / I-77. Mr. Mattox then provided a brief overview of the in-depth analysis that will be completed and the anticipated schedule. Mr. Mattox explained that an RFP will be released this spring with hopes of selecting a consultant during the summer, which would then allow preliminary engineering to begin in late summer or fall. Discussion then followed regarding the history of this project, potential budgetary impacts, etc.

D. FY 21-23 Draft UPWP – Mr. Hooper noted that the Draft UPWP will be presented to the Policy Committee for preliminary approval at the March meeting.

E. Administrative Report – Mr. Hooper briefly noted that the Administrative Report will be provided to the Policy Committee at their March meeting (e.g., administrative adjustments, etc).

IV. Other Business

A. CRAFT – Mr. Hooper noted that RFATS is slated to host the March CRAFT meeting on March 23rd at 10:00 AM.

B. I-77 Bridge Rehab – Mr. Edwards briefly reviewed the rehab project planned for the I-77 Bridge over the Catawba River which is scheduled to occur in May. Mr. Edwards highlighted that traffic flow will be constrained to two lanes in each direction; also noting the temporary closure of the SB exit ramp at Exit 83 and NB entrance ramps at Exit 82. Coordination is ongoing regarding the re-routing of traffic to US-21. Mr. Edwards then stated that Technical Team members should contact Ms. Mobley at SCDOT District 4 Office regarding public information and messaging. Mr. Hooper then noted that he would welcome Mr. Johnston to speak on this project over the next few Policy Committee meetings to ensure public visibility and continuing awareness.

C. CARES Act Funding – Mr. Hooper noted that he is awaiting further guidance from SCDOT regarding the roughly $613,000 in CARES Act Funding that has been allocated to RFATS, as was noted at the January Policy Committee Meeting. Mr. Hooper explained that SCDOT has scheduled a virtual meeting to discuss this with MPOs and COGs later this month.

D. Next Technical Team Meeting – Mr. Hooper noted that the next Technical Team meeting is scheduled for April 1, 2021.

V. Adjourn – The meeting was adjourned at 2:47 PM.

Technical Team Zoom Meeting
Summary Minutes
April 1, 2021 – 1:30 p.m.

Conference Call Attendees: Berry Mattox (SCDOT); Rox Burhans (Lancaster County); Cliff Goolsby (Rock Hill); Patrick Hamilton (York County); Josh Meetze (SCDOT); Susan Britt (City of Tega Cay); Jerome Pearson (SCDOT); Diane Dil (York County); Vic Edwards (SCDOT); Chris Stephens (York County); Penelope Karagounis (Fort Mill); Mark Pleasant (FHWA); Leah Youngblood (Rock Hill); Dean Hendrix (York County); Stephen Allen (Catawba COG); Diane Lackey (SCDOT); Erin Porter (SCDOT); Betsy McCall (SCDOT); Chris Herrmann (RFATS); and David Hooper (RFATS).

I. Review of Minutes

Mr. Hooper asked if there were any additions, corrections, or deletions from the March minutes. The minutes were then accepted as presented.

II. Old Business

A. Policy Committee Meeting

1. **2050 LRTP Update –** Mr. Hooper briefly noted that preliminary approval was granted by the Policy Committee at their March meeting.

2. **FY 21-23 Draft UPWP –** Mr. Hooper stated that the Draft UPWP received preliminary approval by the Policy Committee at the March Meeting and a 30-day public comment period has been initiated.

3. **Coronavirus Relief & Recovery Act –** Mr. Hooper briefly summarized feedback received from SCDOT regarding the $613,000 received from the Coronavirus Relief & Recovery Act. Mr. Hooper noted that SCDOT is recommending that this funding be utilized on existing project priorities and project debt. Specifically, Mr. Hooper noted that SCDOT recommended the application of $360,000 to retire the remaining debt balance from the 27 & 7 program; and allocating the remaining $253,000 to support the US 521 / Marvin Road Intersection Improvement Project. Discussion then followed regarding the ROW acquisition phase and the anticipated schedule for the project.

4. **Title VI Plan Update –** Mr. Hooper briefly noted that the Policy Committee granted preliminary approval for the Title VI Plan Update and a 21-day public comment period has been initiated.

B. 2050 LRTP Update –

Mr. Hooper briefly summarized feedback from the Policy Committee regarding the 2050 LRTP Update. Specifically, Mr. Hooper highlighted that the Policy Committee approved the designation of $10M in Guideshare Funding for regional bicycle and pedestrian improvements. Mr. Hooper noted that further discussion will be needed in May regarding initial projects to be considered for this funding. Mr. Allen noted the importance of emphasizing the benefits of multimodal transportation rather than simply the recreational benefits of bicycle and pedestrian improvements. Those in attendance agreed with this point.

C. **Celanese / I-77 Interchange Evaluation –** Mr. Hooper briefly reviewed the presentation made to the Policy Committee regarding the Celanese / I-77 Interchange. Mr. Hooper noted that Mayor Gettys had recommended the establishment of a district around the interchange location to notify property owners of the process and protect against any changes in land use or zoning that may impact the land needed for the interchange improvement. Mr. Herrmann noted that staff will coordinate with the City of Rock Hill and Berry Mattox to discuss this further.

D. **FY 21-22 TAP & CMAQ Funding Cycle** – Mr. Herrmann briefly noted that the deadline for all TAP and CMAQ Applications will be at 5:00 PM on April 9th, 2021. Mr. Herrmann then stated that he has coordinated with the City of Rock Hill regarding a potential TAP Application. Mr. Goolsby then explained that the City of Rock Hill is anticipating submission of an application for the extension of the Jack White Trail which runs along Dave Lyle Blvd. Mr. Goolsby added that this segment would run from Anafrel Street and connect to the existing trail which is just east of Iredell Street. Mr. Goolsby noted that this is a vital segment for the eventual connection of downtown Rock Hill to the Manchester and Galleria area; as well as providing improved connectivity for access to Northside Elementary School and Northside Recreation Center.

Mr. Herrmann then stated that he has coordinated with the City of Rock Hill, York County and the Town of Fort Mill, and the City of Tega Cay regarding CMAQ applications. Mr. Goolsby explained that the City of Rock Hill is anticipating submission of an application for the existing Downtown Traffic Management Project, which improves congestion in the downtown area caused by blockages at two at-grade railroad crossings adjacent to Dave Lyle Blvd.

Ms. Karagounis then summarized an application co-sponsored by York County and the Town of Fort Mill for a sidewalk improvement on Whites Road to provide connectivity to Catawba Ridge High School and a new middle school which is currently under construction. Ms. Karagounis noted that the application will reflect two segments of sidewalk. The first segment will provide sidewalk on the western side of Whites Road running from Pecan Ridge to Catawba Ridge High School. The second segment will provide sidewalk on the eastern side of Whites Road from Sora Lane to the Fort Mill Bypass and then run south along the western side of Whites Road to connect to Catawba Ridge High School.

Ms. Britt then explained that the City of Tega Cay is anticipating submission of an application for a sidewalk project on New Gray Rock Road from Strafford Run Drive to Bluebell Way which will connect to the planned Catawba Park. Mr. Mattox noted that the project will require a pedestrian bridge over a creek near Elswick Court.

Mr. Herrmann then explained that staff will accept digital copies of the final application due to continued impacts from COVID-19 from those still working remotely. Mr. Herrmann also highlighted that the AQBA analysis required for CMAQ applications are not required to be submitted until June 11th.

III. New Business

A. Policy Committee Meeting for April 23, 2021

1. **Pennies for Progress Report –** Mr. Hooper stated that a Pennies for Progress Project Status Report is slated for the next Policy Committee meeting, and asked Mr. Hamilton if there were any items he wanted to briefly review today. Mr. Hamilton noted that the

Galleria Blvd Extension project and the Fort Mill parkway / Spratt Street Intersection Project have both been bid and will soon be awarded, construction is anticipated to begin on both this summer. Mr. Hooper then asked for an update on the US 21 Widening projects. Mr. Hamilton responded that 95% design plans should soon be completed for the northernmost segment of US 21 from Springfield Parkway to the stateline, with construction anticipated to begin in 2022. The segment from SC 160 to Springfield Parkway is currently in the design phase.

B. 2050 LRTP Update Public Hearing & Plan Presentation – Mr. Hooper briefly noted that a Public Hearing has been scheduled for Friday, April 23rd, 2021 at 10:00 AM to review the 2050 LRTP Update. The Policy Committee will then review for final approval at their meeting afterward.

C. FY 21-23 Draft UPWP – Mr. Hooper noted that final approval will be requested from the Policy Committee at the April meeting.

D. Transportation Performance Management (PTASP) – Mr. Herrmann explained that as a part of TPM requirements, transit providers are required to coordinate with MPOs on establishing transit safety targets. Mr. Herrmann noted that the City of Rock Hill has done this for the My Ride Transit System and the TIP and LRTP are being amended to reflect these targets. Mr. Hooper then stated that this will be considered for preliminary approval by the Policy Committee at the April meeting.

E. Administrative Report – Mr. Hooper briefly noted that the Administrative Report will be provided to the Policy Committee at their April meeting (e.g., administrative adjustments, etc).

IV. Other Business

A. CRAFT – Mr. Hooper briefly noted that RFATS hosted the March Technical Committee meeting and summarized information regarding proposed changes for the 2020 Census. Mr. Hooper also noted that he will be scheduling a presentation on the Beyoned 77 Corridor Study for the Policy Committee over the next few months.

B. Staff Changes – Mr. Hooper noted that Mr. Herrmann has accepted a position with the City of Rock Hill. Mr. Hooper thanked Mr. Herrmann for his contributions to RFATS over the past 6 years. Mr. Herrmann then noted that it has been his pleasure to serve with RFATS and looks forward to continue working as a member of the Technical Team in his new role.

C. Next Technical Team Meeting – Mr. Hooper noted that the next Technical Team meeting is scheduled for May 6, 2021.

V. Adjourn – The meeting was adjourned at 2:47 PM.