GSATS

The Grand Strand Area Transportation Study

2045 Metropolitan Transportation Plan Update

Adopted October 16, 2023

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GRAND STRAND AREA TRANSPORTATION STUDY
METROPOLITAN PLANNING ORGANIZATION

GSATS 2045 METROPOLITAN TRANSPORTATION PLAN

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WACCAMAW REGIONAL COUNCIL OF GOVERNMENTS

GSATS The Grand Strand Area Transportation Study

CDM Smith®

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STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

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MODERN MOBILITY partners

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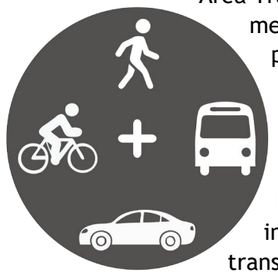
CONTENTS

TABLES

FIGURES

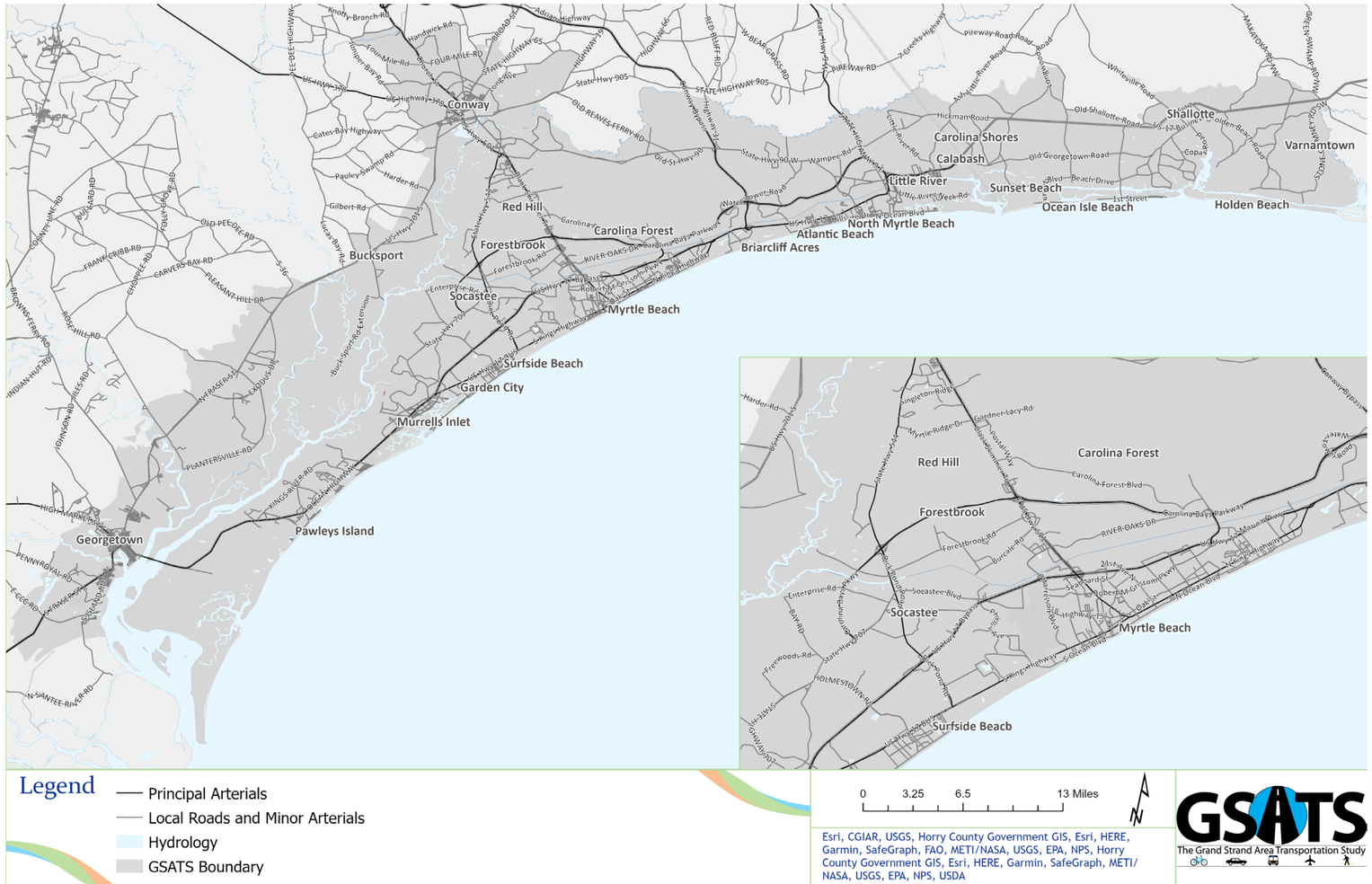
1 INTRODUCTION

The purpose of this Metropolitan Transportation Plan (MTP) is to provide systematic, long-range planning for transportation projects and programs in the Grand Strand Area Transportation Study (GSATS). The metropolitan transportation planning process requires the development of a MTP that addresses at least a 20-year planning horizon and includes both long- and short-range strategies or actions that lead to the development of an integrated, intermodal transportation system that facilitates the efficient movement of people and goods. This MTP was developed through a continuing, cooperative, and comprehensive planning process and identifies needs, financial resources, and priorities for the GSATS region.



GSATS serves as the designated Metropolitan Planning Organization (MPO) responsible for carrying out the federally mandated urban transportation planning and programming process for the Grand Strand Area. MPOs cover urbanized areas with populations of 50,000 or more. The GSATS MPO study area boundary shown in **Figure 1-1** encompasses the northern coastal area of South Carolina and the southern coastal area of North Carolina, including portions of Horry and Georgetown counties in South Carolina and Brunswick County in North Carolina. The municipalities that are also within the boundary are: Myrtle Beach, Conway, North Myrtle Beach, Georgetown, Surfside Beach, Shallotte, Sunset Beach, Carolina Shores, Calabash, Holden Beach, Ocean Isle Beach, Varnamtown, Briarcliffe Acres, Atlantic Beach, and Pawleys Island.

Figure 1-1: GSATS Study Area



*GSATS provides the forum for **cooperative decision making.***

As the MPO, GSATS provides the forum for cooperative decision making in developing regional transportation plans and programs to meet changing needs. It is composed of elected and appointed officials representing local, state, and federal governments or agencies having interest or responsibility in comprehensive transportation planning. GSATS serves as the formal agency that plans and programs transportation improvements in the GSATS area, which are then implemented by local and state jurisdictions.

FIVE YEAR UPDATE

The GSATS 2045 MTP Update is produced to reflect changes in demographics, economic activity, funding availability, changing input from the community and its visitors, and reflect growing and changes in regional mobility needs. This also incorporates updates based on newly available data, where applicable. This update includes:

Review of Progress of Previous MTPs: This update includes a review of the implementation progress of projects and strategies identified in the previous MTP. This is accomplished by updating the Existing Plus Committed (E+C) for analysis of regional needs.

Compilation of New Data: This update effort included a collection and incorporation of the latest data related to population growth, travel patterns, safety data, project cost data, environmental conditions, economic conditions, and other relevant factors.

Public Input and Stakeholder Engagement: Extensive public outreach was included in this MTP update process to gather insights on the successes, challenges, and changing priorities that should be considered in the update.

Update of Transportation Project Recommendations: The MTP update included a reassessment of the list of projects and strategies based on new data and evolving priorities. This involved evaluating previously-identified projects and identifying new ones based on available data and public input.

Update Scenario Plans: Years of analysis and funding scenarios identified in previous MTP efforts are updated to reflect changes in the region's future trajectory based on available land use and funding data.

Update Coordination with Regional Plans: This process has reviewed and updated alignment with other regional plans, policies, and funding mechanisms.

Revisit Environmental Data: This update considers and incorporates newly available data for environmental reviews and for project scoring.

Adoption of the Update: After the review and adjustment process, the updated MTP is adopted by the relevant authorities, thereby providing a refreshed blueprint for transportation planning and investment over the subsequent five-year period.

MTP OVERVIEW

The GSATS 2045 MTP Update is a culmination of extensive public and partner participation, technical analysis, population and employment projections, and local and regional needs assessment. This process has resulted in recommendations for multimodal transportation improvements for the GSATS area. The document is organized into the following chapters:

- Chapter 1 – Introduction and MTP Overview
- Chapter 2 – Planning Context
- Chapter 3 – Goals, Objectives, and Performance Measures
- Chapter 4 – Study Area Characteristics
- Chapter 5 – Roadway Mobility
- Chapter 6 – Active Transportation
- Chapter 7 – Transit
- Chapter 8 – Goods Movement
- Chapter 9 – Financing and Implementation

Appendices, under separate cover, provide additional information on the following topics:

- Appendix A – Public Information Plan and Public Engagement Summary
- Appendix B – Goals, Objectives, and Performance Measures Technical Memorandum
- Appendix C – System Performance Report
- Appendix D – Level of Service Standards and Road Functional Classifications Technical Memorandum
- Appendix E – Existing Transportation Facilities and Demographic Conditions Technical Memorandum
- Appendix F – Future Transportation Facilities Technical Memorandum
- Appendix G – Pedestrian Walkways and Bikeways Technical Memorandum
- Appendix H – Environmental Context Technical Memorandum
- Appendix I – Project Financing and Implementation Plan

2 PLANNING CONTEXT

In its earliest years, surface transportation planning in the United States focused on addressing national mobility needs by connecting the various areas of the nation through an interstate highway system. This was officially known as the National Interstate and Defense Highways Act, which was enacted in 1956. These issues were at the forefront, affecting transportation planning and projects in the wake of two world wars and cold war threats. An interstate highway system was imperative for national defense purposes in the event of a foreign invasion, which would require the quick mobilization of troops across the country.

In recent times, state and metropolitan transportation planning have been shaped and defined by a series of federal transportation laws, regulations, and policies that encourage the development of a multimodal and performance-based transportation planning process. The significant federal transportation planning acts include the *Intermodal Surface Transportation Efficiency Act* of 1991 (ISTEA); the *Transportation Equity Act for the 21st Century* of 1998 (TEA-21); the *Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for All Users* of 2005 (SAFETEA-LU); the *Moving Ahead for Progress in the 21st Century Act* of 2012 (MAP-21); *Fixing America's Surface Transportation Act* of 2015 (FAST Act); and the most recent *Infrastructure Investment and Jobs Act (IIJA),* also known as the *Bipartisan Infrastructure Law (BIL).*

The BIL continues the Metropolitan Planning Program under the FAST Act, which establishes a cooperative, continuous, and comprehensive framework for making transportation investment decisions in metropolitan areas. The BIL adds three areas of policy change for MPOs:

MPO Officials: The BIL requires a Transportation Management Area (TMA) to consider the equitable and proportional representation of the population of the metropolitan planning area when designating officials for the first time.

Complete Streets Planning: MPOs must be actively incorporating Complete Streets concepts into its planning processes. The BIL requires at least 2.5% of metropolitan planning (PL) funds each year to be spent on specified planning activities to increase safe and accessible options for multiple travel modes for people of all ages and abilities, unless an MPO can certify it has a Complete Streets plan and prioritization process in place.

Housing and Transportation: The BIL increases emphasis on housing, requires MPOs to consult with affordable housing organizations as part of transportation planning process, creates an (optional) "housing coordination process" that MPOs can integrate into long-range transportation planning process to address integrated housing, transportation, and economic development strategies.

The GSATS 2045 Metropolitan Transportation Plan Update addresses and meets all BIL planning factors as provided by the Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) shown in **Table 2-1**.

PURPOSE OF MTP

The MTP outlines the transportation goals, objectives, and performance measures for the region, as well as addresses transportation related issues and impacts over a 23-year horizon. The MTP is federally mandated and complies with the Statewide and Metropolitan Transportation Planning regulations issued by the US Department of Transportation (USDOT). This 2045 GSATS MTP Update is an update to the previous long-range transportation plan adopted in 2017.

Table 2-1: Federal Planning Factors

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

Source: 23 USC 134: Metropolitan transportation planning
http://uscode.house.gov/view.xhtml?req=granuleid:USC-prelim-title23-section134&num=0&edition=prelim

BACKGROUND AND HISTORY OF GSATS REGION

GSATS was formed in 1985 to provide a forum for the coordination of regional transportation planning efforts affecting northeastern coastal South Carolina. In 1992, GSATS was designated as the MPO for the Myrtle Beach Urbanized Area (UZA). With this designation, GSATS assumed responsibilities for the development of the area's Long Range Transportation Plan (LRTP) and the identification and ranking of projects for funding through an adopted Transportation Improvement Program (TIP).

The 2010 Census reported continued growth for the area and, for the first time, the Myrtle Beach UZA (renamed the Myrtle Beach-Socastee SC/NC Urbanized Area) extended into the southern portions of Brunswick County, North Carolina. As a result, in 2012, GSATS entered a memorandum of understanding with the North Carolina Department of Transportation (NCDOT), South Carolina Department of Transportation (SCDOT), Brunswick County, and the towns of Calabash, Carolina Shores, Holden Beach, Ocean Isle Beach, Shallotte, Sunset Beach, and Varnamtown. The effect of this memorandum was to create a bi-state MPO with expanded representation on the GSATS Policy Committee (See **Table 2-2**).

Table 2-2: GSATS Policy Committee Voting Membership

Jurisdiction or Agency	Jurisdiction/ Agency Votes	Designated Member
SOUTH CAROLINA POLICY COMMITTEE MEMBERS		
Georgetown County Council	One	Chairman
Horry County Council	Two	Council Chairman and Councilman
City of Conway	One	Mayor
City of Georgetown	One	Mayor
City of Myrtle Beach	Two	Mayor and Councilman
City of North Myrtle Beach	One	Mayor
Town of Atlantic Beach	One	Mayor
Town of Briarcliffe Acres	One	Mayor
Town of Pawleys Island	One	Mayor
Town of Surfside Beach	One	Mayor
Legislative Delegation – Georgetown County	Two	Legislative Delegation Senator and one (1) House member
Legislative Delegation – Horry County	Three	Legislative Delegation Senator and two (2) House members
Waccamaw Regional Transportation Authority (Coast RTA)	One	Chairman
South Carolina Department of Transportation	Two	District Commissioner and SCDOT Secretary of Transportation or designee
NORTH CAROLINA POLICY COMMITTEE MEMBERS		
GSATS-NCTAC	Two	NCTAC Chairman and Vice Chairman
Brunswick County Board of Commissioners	One	County Commissioner
NC Department of Transportation	One	NCDOT Member

Expansion of the GSATS region also included the creation of two review committees for the North Carolina portion of the MPO. These are the GSATS North Carolina Technical Coordinating Committee (NCTCC) and the GSATS North Carolina Transportation Advisory Committee (NCTAC). Representation of these committees are described and illustrated in **Table 2-3** and **Table 2-4**.

Table 2-3: GSATS-NCTCC Voting Membership

Jurisdiction or Agency	Jurisdiction/ Agency Votes	Designated Member
Brunswick County	One	Planning Director
Calabash	One	Town Administrator
Carolina Shores	One	Town Administrator
Holden Beach	One	Town Manager
Ocean Isle Beach	One	Planning Director
Shallotte	One	Planning Director
Sunset Beach	One	Town Administrator
Varnamtown	One	Planning Director
Brunswick Transit System	One	Executive Director
Cape Fear COG	One	Planning Director
FHWA NC	One	Transportation Planner, Planning and Program Development
NCDOT Division	One	Division 3 Engineer or their representative
NCDOT Transportation Planning Branch	One	TPB GSATS MPO Coordinator
WRCOG	One	GSATS MPO Director

Table 2-4: GSATS-NCTAC Voting Membership

Jurisdiction or Agency	Jurisdiction/ Agency Votes	Designated Member
Brunswick County	Two (one vote per member)	County Commission Chair
		County Commissioner
Calabash	One	Mayor
Carolina Shores	One	Mayor
Holden Beach	One	Mayor
Ocean Isle Beach	One	Mayor
Shallotte	Two (one vote per member)	Mayor
		Town Alderman
Sunset Beach	One	Mayor
Varnamtown	One	Mayor
Brunswick Transit System	One	Board Chair
NCDOT	One	North Carolina Board of Transportation member as designated by the Secretary of Transportation
North Carolina House of Representatives	One	District 17 Representative or, if reapportioned, House Member representing the largest geographic portion of the Study Area
North Carolina Senate	One	District 8 Senator or, if reapportioned, the Senator representing the largest geographic portion of the Study Area

GSATS STRUCTURE AND ORGANIZATION RESPONSIBILITY

GSATS is governed by a 24-person policy committee with representatives from jurisdictions and transportation agencies in North Carolina and South Carolina. GSATS includes eighteen jurisdictions, covers approximately 840 square miles, and encompasses a population of nearly 384,000[1]. GSATS is made up of MPO Planning Staff and four committees. The functions and responsibilities are summarized as follows:

- **MPO Planning Staff**: The MPO planning staff carries out the activities of the Unified Planning Work Program (UPWP). Those activities include administration, planning, plan development, program development and maintenance.
- **GSATS Study Team**: The Study Team serves as a technical advisory committee and makes recommendations to the Policy Committee on proposed projects within the South Carolina portion of the study area.
- **GSATS-NCTCC**: The NCTCC reviews, evaluates, and recommends action on all proposed projects within the North Carolina portion of the GSATS Study Area. Recommendations from the NCTCC are forwarded to the NCTAC for action or recommendation to the Policy Committee.
- **GSATS-NCTAC**: The NCTAC serves as the principal review and final recommending body to the Policy Committee on projects and issues affecting the North Carolina portion of the study area. For certain activities where issues are shared in both North Carolina and South Carolina, the NCTAC can exercise final review and make recommendations to the GSATS Policy Committee.
- **GSATS Policy Committee**: The Policy Committee receives, reviews, and takes action (approves, denies, or sends back for reconsideration) on all issues and items brought to it by the MPO planning staff, the Study Team, or NCTAC. Review and approval responsibilities include the adoption of the MPO's MTP. The policy committee annually programs approximately 15 million dollars for local transportation improvements.

[1] https://www.planning.dot.gov/mpo/MPO_Summary.aspx?p=45199200

RELATED PLANS AND STUDIES

The GSATS is responsible for the development of several plans in addition to this MTP. Though separate documents with different ranges and update cycles, they are meant to inform one another so each will progress in complementary fashion.

Metropolitan Transportation Plan (MTP)

Title 23, U.S.C. Section 134 (i) (1) states that MPOs shall prepare and update their MTP every four or five years, depending upon whether the MPO is in attainment with the Clean Air Act (42 U.S.C. 7407 (d)). If in attainment, the MPO is required to update the MTP every five years; if designated as nonattainment, the MTP must be updated every four years. In either case, the MPO may update the plan more frequently if desired. GSATS is currently in attainment with air quality standards and the next update to the GSATS MTP following this update is anticipated in 2028. The BIL continues the performance management framework originally introduced in MAP-21 and the FAST Act. MPOs are required to establish regional performance measures and targets in coordination with state and public transportation providers, based on statewide goals. MPOs must adopt targets to address safety, pavement and bridge condition, and system performance and freight. Rather than adopting area-specific targets, GSATS has elected to adopt the state-specific targets for each required measure. **Chapter 3** details the required measures and targets adopted by GSATS.

Transportation Improvement Program (TIP)

The FY 2024-2033 TIP for the GSATS area is a 10-year program of transportation capital projects together with a three-year estimate of transit capital and maintenance requirements. While the TIP is usually approved biennially, the document may be amended throughout the year. The BIL, as well as the Metropolitan Planning Regulations, mandates that a TIP comprise the following:

1. Identify transportation improvement projects recommended for advancement during the program years. The projects required are those located within the study area and receiving any Federal Highway Administration (FHWA) or Federal Transit Administration (FTA) funds.
2. Identify the criteria and process for prioritization for inclusion of projects in the TIP and any changes from past TIPs.
3. Group improvements of similar urgency and anticipated staging into appropriate staging periods.
4. Include realistic estimates of total costs and revenue for the program period.
5. Include a discussion of how improvements recommended from the Metropolitan Transportation Plan were merged into the TIP.
6. List major projects from previous TIPs that were implemented and identify any major delays in planned implementation.
7. The TIP may also include regional highway projects that are being implemented by the State, City and County for which federal funding is requested.

Congestion Management Process (CMP)

Metropolitan areas with populations exceeding 200,000 are required by federal law to develop a Congestion Management Process (CMP) as part of their MPO planning activities. This requirement was originally introduced in the ISTEA of 1991 and has been incorporated into later surface transportation authorization acts. Under the act(s) and subsequent FHWA directives, CMPs are to address congestion management through a process that provides for safe and effective integrated management and operation of the multimodal transportation system. The development of a congestion management process should result in multimodal system performance measures and strategies that can be reflected in the metropolitan transportation plan and the TIP. The CMP is a "living" document, continually evolving to address the results of performance measures, concerns of the community, new objectives and goals of the GSATS, and up-to-date information on congestion issues. Throughout this document and its appendices are cross-references to the alignment in goals, objectives, performance measures, and the various data sets available to monitor performance of the transportation system.

CONSIDERATION OF STATE AND LOCAL PLANS – PLAN CONNECTIVITY

The GSATS 2045 MTP Update is the most current transportation plan for the Grand Strand Area. As with most planning documents, it builds upon and incorporates the ideas, issues, and recommendations of past and current planning efforts. In this 2045 MTP Update, local plans and studies provide resources for data, housing considerations, mobility needs, and potential projects to include in the MTP project ranking process.

The following plans and studies completed since the 2040 MTP served as valuable inputs into the development of this 2045 MTP Update:

- South Carolina (SCDOT) Statewide Freight Plan Update (2022)
- SCDOT Strategic 10-Year Asset Management Plan (STAMP) System Performance Report (2022)
- SCDOT Statewide Truck Parking Assessment (2022)
- SCDOT 2020-2024 Strategic Highway Safety Plan (2020)
- South Carolina Statewide Green Infrastructure Plan (2022)
- South Carolina Office of Resilience Strategic Statewide Resilience and Risk Reduction Plan (2022)
- North Carolina (NCDOT) Statewide Freight Plan Update (2022)
- NCDOT Annual Performance Report (2022)
- NCDOT NC Moves 2050 Strategic Multimodal Transportation Plan (2021)
- NCDOT Strategic Highway Safety Plan (2019)
- North Carolina Climate Risk Assessment and Resilience Plan (2020)
- GSATS SC Highway 90 Corridor Study (in process)
- GSATS 2040 Metropolitan Transportation Plan (2017)
- Cape Fear COG (NC) NC 210 East Coast Greenway Feasibility Study (in process)
- Cape Fear COG (NC) Regional Bicycle Plan (2017)
- Georgetown County (SC) Comprehensive Plan Transportation Element (2023)
- Georgetown County (SC) Comprehensive Plan Housing Element (2022)
- Georgetown County (SC) US 17 Corridor Study (2020)
- Horry County (SC) IMAGINE 2040 Comprehensive Plan (2020)
- Horry County (SC) Parks and Open Space Plan (2020)
- Brunswick County (NC) Comprehensive Transportation Plan (in process)
- Brunswick County (NC) Blueprint Brunswick Comprehensive Land Use Plan (2023)
- Brunswick County (NC) Parks and Recreation Master Plan (2023)
- City of Conway (SC) Comprehensive Plan Population Element (2023)
- City of Conway (SC) Pathways and Trails Plan (2022)
- City of Conway (SC) Comprehensive Plan Transportation Element (2021)
- City of Myrtle Beach (SC) Comprehensive Plan (2021)
- City of North Myrtle Beach (SC) Comprehensive Plan (2018)
- Murrells Inlet Watershed Plan (2014)
- Town of Atlantic Beach (NC) CAMA Land Use Plan Update (2020)
- Town of Holden Beach (NC) Land Use Plan (2019)
- Town of Carolina Shores (NC) Comprehensive Plan (2018)
- Town of Shallotte (NC) Land Use Plan (2018)
- Town of Ocean Isle Beach (NC) CAMA Land Use Plan (2017)
- Town of Sunset Beach (NC) Land Use Plan (2017)

PUBLIC PARTICIPATION

Developing MTPs requires extensive public and private partner participation and agency coordination throughout the entire planning process. GSATS is required by federal legislation to provide the public and interested stakeholders with reasonable and meaningful opportunities to be involved in the transportation planning process. The outreach activities conducted during the GSATS 2045 MTP Update are detailed in **Appendix A** and summarized below.

Steering Committee

The GSATS Steering Committee consists of federal, state, and local government representatives including the jurisdictional partners in the study area SCDOT, NCDOT, and FHWA. The Steering Committee provides the overall direction and guidance in the development of the technical aspects of the MTP Update. The role of the individual committee members is to represent their organization relative to regional transportation issues, provide data and local priorities in the plan development process, share information with their organizations, and encourage public participation. The Steering Committee met regularly throughout the project development process, and all meetings were hosted both in person and virtually (via Microsoft Teams) for ease of participation and engagement.

Public Meetings

Two series of public information meetings were conducted during the plan development to engage residents, businesspersons, visitors, and other interested parties on multimodal transportation needs in the region. The first series included five public meetings held on May 23, 24, and 25, 2023 to initiate the 2045 MTP Update. The meetings were an open-house format held in Shallotte, NC; North Myrtle Beach, SC; Myrtle Beach, SC; Surfside Beach, SC; and Murrells Inlet, SC. Participants of the first series of in-person meetings were asked to share their transportation concerns and challenges in the region through a variety of mapping exercises and comment forms. In addition to the meetings, a virtual meeting room was advertised for citizens to view meeting materials and submit comments. Additionally, a MetroQuest survey was deployed, allowing participants to identify locations in the GSATS region where they experienced transportation challenges and potential locations for transportation improvements. This MetroQuest survey also included a traditional survey screen that asked questions about their travel patterns and transportation priorities.

Figure 2-1: Summary of Public Information Meeting #1 and MetroQuest Survey

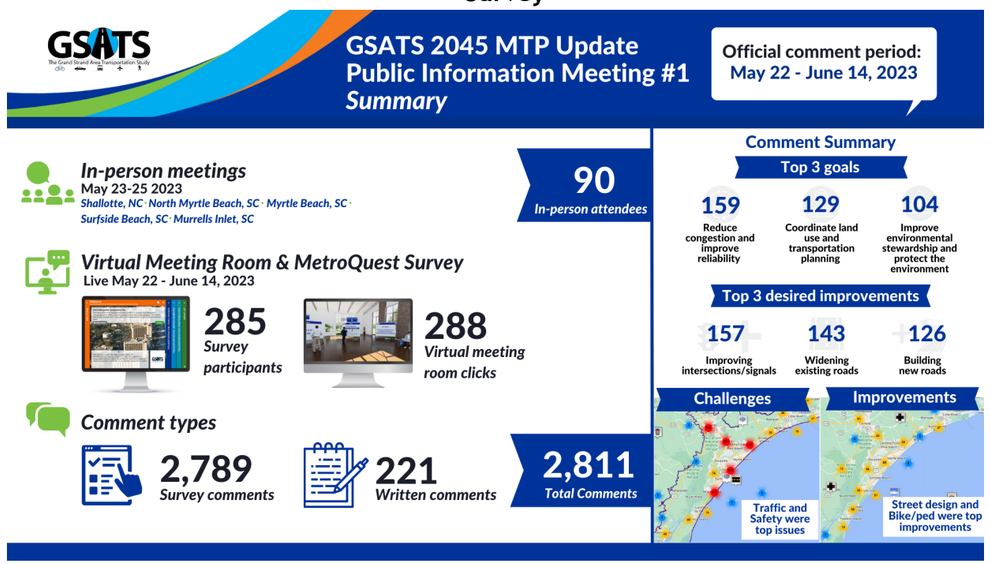


Figure 2-2: Public Meeting Promotion

The second series of public meetings included four public meetings over two days on September 20 and 21, 2023. The meetings were held in North Myrtle Beach, SC; Conway, SC; Pawleys Island, SC, and Shallotte, NC. Meeting attendees were asked to provide comments on the draft MTP update prior to adoption. In addition to the meeting, the virtual meeting room used for the first series was updated with information regarding the draft MTP and participants were able to comment. Meeting summaries for each series of public meetings are included in **Appendix A**.

Virtual Engagement

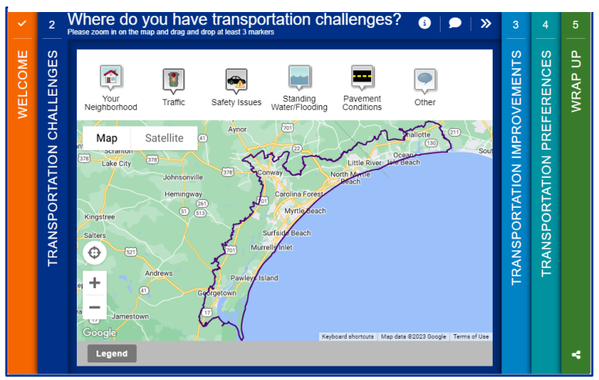
Figure 2-3: Image From Virtual Meeting Room

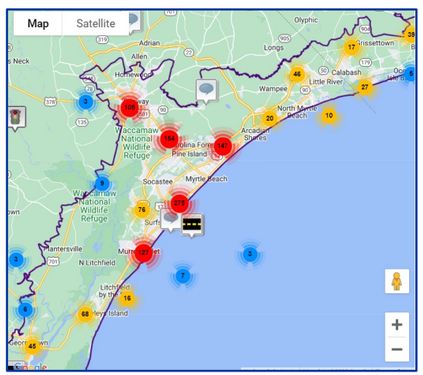
In addition to the in-person public information meetings, an interactive virtual meeting room was utilized. The virtual room is an easy-to-use, web-based interactive meeting platform that replicates an in-person public information meeting. Users were able to sign-in, view the handouts, meeting boards, and take the survey all via a click of a button. Two iterations of the virtual room were used: one for the first series of public meetings and another for the second series of meetings.

In conjunction with the virtual meeting room, a MetroQuest survey was made available during the comment period of the first series of public meetings. The survey was hosted on MetroQuest, a survey software designed specifically for transportation planning projects. When using MetroQuest, participants

were able to provide feedback in the form of traditional survey questions as well as via interactive mapping activities which gathered location-based data on transportation challenges and desired improvements. This information provides an additional layer of insight and understanding to local concerns and desires. Participants at the public meetings were able to take the survey by scanning one of the QR codes placed in the meeting room, or by visiting the website. Additionally, the in-person mapping exercises were intentionally created to mimic the MetroQuest survey mapping screens to receive consistent data.

Figure 2-4 Screenshots From MetroQuest Survey





3 GOALS, OBJECTIVES, AND PERFORMANCE MEASURES

Goals and objectives are used to direct transportation investments and to translate the strategic vision of the GSATS MPO into something that can be measured and tracked. The GSATS 2045 MTP goals define the overall direction of the GSATS long range transportation planning efforts and guide the MPO in decisions regarding multimodal transportation infrastructure investment. The goals provide a strategic framework for organizing and articulating the objectives, priorities, and policies established through the plan development process.

GOAL 1: COORDINATED LAND USE AND TRANSPORTATION

Develop a Plan that will protect and sustain a high quality of life by coordinating land use and transportation planning in the region. This goal is supported by the following objectives:

- Improve data collection and forecasting methods to ensure the identification of existing and future areas of concern.
- Develop and utilize Land Use Design Guidance to improve streetscaping and incorporate Complete Streets.
- Improve pedestrian and bicycle linkages to activity centers.
- Protect and preserve historic, cultural, and civic assets.

GOAL 2: ECONOMIC COMPETITIVENESS

Develop a financially feasible plan that will advance the economic competitiveness of the GSATS region based upon sustainable development. This goal is supported by the following objectives:

- Utilize the existing transportation system to facilitate enhanced freight movement to support a growing economy.
- Embrace the region's tourism economy and proactively consider how to provide better access to the region's natural, cultural, and environmental resources.
- Use transportation investment to support economic development, job creation, and commerce.

GOAL 3: MOBILITY AND SYSTEM ACCESSIBILITY

Develop a Transportation System that will increase accessibility and mobility throughout the region and integrates modes to provide efficient movement of people and freight. This goal is supported by the following objectives:

- Improve access and mobility within the region by adopting and implementing access management, Complete Streets, and intersection design guidelines.
- Provide equitable transportation options for all travelers, including transit-dependent populations and users of all capabilities.

GOAL 4: ENVIRONMENTAL STEWARDSHIP

Develop a transportation system that will enhance economic and social values, protect the natural environment, and minimize adverse impacts. This goal is supported by the following objectives:

- Provide a transportation system that is sensitive to the natural and man-made environment.
- Encourage modal partners to be proactive in considering and addressing environmental impacts of their transportation infrastructure investments.
- Encourage the protection and conservation of natural resources.

GOAL 5: MODAL CHOICES AND BALANCED SYSTEM

Establish a more balanced and livable transportation system that will increase modal choices by prioritizing transit, pedestrian, and bicycle travel throughout the region. This goal is supported by the following objectives:

- Utilize the existing transportation system to facilitate enhanced modal options for a growing and diverse population and economy.
- Consider multimodal connections specifically to the region's tourism resources. Make tourism resources easily available for all transportation users.
- Improve transportation choice and mode selection.
- Improve intermodal connectivity.
- Incorporate Complete Streets design into transportation projects.

GOAL 6: SAFETY AND SECURITY

Provide and promote a safe, secure, accessible, resilient, and efficient multimodal transportation system for residents, tourists, and commerce. This goal is supported by the following objectives:

- Reduce highway fatalities and serious injuries.
- Reduce bicycle and pedestrian and other vulnerable roadway users' fatalities and serious injuries.
- Reduce fatal or serious injury crashes at at-grade rail crossings.

- Reduce fatal and serious injury crashes at intersections.
- Reduce transit-related fatalities and serious injuries.
- Utilize the GSATS Safety Committee to identify safety projects and prioritize projects that improve safety outcomes.

GOAL 7: INFRASTRUCTURE PRESERVATION AND MAINTENANCE

Protect and preserve the existing public multimodal transportation system and facilities in a state of good repair. This goal is supported by the following objectives.

- Maintain or improve the current state of good repair for the National Highway System.
- Reduce the percentage of remaining state highway miles (non-interstate/strategic corridors) moving from a "fair" to a "very poor" rating while maintaining or increasing the % of miles rated as "good."
- Improve the condition of the state highway system bridges.
- Maintain or improve the transit infrastructure in a state of good repair.

GOAL 8: CONGESTION AND RELIABILITY

Reduce congestion and improve reliability of the multimodal transportation system. This goal is supported by the following objectives.

- Reduce the number of system miles at unacceptable congestion levels (above Level of Service D).
- Improve travel time reliability on priority corridors or congested corridors.
- Provide improvements to relieve congestion based on rational and objective criteria and analysis from the GSATS CMP to ensure the wise and effective use of limited resources.

PERFORMANCE MEASURES

The guiding principle behind the development and implementation of performance measures for MPOs is to provide a means to assess how the transportation system and/or the agency is functioning and operating. Performance measures help inform decision-making and create better accountability for efficient and effective program implementation.

Performance measurements serve the following three functions:

- **Plan Development** – Provide a means to quantify baseline system performance and impacts of plan options to support trade-off decisions and help communicate the anticipated impacts of different investment strategies.
- **Plan Implementation** – Support plan implementation by emphasizing agency goals and objectives and integrating them into budgeting, program structure, project selection, and project and program implementation policies.
- **Accountability** – Facilitate tracking and reporting on system performance relative to plan goals and objectives to support accountability for plan implementation and results.

The performance measures for GSATS were determined by starting with SCDOT and NCDOT performance measures and then tailoring them for the GSATS area.

Those considerations include the following:

- **Data Availability** – The data and analysis tools needed for the measure should be readily available or easy to obtain. The data should be reliable, accurate, and timely.
- **Strategic Alignment** – The measures should align well with the goals and objectives of the North Carolina's Statewide Long-Range Plan and South Carolina's Statewide Multimodal Transportation Plan, and federal transportation policy.
- **Understandable and Explainable** – The measures should be easy to understand and useful when communicating to external partners.
- **Causality** –The measures should focus on the items under the transportation planning organizations and local governments span of control.
- **Decision-Making Value** – The measures should provide predictive, diagnostic, and reporting value to agency decision makers.

Table 3-1: Goals, Objectives, and Performance Measures

2045 MTP Goals	Supporting Objectives	Performance Measures [potential source of data]
Coordinated Land Use & Transportation Planning	• Improve data collection and forecasting methods to ensure the identification of existing and future areas of concern. • Develop and utilize Land Use Design Guidance to improve streetscaping and incorporate Complete Streets. • Improve pedestrian and bicycle linkages to activity centers. • Protect and preserve historic, cultural, and civic assets.	• Number of lane miles of bicycle lanes and sidewalks [MPO Data] • Align recommendations with Comprehensive Plans [Steering Committee partners]
Economic Competitiveness	• Utilize the existing transportation system to facilitate enhanced freight movement to support a growing economy. • Embrace the region's tourism economy and proactively consider how to provide better access to the region's natural, cultural, and environmental resources. • Use transportation investment to support economic development, job creation, and commerce.	• Travel Time Reliability index [INRIX, SCDOT, NCDOT] • Annual hours of truck delay on principal arterials [SCDOT, NCDOT]
Mobility and System Accessibility	• Improve access and mobility within the region by adopting and implementing access management, complete streets, and intersection design guidelines. • Provide equitable transportation options for all travelers, including transit-dependent populations and users of all capabilities.	• Number of completed projects incorporating access management, complete streets, and/or intersection design guidelines [MPO Data] • Percent of non-Single Occupant Vehicle travel [US Census Bureau, ACS]
Environmental Stewardship	• Provide a transportation system that is sensitive to the natural and man-made environment. • Encourage modal partners to be proactive in considering and addressing environmental impacts of their transportation infrastructure investments. • Encourage the protection and conservation of natural resources.	• MPO Air Quality Design Values [MPO Data] • Annual hours of delay on principal arterials [INRIX, SCDOT, NCDOT]
Modal Choices and Balanced System	• Utilize the existing transportation system to facilitate enhanced modal options for a growing and diverse population and economy. • Improve transportation choice and mode selection. • Consider multimodal connections specifically to the region's tourism resources. Make tourism resources easily available for all transportation users. • Improve intermodal connectivity. • Incorporate Complete Streets design into transportation projects.	• Percent increase in transit ridership [Coast RTA, Brunswick Transit System (BTS)] • Number of on-demand transit trips [Coast RTA, BTS] • Percent of population within ½ mile of transit route or facility connecting to regional activity center(s) [Coast RTA, BTS] • Percent of population within ½ mile of bicycle facility connecting to regional activity center(s) [MPO Data]
Safety and Security	• Reduce highway fatalities and serious injuries. • Reduce bicycle and pedestrian and other vulnerable roadway users' fatalities and serious injuries. • Reduce fatal or serious injury crashes at at-grade rail crossings. • Reduce fatal and serious injury crashes at intersections. • Reduce transit-related fatalities and serious injuries. • Utilize the GSATS Safety Committee to identify safety projects and prioritize projects that improve safety outcomes.	• Number and rate of fatalities (rate = # of fatalities per 100 million vehicle miles traveled) [SCDOT, NCDOT] • Number and rate of serious injuries (rate = # of serious injuries per 100 million vehicle miles traveled) [SCDOT, NCDOT] • Number of Non-motorized fatalities [SCDOT, NCDOT] • Number of Non-motorized serious injuries [SCDOT, NCDOT]
Infrastructure Preservation and Maintenance	• Maintain or improve the current state of good repair for the National Highway System (NHS). • Reduce the percentage of remaining state highway miles (non-interstate/strategic corridors) moving from a "fair" to a "poor" rating while maintaining or increasing the % of miles rated as "good." • Improve the condition of the state highway system bridges. • Maintain or improve the state transit infrastructure in a state of good repair.	• Percent of state-maintained road miles in "good" condition [SCDOT, NCDOT] • Percent of state-maintained bridges in "good" condition [SCDOT, NCDOT, National Bridge Inspection Standards (NBIS)]
Congestion and Reliability	• Reduce the number of system miles at unacceptable congestion levels (above Level of Service D). • Improve travel time reliability (on priority corridors or congested corridors). • Provide improvements to relieve congestion based on rational and objective criteria to ensure the wise and effective use of limited resources.	• Travel time reliability index [INRIX travel time data or AADT-based level of service]

4 STUDY AREA CHARACTERISTICS

An understanding of existing conditions, trends, opportunities, and challenges is vital to planning for a transportation system that can meet the current and future needs of residents and visitors of the Grand Strand area. Transportation is both affected by and affects many aspects of modern society. Population growth, employment and economic trends, education, tourism, and land use are all key components of urbanized areas that a transportation system must be able to serve in providing mobility and access.

Brunswick County was in the top 10 of fastest growing counties nationwide from 2021 - 2022*

*https://www.census.gov/newsroom/press-releases/2023/population-estimates-counties.html

POPULATION TRENDS

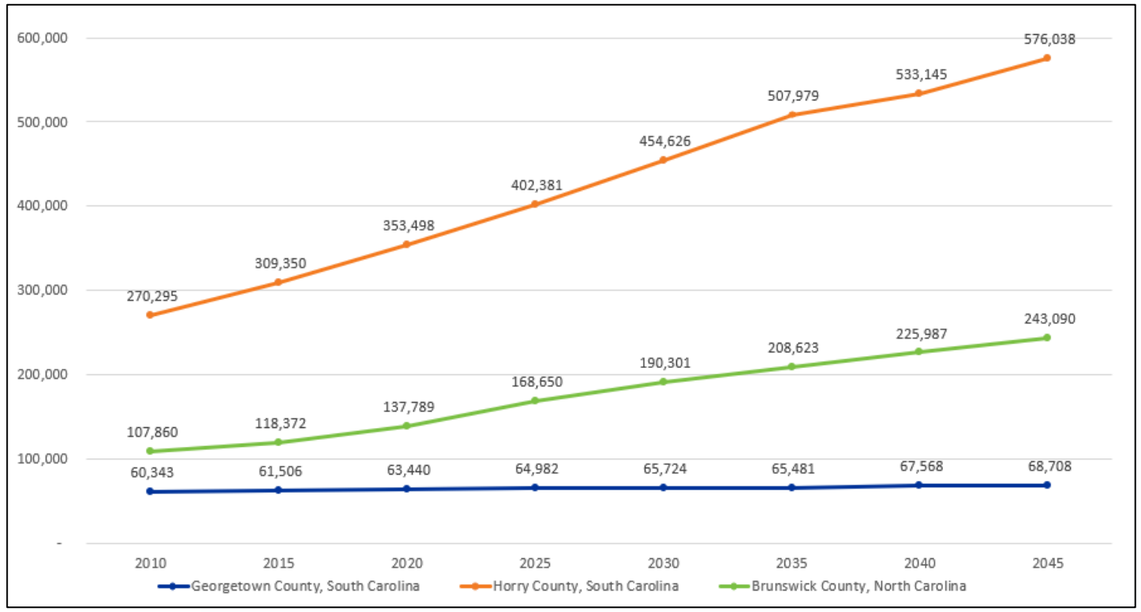
Growth in population in the Grand Strand area continues to outpace growth in infrastructure expansion. US Census Bureau data reveals that Horry, Georgetown, and Brunswick counties' growth continues as quality of life and livability features attract population and business. These rising numbers can be seen in the Historic and projected population estimates for the GSATS counties and states in **Table 4-1** and **Figure 4-1**.

Table 4-1: Historic and Projected Population 2010-2045 [2]

	Estimate			Projection				
	2010	2015	2020	2025	2030	2035	2040	2045*
Georgetown County	60,343	61,506	63,440	64,982	65,724	65,481	67,568*	68,708*
Horry County	270,295	309,350	353,498	402,381	454,626	507,979	550,335*	598,138*
Brunswick County	107,860	118,372	137,789	168,650	190,301	208,623	230,312	251,754
South Carolina	4,635,846	4,896,006	5,130,729	5,366,452	5,601,742	5,827,845	6,074,396*	6,311,908*
North Carolina	9,571,007	9,968,747	10,463,226	11,038,826	11,625,716	12,221,349	12,817,720	13,414,872

** Population projections for 2040 and 2045 for Georgetown County, Horry County, and South Carolina were extrapolated from the 2010-2035 estimates*

Figure 4-1: Historic and Projected Population Growth by County (2010 - 2045)



[2] *Sources: S.C. Department of Revenue and Fiscal Affairs Office, South Carolina Population Estimates from 2010-2020 and Population Projections from 2025-2035; N.C Office of State Budget and Management, Standard Population Estimates, Vintage 2021 and Population Projections, Vintage 2022*

The Myrtle Beach-Conway-North Myrtle Beach, SC-NC Metro Area has seen the greatest percent change in population growth compared with peer metropolitan areas as displayed in **Table 4-2**. The Myrtle Beach-Conway-North Myrtle Beach, SC-NC Metro Area has seen a greater percent change in population growth from 2017 to 2022 than other coastal counterparts like the Charleston-North Charleston, SC Metro Area and Savannah, GA Metro Area.

While not part of the permanent population, an additional consideration for GSATS is the large volume of seasonal population that visits the area during the summer and winter months.

The Grand Strand area attracted approximately 24 million visitors[3] in 2019, which is up from 18 million visitors in 2016. The number of visitors in the GSATS region has continued to grow every year for nearly the past decade. The growing residential population combined with high levels of seasonal visitors place high levels of demand on transportation infrastructure. One of the great challenges faced by the Grand Strand area over the life of this plan will be providing and maintaining adequate transportation infrastructure to meet demand while balancing the finite resources available to do so.

Table 4-2: Myrtle Beach, Peer Metro Areas and State Population Growth (2017 -2022)

Geography	Net Growth (2017-2022)	% Change
Myrtle Beach-Conway-North Myrtle Beach, SC-NC Metro Area	78,122	18.10%
Charleston-North Charleston, SC Metro Area	66,908	8.97%
Columbia, SC Metro Area	28,451	3.51%
Savannah, GA Metro Area	31,784	8.40%
Charlotte-Concord-Gastonia, NC-SC Metro Area	251,540	10.27%
South Carolina (Statewide)	297,260	6.07%
North Carolina (Statewide)	528,667	5.27%

Source: FRED Economic Data

Figure 4.2 shows the change in population density by Census Block Group from 2013 to 2021. The map shows the full range of population density change. While the majority of the GSATS study area experienced growth, the areas with the most pronounced growth include Little River and Myrtle Beach.

Figure 4.3 shows employment change at the census block level from 2013 to 2020. The map indicates employment growth throughout the GSATS study area, with the greatest changes occurring in Myrtle Beach, Conway, and Little River.

[3] http://web.myrtlebeachareachamber.com/news/newsarticledisplay.aspx?ArticleID=925

Figure 4-2: Population Percent Change (2013 - 2021)

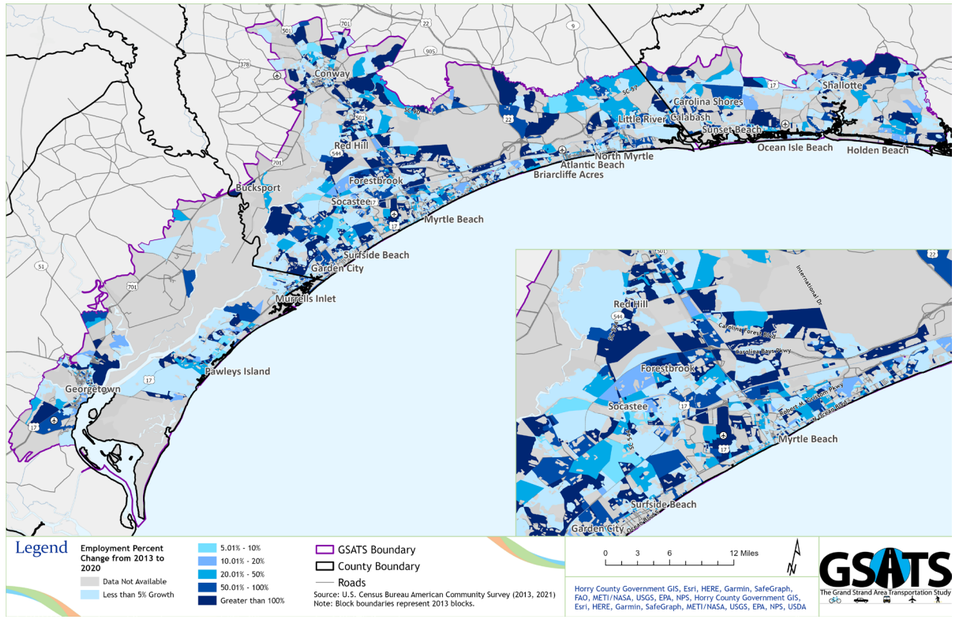
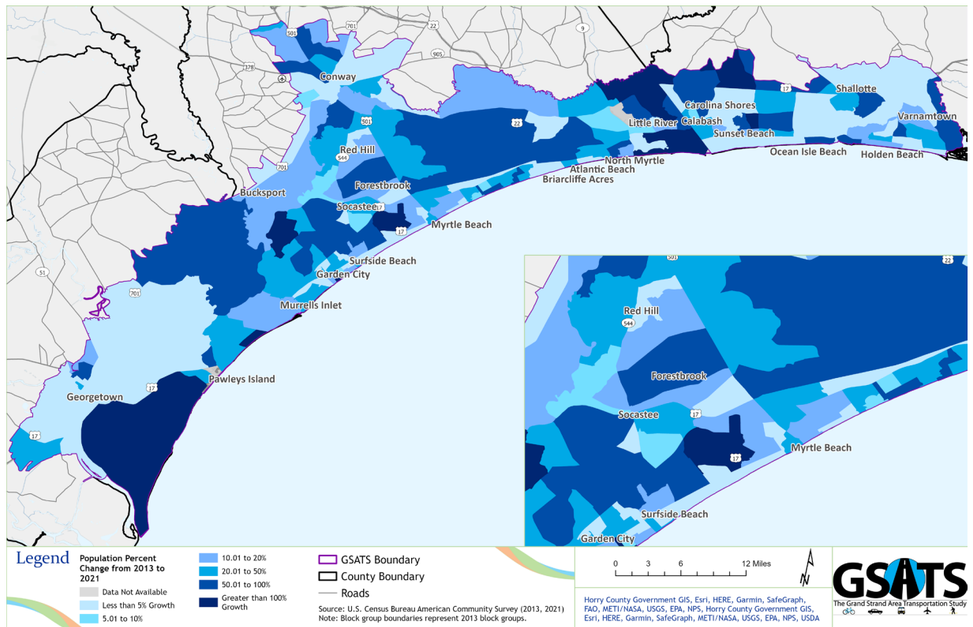


Figure 4-3: Employment Percent Change per Square Mile (2013 - 2020)



MINORITY AND LOW-INCOME POPULATION

The American Community Survey (ACS) collects information about race and minority populations. Minority populations refer to people who do not classify their race as "White Only." Of the three counties comprising the GSATS region, Georgetown County contains the overall greatest percentage of minority populations at 35.1 percent. At the block group level, the greatest concentrations of minority populations are in Georgetown County between Bucksport, the City of Georgetown, and the City of Myrtle Beach. **Figure 4-4** further details the percentages of people of color by block group in GSATS are based on American Community Survey 2021 estimates.

The ACS also collects data on poverty and per capita income. Of the three counties comprising the GSATS region, Brunswick County has the highest per capita income of $40,548 based on the 2021 ACS survey. The per capita income for Horry County is $31,114 and $36,867 for Georgetown County. Of the three counties, Georgetown County had a higher percentage of individuals (14.7 percent) in poverty. Of the three counties in the GSATS region, Georgetown County has the highest percentage of families in poverty at 35.7 percent.

Figure 4-4: Minority Percent by Block Group (2021)

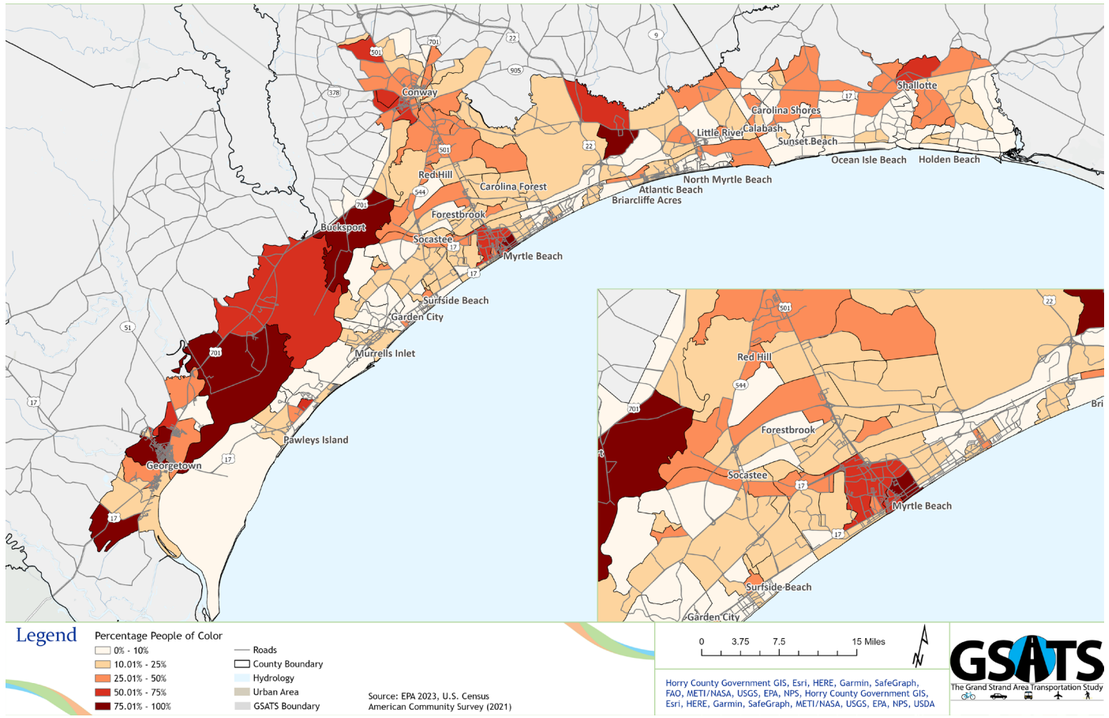


Table 4-3: Minority Population (2021)

	Population	Minority	Percent Minority
Georgetown County	62,992	22,129	35.1%
Horry County	351,029	86,765	23.7%
Brunswick County	136,639	26,973	18.7%
Myrtle Beach-Conway-North Myrtle Beach, SC-NC Metro Area	509,794	113,738	22.3%
South Carolina	5,190,705	1,941,497	37.4%
North Carolina	10,551,162	4,122,437	39.1%
Source: US Census Bureau ACS 2021			

Table 4-4: Per Capita Income and Poverty (2021)

	Per Capita Income	% of Individuals in Poverty	% of Families in Poverty
Georgetown County	$36,867	14.7%	35.7%
Horry County	$31,114	12.4%	9.3%
Brunswick County	$40,548	8.7%	4.9%
Myrtle Beach-Conway-North Myrtle Beach, SC-NC Metro Area	$33,783	11.4%	7.8%
South Carolina	$33,339	14.6%	10.8%
North Carolina	$35,254	13.4%	9.4%
Source: US Census Bureau ACS 2021			

Justice40 and Transportation Disadvantaged Communities

Justice40, implemented in January 2021, is a policy that aims to address environmental and economic disparities in disadvantaged communities. The goal of Justice40 is to ensure that 40% of the benefits from federal investments in climate and clean energy initiatives are directed towards these communities. This initiative acknowledges that historically marginalized communities, including low-income neighborhoods and communities of color, have disproportionately suffered from pollution and environmental degradation. Justice40 seeks to rectify this by allocating a significant portion of funding and resources to these communities, enabling them to benefit from the transition to a clean and sustainable economy.

Consistent with Justice40 initiatives, US Department of Transportation has developed a definition for highly disadvantaged communities using existing, publicly available data sets[4]. The identified disadvantaged Census Tracts in **Figure 4-5** exceed the 50th percentile (75th for resilience) across at least 4 of the following 6 transportation disadvantaged indicators:

- **Transportation Access disadvantage** identifies communities and places that spend more, and longer, to get where they need to go. (CDC Social Vulnerability Index, Census America Community Survey, EPA Smart Location Map, HUD Location Affordability Index)
- **Health disadvantage** identifies communities based on adverse health outcomes, disability, as well as environmental exposures. (CDC Social Vulnerability Index)
- **Environmental disadvantage** identifies communities with disproportionate pollution burden and inferior environmental quality. (EPA EJ Screen)
- **Economic disadvantage** identifies areas and populations with high poverty, low wealth, lack of local jobs, low homeownership, low educational attainment, and high inequality. (CDC Social Vulnerability Index, Census America Community Survey, FEMA Resilience Analysis & Planning Tool)
- **Resilience disadvantage** identifies communities vulnerable to hazards caused by climate change. (FEMA National Risk Index)
- **Equity disadvantage** identifies communities with a high percentile of persons (age 5+) who speak English "less than well." (CDC Social Vulnerability Index)

Distance from an identified Justice40 census tract was included as a scoring metric in the Livability category of the GSATS project prioritization process. Projects near or within a Justice40 census tract will receive additional Livability points. Additional information about the project prioritization process is included in **Chapter 5**.

Of the three counties comprising the GSATS region, Georgetown County contains the overall greatest percentage of occupied housing units with no vehicles at 5.3 percent. **Table 4-5** illustrates the concentration of households without personal vehicles.

Figure 4-5: Disadvantaged Communities within the GSATS Boundary

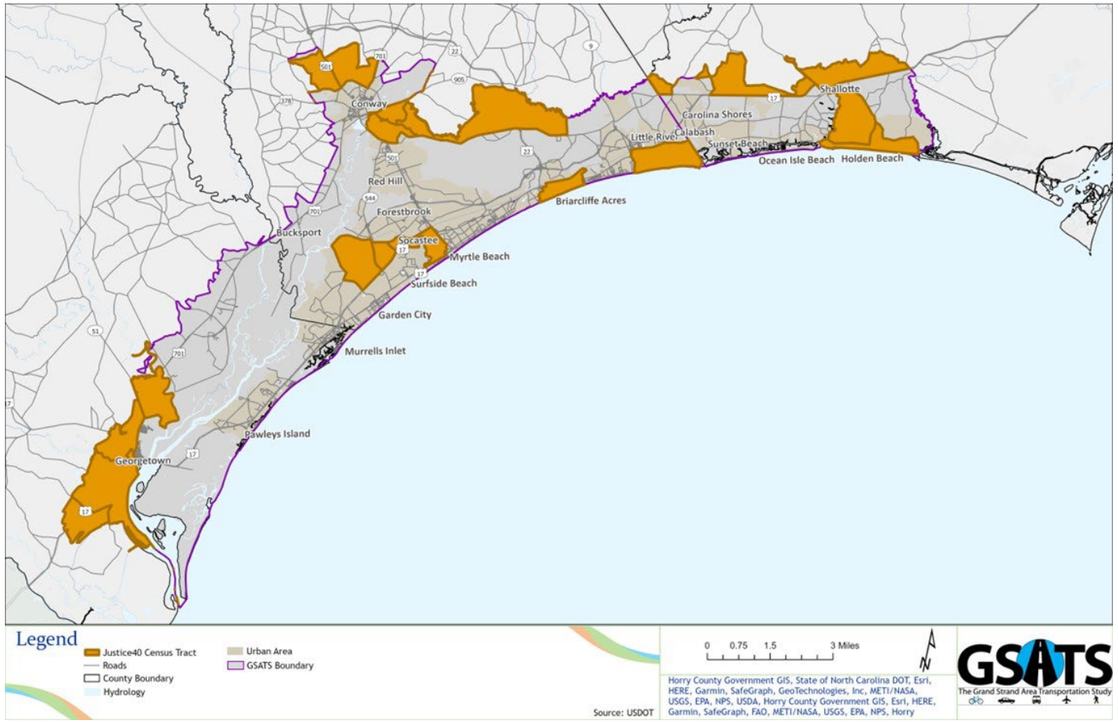


Table 4-5: Households without Access to a Vehicle (2019)

	Percent of Occupied Housing Units with No Vehicles	Percent of Households One Vehicle	Percent of Occupied Housing Units with Two or More Vehicles
Georgetown County	5.3	33.6	36.6
Horry County	4.4	36.3	42.2
Brunswick County	2.5	28.7	47.3
South Carolina	5.8	32.2	38.6
North Carolina	5.5	31.3	38.1
Source: US Census Bureau ACS 2021			

[4] USDOT. Justice40 Initiative. https://www.transportation.gov/equity-Justice40

EXISTING (2019) TRANSPORTATION SYSTEM

The existing transportation system in the Grand Strand area provides area residents and visitors with the ability to travel for work, school, shopping, and recreation. The efficiency with which these trips can be made determines the effectiveness of the current roadway network. A few major roadways that act as links between the various communities in the GSATS region dominate the network. While some existing mobility options such as bicycle lanes, sidewalks, and transit service are present in the region, increased accommodation is necessary for residents and tourists alike as travel demand increases. This creates challenges for cities, counties, and the states in the GSATS region as each must continue to manage their existing facilities while planning for anticipated growth.

Roadways

The roadway network is the most important aspect of the MPO planning area transportation system as it bears the burden of transporting most goods and people throughout the region compared with other modes. The region's economic vitality is dependent on this roadway network, which makes the region accessible for commuter, industrial, commercial, tourism and other day-to-day uses. This system should be viewed as an indispensable regional economic asset that requires constant reinvestment to protect the economic stability of the region. Maintenance of the roadway network is a critical factor in ensuring the safe and efficient travel of both residents and visitors alike.

Functional Classification

Functional classification is the process by which roadways are grouped into categories according to the character of service they are intended to provide. Individual roads do not serve travel independently; most travel involves movement through a network of roads. Functional classification examines the channelization of traffic throughout a roadway network and defines the role that each roadway plays in serving traffic flow. Two important variables define roadway function: mobility and access. At one end of the spectrum, freeways provide the highest level of mobility and the lowest level of access, serving long distance trips with minimal access to abutting land uses. Local streets, on the other hand, have numerous driveways and connections to provide local access to businesses and residences and are not intended for use over long distances.

The functional classification for the GSATS roadways utilize the SCDOT and NCDOT roadway classification system according to the following classes:

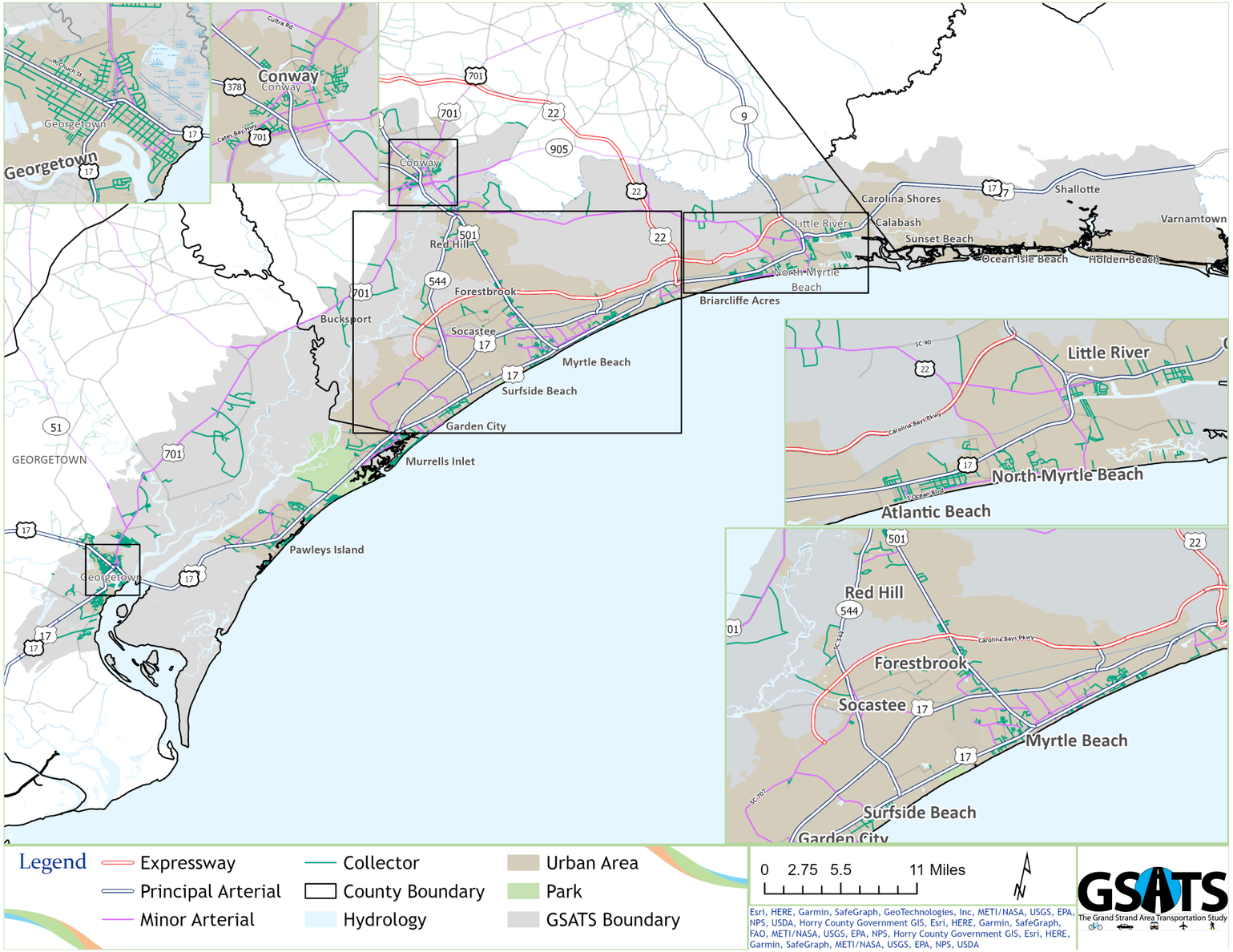
- Freeways/Expressways
- Principal Arterials
- Minor Arterials
- Collector
- Local Roads

The GSATS region is served by two expressways and several arterials. **Figure 4.6** illustrates the location of the area's major roadway infrastructure and a brief description of each corridor is provided below:

- SC 31 is a restricted access expressway that spans north and south running parallel to US 17. SC 31 starts at SC 544 and intersects US 501, SC 22, and terminates at SC 9. This six-lane divided roadway borders the outer edge of Myrtle Beach and North Myrtle Beach.
- SC 22 is a restricted access expressway that begins at US 17 between Myrtle Beach and North Myrtle Beach. Traveling northwest, this roadway intersects SC 31 and US 701 before bypassing Conway and connecting to US 501 north of the town of Aynor.
- US 17 is the study area's principal north to south roadway. The corridor extends through Georgetown, Horry, and Brunswick counties and connects the area to major cities such as Virginia Beach, VA, Wilmington, NC, Charleston, SC, Savannah, GA, Jacksonville, FL, and Ft. Myers, FL.
- US 501 is a principal arterial that begins at US 17 Business in Myrtle Beach and ends in Buena Vista, VA. US 501 passes through Myrtle Beach, Conway, and Aynor.
- SC 9 is a principal arterial in the North Myrtle Beach area that extends east to west. SC 9 interconnects US 17, SC 31, SC 65, and SC 90.
- SC 544 is a principal arterial roadway that spans east to west in Horry County. SC 544 starts at US 17 Business just south of Myrtle Beach. This roadway connects local arterials including US 17, US 17 Business, US 501, SC 707, and SC 31.
- US 378 is a principal arterial that begins in Washington, GA and ends in Conway, SC at US 501.
- US 521 is a principal arterial that starts in Georgetown, SC and ends in Charlotte, NC connecting to I-485.
- US 17 Business is a minor arterial roadway that serves Murrells Inlet, Garden City Beach, Surfside Beach, Myrtle Beach, and Shallotte. US 17 Business runs through the center of these communities.
- SC 707 is a minor arterial roadway that runs north to south in Georgetown and Horry counties. SC 707 connects to the arterials US 17 and SC 544.

Over the past twenty years, the area has experienced notable improvements to the roadway network. These improvements have included the construction of Carolina Bays Parkway and Grissom Parkway, the widening of SC 544, and improvements to SC 22, 10th Avenue North, 21st Avenue North, 29th Avenue North, and Harrelson Boulevard. The area has also invested in access management strategies in the US 17 corridor and intersection improvements for localized safety and operational improvements. Despite these improvements, area growth (both population and tourism) has in several areas strained the capacity of the study area's roadway network. This has resulted in increased traffic and corresponding congestion on many of the area's roadways.

Figure 4-6: Functional Classification of GSATS Roads



Sources: GSATS, SCDOT and NCDOT

ROADWAY NETWORK USAGE

Annual average daily traffic (AADT) volumes for the region were obtained from SCDOT and NCDOT for the years 2010 and 2019.

Based on historical AADTs, average annual growth rates by county between 2010 and 2019 are as follows:

- Georgetown County – 0.81%
- Horry County – 1.81%
- Brunswick County – 4.3%

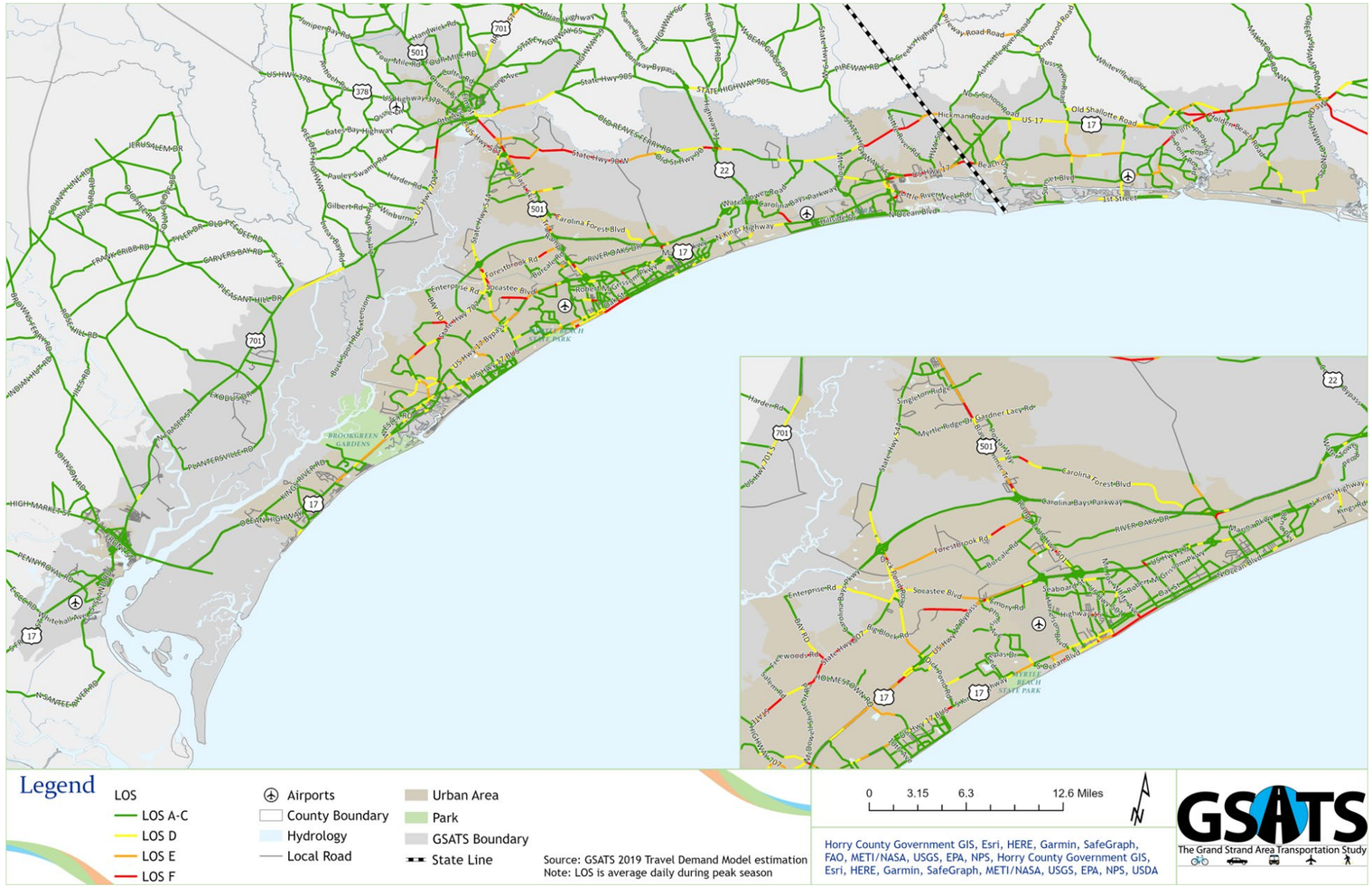
CAPACITY ANALYSIS

Level of Service (LOS) is a scale used to evaluate how the use of a roadway compares to the number of vehicles it was designed to accommodate. Transportation planners derive LOS for a roadway by examining its traffic volumes, operating capacity (the number of vehicles per hour the roadway can handle without creating congestion) and estimated or observed vehicle speeds. When the roadway traffic volume exceeds the capacity of the roadway, the facility loses its ability to efficiently move traffic and becomes congested.

A planning level capacity assessment of existing roadway system traffic conditions was developed using the regional travel demand model. This model was updated to a base year of 2019 and attempts to estimate travel conditions in the region by looking at both the supply of and demand for transportation. The supply dimension of the model is reflected in the roadway network, while population and employment data drive the travel demand side of the equation. 2045 traffic estimates are used to identify needs for improved mobility and are aligned with the forecast demographics from local comprehensive plans (development trends).

SCDOT has established the LOS goal of D when measured as a Peak Season Daily LOS for state roads. NCDOT has established the target LOS goal of D for system level planning analysis. Like the state DOTs, roadway LOS goals are also used by GSATS to establish the desired operating conditions of the roadway network. A LOS goal of D is proposed for this MTP update. The appropriate degree of congestion (or LOS) to be used in planning and designing highway improvements is determined by considering a variety of factors. These factors include the desires of motorists, adjacent land use type and development intensity, environmental factors, and aesthetic and historic values. These factors must also be weighed against the financial resources available for infrastructure improvements. **Figure 4-7** illustrates the LOS of GSATS roadways for existing conditions in 2019. **Appendix D** provides more detailed information on the LOS for the GSATS transportation system.

Figure 4-7: Existing (2019) Peak Season Daily LOS



Source: GSATS Travel Demand Model

The future conditions are based on updated demographic and land use projections conducted as part of the MTP update. **Figure 4.8** provides the 2045 future conditions peak season daily LOS.

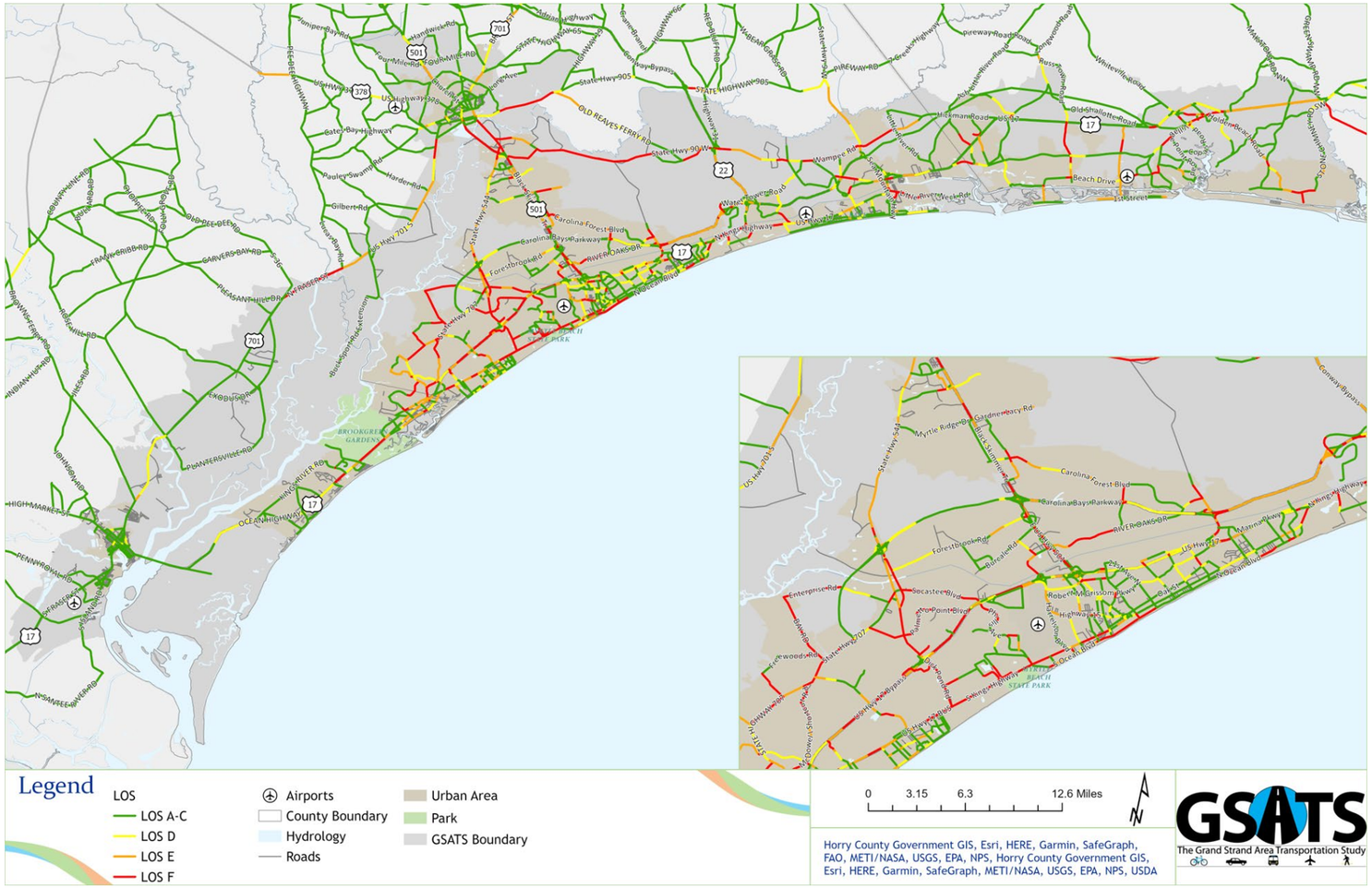
Committed projects include those contained in the North and South Carolina Statewide Transportation Improvement Programs (STIP), the Waccamaw Regional Council of Governments Rural Transportation Improvement Program (RTIP), the current GSATS 2019-20128 Transportation Improvement Program (TIP) and the Horry County RIDE III referendum.

Illustrated in **Table 4-6**, a comparison between the 2019 base year network with the 2045 existing plus committed network shows the distribution of lane miles and their relative performance in LOS. This informs planners of the performance of the existing roadway network plus projects that are in the pipeline for construction between the current year and the 2045 plan year. This comparison estimates the expected trend of a higher percentage of roadways decreasing their LOS due to the increase in population and economic activity in the region.

Table 4-6: LOS Distribution (2019, 2045)

Level of Service	2019 Base Year		2045 E+C (2045 No Build)	
	Lane Miles	Lane Mile Distribution (%)	Lane Miles	Lane Mile Distribution (%)
A	2,962	59%	2,282	43.4%
B	739	15%	872	16.6%
C	720	14%	843	16.0%
D	275	5%	441	8.4%
E	195	4%	387	7.4%
F	126	3%	432	8.2%
Total	5,019	100%	5,257	100.0%

Figure 4-8: Future (2045) Peak Season Daily LOS

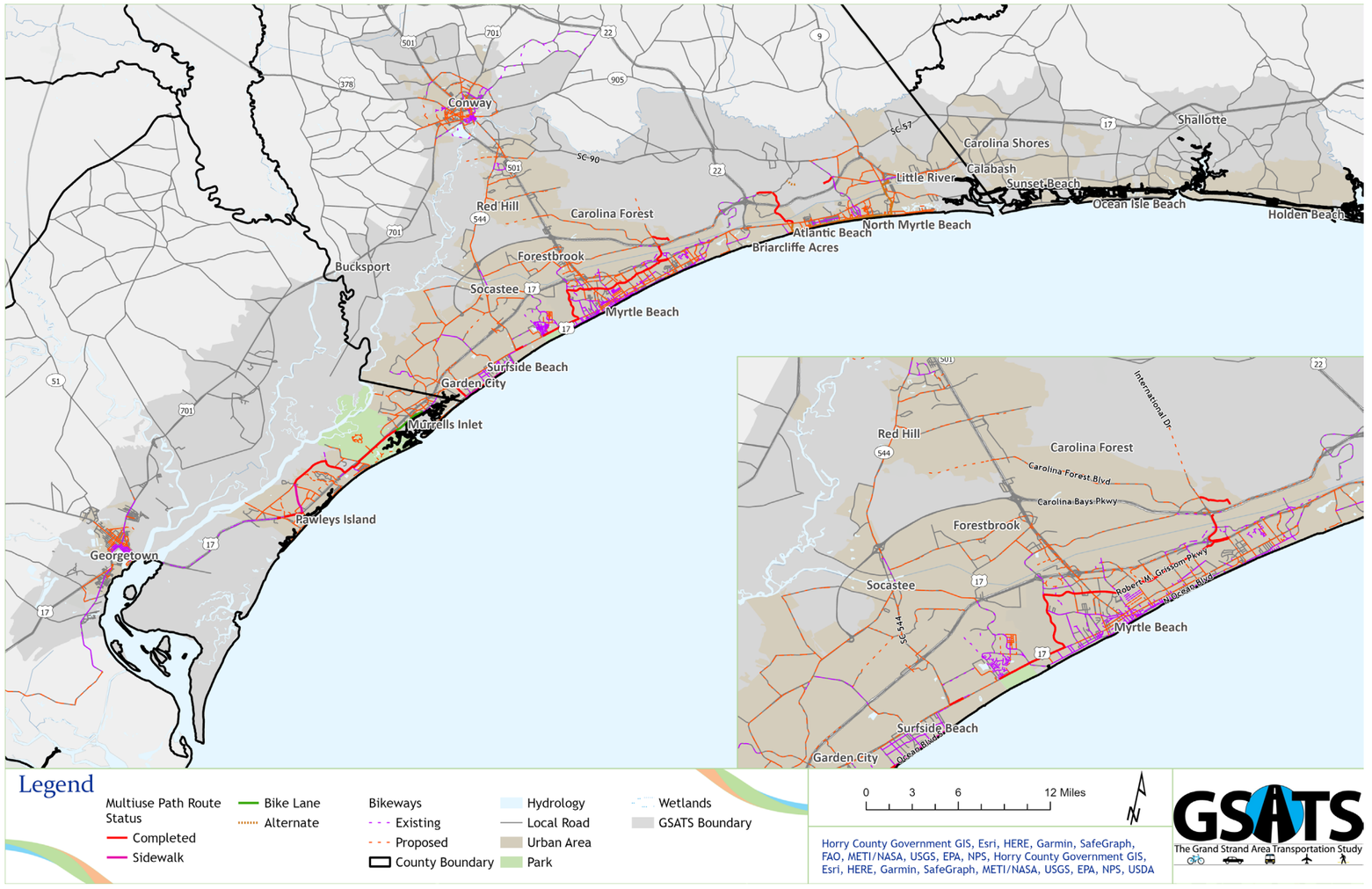


Source: GSATS Travel Demand Model

Bicycle and Pedestrian Facilities

The GSATS region currently has bike and pedestrian facilities throughout the jurisdictions of its member governments. **Figure 4-9** shows the existing and planned facilities throughout the region. Several bikeways are proposed primarily within the urban areas within the region. The East Coast Greenway, a planned urban trail system from Maine to Florida, will also provide a significant active transportation connection for bicyclists and pedestrians when fully implemented. The completed and planned segments of the ECG within the South Carolina and North Carolina portions of GSATS are shown in **Chapter 6** and **Appendix G**. Bicycle and pedestrian projects will be ranked when they are submitted to GSATS for funding.

Figure 4-9: Existing (2019) GSATS Area Bicycle and Pedestrian Facilities

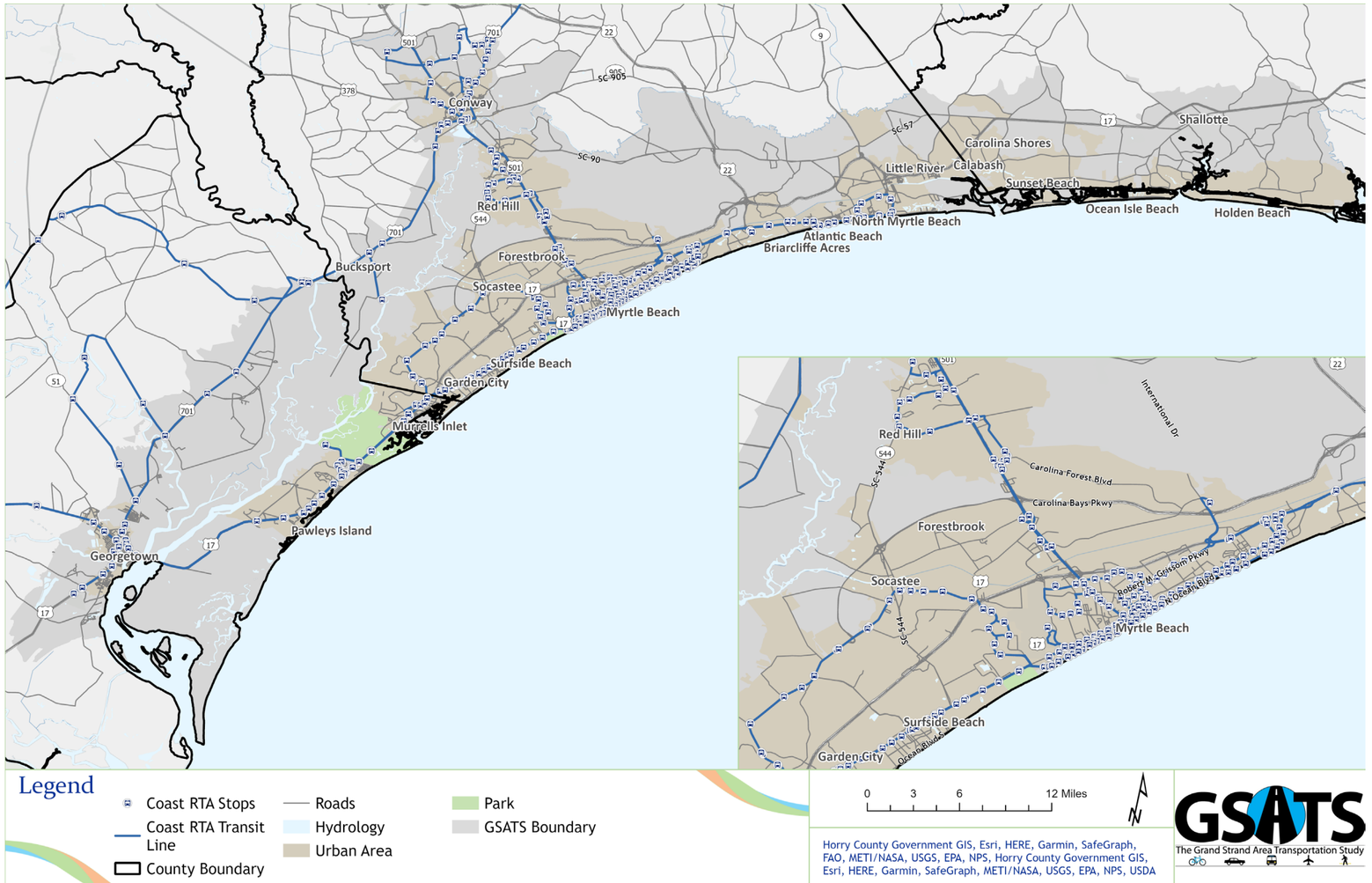


Transit Facilities

Within the Grand Strand area, transit service provides transportation and mobility options for the residents each day. Not only do the residents of the Grand Strand area rely on these options, but so do tourists which represent a significant amount of the population during the peak tourist season. Access to jobs, medical care, shopping, recreational activities, needed services, and all other aspects of daily life are provided by these options. These needs increase tremendously during the peak tourist season and continue through the remaining off-peak season. As the area's population has grown, and continues to do so, convenient and reliable transit service will become an even greater necessity.

The GSATS MPO anticipates the automobile to continue to be the dominant mode of transportation in the foreseeable future for the area, both in number of trips and the distance traveled. However, transit and other modes will continue to play an increasingly important and beneficial role in the overall transportation network. Supporting and encouraging transit and other modes will reduce congestion and air pollution in the area, as well as consumption of natural resources. **Figure 4-10** illustrates the transit system in the region.

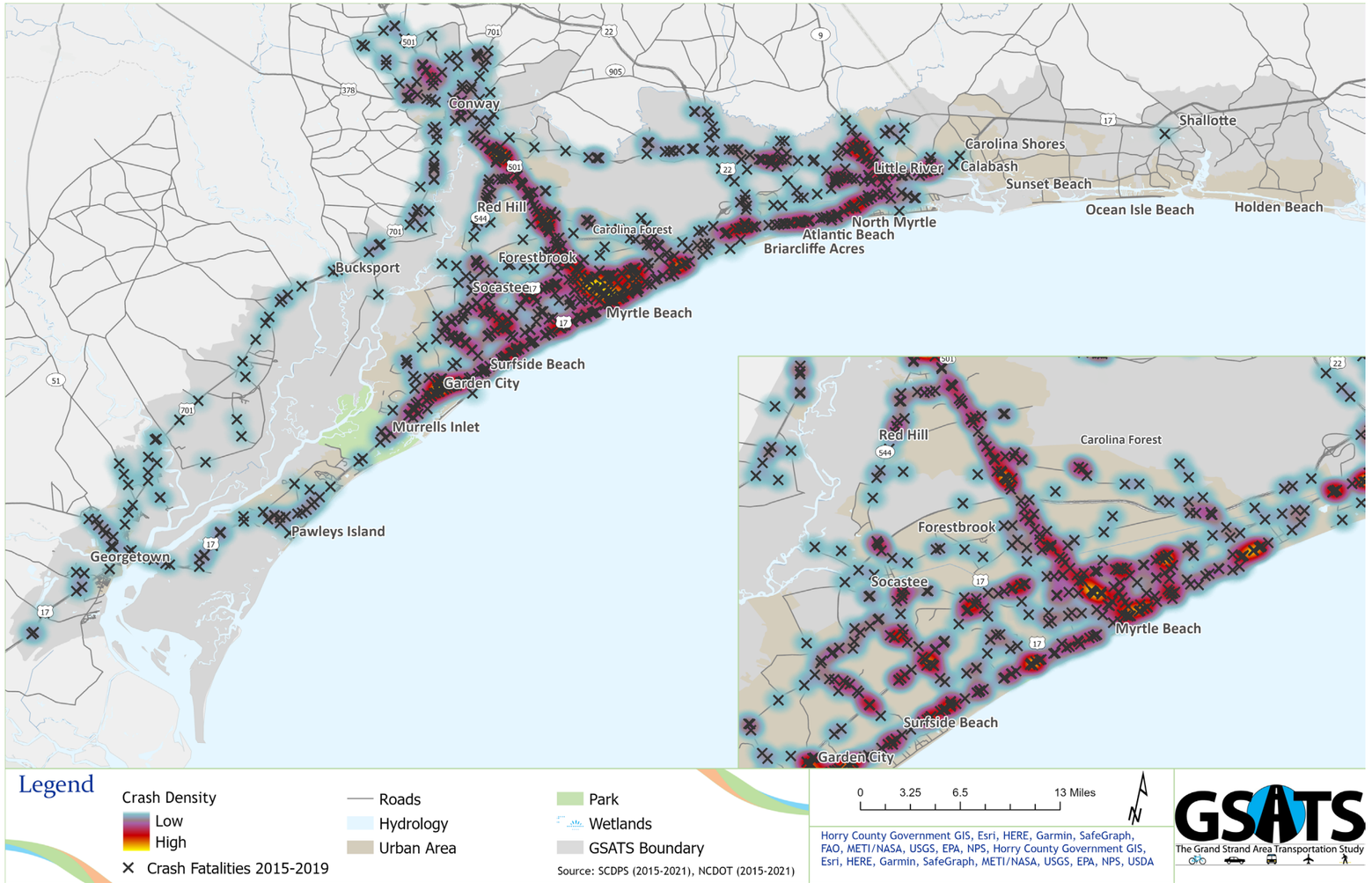
Figure 4-10: Existing (2022) GSATS Area Public Transit Facilities



SAFETY ANALYSIS

Fatal crash data for the GSATS region were obtained from SCDOT and NCDOT. **Figure 4-11** illustrates the fatal crash density in the GSATS region between 2015 and 2019. Bike and pedestrian crashes most frequently occur on US Highways 501 between Conway and Myrtle Beach and along US 17 in Myrtle Beach and leading to Conway. The MPO takes safety very seriously and will continue to work with its planning partners to reduce the number of crashes and improve the safety of the region's roadway system. Safety data, specifically crash locations, are weighted most heavily in the ranking of potential projects in the GSATS region, as detailed in **Appendix I**. Steps that GSATS has taken to address safety include participation in regional roadway safety audits, development of a GSATS Safety Committee to review safety issues in the region, and a focus on promoting projects that address safety as part of the project prioritization process.

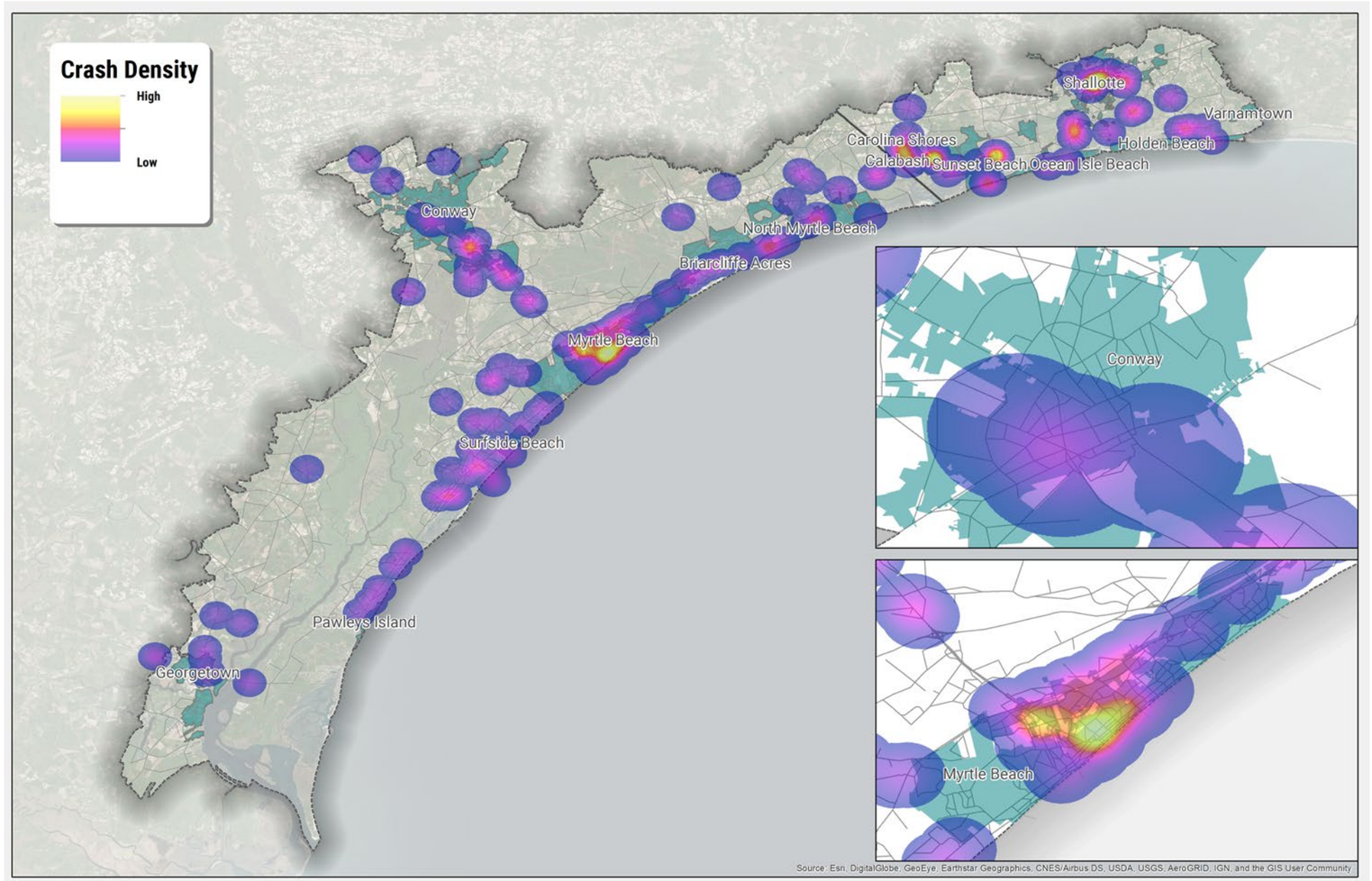
Figure 4-11: Fatal Crash Density in GSATS Region, 2015-2019



Vulnerable Road Users

Crash data provided by SCDOT and NCDOT identified the location and nature of bike- and pedestrian-related street crashes. A total of 440 pedestrian crashes occurred in the GSATS region between 2017 and 2021, 412 of which were in South Carolina and 28 in North Carolina. Of the 440 reported pedestrian crashes, 66 crashes resulted in fatalities. Crashes involving cyclists and pedestrians occurred throughout the GSATS region in several of the municipalities and within unincorporated areas, as shown in **Figure 4-11.** Crash density is shown to more clearly identify locations where bike and pedestrian crashes occurred with greater frequency. In addition to illustrating the locations of crashes, **Figure 4-12** provides insight into the areas that people are already biking and walking within the study area, and the need for enhancements that provide a safe bike and pedestrian network for users.

Figure 4-12: Vulnerable Road Users Crash Density (2015 – 2019)

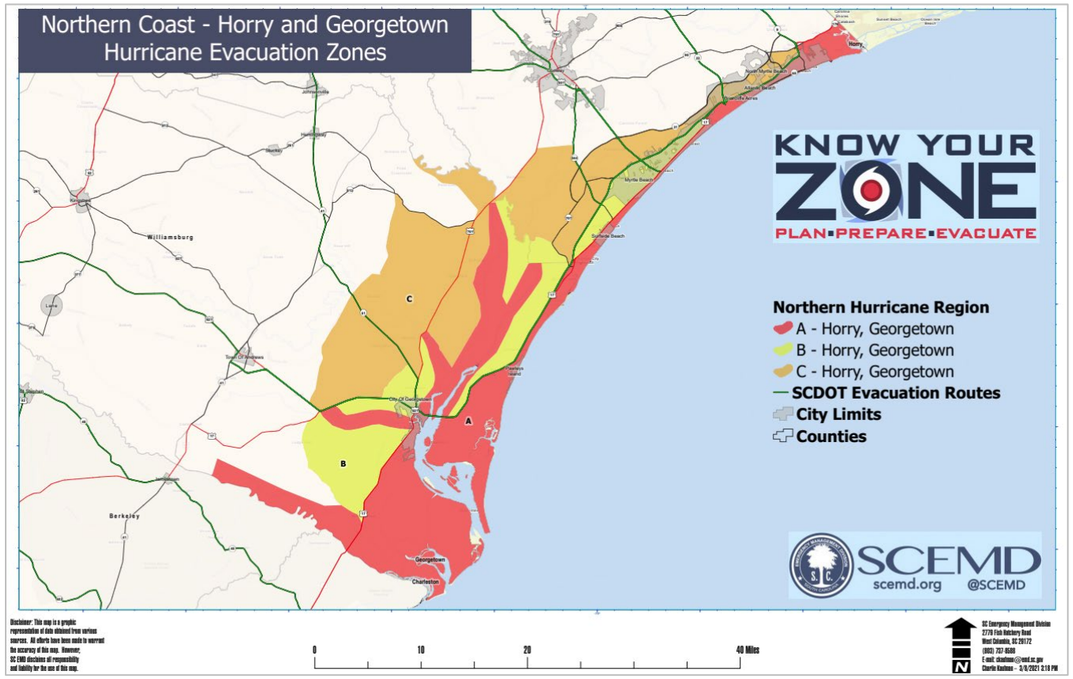


HURRICANE EVACUATION

In addition to serving daily travel demand, the regional roadway network is also the primary means of departure during emergency evacuations. Consequently, development and maintenance of evacuation routes are an important element of this MTP. Hurricanes and tropical storms often make landfall and cause damage to the United States' East Coast, including the South Carolina and North Carolina coastlines. Hurricanes range in size and intensity, and the accompanying high winds, storm surge, rainfall, and tornadoes cause significant loss of life and property damage.

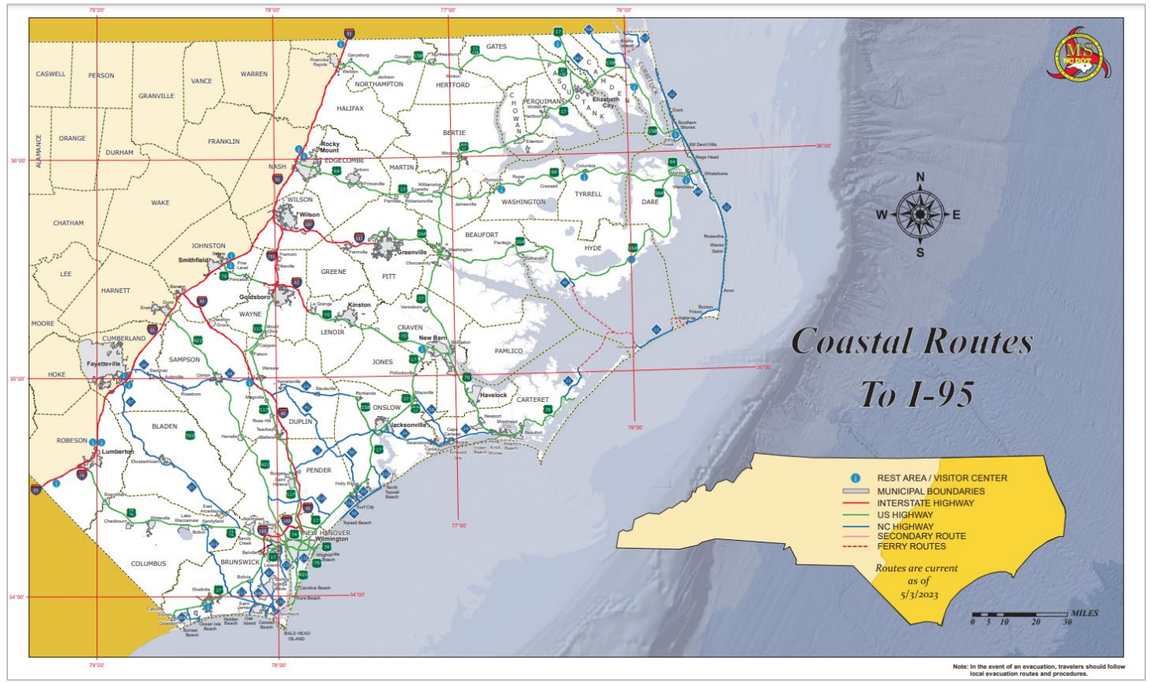
Each year on average, ten tropical storms (of which six become hurricanes) develop over the Atlantic Ocean, Caribbean Sea, or Gulf of Mexico. Many of these remain over the ocean. However, about five hurricanes strike the US coastline every three years. Of these five, two will be major hurricanes (Category 3 or greater on the Saffir-Simpson Hurricane Scale). The coastal counties of Georgetown, Horry, and Brunswick are vulnerable to extensive flooding during hurricanes. During such potential disasters, the safe and timely evacuation of coastal and floodplain areas is crucial to ensure public safety. Evacuation routes for South Carolina and North Carolina are illustrated in **Figure 4-13** and **Figure 4-14**.

Figure 4-13: Hurricane Evacuation Routes in Horry and Georgetown Counties, SC



Source: South Carolina Emergency Management Division

Figure 4-14: Hurricane Evacuation Routes in North Carolina



Source: NC DOT

5 TRANSPORTATION PROJECT DEVELOPMENT AND SCREENING

Population growth, high automobile availability and usage, and auto-oriented land use development indicate that residents and visitors are heavily dependent upon the automobile as their primary mode of transportation in the GSATS region. Based upon an evaluation of the regional roadway system over the next 23 years, it is evident that increasing demands will be placed on the existing roadway network. The regional roadway system cannot indefinitely sustain this growth in demand without substantial investment. However, funding levels are not keeping pace with investment needs. Preserving the existing system in a state of good repair, increasing its operational efficiency, enhancing its safety, managing future travel demand, and promoting the use of alternative modes of transportation are all strategies that will need to be employed to relieve the pressure on the regional roadway system and advance the goals of this plan.

PROJECT IDENTIFICATION

During the 2045 MTP Update, a list of projects was initially generated from the previous GSATS 2040 Long Range Transportation Plan process. Member jurisdictions were then asked to review the previous list to update any change in information as well as provide new projects for consideration in the 2045 MTP. Projects from the 2040 list that were constructed or were deemed no longer practical by the sponsoring jurisdiction were removed. Sponsoring jurisdictions also contributed projects identified in local transportation and comprehensive plans throughout the region. Improvements were also identified to address estimated demand and safety concerns in the region based on available data and input from the public at multiple Public Involvement Meetings. A final list of projects for consideration were submitted to the Steering Committee in September 2023 for approval. The projects to be ranked were categorized by type of improvement as follows:

- New Location
- Widening
- Access Management/Streetscape/Complete Streets
- Intersections

New Location Projects

Major investment in the regional roadway network is essential if current and future demand for automobile use in the region is to be satisfied. There are limitations on new roadway construction, such as natural and man-made barriers that hinder roadway improvements. These barriers often include factors that determine when and how fast improvements can be made to roadways, such as the processes used to obtain funding for transportation projects, environmental review requirements, and other government regulations.

Widening Projects

Widening recommendations are projects on existing roadways that may require additional right-of-way acquisition. For estimating costs and relative impacts to these projects, information detailing the number of additional lanes and the bicycle and/or pedestrian elements are included in the project descriptions.

Access Management/Streetscape/Complete Streets Projects

Access management, streetscape, and complete streets recommendations seek to improve mobility, alleviate congestion, and accommodate all users within the existing transportation system. They typically involve roadway improvements that increase capacity, optimize traffic operation, or apply traffic calming in residential areas. Access management includes a broad set of techniques designed to improve roadway capacity, mobility, and safety by limiting the accessibility of vehicular traffic. The techniques usually control and regulate the location, spacing, and design of driveways, medians, median openings, traffic signals, and freeway interchanges. Furthermore, when combined with streetscape improvements, access management techniques can also contribute to attractive multimodal environments.

Complete streets are designed and operated to enable safe access for all users, including pedestrians, bicyclists, motorists and transit riders of all ages and abilities. Complete Streets make it easier to cross the street, walk to shops, and bicycle to work.

Intersection Improvements

Similar to widening projects and access management projects, intersection improvements are considered when traffic operations and/or safety conditions are a concern. For the purpose of project identification and ranking, information is collected about proposed improvements at an intersection. This includes potential signalization, additional of turn lanes and/or other enhancements. For the purpose of project ranking, intersection improvements are scored similarly to widenings by estimating the current conditions on adjacent roadways and estimating the length of recommended improvements.

PROJECT COST ESTIMATE METHODOLOGY

A key part of the project identification task was identifying and estimating planning level project costs. Many project costs were provided by the public agencies recommending or responsible for the roadways under consideration or identified in the previous plan. Other new projects necessitated developing planning level cost estimates, developed using data obtained from SCDOT on recently constructed projects of similar roadway cross sections. This data allowed the development of per mile costs that were applied to the proposed projects to obtain the estimated project cost. From SCDOT's base data, factors were added if a project was expected to have major right-of-way and utility impacts. A minimum of 10 percent contingency was added to all projects to account for the uncertainty of the future cost of materials. Higher contingency factors were added if a project was of medium or high complexity. An

inflation rate of 3 percent was also applied to all projects to obtain an inflation-adjusted 2030 cost estimate.

PROJECT SCORING CRITERIA

During the previous 2040 LRTP process, GSATS developed project evaluation criteria based on priorities tailored to the GSATS region. The GSATS prioritization criteria is compliant with the South Carolina Act 114 statewide framework for evaluating and funding projects in South Carolina and the North Carolina Department of Transportation SPOT 7.0 Prioritization Process for projects in North Carolina. For additional information Act 114 and SPOT process and their relationship to the identified projects in this MTP, see **Appendix I**. The 2045 MTP continues these same prioritization criteria outlined in **Table 5-1 and Table 5-2**. **Table 5-1** lists the prioritization criteria for widening, corridor improvements, interchange, and large intersection projects. **Table 5-2** lists the prioritization criteria for new capacity projects. Each set of criteria totals 100 maximum points. Both tables identify the accompanying GSATS 2045 Goal Area for each criterion.

For road widening projects, safety scoring was increased from 20 to 30 in the 2045 MTP Update, reflecting the local emphasis on improving safety as a top regional priority. Another change made in the scoring is a modification from "Environmental Impact" to "Environmental Impact and Resiliency," reflecting the established goals and objectives. This scoring was changed from only estimating the environmental impacts of a potential project to also including a resiliency score for a combined total score in this criterion.

Table 5-1: Road Widening/Access Management/Complete Streets Project Ranking Criteria

2045 Project Prioritization Criteria	Maximum Points	GSATS 2045 Goal Area
Public Safety	30	• Safety and Security
Traffic Volume and Congestion	20	• Congestion and Reliability
Livability	20	• Modal Choices and Balanced System • Economic Competitiveness • Coordinated Land Use and Transportation • Mobility and System Accessibility
Financial Viability and Maintenance Costs	10	• Infrastructure Preservation and Maintenance
Environmental Impact and Resiliency	10	• Environmental Stewardship (Environmental Impacts and Resiliency)
Functional Class (Truck Traffic)	5	• Congestion and Reliability
Consistence with Local Land Use Plans	5	• Coordinated Land Use and Transportation Planning

Table 5-2: New Location Project Ranking Criteria

2045 Project Prioritization Criteria	Maximum Points	GSATS 2045 Goal Area
Traffic Volume and Congestion	40	• Congestion and Reliability
Livability	20	• Modal Choices and Balanced System • Economic Competitiveness • Coordinated Land Use and Transportation • Mobility and System Accessibility
Financial Viability and Maintenance Costs	20	• Infrastructure Preservation and Maintenance
Environmental Impact	10	• Environmental Stewardship
Functional Class (Truck Traffic)	5	• Congestion and Reliability
Consistence with Local Land Use Plans	5	• Coordinated Land Use and Transportation Planning

GSATS PROJECT SCORING CRITERIA BREAKDOWN

The following subsections describe the scoring process and point scale for each criterion.

Traffic Volume and Congestion Score

The traffic volume and congestion score is a quantifiable criterion based on estimated future traffic volumes and the associated level-of-service (functionality and operational characteristics) of the roadways. Future traffic volume and congestion levels are used to evaluate the long-term performance of the highway network, along with the identification of deficiencies and recommended projects. Prior to programming projects in the GSATS TIP, current day traffic volumes and congestion will also be considered in the ranking process for the cost constrained portion of the MTP, as well as any other candidate projects to support a "worst-first" approach to project selection. A weighted point assignment is based on projected 2045 volume to capacity ratio from the GSATS 2045 travel demand model, with more points going to the more congested roadways, as detailed in **Table 3**. Volume and congestion scores are assigned based on the sliding scale of estimated volume to capacity (V/C) ratios. For widening projects, the V/C ratio of the existing roadway is used for scoring. For new location projects, the V/C ratio of the existing facility in need of improvement is used for scoring. This is a GIS process of identifying adjacent and/or parallel routes to be improved by additional network capacity. *This criterion supports the MTP goal area of Congestion and Reliability and align with performance measures of improved Travel Time Reliability and Annual hours of truck and auto delay on principal arterials.* **Table 5-3**.

Table 5-3: Traffic Volume and Congestion Point Scale

Project Type	Points by V/C Ratio							
	1 to 5	6 to 10	11 to 15	16 to 20	21 to 25	26 to 30	31 to 35	36 to 40
Widening & Access Management Projects	0.126 - 0.63	0.631- 0.89	0.891- 1.16	1.161 – 1.42	--	--	--	--
New Location Projects	0.02 - 0.01	0.011- 0.14	0.141- 0.30	0.301- 0.41	0.411- 0.54	0.541- 0.68	0.681- 0.81	0.811 – 1.95

Public Safety Score

Public safety is a quantifiable criterion based on observed crash data provided by SCDOT and NCDOT. A weighted point assignment is based on the number of crashes for existing roads from 2017-2021 for North Carolina and South Carolina roads divided by the length in feet of the improvement. This crash data reflects geographically referenced points where a crash occurred, including autos, trucks and non-motorized. Projects to improve roads with higher crash rates receive more points, supporting the plan goals of improving safety on the regional infrastructure. This point scale is presented in **Table 5-4**. Because new construction projects do not have historical crash data available, crash rates are excluded from new location project scoring. *This criterion supports the MTP goal area of Safety and Security and supports aligns with performance metrics of improving number and rate of fatalities, number and rate of serious injury, number of non-motorized fatalities and number of non-motorized serious injuries.*

Table 5-4: Public Safety Point Scale

Project Type	Points					
	1 to 5	6 to 10	11 to 15	16 to 20	21 to 25	26 to 30
Widening & Access Management Projects	0.0021 – 0.0106	0.0107- 0.0211	0.0212- 0.0269	0.0270 – 0.0390	0.0391 – 0.1086	0.1087 – 0.3516

Livability Score

The livability score is a quantifiable criterion based on distance from defined public facilities/destinations and the project's ability to improve access, connectivity, and mobility for other, non-auto, modes of travel. Projects can receive a total of 20 points. Projects receive two points maximum for being within 1/2 mile and one point maximum for being within one mile of schools, public buildings, parks, libraries, hospitals, transit, and other destinations. These geographically referenced datasets are obtained from County governments and sponsoring jurisdictions. This scoring was updated in the 2045 MTP to include distance from an identified Justice40 census tract, reflecting the planning priority of supporting access and mobility for Justice40 communities. A GIS buffer analysis was conducted to determine the point allocation, scoring two points for projects within 0.5 miles from these community features and one point for projects within 1.0 mile. Those scores are summed for the total livability score for these projects, having a maximum of 20 points. *This criterion supports the MTP goal areas of modal choices and balanced system, supporting economic competitiveness, coordinating land use and transportation, and supporting mobility and system accessibility. This also supports the performance measures of aligning recommendations with comprehensive plans, improving the percent of non-single occupant vehicle travel, percent increase in transit ridership, and percent of population within 0.5 miles of transit routes.*

Financial Viability and Maintenance Cost Score

The financial viability and maintenance cost score is a quantifiable criterion based on estimated project construction and 20-year maintenance costs with consideration of the new 10-year Transportation Improvement Program (TIP) budget. Additional consideration will be given to projects supplemented with local project funding and/or other federal and state funding, should it be available. Point assignment is based on the ratio of the planning level cost estimate to the current level of funds available in the TIP over a ten-year period. This results in high-cost projects receiving fewer points than lower-cost projects. This point scale is presented in **Table 5-5**.

Table 5-5: Financial Viability and Maintenance Costs Point Scale

Project Type	Points			
	1 to 5	6 to 10	11 to 15	16 to 20
Widening & Access Management Projects	$110.77m - $27.76m	$27.76m - $102k	--	--
New Location	$434.46m - $30.91m	$30.90m - $12.27m	$12.26m - $948k	$948k - $487k

Environmental Impact and Resiliency Scores

The quantifiable environmental impact criterion is based on a combination of an estimated environmental impact and resiliency with the higher score reflecting a lesser level of environmental impact and a greater need for resilient infrastructure. The environmental impact score is the result of a GIS analysis of project level assessments of potential impacts to natural, social, and cultural resources. Each project begins with 5 points and then lose points for each resource located within a 100-foot buffer around the project. Point assignment is based on 22 environmental criteria including: the potential for impacting threatened and endangered species, forested habitat, wetlands, drainage crossings, floodplains, outstanding resource water, uplands, HAZMAT sites, Parks/Refuges/WMA 4(f)/6(f), historic structures, archeological sites, farmland, communities, residencies, planned residencies, commercial sites, other relocations, environmental justice impacts, noise receptors, and visual impacts. The number of criteria impacted is then translated into the estimated environmental documentation required: preparation of a Categorical Exclusion (CE), Environmental Assessment (EA) and Finding of No Significant Impact (FONSI), or Environmental Impact Statement (EIS). The higher number of impacts resulting in

more extensive environmental documentation and mitigation, the lower environmental impact scoring. The Environmental Impact point allocation is detailed in **Table 5-6.**

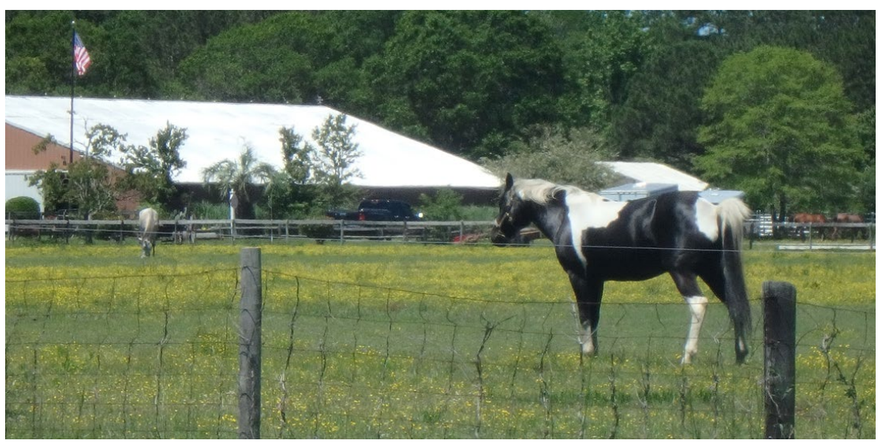
Table 5-6: Environmental Impact Point Scale

Project Type	Points			
	0 to 1	2	3	4 to 5
All Types	EIS with major mitigation	EIS	EA and Finding of No Significant Impact (FONSI)	Categorical Exclusion

Resiliency is scored based on the highest flood zone grade that each project passes through. Projects that intersect with a NOAA-identified flood composite risk area is assigned a higher score, and the higher the flood risk score, the higher the resilience score of the project. This is based upon the requirement to improve a roadway to current stormwater design standards if and when a roadway right of way is modified, thus improving the resilience of the transportation infrastructure. The 8 flood zone grades are then broken into quintiles and each project receives a score accordingly. The Resiliency point allocation is detailed in **Table 5-7**. *This scoring supports the MTP goal area of environmental stewardship.*

Table 5-7: Resiliency Point Scale

Project Type	Points				
	1	2	3	4	5
All Types	0.01 - 1.4	1.141 - 2.8	2.81 - 4.2	4.21 - 5.6	5.61 – 7.0



Functional Class (Truck Traffic) Score

The functional class (truck traffic) score is a quantifiable criterion based on functional class (Expressway, Ramp, Principal Arterial, Minor Arterial, and Collector). In situations where facilities that provide an alternative to a route operating at a level of service "F," the functional classification of the failing route will be used. In all other situations, point assignment is based on the functional class of the road being improved or constructed. The Functions Class point scale is shown in **Table 5-8**. *This scoring criterion supports the MTP goal area of improving congestion and reliability and aligns with performance measures of annual hours of truck delay on principal arterials.*

Table 5-8: Functional Class Point Scale

Project Type	Points					
	0	1	2	3	4	5
All Types	Local	Collector	Minor Arterial	Principal Arterial	Ramp	Expressway

Consistency with Local Land Use Plans Score

The consistence with local land use plans is a quantifiable criterion based on support of future land use, comprehensive plan objectives, and established communities. Point assignment is based on the local government's (city, town, or county) input regarding a project's compatibility with the adopted future land use map, comprehensive plan, contribution to walkable communities, open space, or established communities. With each of the five factors offered, one point is possible, giving each project a maximum potential score of 5 points. *This scoring supports the MTP goal areas of supporting economic competitiveness and coordinated land use and transportation planning. It aligns with the performance measures of aligning recommendations with comprehensive plans and increasing the percent of population within 0.5 miles of transit routes.*

RESULTS OF PROJECT SCREENING

Using the project scoring criteria described in the prior section, each project was scored for each specific metric and a total score out of 100 points was determined. A comprehensive list of 120 projects, of all project types, sorted by the ranking criteria approved for the 2045 MTP, are listed below in **Table 5-9 and Table 5-10**. Projects in South Carolina and North Carolina are listed in separate tables and ranked independently of one another due to the different funding and state level ranking processes This ranking informs planners and regional decision makers of the performance of the ranking criteria, confirming their reinforcement of locally established goals, objectives, and performance measures. In the planning process, this list is then evaluated against available funds. This table is termed a "fiscally unconstrained list," indicating that no projects have been eliminated due to the lack of available funding. In the following sections, the funding scenarios are applied, and a "fiscally constrained list" is presented in later sections. *Each project is assigned a project ID number that corresponds with the project type as follows: B: Bridges; I: Intersections, Interchanges, Corridor Management; N: New Construction; R: Access Management; S: Superstreet; W: Widening*

Table 5-9: South Carolina Roadway Project Screening Results

Rank	Project ID	Local Government	Project Name	Project Description	Congestion Score	Safety Score	Total Livability Score	Financial Viability Score	Truck Traffic Functional Class Score	Environmental Scaled Score	Land Use	Resiliency Score	TOTAL SCORE
1	I - 3i	Georgetown County	US 17 Signalizations	Install adaptive signal timing at 17/Litchfield Drive, 17/Willbrook Boulevard, 17/N Boyle Road, 17/Watchesaw Road, 17/Bellamy Road, 17/Riverwood Drive, 17/Burgess Road, 17/Blackgum, 17/Retreat Beach Blvd	16	30	13	7	3	5	3	4	81
2	I - 19	City of Conway	1st / 2nd Avenue Underpass at US 501	Underpass connecting 1st / 2nd Avenue to US 501 ramps for access to downtown Conway	35	NA	9	18	1	3	2	2	70
3	I - 7i	Georgetown County	US 17 Access Mgmt	Remove concrete median opening and replace with grass at 17/Eagles, 17/Channel Bluff Ave, 17/Georgieville St, 17/Atalaya Rd	15	21	9	8	3	5	3	3	67
4	N - 98	Horry County	US 17 and US 17 Business Connection	A new connector between US 17 Bypass and US 17 BUS in Garden City north of the Garden City Connector and South of Glenns Bay Road, including bicycle and pedestrian facilities	35	NA	9	14	1	4	4	0	67
5	N - 22	City of Conway	SC 90 Extension	Extend SC 90 from US 501 Bus to intersect US 501 east of Conway	40	NA	5	10	2	3	2	5	67
6	I - 3	Horry County	Hwy 17 Bypass / Hwy 544 Intersection/Interchange	Interchange and Intersection Improvements at Hwy 17 Bypass & Hwy 544 interchange from Beaver Run Blvd to South Strand Commons Including bicycle and pedestrian facilities	17	24	6	5	2	4	4	5	67
7	I - 5i	Georgetown County	US 17 Access Mgmt	Remove concrete median opening and replace with grass US 17 at (Wesley Rd North, Nicoles, Nelson Dr, and Hammock Ave)	9	25	10	8	3	5	3	3	66
8	W - 19	City of North Myrtle Beach	Hwy 17 - Windy Hill Intersections	US 17 Intersections. Widen for dual left at intersections	10	27	9	4	3	4	4	5	66
9	I - 12	Horry County	US 17 Bus / SC 544 Intersection	Intersection improvements/signalization for right turn congestion and queuing onto SC 544	9	29	6	7	2	4	3	5	65

Rank	Project ID	Local Government	Project Name	Project Description	Congestion Score	Safety Score	Total Livability Score	Financial Viability Score	Truck Traffic Functional Class Score	Environmental Scaled Score	Land Use	Resiliency Score	TOTAL SCORE
10	N - 3i	City of North Myrtle Beach	Possum Trot Rd Extension	Extend Possum Trot Rd. across US 17 to Madison Dr	30	NA	8	18	1	5	3	0	65
11	I - 21	Georgetown County	US 17 at Litchfield Drive and Country Club Drive in Litchfield	Project to improve two intersections approximately 300 feet apart on Highway 17. Litchfield Drive is an signalized intersection with commercial uses on all four corners and Country Club is an unsignalized intersection located 300 feet north on the west side	15	25	7	6	3	4	2	3	65
12	N - 2	City of North Myrtle Beach	Edge Parkway and Sand Ridge Rd connector	Connect Sandridge Rd to Edge Parkway signal. Add bike/ped facilities.	29	NA	7	18	1	4	4	0	63
13	N - 10	Horry County	Scipio Lane Ext.	Scipio Lane Extension from Holmestown Road to Big Block Road with multipurpose path	36	NA	10	7	1	3	5	0	62
14	R - 9	City of Conway	Hwy 501 Access Mgmt	Hwy 501 from 4th Avenue to 16th Avenue - Coordinate Access Management.	7	20	12	6	3	4	4	5	61
15	R - 20a	City of Myrtle Beach	Kings Highway	Improve Kings Highway from Farrow Parkway to 31st N with Bike/Ped/Transit improvements	12	20	15	3	2	1	3	5	61
16	B - 1i	North Myrtle Beach	Barefoot Bridge Replacement	Replace existing swing span bridge with a fixed bridge	40	NA	9	1	1	2	3	5	61
17	N - 44	City of North Myrtle Beach	Outrigger Rd / Hilton Drive Connector	Connect Outrigger Road with Hilton Drive near 27th South	30	NA	9	11	1	5	4	0	60
18	N - 5a	Horry County	Postal Way extension to Atlantic Center	Extend Postal Way to the north to Atlantic Center, including bicycle and pedestrian facilities with transit potential	35	NA	9	8	1	3	4	0	60
19	R - 20c	City of Myrtle Beach/ Horry County/City of North Myrtle Beach	Kings Highway Access Mgmt	Improve Kings Highway from 67th Ave. N (MB) to 48th Ave S (NMB) with Bike/Ped/Transit improvements	13	13	14	4	2	5	5	4	60
20	W - 35	City of Georgetown	Anthuan Maybank Drive Widening / Extension	Widen and extend Anthuan Maybank Drive to Highmarket St	30	NA	16	6	2	5	0	1	60
21	R - 7i	Georgetown County	US 17 and Burgess Road Intersection	Improve operation on corridor after capacity upgrades at grade quadrant intersection design. US 17 and Burgess Road (707)	15	20	8	6	3	4	3	0	59
22	N - 14	Horry County/City of North Myrtle Beach	Champions Blvd Connector	New road connecting Water Tower Road and Long Bay Rd as 2 lanes divided with multipurpose path	31	NA	4	15	1	4	4	0	59
23	N - 49	City of Conway	2nd Avenue Extension	2nd Avenue Extension to S-723 (US 501 exit ramp to 2nd Avenue)	25	NA	9	15	1	3	3	3	59
24	R - 4i	Georgetown County	US 17 Bypass Widening	Widen to 6 lanes between Bellamy Ave and Burgess Rd on 17 Byp. Install a reduced conflict intersection at Macklen Avenue	14	18	10	5	3	4	3	1	58

Rank	Project ID	Local Government	Project Name	Project Description	Congestion Score	Safety Score	Total Livability Score	Financial Viability Score	Truck Traffic Functional Class Score	Environmental Scaled Score	Land Use	Resiliency Score	TOTAL SCORE
25	W - 30	Horry County	US 17 Bus Access Mgmt	Install Additional Lanes on Bus 17/Eliminate Frontage Roads Between Myrtle Beach and Surfside, match existing section in MB and extend East Coast Greenway	17	14	11	3	2	3	5	3	58
26	N - 8	Georgetown County	Georgetown Bypass/Brick Landing Rd Phase 4	Georgetown Bypass/Brick Landing Road PH 4: Hwy 521 to Hwy 17, south (across Sampit River)	28	NA	15	4	2	2	2	5	58
27	R - 32	Horry County	SC 179 Widening	Improve and widen 179 from US 17 to NC 179 to multilane facility with multipurpose path	17	11	9	5	1	4	5	4	56
28	M - 6	Horry County	SC 9 Access Mgmt	Access management improvements from SC 57 to Water Grande Blvd including plantable median between intersections and bicycle and pedestrian facilities	7	15	11	5	3	5	4	5	55
29	N - 5i	Horry County	Conway Perimeter Road / Busbee Bypass	Conway Perimeter Rd / Busbee Bypass-From US 701 to SC 544	35	NA	7	0	3	2	3	5	55
30	N - 54	City of Conway	Powell St Extension	Extend Powell Street from 1st Avenue to Marina Drive and install sidewalks in Conway	10	NA	12	20	1	4	5	2	54
31	B - 8	City of Myrtle Beach	Hwy 501 Bridge	Replace and widen HWY 501 Intracoastal Waterway bridge, add bike lanes and sidewalks (or build parallel bridge)	16	15	6	3	2	4	3	5	54
32	W - 12	Horry County/City of North Myrtle Beach	Little River Neck Road Widening	Widen Little River Neck Road from 2 to 3 lanes with multipurpose path in North Myrtle Beach and construct roundabout north of Hill St	20	8	11	2	1	4	4	4	54
33	B - 4	Horry County	New Bridge over Waccamaw River	New Bridge over Waccamaw River, which would link SC 90 with SC 905 east of Conway	40	NA	2	3	1	2	1	5	54
34	I - 16i	Georgetown County	US 17 Access Mgmt	Install a NB U-turn at Boyle and 17 in conjunction with other access mgmt efforts in this corridor	7	15	10	8	3	4	3	3	53
35	I - 12i	Georgetown County	US 17 Signalizations	Install unsignalized reduced conflict measures at all three intersections between Sandy Island Road and Wesley Road	13	12	9	7	3	3	3	3	53
36	R - 6i	Georgetown County	US 17 / Pendergrass and Wachesaw Intersections	Convert 17/Pendergrass and 17/Wachesaw to a RCI. Wesley Road may need to align with Coquina. Pendergrass may not need to be signalized.	11	13	10	6	3	4	3	3	53
37	W - 4	Horry County	SC 90 Widening	Widen SC 90 from 17 to Robert Edge Parkway Intersection with bicycle and pedestrian facilities	15	12	10	1	2	4	4	5	53
38	W - 3b	Horry County	US 17 Bypass Widening	Widen US 17 Bypass from Hwy 544 to Horry County line	13	13	11	1	3	4	3	5	53
39	N - 19	Georgetown County	Parkersville Rd Extension	Extension of Parkersville Road from Baskerville Road north to Gilman Road in Litchfield	15	NA	9	17	1	4	3	3	52
40	W - 5	Horry County	SC 90 Widening	Widen SC 90 from Robert Edge Parkway to SC 22, including bicycle and pedestrian facilities	13	11	10	1	5	3	4	5	52
41	R - 1i	Georgetown County	US 17 / Alston Rd Intersection	Restripe Petigru Dr approach with an exclusive left-turn lane and construct an exclusive left-turn lane on Alston Rd with 125 feet of storage	9	16	9	7	1	5	3	1	51

Rank	Project ID	Local Government	Project Name	Project Description	Congestion Score	Safety Score	Total Livability Score	Financial Viability Score	Truck Traffic Functional Class Score	Environmental Scaled Score	Land Use	Resiliency Score	TOTAL SCORE
42	I - 15i	Georgetown County	US 17 Access Mgmt	Install raised concrete medians at certain access points in this high crash fatality area between Smalls Loop Rd and Island Shops (N Causeway Road)	9	15	10	5	3	4	3	2	51
43	W - 39	City of Myrtle Beach	29th Avenue North	Widen 29th Ave North from Robert Grissom Parkway to North Kings Highway with bike lane and sidewalk (Limit project to the Oak Street intersection)	12	16	10	5	1	3	1	3	51
44	W - 3a	Horry County	US 17 Bypass Widening	Widen US 17 Bypass from Back Gate to Hwy 544	14	13	7	2	3	4	3	5	51
45	N - 3	Horry County/City of North Myrtle Beach	Sandridge Road Extension	Extend Sandridge Rd/Old Sanders Dr to Bourne Trail all the way to Long Bay Rd, with dedicated bicycle lanes	31	NA	9	0	1	4	4	2	51
46	W - 6	Horry County	SC 90 Widening	Widen SC 90 from International Drive to US 501, including bicycle and pedestrian facilities	17	10	10	0	2	3	4	5	51
47	I - 10i	Georgetown County	US 17 / US 17 Bus Intersection	Improve intersection of 17 and 17 Bus with a signal. Change alignment to right angle in long term	9	18	6	6	3	4	3	1	50
48	W - 38	City of Myrtle Beach	38th Avenue North	Widen 38th Ave North from Robert Grissom Parkway to North Kings Highway with bike lane, and sidewalk	11	16	9	5	2	3	1	3	50
49	I - 10	City of Conway	4th and 3rd Avenue Intersections	Intersection improvements at 4th Ave and 3rd Ave (Hwy 701)	6	19	11	4	2	4	4	0	50
50	R - 4	Horry County	Sea Mountain Highway Widening	Improve alignment of Sea Mountain Highway (SC 9 to the Intracoastal Waterway Bridge) in Horry County from 2-lane to 3-lane undivided minor arterial standards, including bicycle and pedestrian amenities with turning pockets at major intersections	10	13	8	4	2	4	4	5	50
51	W - 1	City of Myrtle Beach	Seaboard St Widening	Widen Seaboard St between US 501 and Mr. Joe White Ave in Myrtle Beach including bicycle and pedestrian improvements.	15	16	7	4	1	4	3	0	50
52	N - 6i	Horry County	Gardner Lacy Rd Extension	Extension of Gardner Lacy to International Dr	39	NA	3	0	1	4	3	0	50
53	W - 11	Horry County	SC 90 Widening	Widen SC 90 from SC 22 to International Drive, including bicycle and pedestrian facilities	17	10	8	1	2	3	4	5	50
54	R - 30	Horry County	Garden City Connector Widening	Widen Garden City Connector to include turn lanes at major intersections and construct multi-purpose path to improve capacity and safety	11	14	8	5	2	4	4	1	49
55	I - 8i	Georgetown County	US 17 Access Mgmt	Remove concrete median and install grass at Rodeway Inn/SGA Architects office and US 17	6	18	4	9	3	5	3	0	48
56	R - 20b	City of Myrtle Beach	Kings Highway Access Mgmt	Improve Kings Highway from 31st N to 67th Ave. N with Bike/Ped/Transit improvements	8	14	10	4	2	5	2	3	48
57	W - 18	Horry County	SC 57 Widening	Widen SC 57 from SC 90 to SC 9 with bicycle and pedestrian amenities	15	12	10	2	1	4	4	0	48
58	I - 6	City of Conway	US 501 / SC 544 Interchange	US 501 / SC 544 Interchange improvements	18	16	6	2	2	4	0	0	48
59	R - 12i	Horry County	Hwy 905 Widening	Widening in Conway to SC 9, Hwy 905-from 4-lane section near Conway to SC 9-(Ended at GSATS boundary at Hwy 19)	15	10	9	2	2	4	3	3	48

Rank	Project ID	Local Government	Project Name	Project Description	Congestion Score	Safety Score	Total Livability Score	Financial Viability Score	Truck Traffic Functional Class Score	Environmental Scaled Score	Land Use	Resiliency Score	TOTAL SCORE
60	I - 6i	Georgetown County	US 17 / US 17 Bus Signalization	US 17 at US 17 Bus - Signalize NB 17 when warranted	8	11	7	8	2	5	3	3	47
61	R - 3i	Georgetown County	S Causeway Road/Tyson Dr and Beaumon Dr Intersections	Signal spacing improvements and realignment between S Causeway Road/Tyson Drive to S Causeway Drive/Beaumon Drive	8	15	8	5	3	4	3	0	46
62	W - 16	Horry County	Big Block Rd Widening	Widen from SC 707 to SC 544 and Realign Big Block Rd and Include bicycle and pedestrian facilities	15	12	7	3	1	4	4	0	46
63	R - 11	City of Conway	2nd/3rd/4th/Powell/Wright Intersections	Realign road segments to allow for better capacity, function, flow and safety	6	15	10	5	2	4	3	0	45
64	AM - 3	Georgetown County/Horry County	US 17 Bus Access Mgmt	Access management improvements from Belin Rd to Tadlock Rd	11	10	9	5	2	4	0	4	45
65	W - 10	Horry County	River Oaks Drive Widening	Widen River Oaks Drive including turn lanes at major intersections to improve capacity and safety and construct multi-purpose path	12	13	7	2	2	4	4	1	45
66	W - 9	Horry County/Georgetown County	US 701 Widening	Widen US 701 from Georgetown to Conway	7	10	17	0	2	2	2	5	45
67	I - 1	City of North Myrtle Beach	Edge Parkway / SC 31 Interchange	Robert Edge Parkway / SC 31 interchange ramp improvements. Convert existing signalized diamond interchange to diverging diamond interchange to improve traffic floc and eliminate left turn conflicts	8	10	9	5	4	4	4	0	44
68	R - 8i	Georgetown County	Petigru Dr and Waverly Rd Roundabout	Single lane roundabout at Petigru Dr and Waverly Rd	5	10	12	7	1	4	3	1	43
69	R - 10i	Horry County	Tournament Blvd Widening	Widening to Hwy 707 with bicycle and pedestrian improvements	11	11	7	3	2	5	3	1	43
70	W - 8	City of Myrtle Beach	US 17 Bypass Widening	Widen US 17 Bypass from 4 lanes to 6 lanes from 29th Avenue N northwards to Grissom with interchange improvements	10	14	7	1	3	3	0	5	43
71	R - 27	Town of Surfside Beach	Sandy Lane Access Mgmt	Improve Azalea Drive and Sandy Lane to Improve Backside Access in Surfside Beach	9	10	9	6	1	4	3	0	42
72	B - 1	Horry County/City of North Myrtle Beach	US 17 Bridges in North Myrtle Beach	Widen US 17 Bridges at SC 9, SC 90, and Sea Mountain Highway with additional grade separation at SC 9	6	11	10	2	2	3	3	5	42
73	I - 20	Georgetown County	US 17 at Hog Heaven and the Colony Intersection Improvement	Project to close a dangerous median break in front of an existing business on US Highway 17 (located in the middle of a horizontal curve) in Pawleys Island and improve/install a dedicated U-turn lane both northbound and southbound halfway between The Colony	10	10	4	6	5	4	2	0	41

Rank	Project ID	Local Government	Project Name	Project Description	Congestion Score	Safety Score	Total Livability Score	Financial Viability Score	Truck Traffic Functional Class Score	Environmental Scaled Score	Land Use	Resiliency Score	TOTAL SCORE
74	R - 13i	Horry County	Hwy 378 Widening	From the western limit of current 5-lane section to Little Pee Dee River Bridge approach at county line with bile and pedestrian improvements (Project ends at GSATS boundary for this inclusion at Juniper Bay Rd)	10	12	5	4	3	4	3	0	41
75	I - 11i	Georgetown County	US 17 / Kings River Rd Signalization	Signalization at Kings River Rd and 17 to meet LOS needs	4	12	5	8	3	5	3	0	40
76	W - 7	City of North Myrtle Beach	2nd Avenue N Widening	Widen 2nd Avenue North in North Myrtle Beach with bike lane, and multipurpose path	1	13	10	4	1	3	4	4	40
77	I - 9i	Georgetown County	Traffic Study	Traffic study to determine alternative forms of traffic control at DeBordieu Colony Neighborhood	8	10	3	10	NA	5	3	0	39
78	B - 7	Horry County/City of North Myrtle Beach	US 17 and Champions Blvd Connector	Construct connector from US 17 (between 17th Ave S and 21st Ave S) and Champions Blvd via existing Bourne Trail bridge over SC 31	20	NA	7	2	1	2	3	4	39
79	R - 5i	Georgetown County	Kings River Rd and Waverly Rd Roundabout	Install roundabout to maintain LOS especially in regard to nearby schools at Kings River Rd and Waverly Rd	4	11	6	7	1	4	3	2	38
80	R - 5	Horry County	Mt. Zion Road Access Mgmt	Improve alignment of Mt Zion Road (SC 90 to SC 57) to two-lane undivided minor arterial standards, including bicycle and pedestrian amenities with turning pockets at major intersections	6	10	7	5	2	4	4	0	38
81	W - 21	Horry County	Singleton Ridge Road Widening	Widen Singleton Ridge Road from US 501 to SC 544 with multipurpose path in Conway	2	15	8	3	2	4	4	0	38
82	W - 32	Horry County	Myrtle Ridge Drive Widening	Widen Myrtle Ridge Drive from US 501 to SC 544	7	13	5	3	1	4	3	2	38
83	R - 15i	City of Conway	Church St Access Management	Church Street between Mill Pond and 16th safety and access management improvements	8	0	6	7	3	5	3	2	34
84	R - 9i	Georgetown County	Kings River Rd and Hagley Dr Roundabout	Single-lane roundabout at Kings River Rd and Hagley Dr if cul de sac is not implemented	0	13	6	7	1	4	3	0	34
85	B - 3	Horry County	Highway 22 Expansion	Environmental Studies and Right of Way	5	NA	11	4	5	1	3	5	34
86	N - 4i	Horry/Myrtle Beach	Bowline Boulevard Extension to Edge Pkwy	Bowline Boulevard Extension to Edge Pkwy	0	0	7	13	1	4	3	4	32
87	W - 20	Georgetown County	Pennyroyal Road Widening	Widen Pennyroyal Rd from E of Montford Drive to US 17 in Georgetown	0	10	10	4	1	4	3	0	32
88	R - 14i	Horry County	Hwy 111 Access Mgmt	Safety and capacity improvements, Hwy 57 to US 17 (includes portion of S-50 / Mineola). Add bike/ped improvements	2	10	6	4	1	4	3	0	30
89	N - 25	City of Conway	Medlen Parkway Extension	Medlen Parkway Extension: Realign western terminus at US 501 to continue straight to US 378	10	NA	7	5	1	5	0	2	30

Rank	Project ID	Local Government	Project Name	Project Description	Congestion Score	Safety Score	Total Livability Score	Financial Viability Score	Truck Traffic Functional Class Score	Environmental Scaled Score	Land Use	Resiliency Score	TOTAL SCORE
90	W - 17	Horry County	Water Tower Road Widening	Widen Water Tower Road from SC 31 to SC 90 and Widen Long Bay Road, including bicycle and pedestrian facilities	7	5	7	1	2	4	4	0	30
91	N - 100	City of North Myrtle Beach	Long Bay Rd Widening	Widen Long Bay Road form SC90 to Champions Blvd.	4	4	8	2	2	4	4	0	28
92	R - 2i	Georgetown County	Hagley Dr Roundabout	Cul de sac Hagley Dr	1	5	5	6	1	5	3	0	26
93	W - 61	City of North Myrtle Beach	Champions Blvd and Sandridge Loop Connector	Pave and/or widen existing 2 lane road connecting Champions Blvd. to Sandridge Loop. Connect to Edge Pkwy. 2 to 4 lane widening	3	6	4	3	1	4	4	0	25
94	W - 37	City of Conway	Cultra Road Widening	Widen Cultra Road from Church to Main St with center median and multipurpose path	0	1	9	2	2	5	4	0	23

Table 5-10: North Carolina Roadway Project Screening Results

Rank	Project ID	Local Government	Project Name	Project Description	Congestion Score	Safety Score	Total Livability Score	Financial Viability Score	Truck Traffic Functional Class Score	Environmental Scaled Score	Land Use	Resiliency Score	TOTAL SCORE
1	N - 9	Town of Shallotte	Smith Av to Bridgers Rd Connection	A new interconnection between Smith Ave (SR 1357) to Bridgers Road (SR 1349); 2-Lane, Shoulder	34	NA	10	18	1	4	4	2	73
2	N - 1i	NCDOT	Main St. and Holden Beach Rd. Connection	New Street Connection from Main St. (Hwy 17 Business) to Holden Beach Rd.	35	0	9	18	1	4	3	0	70

Rank	Project ID	Local Government	Project Name	Project Description	Congestion Score	Safety Score	Total Livability Score	Financial Viability Score	Truck Traffic Functional Class Score	Environmental Scaled Score	Land Use	Resiliency Score	TOTAL SCORE
3	N - 7	Town of Shallotte	South Main and Village Point Rd Connector	A new interconnection between South Main Street near Shallotte Park to NC 179 and Village Point Road; 2-Lane with shoulder	34	NA	11	12	1	3	4	4	69
4	N - 13	Town of Shallotte	North Main St and Smith Ave Connector	New interconnection between US 17 Business/Main Street (SR 1434) to Smith Ave (SR 1357); 2-Lane, Shoulder	31	NA	8	14	1	4	3	3	64
5	N - 2i	Town of Shallotte	Smith Ave. and Hwy 130 Connection	Collector Street Connection to Smith Ave Interchange Project (U-5862). Potential tie-in to Carolina Bays Pkwy.	30	NA	10	9	1	4	3	3	60
6	W - 28	Town of Shallotte	NC 179 Widening	Widen NC 179 to a multi-lane facility from US 17 BUS to Hale Swamp Road (future NC 179); 4-Lane W/median & multipurpose path	16	10	14	2	1	4	4	4	55
7	B - 5	Town of Ocean Isle Beach	New Bridge on Brick Landing Rd	New Bridge from Brick Landing Road (SR 1143) to Shallotte Blvd (SR 1202)	28	NA	6	8	1	3	3	5	54
8	W - 46	Town of Shallotte	White St Widening	Widen White Street to a multi-lane facility from Smith Avenue (SR 1357) to Mulberry Street (SR 1357); 4-Lane W/Median	16	10	10	4	1	4	4	3	52
9	W - 31	Brunswick County	SC 130 Widening	Widen NC 130 to a multi-lane facility from Smith to Sabbath Home Intersection; 4-Lane W/median & multipurpose path	15	11	10	1	1	4	5	4	51
10	S - 3	Town of Shallotte	Ocean Hwy Superstreet	Upgrade roadway to superstreet from NC-211 to US 17 B (Main Street)	13	12	11	3	3	4	3	1	50
11	S - 5	Town of Shallotte	Ocean Hwy Superstreet	Upgrade roadway to superstreet from the US 17 B (Main Street) to US 17 B (Main Street)	10	11	12	3	3	4	2	4	49
12	W - 51	Town of Holden Beach	NC 130 Widening	Widen NC 130 to a multi-lane facility from Sabbath Home Intersection to the end of state maintenance; 4-Lane W/Median & Sidewalk	16	10	10	3	1	3	0	5	48
13	W - 53	Town of Shallotte	NC 130 Widening	Widen NC 130 to a multi-lane facility from McMilly Road (SR 1320) Village Road (NC 179); 4-Lane W/Median & Sidewalk	6	11	13	2	2	4	4	5	47
14	I - 2i	Town of Shallotte	Village Rd / Village Pond Rd Intersection	Intersection improvement at Village Rd (Hwy 179) & Village Point Rd	6	15	9	6	1	4	3	0	44
15	W - 44	Town of Ocean Isle Beach	Ocean Isle Beach Rd Widening	Widen Ocean Isle Beach Road (SR 1184) to a multi-lane facility from US 17 to NC 179 (Beach Drive); 4-Lane W/Median	13	10	9	1	1	4	3	3	44
16	W - 59	Town of Sunset Beach	NC 904 Widening	Widen NC 904 to a multi-lane facility from US 17 to NC 179 (Beach Drive); 4-Lane W/Median & Sidewalk	16	11	8	1	1	4	3	0	44
17	I - 8	Brunswick County	Persimmon Rd / NC 179 Intersection	Intersection improvements at Persimmon Rd and NC 179	4	15	7	6	1	5	2	0	40

Rank	Project ID	Local Government	Project Name	Project Description	Congestion Score	Safety Score	Total Livability Score	Financial Viability Score	Truck Traffic Functional Class Score	Environmental Scaled Score	Land Use	Resiliency Score	TOTAL SCORE
18	W - 26	Town of Ocean Isle Beach	Beach Dr Access Mgmt	Access management	9	10	6	6	1	5	3	0	40
19	S - 4	Town of Shallotte	Ocean Hwy Superstreet	Upgrade roadway to superstreet from US 17 B (Main Street) to NC-904	2	11	11	3	3	4	3	3	40
20	W - 23	Town of Calabash	NC 179 Widening	Widen NC 179 to a multi-lane facility from the South Carolina State Line to Old Georgetown (SR 1163); 4-Lane W/Median & Multipurpose Path	11	11	9	2	1	4	0	0	38
21	I - 1i	Town of Shallotte	Forest St Extension	Right in right out intersection with Forest St Ext. & Hwy 17 Bypass	13	0	9	6	1	4	3	0	36
22	W - 40	Brunswick County	Longwood Rd Widening	Widen NC 904 to a multi-lane facility from Etheridge Road (SR 1308) to US 17; 4-Lane W/Median	7	10	7	1	1	4	3	2	35
23	W - 22	Town of Sunset Beach	NC 179 Bus Widening	Widen NC 179 BUS to a multi-lane facility from NC 904 (Seaside Road) to the Sunset Blvd Bridge; 4-Lane W/Median	5	7	7	2	1	4	3	4	33
24	S - 1	Town of Carolina Shores	Ocean Hwy Superstreet	Upgrade roadway to superstreet from the NC-904 to the South Carolina State Line	0	10	11	2	3	4	0	2	32
25	W - 41	Brunswick County	Hickman Rd Widening	Widen Hickman Road (SR 1303) to a multi-lane facility from US 17 to State Line; 4-Lane W/Median	1	10	8	2	1	4	2	0	28
26	W - 60	Town of Sunset Beach	NC 179 Widening	Widen NC 179 to a multi-lane facility from NC 904 (Seaside Road) to Beach Drive (179B); 4-Lane W/Median & Sidewalk	3	9	7	1	1	4	3	0	28

6 ACTIVE TRANSPORTATION

In recent years, communities throughout the United States have experienced a growing interest in implementing transportation infrastructure improvements that enhance walking and biking. Towns, cities, counties, and MPOs understand the need to plan, design, and implement non-motorized transportation options as well as increase opportunities for recreation. Advancing bike and pedestrian networks is essential to meeting safety, mobility, livability, environmental, equity, and economic goals. Additionally, active transportation options provide a host of benefits to individual communities and larger regions by connecting destinations and creating enjoyable transportation options that can improve the health of users.

People throughout the GSATS area have embraced biking and walking as viable forms of transportation and recreation. As communities within the GSATS region continue to grow, extending a safe and comfortable biking and walking network can encourage more people to prioritize these options for transportation, particularly for shorter trips. A detailed analysis of the active transportation system is found in **Appendix G**.

OVERVIEW OF EXISTING FACILITIES

The GSATS region currently has bike and pedestrian facilities throughout the jurisdictions of its member governments. Predominantly sidewalks exist within urban areas, but due to development regulation requirements, sidewalks are also located in commercial and residential areas as well. The coastal nature of the GSATS area may encourage walking due to the number of visitors that travel to the area. While bike and pedestrian facilities exist in the GSATS study area, there are numerous opportunities to strengthen connectivity within individual communities and throughout the region. Planning and design of bike and pedestrian infrastructure should build upon the existing segments and networks within the GSATS area and strive to implement facilities that attract new users while linking destinations and providing more accessibility. The planned facilities for biking and walking highlight the current gaps in the bike and pedestrian network. In many cases, the planned facilities not only provide active transportation corridors within a single community but also connect to neighboring communities and illustrate how a regional network of bikeways and walkways could exist. Bike and pedestrian facilities, both existing and planned, are prevalent within the South Carolina portion of the GSATS region but the North Carolina area is lacking these facility types. Planning efforts and targeted strategies should be used to enhance the bike and pedestrian environments within the North Carolina portion of the GSATS region.

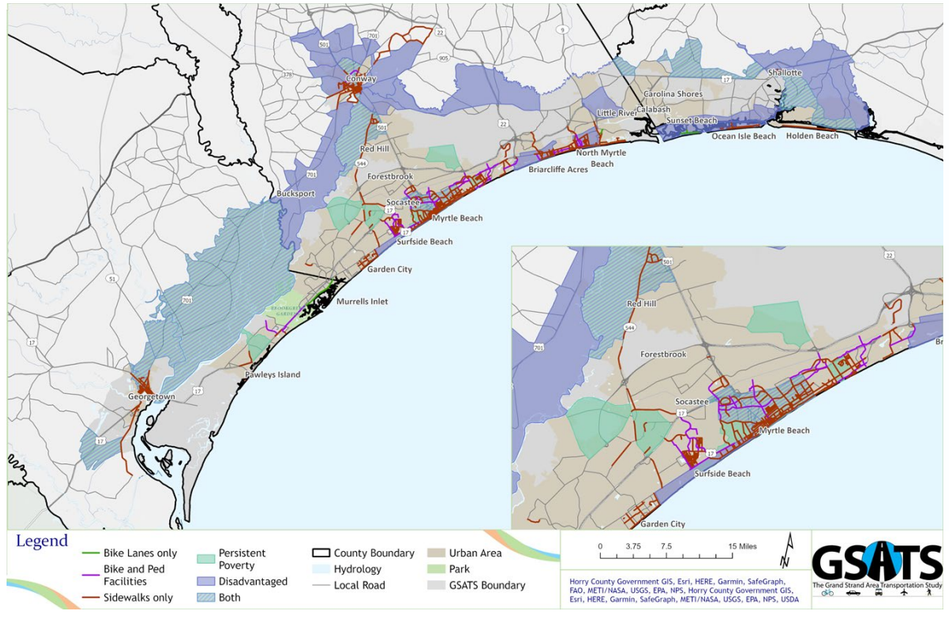
Active Transportation Equity in the GSATS Region

As discussed in **Chapter 4**, it is important to identify any inequities or disparities in a transportation system and then address them so that recommended improvements benefit all community members. In 2021, EO 14008 was passed to create the Justice40 Initiative to further transportation equity.[5] This program seeks to identify community disadvantages and identify projects that create benefits or mitigate those disadvantages, all to improve the quality of life and economic prosperity across the country.[6] There are many facets to the Justice40 program, including requirements and greater consideration for the use of federal funds towards the goals of the program. USDOT has also created the Equitable Transportation Community (ETC) Explorer to geospatially explore various disadvantage indicators across five components: Transportation Insecurity, Climate and Disaster Risk Burden, Environmental Burden, Health Vulnerability, and Social Vulnerability. **Figure 6-1** overlays existing walking and biking facilities in the GSATS region with Disadvantaged Census tracts and Areas of Persistent Poverty (APP), as identified by the USDOT ETC tool.

In the GSATS region, large portions of the urbanized areas are not considered disadvantaged nor APP, with exception to Conway, which is largely disadvantaged. Most of the APP and disadvantaged areas within the region are in the rural or unincorporated areas of the region, including large portions of Georgetown County. Despite these trends, much of the region's active transportation network is located within Justice40-designated disadvantaged areas and APP, particularly in Myrtle Beach, Surfside Beach, North Myrtle Beach, and Ocean Isle Beach.

While these datasets indicate few disparities according to USDOT's Justice40 programs, it is recommended that GSATS and member jurisdictions examine other potential disparities as well.

Figure 6-1: Existing Bicycle and Pedestrian Facilities in Justice40 Areas



[5] USDOT. Justice40 Initiative. https://www.transportation.gov/equity-Justice40

[6] USDOT. 2023. ETC Explorer. Justice40 Initiative. https://www.transportation.gov/priorities/equity/justice40/etc-explorer

Pedestrian and Bicycle Safety

Crash data provided by the South Carolina Department of Public Safety (SCDPS)[7] and North Carolina Department of Transportation (NCDOT)[8] identified the location and nature of bike- and pedestrian-related street crashes. A total of 440 pedestrian crashes occurred in the GSATS region between 2017 and 2021, 412 of which were in South Carolina and 28 in North Carolina. Of the 440 reported pedestrian crashes, 66 crashes resulted in fatalities. One of these crashes, which occurred just north of Old Georgetown Road SW on US Highway 904, killed two pedestrians. Regarding bicycle crashes in South Carolina, 5 out of 295 resulted in fatalities, and in North Carolina there were 3 fatalities out of 22 crashes, resulting in a total of 317 bike crashes in the GSATS region.

Crashes involving cyclists and pedestrians occurred throughout the GSATS region in several of the municipalities and within unincorporated areas, as shown in **Figure 6-2** and **Figure 6-3**. Crash density is shown to clearly identify locations where bike and pedestrian crashes occurred with greater frequency. For instance, the maps show that bike and pedestrian crashes most frequently occur on US Highways 501 and 17 in Myrtle Beach and leading to Conway. In addition to illustrating the locations of crashes, these maps provide insight into the areas that people are already biking and walking within the study area and need additional features to create a safe bike and pedestrian network, such as along major roadways and in urban centers.

Figure 6-2: Pedestrian Crashes and Fatalities (2017 – 2021)

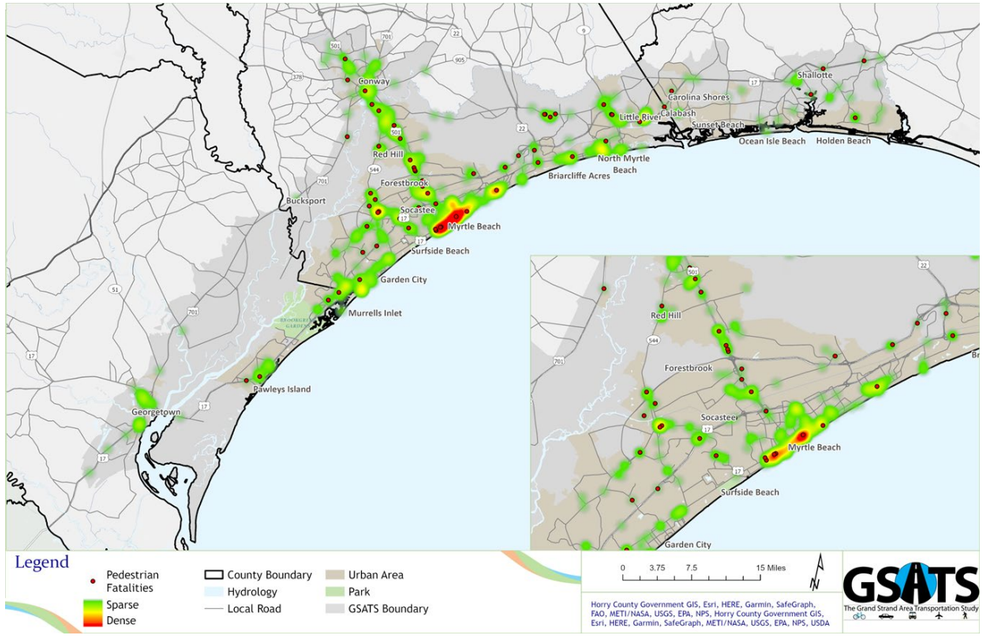
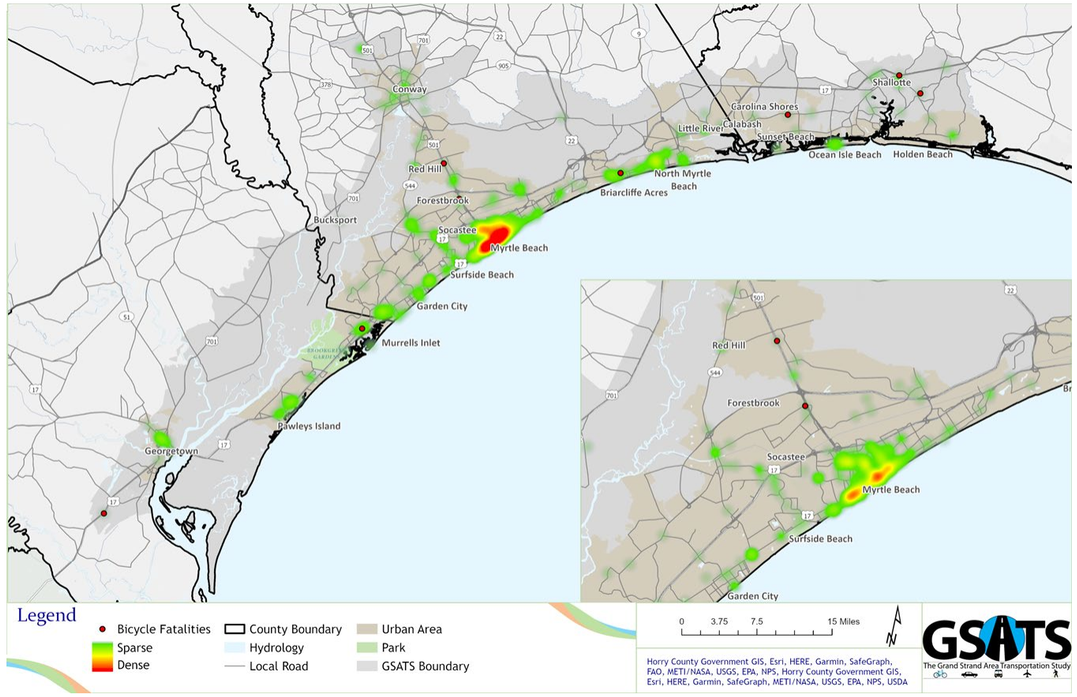


Figure 6-3: Bicycle Crashes and Fatalities (2017 – 2021)



Bike and pedestrian safety is an issue for South Carolina and the United States as a whole. In 2021 there were 194 pedestrians killed in traffic crashes in South Carolina, a 19 percent increase from the 164 fatalities in 2019. A similar trend is observed in the United States, where 7,388 pedestrians were killed in traffic crashes in 2021, a nearly 17 percent increase from the 6,324 pedestrian fatalities in 2019. This is the highest since 1981 when 7,837 pedestrians died in traffic crashes[9]. Nationwide in 2021, nearly 69 percent of all pedestrian fatalities occurred where no sidewalk was noted on the crash report. Providing safe separation from automobile travel lanes can protect bicyclists and pedestrians by delineating a space for users to travel.

[7] SCDOT GIS Traffic Collisions, https://scdps-gis-and-mapping-scdps.hub.arcgis.com/
[8] NCDOT Bicyclist and Pedestrian Crash Map, https://hub.arcgis.com/maps/NCDOT::ncdot-bicyclist-and-pedestrian-crash-map/about

[9] National Highway Traffic Safety Administration, 2021 Traffic Safety Facts

EAST COAST GREENWAY

The East Coast Greenway is an urban trail system planned to link 25 major US cities from Calais, Maine to Key West, Florida. The main spine of the trail will stretch 3,000 miles along the East Coast, with an additional 2,000 miles of alternate routes to provide connectivity to towns, cities, parks, and natural areas. The trail is designed to accommodate pedestrians, cyclists, and other non-motorized modes of transportation. The segments of the ECG that pass through the GSATS region are shown in **Figure 6-4**.

Each segment of the trail is master planned, designed, constructed, and maintained by local governments. The East Coast Greenway Master Plan for Horry and Georgetown Counties was developed in 2003, detailing a 90-mile route through both counties and many of their municipalities. According to the East Coast Greenway website, there are 59 miles of protected greenway in South Carolina out of a planned 256-mile spine route. Currently, the trail is a mix of on- and off-road facilities.

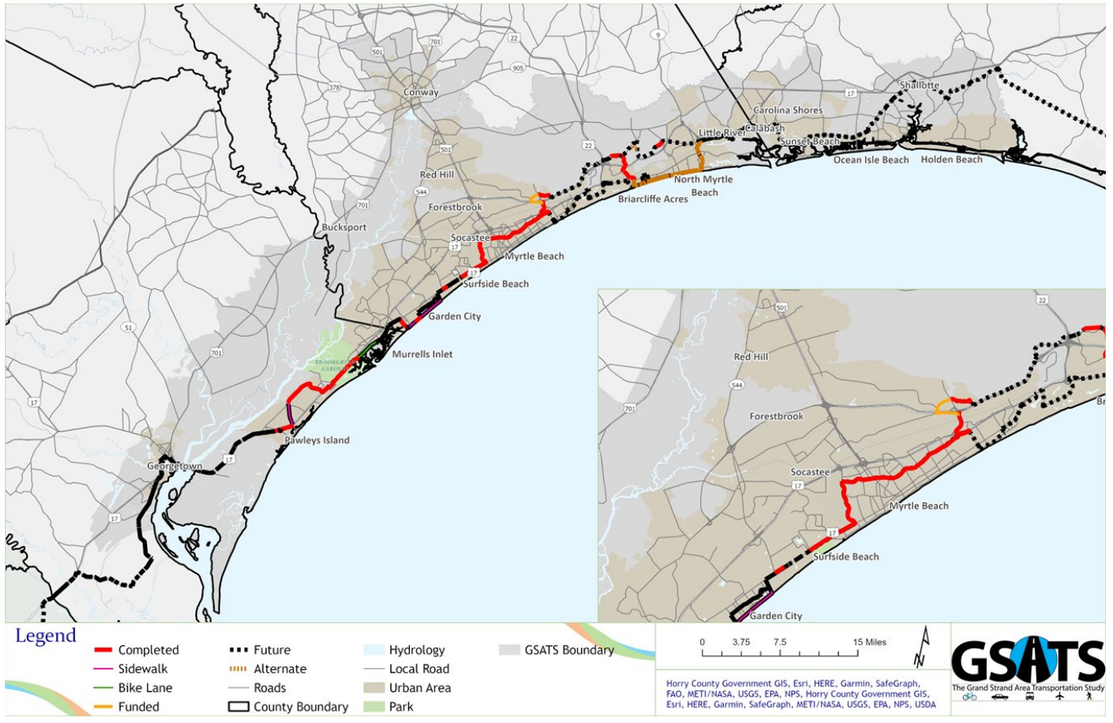
GSATS and its member governments support the implementation of the ECG; representatives from Myrtle Beach, North Myrtle Beach, Murrells Inlet, Horry County, and Waccamaw Regional Council of Governments (WRCOG) are active participants on the South Carolina ECG Steering Committee. Additionally, GSATS has dedicated 80% of their Transportation Alternatives Program (TAP) funds over approximately 20 years to realizing the ECG within the South Carolina portion of GSATS' study area. [10] This commitment has resulted in implemented facilities along approximately 50% of the ECG alignment within Horry and Georgetown counties. Key accomplishments include the first ECG trailhead in South Carolina at the Horry County Bike and Run Park, another trailhead being developed by the City of Myrtle Beach just south of Market Common, and the completion of the entire greenway route within the municipal limits of the City of Myrtle Beach.

It is important to note that to receive the official designation as part of the ECG the constructed path must be separated from the roadway and be 10 feet in width to accommodate both bicyclists and pedestrians. In some instances, an 8-foot path may be accepted if physical constraints prevent a wider path. These design criteria directly impact project costs. While there are several segments of the route that are still routed along streets in South Carolina, the GSATS region has become a leader in developing the ECG per the required specifications.

Currently, there are not any completed sections of the ECG within the North Carolina portion of the GSATS region, and incomplete portions of the greenway are rerouted onto low-traffic roadways. Brunswick County in North Carolina was recently incorporated into the GSATS study area and will be included in the amendment to the existing ECG Master Plan for the region. The East Coast Greenway website reports that 28% of North Carolina's 372-mile spine route is complete. [11]

While a conceptual alignment has been created within the GSATS region in North Carolina, GSATS has not adopted a route for the North Carolina portion of its study area. A grant was previously awarded by the National Park Service, through the Rivers, Trails, and Conservation Assistance Program (RTCA), to assist with the development of a detailed study of a route for the ECG through Brunswick County, North Carolina. As part of this process, alternative alignments should be considered that keep the greenway closer to the Atlantic Ocean, as an alignment that is truly along the coast may benefit local economies and make the GSATS area more of a regional destination for long distance cycling. Note, however, that Holden, Ocean Isle, and Sunset Beaches are islands without existing bridge connections; proposed ECG routes to these locations would have to provide some type of linkage between the islands and the mainland.

Figure 6-4: East Coast Greenway



[10] Under the FAST Act, adopted in 2016, TAP became a set-aside of the Surface Transportation Block Grant program, and this practice was continued through the BIL passed in 2021; however, most MPOs continue to refer to it as TAP.

[11] East Coast Greenway (2017), http://www.greenway.org/explore-by-state/nc

Safe Routes to School

The Safe Routes To School (SRTS) program was developed to encourage school children to walk and bike to school through a variety of strategies, including the development of safe, dedicated bicycle and pedestrian facilities in the direct vicinity of schools. Since 2012, funding for SRTS has come out of tap from the state's Surface Transportation Block Grant (STBG). The 2021 Bipartisan Infrastructure Law (BIL) codified SRTS, increased TAP funding as a percentage of STBG funds, and expanded eligibility to include high schools. GSATS dedicates 80% of their TAP funding in South Carolina to the completion of the east coast greenway. The BIL's SRTS and TAP updates provide more funding for the SRTS and walking and biking programs.

GSATS has completed two very successful SRTS projects in the past that can be held up as models for the rest of the region:

- Waccamaw Elementary School – A multipurpose path along Waverly Road was implemented to enhance access to the elementary school as part of this SRTS project. The multipurpose path is approximately 0.5 mile in length and is parallel to Waverly Road from Shipmaster Avenue to Kings River Road. Other infrastructure improvements enhanced crossings for the path along the corridor.
- Georgetown Middle School – A multipurpose path along Church Street, along with other infrastructure and non-infrastructure improvements to enhance safety and access to the school, have been recommended in previous plans. Approximately 0.1 mile of multipurpose path was implemented from Anthuan Maybank Drive to IP Canal Road.

The GSATS region would benefit from pursuing more SRTS projects. Based on limited existing resources, interest in pursuing SRTS projects should originate at the local level. Through partnerships, TAP funds can be applied for and used on SRTS projects that may also improve safety and connectivity for surrounding neighborhoods.

To generate more interest in SRTS projects, GSATS should consider advancing broader Transportation Demand Management plans for schools. These would focus on all modes of school transportation (e.g., walking, biking, student drop-off/pickup by personal automobile, buses, etc.), and how best to coordinate those modes to allow for the most efficient internal and external transportation network surrounding one or more schools. Additionally, local development regulations should be considered to support SRTS. For example, Horry County's land development regulations require that new subdivisions built within 1.5 miles of a school or park include external sidewalks or the developer may pay a fee in lieu to fund future sidewalks.

Complete Streets Policies

"Complete streets" are streets and roadways planned, designed, and operated for the safe movement of all roadway users, regardless of mode, age, or ability[12]. Complete streets are typically implemented through roadway design, but the adoption of complete streets policies at the state, regional, and local levels help ensure that roadway projects meet design criteria and sufficiently meet complete streets goals. Such policies may address a multitude of roadway elements, including sidewalks, bicycle lanes, bus stops and shelters, crosswalks, medians and shoulders, traffic signals, vehicle travel lanes, and streetscapes and landscaping.

USDOT states that "every transportation agency…has the responsibility to improve conditions and opportunities for walking and bicycling" and recognizes Complete Streets as a context-sensitive approach to building an accessible transportation system for all[13]. The Federal Highway Administration (FHWA) supports complete streets as the default approach to roadway design and implementation[14]. There are many federal programs that support the implementation of complete streets, including the Highway Safety Improvement Program (HSIP), Congestion Mitigation and Air Quality Improvement Program (CMAQ), the Surface Transportation Block Grant (STBG), and Safe Streets and Roads for All (SS4A).

At the state level, both North Carolina and South Carolina have statewide complete streets policies. GSATS recognized the benefits of Complete Streets to the region and proactively adopted a Complete Streets policy as part of the 2040 MTP Update, which was ahead of the statewide policy adopted by SCDOT. NCDOT first adopted its policy in 2009 and amended it in 2019, requiring that state transportation planners and designers consider and incorporate multimodal facilities in the design and improvement of all transportation projects in the state[15]. The policy strives to address and support safety for all transportation modes and the statewide Vision Zero program for North Carolina through applying to all projects within NCDOT's jurisdiction. SCDOT adopted its policy in 2021, requiring the agency to work with regional partners to include the needs of those walking, biking, and taking transit in their regional plans. The department will update and modernize its design manuals to accommodate all modes and will establish a council to facilitate ongoing communication to seek continuous improvement opportunities[16]. The directive outlined by SCDOT is a complete streets policy for the State of South Carolina, that was created in collaboration with MPOs, Councils of Governments (COGs) and regional transit providers. The document outlines considerations for planning authorities when approaching complete streets projects and identifies funding sources for walking, bicycling, and transit accommodations. Design, work zone traffic control, maintenance, and safety and operations guidelines and documents are noted for reference.

[12] U.S. Department of Transportation. 2015. Complete Streets. Retrieved from https://www.transportation.gov/mission/health/complete-streets
[13] FHWA. 2010. Public Roads. 74(1). Retrieved from https://highways.dot.gov/public-roads/julyaugust-2010/street-design-part-1-complete-streets
[14] Federal Highway Administration. Complete Streets in FHWA. Retrieved from https://highways.dot.gov/complete-streets
[15] North Carolina Department of Transportation. 2019. Complete Streets Policy Guidance. Retrieved from https://connect.ncdot.gov/projects/BikePed/Documents/CS%20Policy%208.28.19.pdf
[16] South Carolina Department of Transportation. 2021. Establish Guidelines for Inclusion of Multimodal Accommodations (Walking, Bicycling, and Transit) in Projects Undertaken on the State-Owned Highway System. Retrieved from http://info2.scdot.org/SCDOTPress/PublishingImages/DD%2028%20Complete%20Streets.pdf

ACTIVE TRANSPORTATION RECOMMENDATIONS

Having a broad vision for active transportation in the GSATS region is important; however, it is equally important to understand that active transportation improvements need to be implemented in an efficient manner. To this end, the following recommendations lay the groundwork for realizing a more connected and comfortable active transportation network while increasing the number of users of the network. It is recommended that the GSATS region continue to support various active transportation planning efforts within the ECG Master Plan, Brunswick County CTP, US 17 Corridor Study (Georgetown County), Georgetown County Bike Path and Trails Master Plan, Georgetown County Comprehensive Plan Transportation Element, Conway Pathways and Trails Plan, the City of Conway CTP, Myrtle Beach Bicycle and Pedestrian Master Plan, North Myrtle Beach Comprehensive Plan, Atlantic Beach Comprehensive Plan, Burgess Bike and Pedestrian Plan, Horry county Bicycle and Pedestrian Plan, and the North Myrtle Beach Northeast Area Transportation Plan.

Successful active transportation networks address the needs of a wide spectrum of users

Benchmark. As the GSATS region moves toward a more integrated active transportation network, it will be important to be able to measure the effectiveness of the efforts that are being undertaken. This helps to achieve the "Evaluation" piece of the 5 E's approach to active transportation planning. Through partnerships with member governments, nonprofits, and advocacy groups, benchmarking programs should be established. One such program would be recording bicycle and pedestrian counts at regular intervals. Counts will help in quantifying the success of implemented facilities and in determining areas of demand where future facilities may be needed. GSATS should continue to collect and analyze bicycle and pedestrian crashes; understanding locations, frequency, and causes of crashes will assist in determining appropriate education, enforcement, and infrastructure countermeasures to reduce such crashes.

Develop Active Transportation Design Policies. GSATS should partner with member governments and the SCDOT and NCDOT to develop active transportation design policies. At a minimum, the areas of design listed below should be considered, especially in lower density or rural areas:

- **Separating Users -** A key part of providing a safe network for all users is to reduce conflict points. This is especially important for users traveling at different speeds, in different directions, or with different levels of protection (e.g., drivers versus vulnerable road users). Separation is a key aspect of Vision Zero efforts and safety planning. Users can be separated in space by providing protective features like sidewalks, bike lanes, and curb extensions separate from the vehicle travel lane. Users can be separated in time with signalization treatments, such as leading pedestrian intervals to allow people walking to get into drivers' lines of vision before they begin moving.
- ***Paved Shoulders*** - Roads having a more rural character (i.e., roads that do not have curb and gutter, lack shoulders, and/or have open ditches) within the GSATS area offer a unique opportunity for biking between coastal communities without traveling along corridors with higher vehicle volumes. Rural roadway designs should include 4- to 8-foot paved shoulders to provide bicyclists and walkers an area of refuge from automobile traffic. Paved shoulders also provide an area where motorists may make course corrections when lane departures occur.
- ***Rumble Strips*** - While popular on rural roads for vehicular safety, rumble strips create hazards for people riding bikes. When rumble strips are necessary, their design and placement are critical to safe bicycle travel. If rumble strips consume the entirety of the shoulder, or leave little to no shoulder passable, bicyclists are forced to ride in the travel lane, increasing the potential for automobile/bicycle conflicts. Additionally, periodic breaks or "skips" in the rumble strips allow bicyclists to enter and exit the shoulder area when needed.
- ***Bridges*** - Bridges are classic choke points for pedestrians and bicyclists. When bridges only provide the necessary width for vehicular travel lanes, walkers and bicyclists have no safe travel zone. Whenever possible, bridge replacement projects should include the continuation of shoulder facilities (at a minimum) across their entire length. Even when these shoulders do not presently exist on the approaches, providing them on the bridge is good practice, as many years will pass before the bridge is replaced again.
- ***Signage*** - Basic signage is a low-cost infrastructure improvement that provides increased safety and comfort to walkers and bikers. By including "Bikes May Use Full Lane" signs in general roadway improvement designs, motorists become more aware of bicyclists even when bikes are not physically present. Improvements that are more directly targeted at bicyclists and pedestrians should include more extensive signage appropriate for the context of the project.
- ***Lighting*** - In addition to overhead lighting for vehicles, lighting scaled to the pedestrian realm helps ensure that drivers can see vulnerable road users at night. Pedestrian and bicyclist crashes often occur at night when they are less visible to drivers, particularly in rural areas where drivers are not expecting vulnerable road users. A single light placed directly over the crosswalk does not adequately improve visibility of the pedestrian for an approaching driver. It is best to place streetlights along both sides of arterial streets and provide a consistent level of lighting along a roadway. This includes lighting pedestrian crosswalks and approaches to the crosswalks.

Make Active Transportation Part of Every Project. Historically, bicycle and pedestrian projects have been considered "alternative transportation" or amenities and viewed as projects that must be tackled independently and as desired. The reality is that active transportation should be an integrated part of the overall transportation network, and it is much more efficient and cost effective to incorporate active transportation facilities into larger roadway and bridge projects. The GSATS region has seen this approach work very successfully with projects like the Robert Grissom Parkway. When pursuing all roadway, intersection, and bridge projects, GSATS will consider how bicyclists and pedestrians will be accommodated in a safe, convenient, and comfortable manner. All new projects must make accommodations for non-motorized modes of transportation throughout the GSATS study area.

Continue and Build Upon GSATS's TAP Ranking Criteria. GSATS' existing Transportation Alternatives Ranking Criteria uses seven criteria to score applications for TAP funding: 1) Funding Request Amount; 2) Funding Ratio (i.e., percentage of local match); 3) Environmental Benefit; 4) Level of Support; 5) Level

of Benefit; 6) Local Commitment to Project; and 7) Connectivity. Consider awarding bonus points for projects that fall within the potential active transportation demand areas identified in **Appendix G**.

Continue to Prioritize Separated Facilities. Through the dedication of 80 percent of its South Carolina TAP funding to the East Coast Greenway, GSATS has made a bold statement about the importance of separated facilities. To meet the needs of all GSATS area residents and visitors, GSATS should continue to prioritize bicycle and pedestrian facilities that are physically separated from motorized traffic. While on-road facilities such as bike lanes are certainly valid in some situations, separated bicycle facilities provide lower-stress environments that 60% of the public desire based on public feedback, as discussed in greater detail in **Appendix D**. These facilities also provide greater separation for pedestrians, making the walking environment more comfortable as well. Such would include separated bike lanes, shared-use paths, sidepaths, trails, and greenways. Moving beyond just the East Coast Greenway, when new roadway and widening projects are considered, GSATS should advocate for separated facilities over typical roadway cross sections and in compliance with state and local complete streets policies; in many cases, separated facilities require less right-of-way than on-road bike lanes. By providing facilities that everyone can use, especially the most vulnerable users like children and the elderly, GSATS will elevate the perception of active transportation, encourage more people to use the provided facilities, and meet the needs of a greater number of its constituents.

Continue to Connect the Network. GSATS understands the importance of connecting the network, as shown by its focus on connecting the East Coast Greenway. GSATS should continue to direct its attention to connecting the bicycle and pedestrian network as funding allows, including the East Coast Greenway and beyond by prioritizing safety and demand. By providing a better-connected network, facilities will be more useful for transportation trips as more destinations are reachable via active transportation. This in turn will make it more plausible to expand beyond TAP funding and advocate for the use of Surface Transportation Block Grant Program funding and other funding sources for bicycle and pedestrian projects, as they will have a legitimate transportation nexus.

Pursue Expanded Active Transportation Funding Through BIL. BIL created new programs and expanded eligibilities for nonmotorized facilities under existing programs. Walking and biking infrastructure can be funded through programs created explicitly for such facilities, such as TAP or the Active Transportation Infrastructure Investment program. Such projects can also be funded through other programs if the projects support the program goals, such as protected bike lanes under the Safe Streets for All program or projects that substantially advance walking and biking under the Carbon Reduction Program. Lastly, many other highway programs allow active transportation funding, including the Rural Surface Transportation Block Grant and legacy programs like Congestion Mitigation and Air Quality.

7 TRANSIT

Transit is reliant upon a complete transportation network to operate efficiently. Appropriate roads must be suitable for bus service, and sidewalks and other pedestrian features must provide adequate access to transit stops. Thus, transit cannot be considered in isolation to the overall transportation network. The strategies developed as part of this long-range plan will be supportive of improvements to the total transportation system. The success of transit in the GSATS region depends upon the coordinated efforts of the many government entities, public transit agencies, and private businesses.

The existing transit providers in the GSATS region and their available services are summarized in the following sections. The GSATS MPO anticipates the automobile to continue to be the dominant mode of transportation in the foreseeable future for the area, both in number of trips and the distance traveled. However, transit and other modes will continue to play an increasingly important and beneficial role in the overall transportation network.

MOBILITY NEEDS

Historical trends in employment, as well as the commuting patterns that connect outlying community residents to jobs, will play a key role in this MTP. There is an increasing need for employment-related transit services in Myrtle Beach and other high employment areas that provide residents of the Grand Strand area transportation choices and increased access to employment beyond traditional transit service areas. These trends include:

- Long-term growth in employment
- More residents live and work in different counties
- Increased commuting into urban areas

In an ever-increasingly multimodal society, it is important to identify various transit options and alternatives that should be considered during future transportation related projects and planning studies within the Grand Strand area. Viable alternatives that were identified include:

- **Inter-county bus service**: This type of service is provided currently by several providers in the area. Enhanced service options are likely an alternative to meet future demand.
- **College/University Coordination**: The Coast RTA currently coordinates with Coastal Carolina University for student passes and assisting students with their transportation needs. This coordination is necessary for the future with expanded services for students and staff.
- **Traffic Signal Preemption**: Traffic signal preemption is a type of system that allows the normal operation of traffic lights to be preempted. The most common use of these systems is to manipulate traffic signals in the path of an emergency vehicle, halting conflicting traffic and allowing the emergency vehicle right-of-way, to help reduce response times and enhance traffic safety. Signal preemption can also be used by bus transit systems to allow public transportation priority access through intersections, or by railroad systems at crossings to prevent collisions.
- **Park-and-Ride**: Another transportation alternative would be to build and operate several park-and-ride sites throughout the Grand Strand area, which could allow for commuters to park and then ride the bus to their respective destinations. These alternatives have been proven successful for other transit agencies, especially for areas where the employment opportunities are in the same general area.
- **Volunteer Driver program**: Supplemental service for outlying destinations beyond the typical transit service area. This is a viable low-cost alternative for flexible service; however, policies must be in place regarding insurance coverage and program administration.
- **Rideshare Program**: Ridesharing currently exists in the Grand Strand area today; however increased marketing and incentives will be needed in the future to meet future travel needs. This will likely include vanpool, carpool, school-pool, and bike pool programs.
- **Private Ridesharing**: In recent years, additional mobility options have emerged as potential services for individuals, such as Uber and Lyft. These private ridesharing companies allow individuals who possess a smartphone to hail a person to pick them up and take them to their destination. While this service is similar to taxis, they have grown in recent years for a multitude of reasons and are a viable option for many individuals.

EXISTING PROVIDERS

A majority of the transit service in the Grand Strand area is offered by the Waccamaw Regional Transportation Authority also known as the Coast RTA. Coast RTA is based out of Conway, South Carolina and offers a variety of service options for residents traveling around the Grand Strand area, including:

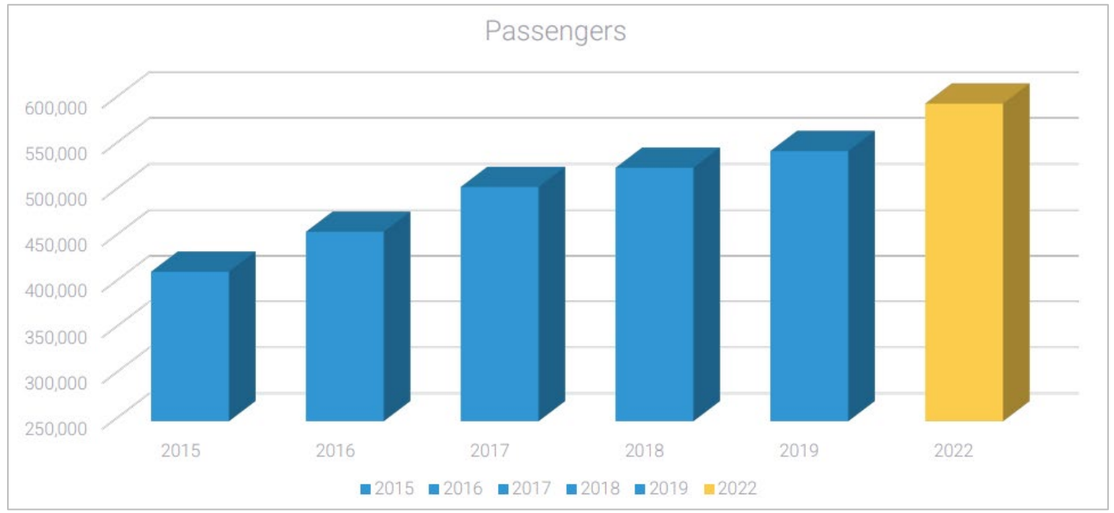
- Fixed-route service
- Curb-to-curb paratransit service
- Entertainment Express (Myrtle Beach, North Myrtle Beach)
- Coastal Carolina University Campus Shuttle

The Coast RTA operates fixed-route regularly scheduled bus service daily, from approximately 5:00 a.m. to approximately 9:00 p.m. depending on the specific route. There are 10 routes that provide service within the Cities of Andrews, Bucksport, Conway, Garden City, Georgetown, Loris, Murrells Inlet, Myrtle Beach, Pawleys Island and Surfside Beach. Coast RTA operates a fleet of 35 vehicles with a variety of capacities ranging from nine to 40 passengers.

Coast RTA Ridership

Systemwide ridership for the Coast RTA has increased in the most recent years, as illustrated in **Figure 7-1** and listed in **Table 7-1**. The Coast RTA staff indicated that ridership increased 32 percent from 2015 to 2019, and an additional nine percent from 2019 to 2022. Overall annual ridership in 2022 was nearly 600,000, which exceeded pre-pandemic totals.

Figure 7-1: Coast RTA Fixed Route Annual Ridership



Brunswick Transit System

Brunswick Transit System, Inc. (BTS) is a non-profit community transportation system that coordinates general public and human service transportation services for the residents of Brunswick County, North Carolina. The transit system operates a fleet of 17 vehicles, including ADA equipped vehicles to assist persons with special need. BTS provides non-emergency transportation services to the general public through a Dial-a-Ride program and to human service agency clients through contract services. Dial-a-ride is a fare assistance transportation program sponsored by the North Carolina Department of Transportation open to the general public of Brunswick County. Service hours are Monday-Friday 8:00 a.m. - 4:30 p.m. and require reservations with a forty-eight (48) hour notice. BTS is allocated Section 5307 federal transit funds through the MPO.

Service Providers Outside GSATS Region

A few transit service providers located outside the GSATS region provide demand response service to some locations with the GSATS region:

- Williamsburg County Transit Authority
- Pee Dee Regional Transportation Authority
- Santee Wateree Regional Transportation Authority
- Intercity bus service: Greyhound, Carolina Trailways, and Southeastern Stages

Other Transportation Providers

Several private service operators, such as shuttle, limousine, and taxi services transport residents throughout eastern South Carolina and southeastern North Carolina to job sites along the Grand Strand area. There are also private ridesharing services, such as Uber and Lyft, which provide additional mobility options to those with a smartphone by allowing them to request a ride through an application. These private services have the potential to allow for individuals to move throughout the area and not rely on public transportation services such as buses or demand response options.

FUTURE TRANSIT OUTLOOK

The GSATS MPO recognizes that public transportation empowers individuals to be independent, seek and retain employment, access medical care, and reach new opportunities including education, commercial, and recreational activities. Nationally, the role of public transportation is evolving from the perspective of a standalone transit agency to the consideration of how mobility can enhance economic development and improve quality of life in communities. Thus, in many areas, transit is developing new partnerships that are leading to improved mobility choices for customers for all services. This evolutionary process has resulted in the recognition that "*community transportation networks*" add value to many facets of life for residents, tourists and workers.

Transit Needs

Public transportation plays a key part in defining the transportation system in the Grand Strand area. The proposed transit needs discussed below provide a vision for public transportation in the future. The proposed needs include travel mode choices to residents in the community, including regional and local services, a future streetcar network, water taxi service, park and ride services, and other transit circulators. These transit needs in coordination with roadway, pedestrian, and bikeway improvements will build an overall cohesive future transportation network.

The following trends affect transportation patterns and provide an opportunity for public transit to meet these needs:

- Anticipated growth in aging population. Expand transit services to include non-traditional services such as flex services, Call-A-Ride services, and rideshare services.
- Increasing density should be supported with enhanced transit services. Initial planning for higher density areas should include facilities and amenities for transit services. This may include bus pullouts, shelters, queue jump lanes, transit signal priority, etc., which are a precursor for future rapid transit services.
- Transit facilities and amenities. Future planning and coordination of transfer stations or multimodal facilities should involve all jurisdictions to identify modal needs and access to sites. Incorporating private development within the planning process provides an opportunity for additional revenue sources. All new development and infill development should follow transit supportive design guidelines.

Table 7.1 summarizes the various public transportation improvements that were identified as needed throughout the GSATS area. The projects are categorized by the various timeframes that the projects were identified; short, mid and long term. Short-term projects were identified as being targeted to start by 2025, mid-term projects by 2035 and long-term projects by 2045.

Table 7-1: Future Transit Projects and Needs

Project	Name	Type	Timeframe	Capital	Annual O/M
SHORT RANGE NEEDS					
1	Transit Study	Planning Study	Short	$250,000	$-
2	Vanpool Service	New Service	Short	$400,000	$44,000
3	Myrtle Beach Transit Hub	Multimodal Hub	Short	$8,000,000	$80,000
Total			**Short**	**$8,650,000**	**$124,000**
MID-RANGE NEEDS					
4	US 501 Service Conway to Myrtle Beach	New Service	Mid	$13,000,000	$1,000,000
5	Aynor Park and Ride Lot	Park and Ride Lot	Mid	$350,000	$3,500
6	Loris Park and Ride Lot	Park and Ride Lot	Mid	$350,000	$3,500
7	Georgetown Park and Ride Lot	Park and Ride Lot	Mid	$350,000	$3,500
8	Myrtle Beach Operations Facility	Operations Facility	Mid	$10,000,000	$100,000
Total			**Mid**	**$24,050,000**	**$1,110,500**
LONG RANGE NEEDS					
9	9th Avenue North Streetcar	New Service & Maintenance Facility	Long	$9,500,000	$95,000
10	Georgetown Co Transit Hub	Multimodal Hub	Long	$4,000,000	$40,000
Total			**Long**	**$13,500,000**	**$135,000**
TOTAL NEEDS					
Grand Total				**$46,200,000**	**$1,369,500**

Transit Policy Recommendations

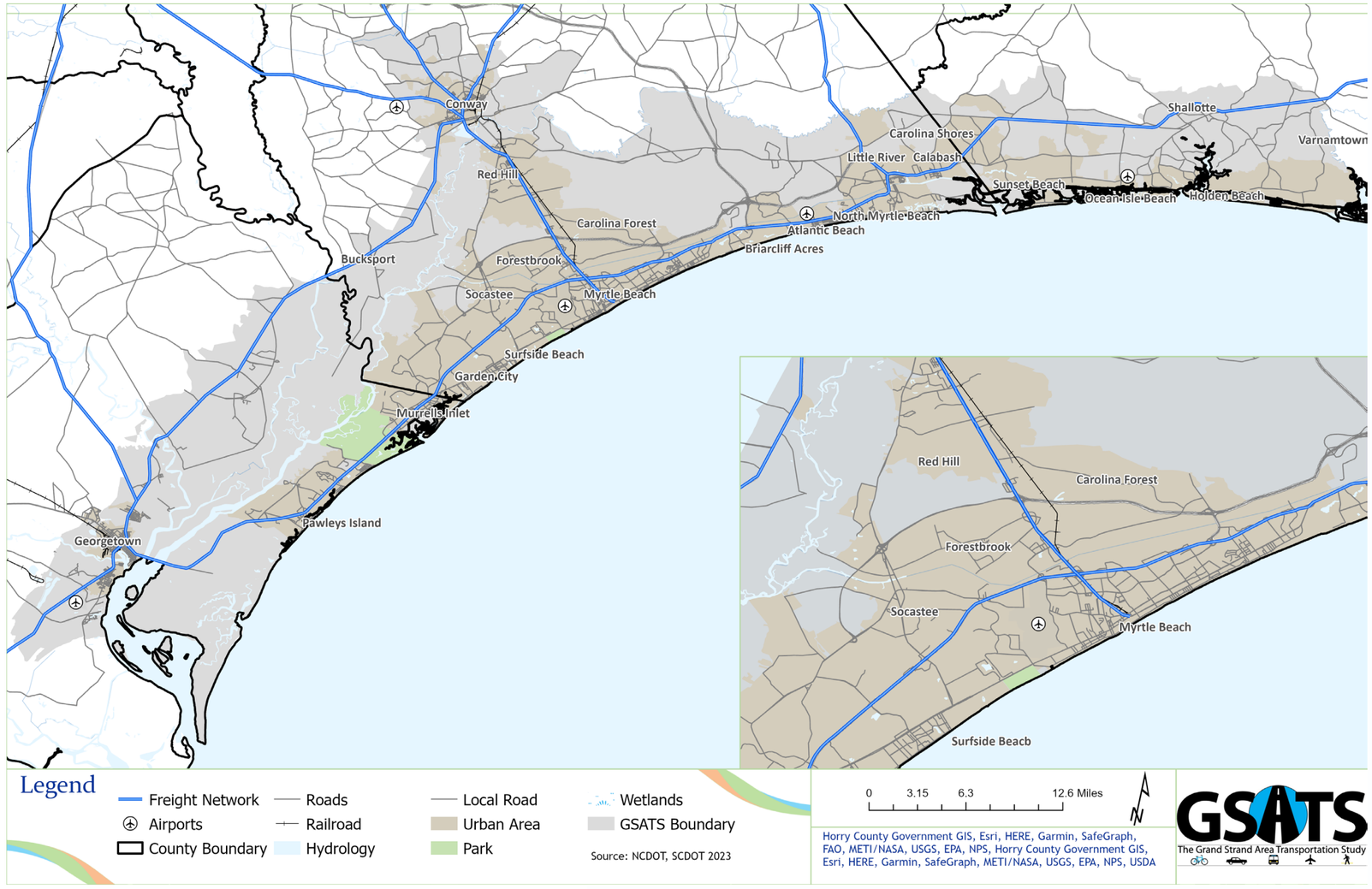
The *2014 Waccamaw Regional Transit & Coordination Plan*, an appendix of the *South Carolina Multimodal Transportation Plan*, identified regional transit planning efforts, transportation gaps, and strategies for the future within the Waccamaw Council of Government (WRCOG) region. The South Carolina portion of the GSATS region is located within the WRCOG region. The transit recommendations identified in that plan are relevant to the GSATS transit needs and are summarized below:

- Implement a mobility manager and central location for directing and assigning trips
- Use technology to enhance transit efficiencies
- Maximize agency-to-agency communication
- Coordinate funding options to maximize utility of available funding options
- Adjust local policies and regulations if needed
- Ensure appropriate vehicle types for specific needs of riders
- Formalize agreements between various agencies and mobility manager
- Ensure proper documentation of all processes
- Acquire marketing plan and logo development
- Verify that local policies and regulations pacify any related changes

8 GOODS MOVEMENT

Transportation is a vital engine that drives every economy. Transportation systems link key regional economic centers with national and international markets which, in turn, improves regional economic competitiveness, especially as transportation system efficiencies improve. Improvements in the system can lower the costs of transportation by decreasing the amount of time required for the movement of goods. Lower transportation costs can be passed on to consumers in the form of lower prices, to workers as higher wages, and to business owners in the form of increased profits. Additionally, convenient commutes for workers can lead to increased labor productivity in the workplace. For the purposes of the MTP, a freight network is identified based on the infrastructure included in the South Carolina and North Carolina Statewide Freight Networks. The GSATS region's freight transportation system includes several highways, one Class I railroad, and five airports. While all modes play a role in moving freight to, from, and through the region, the local flow of goods and services is dominated by the trucking sector. **Figure 8-1** illustrates the freight transportation system in the GSATS region.

Figure 8-1: GSATS Region Freight Transportation System



HIGHWAY FREIGHT

The regional truck network is comprised of five US Routes and several state highways, a number of arterials and collectors, and local roads that provide the last mile access to major freight generators. The National Highway System (NHS) includes the Interstate Highway System as well as other roads important to the nation's economy, defense, and mobility. The NHS was developed by the Department of Transportation (DOT) in cooperation with the states, local officials, and metropolitan planning organizations (MPOs). As shown on **Figure 8-2**, US 501, US 378, SR 22, SR 31, and SR 9 are on the "Other National Highway System". US 17 is listed on the Strategic Highway Network (STRAHNET), a designation given to roads that provide "defense access, continuity, and emergency capabilities for movements of personnel and equipment in both peace and war." STRAHNET includes Routes (for long-distance travel) and Connectors (to connect individual installations to the Routes).

Figure 8-2: National Highway System in GSATS Region [17]

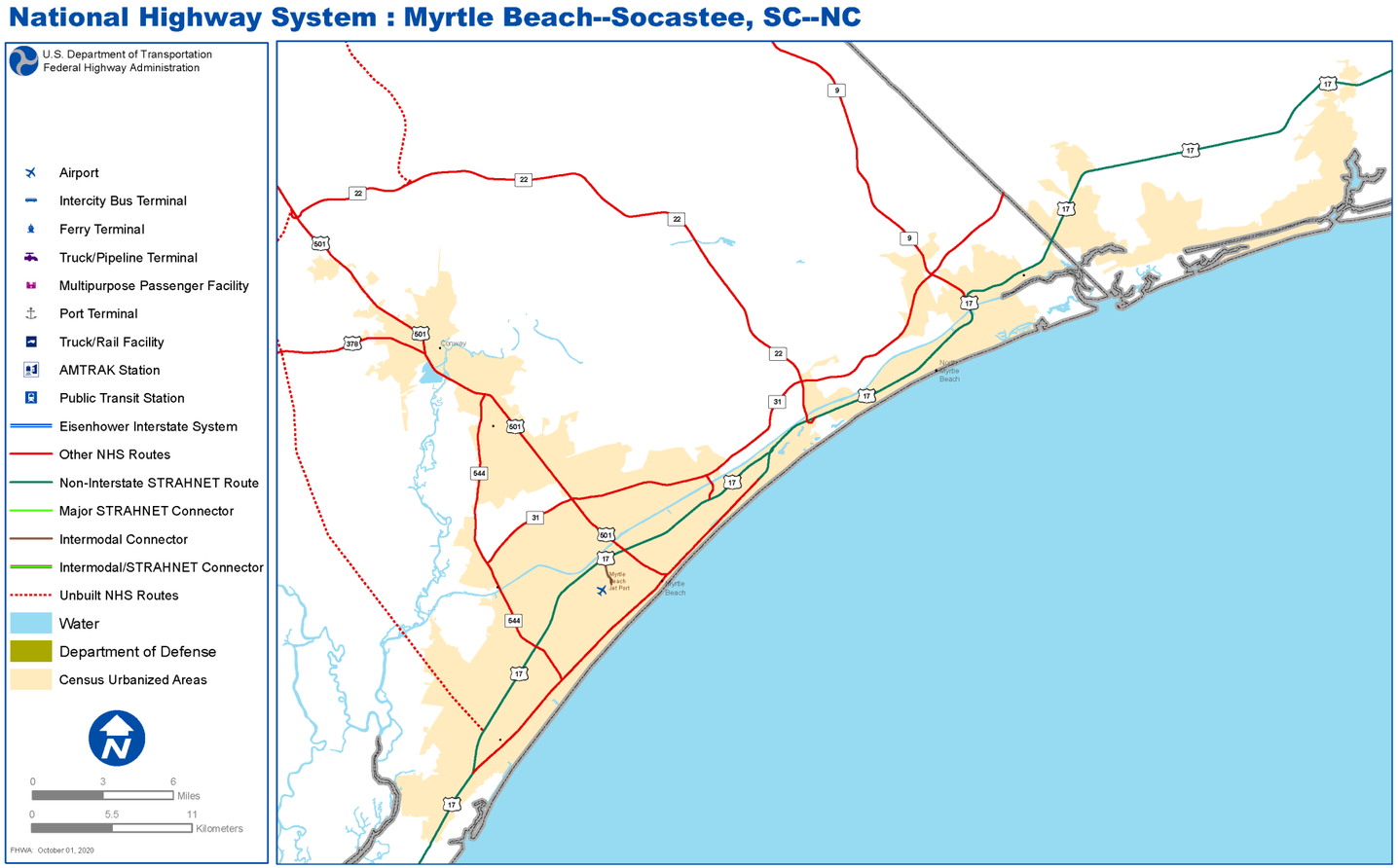


Figure 8-3 illustrates the Strategic Freight Roadway Network (SFRN) for South Carolina. The SFRN includes road segments with high volumes of daily truck traffic or are important to movement of goods via truck according to the South Carolina Statewide Freight Plan Update adopted in 2023. US 17, US 378, US 501, US 701, SR 9, and SR throughout the GSATS region is identified on the SFRN.

According to a freight flow analysis for the North Carolina Freight Plan, about 4,008,000 tons of freight originated in or destined for Brunswick County, North Carolina in 2015. Over 75 percent of this freight was moved by truck with about 18 percent moved by rail car.[18] **Figure 8-4** illustrates the North Carolina Truck Network in Brunswick County.

Figure 8-3: South Carolina Strategic Freight Roadway Network (2022)

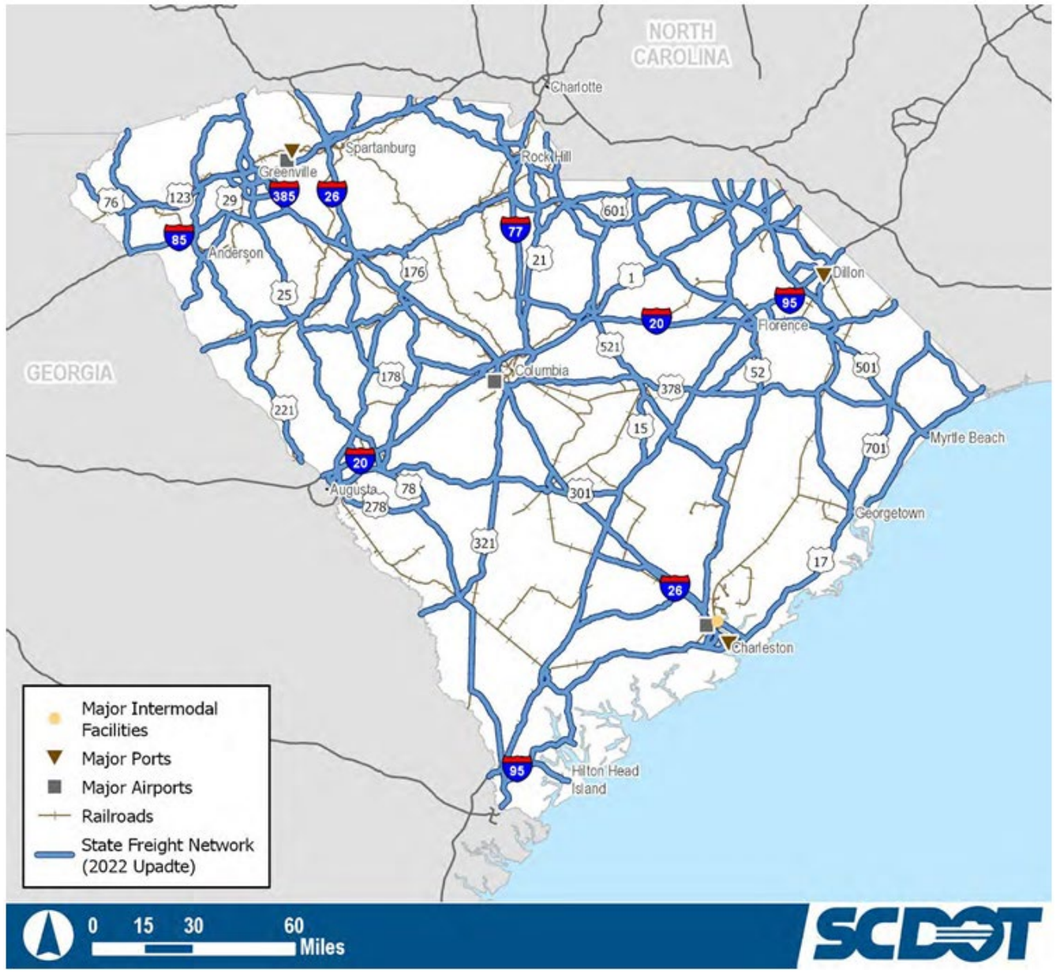


Figure 8-4: NCDOT - North Carolina Truck Network (NCTN) in Brunswick County[19]

[18] SCDOT, https://public.tableau.com/app/profile/cambridge.systematics/viz/NorthCarolinaFreightFlowTool/Story1

[19] NCDOT, https://ncdot.maps.arcgis.com/home/webmap/viewer.html?webmap=a8f091b8fadc4c5d8bb905bf44556a5d

RAIL FREIGHT

CSX Transportation (CSXT) is the only Class I railroad operator within the GSATS region. CSXT is the South Carolina's largest railroad with 1,764 route miles and covers virtually every area of the state. CSXT has a main line near the Town of Andrews and a spur line connected to it. This CSXT spur line provides the Port of Georgetown intermodal freight service for break bulk commodities, provides coal for the Santee Cooper Winyah Generating Station, and provides freight service to International Paper's mill. Four small railroad switching yards are located in Georgetown County, one at the Santee Cooper Winyah Generating Station, one in the Town of Andrews, and two in the City of Georgetown. As the sole freight hauler on rail In Horry County, RJ Corman operates a short line between Chadbourn, NC and Myrtle Beach. The portion of the line between Conway and Myrtle Beach is owned by Horry County and leased to RJ Corman. In 2016, Horry County received an USDOT Transportation Infrastructure Generating Economic Recovery (TIGER) Grant to upgrade rail lines to increase haul speed and weight, which could increase economic development activity along the line.

1 CLASS I RAILROAD CSX

AIR CARGO

There are five airports located within the GSATS region; however only one handles air cargo. The Myrtle Beach International Airport has a dedicated air cargo building at the entrance of the airport. The airport recently completed a Master Plan that will guide development over the next 20 years. The airport announced the details of a $100 million expansion project in 2022, which includes a parking lot expansion, the addition of passenger gates, and a new rental car canopy.

5 COMMERCIAL SERVICE AIRPORTS

9 FINANCING AND IMPLEMENTATION

Federal planning regulations require that the financial plan presented in the MTP be financially constrained, which means that the estimated cost for all transportation improvements presented in the plan cannot exceed the amount of reasonably expected revenues projected from identified funding sources.

This section focuses on the long-range financial constraints and opportunities in the GSATS region over the 23 fiscal years of this MTP. The MPO, in cooperation with Steering Committee members, SCDOT staff, and NCDOT staff, have conducted a careful analysis of what funds are to be reasonably expected, how those funds may be allocated, and how and when projects will be financed.

The projects that have been included within the GSATS 2045 MTP Update have been carefully selected and prioritized. These projects represent the current priorities based upon anticipated needs over the coming years. However, planning for the future always includes revisiting priorities, evaluating new trends, and considering a wide variety of other factors. Therefore, this plan is to be considered a living document and will be revised as events warrant.

During the course of the development of this MTP, a wide variety of worthwhile and needed projects were identified. However, due to financial constraints, there is not enough funding to support all proposed recommendations. These projects are considered as illustrative and are outside the financial constraint of this plan. **Appendix I** further details the project financing methodology.

ROADWAY FUNDING SOURCES AND REVENUE FORECASTS

The GSATS region relies on state and federal funding to implement regional transportation improvements. Considerable statewide needs, coupled with rising fuel efficiency and an unstable transportation funding trend, leave many future transportation funding questions unanswered.

Actual funding availability during the period to 2045 will depend largely upon future actions and public policy directives initiated at the federal and state levels. Roadway, bicycle, and pedestrian projects are traditionally financed through federal, state, and local funds, which are primarily derived from taxes on fuel, fees from vehicle registrations, and local option sales taxes, such as the Horry County Ride programs. Transit projects are also funded through federal, state, and local sources, as well as revenue received through fares. The Financial Plan provides an analysis of anticipated federal, state, and local revenues, cost inflation factors, year-of-expenditure dollars, and planning level cost estimates.

Federal and State Funding Sources

One of the primary sources of funding comes from a mixture of state and federal transportation dollars. State departments of transportation are required to sub-allocate federal highway funds by formula to designated Transportation Management Areas (TMAs).

South Carolina

In South Carolina, the SCDOT Commission determines the funding level allocation to MPOs for the federal-aid program following each new federal highway bill and annual appropriations act. Since the mid-1990s, the allocation between urban and rural federal-aid funds for MPOs, called Guideshare, has been based on study area population. In an effort to provide regions with enough funding to plan meaningful projects, the SCDOT Commission approved a multi-year increase in MPO and COG funding allocations beginning in 2022. In addition to the funding increase, the SCDOT Commission voted to change the name of the Guideshare program to the Regional Mobility Program. The 2023 GSATS allocation will increase to $12.7 million and eventually ramp up to the fully phased-in annual allocation of $15.7 million in FY 2024-25. The State portion of these monies serves as the local match to the federal dollars, so local governments do not have to identify monies to encumber these funds. Between 2023 and 2045, there will be at least $358.1 million of Regional Mobility Program gross revenue available for roadway projects (1 year at $12.7 million and 22 years at $15.7 million per year).

North Carolina

Based on the FY 2020-2029 NCDOT STIP and FY 2020-2029 GSATS MTIP, the GSATS area has $31.3 million programmed between FY 2020-2025, equating to approximately $5.2 million of federal funds and local match annually for roadway projects in the North Carolina portion of the GSATS region. In general, local governments will be required to identify non-federal funds to serve as the 20 percent match to the federal dollars. Between 2023 and 2045, there will be approximately $119.6 million of gross revenue available for roadway projects (23 years at $5.2 million per year).

Local Funding Source – RIDE III

The Road Improvement and Development Effort (RIDE) program was initiated in Horry County in 1996 to determine the short and long-term transportation infrastructure needs for the County, along with various funding options. Funding for the first phase, totaling $1.1 billion, was provided through applications to the State Infrastructure Bank together with matching funds from a 1.5 percent hospitality fee. The second phase, called RIDE II, was paid for through a one-cent Capital Projects Sales Tax approved by Horry County voters on November 7, 2006. RIDE II went into effect on May 1, 2007 and expired April 30, 2014. Funding for RIDE II totaled approximately $425 million.

On November 8, 2016, Horry County voters supported a One-Cent Capital Projects Sales Tax for roads, also known as the RIDE III. This tax went into effect on May 1, 2017, and will expire on April 30, 2025. It will increase the level of sales tax in Horry County an additional penny on all retail sales, accommodations and prepared food/beverage. Groceries (unprepared food) will be exempt from the sales tax. Horry County is slated to receive $592 million over the eight-year life of the one-cent Capital Projects Sales Tax; approximately $408 million is funding projects within the GSATS portion of Horry County.

In 2022, Horry County approved the framework for choosing the advisory committee for RIDE IV. The RIDE IV local option sales tax would be collected over a seven-year period from May 1, 2025 to April 30, 2032. The 18-member advisory committee finalized their list of recommended projects in April 2023, allocating a projected $826 million in revenue to bridge and roadway projects, paving and resurfacing projects, and environmental mitigation. Assuming the same proportion from RIDE III, the GSATS portion of Horry County could expect approximately $569 million worth of programmed projects over the seven-year period.

Due to the success of the first three rounds of the RIDE program, it is anticipated that the RIDE program will continue during the life of the 2045 MTP. With an anticipated average annual GSATS RIDE IV allocation of $100 million, an additional $2 billion ($100 million per year from 2026 to 2045) is forecast for the GSATS portion of Horry County to fund transportation projects. GSATS does not manage the RIDE program, but RIDE projects are required to be on the GSATS TIP and the SCDOT STIP.

Additional Funding Sources

- **Other Publicly Funded Improvements** – Federal Highway High Priority Projects, South Carolina's State Infrastructure Bank, Local Option Sales Taxes, and the County Transportation Committees often provide funding for transportation improvements in the GSATS region.
- **Privately Funded Improvements** – Impact Fees, Tax Increment Financing, Municipal Improvement Districts, or other private investment also provide funding for transportation improvements in the region.

ROADWAY REVENUE FORECAST

Using historic data and projected allocations from SCDOT and NCDOT, future roadway funding was forecast to the year 2045.

Project expenditures programmed through FY 2027 from the FY 2021-2027 SCDOT Statewide Transportation Improvement Program (STIP) and the FY 2024-2033 NCDOT STIP were deducted from the revenue projection, providing a net revenue forecast available for newly identified projects. **Table 9-1** indicates the net funding for roadway projects by state.

Table 9-1: GSATS Roadway Net Revenue Forecast

State	2023-2045 Gross Revenue Forecast	TIP Committed Projects through FY 2027	2023-2045 Net Revenue Forecast
North Carolina	$114,400,000	($19,700,000)	**$94,700,000**
South Carolina	$358,100,000	($23,200,000)	**$334,900,000**

The projected revenue was broken down into three horizon periods: 2023-2027 (Short-Term), 2028-2033 (Medium-Term), and 2034-2045 (Long-Term). **Table 9-2** indicates the funding for roadway projects by state and horizon period. The short-term horizon period considers projects already committed and programmed for funding in each state.

Table 9-2: GSATS Roadway Net Revenue Forecast by Time Horizon

State	Short-Term 2023-2027	Medium-Term 2028-2033	Long-Term 2034-2045
North Carolina	$6,300,000	$31,200,000	$57,200,000
South Carolina	$52,300,000	$94,200,000	$188,400,000

FISCALLY-CONSTRAINED PROJECTS

The culmination of the GSATS 2045 MTP planning process is a list of projects to be programmed to meet the needs of a growing region. A financial plan that demonstrates how the adopted transportation plan can be implemented is required[20] as part of the development and content of the MTP.

This fiscally constrained plan identifies the projects to be funded using the funding levels for North Carolina and South Carolina indicated in the prior section. As projects utilize the funding for each horizon period, any remaining funds were disbursed to the next horizon period. Ultimately, all the project funds were expended by horizon year 2045. Projects funded through the Horry County RIDE III program are shown in **Table 9-3.**The projects and their associated costs by horizon period and state are listed in **Table 9-4** and **Table 9-5**. At the end of each horizon period, a summary of revenues and expenditures is provided.

For illustrative purposes, the financial plan may include additional projects that would be included in the adopted transportation plan if additional resources beyond those identified in the financial plan were to become available[21]. These projects are considered part of the 2045 MTP unfunded list and are shown for South Carolina in **Table 9-6** and North Carolina in **Table 9-7**.

Table 9-3: Horry County RIDE III Funded Projects within the GSATS Region

Name	Project Description	Cost Estimate[22] ($1,000s)
US Hwy. 501 Corridor improvements	Complete 6-lane widening and signalized intersection improvements on US Hwy. 501, from SC Hwy. 31 to SC 544 interchange. Phase I: US 501 Southbound from Gardner Lacy to SC 31. Phase II: US 501 Northbound and Southbound from Gardner Lacy to SC 544.	$41.0
Conway Perimeter Road Phase II	Construct new road with multi-use path from US Hwy. 378 (at El Bethel Road) to US Hwy. 701 south. The new road will feature 4-lanes with median and turning lanes at the intersection.	$18.4
Southern Evacuation Lifeline (SELL) – Environmental Studies and Right-of-Way	Funding to complete the final environmental impact studies required to obtain Record of Decision (ROD) for future roadway. Purchase land for right-of-way of final alignment identified in the Record of Decision.	$25.0
US Hwy. 17 Business Intersection Improvements - Garden City	Improve capacity and safety at the following three intersections in Garden City (intersection widening, turn lane extensions, and other operational improvements): 1.) US 17 Business @ Inlet Square Mall/Mt. Gilead Road 2.) US 17 Business @ Atlantic Avenue 3.) US 17 Business @ Garden City Connector/Pine Avenue.	$19.8
US Hwy. 501 Realignment	Realign US Hwy. 501 at Broadway Street intersection to connect to 7th Avenue North at Oak Street in the City of Myrtle Beach (new alignment). Install sidewalks and intersection improvements on 7th Avenue North, between Oak Street and North Kings Highway.	$13.9
Forestbrook Road Widening	Widen Forestbrook Road, between US Hwy 501 and Dick Pond Road. Improvements will feature 5-lanes including a center turn-lane and the installation of bike/pedestrian facilities such as sidewalks and wider travel lanes.	$89.1
Fred Nash Blvd. connection to Harrelson Blvd. – Myrtle Beach	Construct new 3-lane road, including a center turn-lane, to extend Fred Nash Boulevard around the end of the airport runway (MYR) to provide a direct connection to Harrelson Boulevard. The project includes bicycle facilities.	$19.3
SC Hwy. 31 (Carolina Bays Parkway) Extension To SC/NC State line	Final phase of SC Hwy. 31 (Carolina Bays Parkway). Build new limited-access freeway to extend SC Hwy. 31 from SC Hwy. 9 to North Carolina state line.	$185.0

[20] 23 CFR 450.324(f)(11)
[21] 23 CFR 450.324(f)(11)(vii)
[22] Cost estimates provided by SCDOT

Table 9-4: South Carolina Fiscally Constrained Projects

Rank	Project ID	Local Government	Project Name	Project Description	Cost Estimate ($1,000s)
SHORT-TERM 2023-2027 FISCALLY CONSTRAINED PROJECTS					
1	I - 3i	Georgetown County	US 17 Signalizations	Install adaptive signal timing at 17/Litchfield Drive, 17/Willbrook Boulevard, 17/N Boyle Road, 17/Watchesaw Road, 17/Bellamy Road, 17/Riverwood Drive, 17/Burgess Road, 17/Blackgum, 17/Retreat Beach Blvd	$1.39
2	I - 19	City of Conway	1st / 2nd Avenue Underpass at US 501	Underpass connecting 1st / 2nd Avenue to US 501 ramps for access to downtown Conway	$3.08
3	I - 7i	Georgetown County	US 17 Access Mgmt	Remove concrete median opening and replace with grass at 17/Eagles, 17/Channel Bluff Ave, 17/Georgieville St, 17/Atalaya Rd	$0.33
4	N - 98	Horry County	US 17 and US 17 Business Connection	A new connector between US 17 Bypass and US 17 BUS in Garden City north of the Garden City Connector and South of Glenns Bay Road, including bicycle and pedestrian facilities	$7.24
5	N - 22	City of Conway	SC 90 Extension	Extend SC 90 from US 501 Bus to intersect US 501 east of Conway	$14.57
6	I - 3	Horry County	Hwy 17 Bypass / Hwy 544 Intersection/Interchange	Interchange and Intersection Improvements at Hwy 17 Bypass & Hwy 544 interchange from Beaver Run Blvd to South Strand Commons Including bicycle and pedestrian facilities	$18.72
7	I - 5i	Georgetown County	US 17 Access Mgmt	Remove concrete median opening and replace with grass US 17 at (Wesley Rd North, Nicoles, Nelson Dr, and Hammock Ave)	$0.27
				Short-Term Project Expenditures	**$45.60**
				Short-Term Revenue	**$52.30**
				Short-Term Surplus	**$6.70**
MID-TERM 2028-2033 FISCALLY CONSTRAINED PROJECTS					
8	W - 19	City of North Myrtle Beach	Hwy 17 - Windy Hill Intersections	US 17 Intersections. Widen for dual left at intersections	$21.00
9	I - 12	Horry County	US 17 Bus / SC 544 Intersection	Intersection improvements/signalization for right turn congestion and queuing onto SC 544	$1.49
10	N - 3i	City of North Myrtle Beach	Possum Trot Rd Extension	Extend Possum Trot Rd. across US 17 to Madison Dr	$3.89
11	I - 21	Georgetown County	US 17 at Litchfield Drive and Country Club Drive in Litchfield	Project to improve two intersections approximately 300 feet apart on Highway 17. Litchfield Drive is a signalized intersection with commercial uses on all four corners and Country Club is an unsignalized intersection located 300 feet north on the west side	$6.76
12	N - 2	City of North Myrtle Beach	Edge Parkway and Sand Ridge Rd connector	Connect Sandridge Rd to Edge Parkway signal. Add bike/ped facilities.	$4.48
13	N - 10	Horry County	Scipio Lane Ext.	Scipio Lane Extension from Holmestown Road to Big Block Road with multipurpose path	$17.56
14	R - 9	City of Conway	Hwy 501 Access Mgmt	Hwy 501 from 4th Avenue to 16th Avenue - Coordinate Access Management.	$7.05
15	R - 20a	City of Myrtle Beach	Kings Highway	Improve Kings Highway from Farrow Parkway to 31st N with Bike/Ped/Transit improvements	$32.34
				Mid-Term Project Expenditures	**$94.57**
				Mid-Term Revenue + Short-Term Surplus	**$100.90**
				Mid-Term Surplus	**$6.33**

Rank	Project ID	Local Government	Project Name	Project Description	Cost Estimate ($1,000s)
LONG-TERM 2034-2045 FISCALLY CONSTRAINED PROJECTS					
16	B - 1i	North Myrtle Beach	Barefoot Bridge Replacement	Replace existing swing span bridge with a fixed bridge	$80.00
17	N - 44	City of North Myrtle Beach	Outrigger Rd / Hilton Drive Connector	Connect Outrigger Road with Hilton Drive near 27th South	$11.28
18	N - 5a	Horry County	Postal Way extension to Atlantic Center	Extend Postal Way to the north to Atlantic Center, including bicycle and pedestrian facilities with transit potential	$17.45
19	R - 20c	City of Myrtle Beach/ Horry County/City of North Myrtle Beach	Kings Highway Access Mgmt	Improve Kings Highway from 67th Ave. N (MB) to 48th Ave S (NMB) with Bike/Ped/Transit improvements	$20.32
20	W - 35	City of Georgetown	Anthuan Maybank Drive Widening / Extension	Widen and extend Anthuan Maybank Drive to Highmarket St	$20.45
21	R - 7i	Georgetown County	US 17 and Burgess Road Intersection	Improve operation on corridor after capacity upgrades at grade quadrant intersection design. US 17 and Burgess Road (707)	$5.23
22	N - 14	Horry County/City of North Myrtle Beach	Champions Blvd Connector	New road connecting Water Tower Road and Long Bay Rd as 2 lanes divided with multipurpose path	$6.07
23	N - 49	City of Conway	2nd Avenue Extension	2nd Avenue Extension to S-723 (US 501 exit ramp to 2nd Avenue)	$7.29
24	R - 4i	Georgetown County	US 17 Bypass Widening	Widen to 6 lanes between Bellamy Ave and Burgess Rd on 17 Byp. Install a reduced conflict intersection at Macklen Avenue	$13.27
				Long-Term Project Expenditures	**$181.36**
				Long-Term Revenue + Mid-Term Surplus	**$194.73**
				Long-Term Surplus	**$13.37**

Table 9-5: North Carolina Fiscally Constrained Projects

Rank	Project ID	Local Government	Project Name	Project Description	Cost Estimate ($1,000s)
SHORT-TERM 2023-2027 FISCALLY CONSTRAINED PROJECTS					
1	N - 9	Town of Shallotte	Smith Av to Bridgers Rd Connection	A new interconnection between Smith Ave (SR 1357) to Bridgers Road (SR 1349); 2-Lane, Shoulder	$4.05
				Short-Term Project Expenditures	**$4.05**
				Short-Term Revenue	**$6.30**
				Short-Term Surplus	**$2.25**
MID-TERM 2028-2033 FISCALLY CONSTRAINED PROJECTS					
2	N - 1i	NCDOT	Main St. and Holden Beach Rd. Connection	New Street Connection from Main St. (Hwy 17 Business) to Holden Beach Rd.	$3.83
3	N - 7	Town of Shallotte	South Main and Village Point Rd Connector	A new interconnection between South Main Street near Shallotte Park to NC 179 and Village Point Road; 2-Lane with shoulder	$9.81
4	N - 13	Town of Shallotte	North Main St and Smith Ave Connector	New interconnection between US 17 Business/Main Street (SR 1434) to Smith Ave (SR 1357); 2-Lane, Shoulder	$7.37
				Mid-Term Project Expenditures	**$21.01**
				Mid-Term Revenue + Short-Term Surplus	**$33.45**
				Mid-Term Surplus	**$12.44**
LONG-TERM 2034-2045 FISCALLY CONSTRAINED PROJECTS					
5	N - 2i	Town of Shallotte	Smith Ave. and Hwy 130 Connection	Collector Street Connection to Smith Ave Interchange Project (U-5862). Potential tie-in to Carolina Bays Pkwy.	$16.27
				Long-Term Project Expenditures	**$16.27**
				Long-Term Revenue + Mid-Term Surplus	**$69.64**
				Long-Term Surplus	**$53.37**

Table 9-6: South Carolina Unfunded Projects

Rank	Project ID	Local Government	Project Name	Project Description	Cost Estimate ($1,000s)
25	W - 30	Horry County	US 17 Bus Access Mgmt	Install Additional Lanes on Bus 17/Eliminate Frontage Roads Between Myrtle Beach and Surfside, match existing section in MB and extend East Coast Greenway	$24.60
26	N - 8	Georgetown County	Georgetown Bypass/Brick Landing Rd Phase 4	Georgetown Bypass/Brick Landing Road PH 4: Hwy 521 to Hwy 17, south (across Sampit River)	$53.70
27	R - 32	Horry County	SC 179 Widening	Improve and widen 179 from US 17 to NC 179 to multilane facility with multipurpose path	$16.90
28	M - 6	Horry County	SC 9 Access Mgmt	Access management improvements from SC 57 to Water Grande Blvd including plantable median between intersections and bicycle and pedestrian facilities	$14.95
29	N - 5i	Horry County	Conway Perimeter Road / Busbee Bypass	Conway Perimeter Rd / Busbee Bypass-From US 701 to SC 544	$361.49
30	N - 54	City of Conway	Powell St Extension	Extend Powell Street from 1st Avenue to Marina Drive and install sidewalks in Conway	$0.47
31	B - 8	City of Myrtle Beach	Hwy 501 Bridge	Replace and widen HWY 501 Intracoastal Waterway bridge, add bike lanes and sidewalks (or build parallel bridge)	$50.72
32	W - 12	Horry County/City of North Myrtle Beach	Little River Neck Road Widening	Widen Little River Neck Road from 2 to 3 lanes with multipurpose path in North Myrtle Beach and construct roundabout north of Hill St	$50.96
33	B - 4	Horry County	New Bridge over Waccamaw River	New Bridge over Waccamaw River, which would link SC 90 with SC 905 east of Conway	$70.72
34	I - 16i	Georgetown County	US 17 Access Mgmt	Install a NB U-turn at Boyle and 17 in conjunction with other access management efforts in this corridor	$0.44
35	I - 12i	Georgetown County	US 17 Signalizations	Install unsignalized reduced conflict measures at all three intersections between Sandy Island Road and Wesley Road	$3.49
36	R - 6i	Georgetown County	US 17 / Pendergrass and Wachesaw Intersections	Convert 17/Pendergrass and 17/Wachesaw to a RCI. Wesley Road may need to align with Coquina. Pendergrass may not need to be signalized.	$7.40
37	W - 4	Horry County	SC 90 Widening	Widen SC 90 from 17 to Robert Edge Parkway Intersection with bicycle and pedestrian facilities	$117.16
38	W - 3b	Horry County	US 17 Bypass Widening	Widen US 17 Bypass from Hwy 544 to Horry County line	$155.59
39	N - 19	Georgetown County	Parkersville Rd Extension	Extension of Parkersville Road from Baskerville Road north to Gilman Road in Litchfield	$4.67
40	W - 5	Horry County	SC 90 Widening	Widen SC 90 from Robert Edge Parkway to SC 22, including bicycle and pedestrian facilities	$119.73
41	R - 1i	Georgetown County	US 17 / Alston Rd Intersection	Restripe Petigru Dr approach with an exclusive left-turn lane and construct an exclusive left-turn lane on Alston Rd with 125 feet of storage	$1.04
42	I - 15i	Georgetown County	US 17 Access Mgmt	Install raised concrete medians at certain access points in this high crash fatality area between Smalls Loop Rd and Island Shops (N Causeway Road)	$11.22
43	W - 39	City of Myrtle Beach	29th Avenue North	Widen 29th Ave North from Robert Grissom Parkway to North Kings Highway with bike lane and sidewalk (Limit project to the Oak Street intersection)	$14.39
44	W - 3a	Horry County	US 17 Bypass Widening	Widen US 17 Bypass from Back Gate to Hwy 544	$67.55
45	N - 3	Horry County/City of North Myrtle Beach	Sandridge Road Extension	Extend Sandridge Rd/Old Sanders Dr to Bourne Trail all the way to Long Bay Rd, with dedicated bicycle lanes	$85.81
46	W - 6	Horry County	SC 90 Widening	Widen SC 90 from International Drive to US 501, including bicycle and pedestrian facilities	$206.72
47	I - 10i	Georgetown County	US 17 / US 17 Bus Intersection	Improve intersection of 17 and 17 Bus with a signal. Change alignment to right angle in long term (L-2)	$6.76
48	W - 38	City of Myrtle Beach	38th Avenue North	Widen 38th Ave North from Robert Grissom Parkway to North Kings Highway with bike lane, and sidewalk	$12.85

Rank	Project ID	Local Government	Project Name	Project Description	Cost Estimate ($1,000s)
49	I - 10	City of Conway	4th and 3rd Avenue Intersections	Intersection improvements at 4th Ave and 3rd Ave (Hwy 701)	$18.45
50	R - 4	Horry County	Sea Mountain Highway Widening	Improve alignment of Sea Mountain Highway (SC 9 to the Intracoastal Waterway Bridge) in Horry County from 2-lane to 3-lane undivided minor arterial standards, including bicycle and pedestrian amenities with turning pockets at major intersections	$21.76
51	W - 1	City of Myrtle Beach	Seaboard St Widening	Widen Seaboard St between US 501 and Mr. Joe White Ave in Myrtle Beach including bicycle and pedestrian improvements.	$30.50
52	N - 6i	Horry County	Gardner Lacy Rd Extension	Extension of Gardner Lacy to International Dr	$80.59
53	W - 11	Horry County	SC 90 Widening	Widen SC 90 from SC 22 to International Drive, including bicycle and pedestrian facilities	$202.22
54	R - 30	Horry County	Garden City Connector Widening	Widen Garden City Connector to include turn lanes at major intersections and construct multi-purpose path to improve capacity and safety	$18.06
55	I - 8i	Georgetown County	US 17 Access Mgmt	Remove concrete median and install grass at Rodeway Inn/SGA Architects office and US 17	$0.09
56	R - 20b	City of Myrtle Beach	Kings Highway Access Mgmt	Improve Kings Highway from 31st N to 67th Ave. N with Bike/Ped/Transit improvements	$21.02
57	W - 18	Horry County	SC 57 Widening	Widen SC 57 from SC 90 to SC 9 with bicycle and pedestrian amenities	$48.88
58	I - 6	City of Conway	US 501 / SC 544 Interchange	US 501 / SC 544 Interchange improvements	$81.17
59	R - 12i	Horry County	Hwy 905 Widening	Widening in Conway to SC 9, Hwy 905-from 4-lane section near Conway to SC 9-(Ended at GSATS boundary at Hwy 19)	$94.82
60	I - 6i	Georgetown County	US 17 / US 17 Bus Signalization	US 17 at US 17 Bus - Signalize NB 17 when warranted	$0.75
61	R - 3i	Georgetown County	S Causeway Road/Tyson Dr and Beaumon Dr Intersections	Signal spacing improvements and realignment between S Causeway Road/Tyson Drive to S Causeway Drive/Beaumon Drive	$13.53
62	W - 16	Horry County	Big Block Rd Widening	Widen from SC 707 to SC 544 and Realign Big Block Rd and Include bicycle and pedestrian facilities	$39.07
63	R - 11	City of Conway	2nd/3rd/4th/Powell/Wright Intersections	Realign road segments to allow for better capacity, function, flow and safety	$10.34
64	AM - 3	Georgetown County/Horry County	US 17 Bus Access Mgmt	Access management improvements from Belin Rd to Tadlock Rd	$10.77
65	W - 10	Horry County	River Oaks Drive Widening	Widen River Oaks Drive including turn lanes at major intersections to improve capacity and safety and construct multi-purpose path	$144.50
66	W - 9	Horry County/Georgetown County	US 701 Widening	Widen US 701 from Georgetown to Conway	$445.56
67	I - 1	City of North Myrtle Beach	Edge Parkway / SC 31 Interchange	Robert Edge Parkway / SC 31 interchange ramp improvements. Convert existing signalized diamond interchange to diverging diamond interchange to improve traffic floc and eliminate left turn conflicts	$18.45
68	R - 8i	Georgetown County	Petigru Dr and Waverly Rd Roundabout	Single lane roundabout at Petigru Dr and Waverly Rd	$4.30
69	R - 10i	Horry County	Tournament Blvd Widening	Widening to Hwy 707 with bicycle and pedestrian improvements	$28.08
70	W - 8	City of Myrtle Beach	US 17 Bypass Widening	Widen US 17 Bypass from 4 lanes to 6 lanes from 29th Avenue N northwards to Grissom with interchange improvements	$144.43
71	R - 27	Town of Surfside Beach	Sandy Lane Access Mgmt	Improve Azalea Drive and Sandy Lane to Improve Backside Access in Surfside Beach	$6.70
72	B - 1	Horry County/City of North Myrtle Beach	US 17 Bridges in North Myrtle Beach	Widen US 17 Bridges at SC 9, SC 90, and Sea Mountain Highway with additional grade separation at SC 9	$71.39

Rank	Project ID	Local Government	Project Name	Project Description	Cost Estimate ($1,000s)
73	I - 20	Georgetown County	US 17 at Hog Heaven and the Colony Intersection Improvement	Project to close a dangerous median break in front of an existing business on US Highway 17 (located in the middle of a horizontal curve) in Pawleys Island and improve/install a dedicated U-turn lane both northbound and southbound halfway between The Colony	$3.07
74	R - 13i	Horry County	Hwy 378 Widening	From the western limit of current 5-lane section to Little Pee Dee River Bridge approach at county line with bile and pedestrian improvements (Project ends at GSATS boundary for this inclusion at Juniper Bay Rd)	$23.82
75	I - 11i	Georgetown County	US 17 / Kings River Rd Signalization	Signalization at Kings River Rd and 17 to meet LOS needs	$0.63
76	W - 7	City of North Myrtle Beach	2nd Avenue N Widening	Widen 2nd Avenue North in North Myrtle Beach with bike lane, and multipurpose path	$22.91
77	I - 9i	Georgetown County	0	Traffic study to determine alternative forms of traffic control at DeBordieu Colony Neighborhood	$0.03
78	B - 7	Horry County/City of North Myrtle Beach	US 17 and Champions Blvd Connector	Construct connector from US 17 (between 17th Ave S and 21st Ave S) and Champions Blvd via existing Bourne Trail bridge over SC 31	$78.45
79	R - 5i	Georgetown County	Kings River Rd and Waverly Rd Roundabout	Install roundabout to maintain LOS especially in regard to nearby schools at Kings River Rd and Waverly Rd	$4.30
80	R - 5	Horry County	Mt. Zion Road Access Mgmt	Improve alignment of Mt Zion Road (SC 90 to SC 57) to two-lane undivided minor arterial standards, including bicycle and pedestrian amenities with turning pockets at major intersections	$12.01
81	W - 21	Horry County	Singleton Ridge Road Widening	Widen Singleton Ridge Road from US 501 to SC 544 with multipurpose path in Conway	$35.60
82	W - 32	Horry County	Myrtle Ridge Drive Widening	Widen Myrtle Ridge Drive from US 501 to SC 544	$49.18
83	R - 15i	City of Conway	Church St Access Management	Church Street between Mill Pond and 16th safety and access management improvements	$2.74
84	R - 9i	Georgetown County	Kings River Rd and Hagley Dr Roundabout	Single-lane roundabout at Kings River Rd and Hagley Dr if cul de sac is not implemented	$4.30
85	B - 3	Horry County	Highway 22 Expansion	Environmental Studies and Right of Way	$25.00
86	N - 4i	Horry/Myrtle Beach	Bowline Boulevard Extension to Edge Pkwy	Bowline Boulevard Extension to Edge Pkwy	$8.62
87	W - 20	Georgetown County	Pennyroyal Road Widening	Widen Pennyroyal Rd from E of Montford Drive to US 17 in Georgetown	$18.34
88	R - 14i	Horry County	Hwy 111 Access Mgmt	Safety and capacity improvements, Hwy 57 to US 17 (includes portion of S-50 / Mineola). Add bike/ped improvements	$25.75
89	N - 25	City of Conway	Medlen Parkway Extension	Medlen Parkway Extension: Realign western terminus at US 501 to continue straight to US 378	$27.11
90	W - 17	Horry County	Water Tower Road Widening	Widen Water Tower Road from SC 31 to SC 90 and Widen Long Bay Road, including bicycle and pedestrian facilities	$141.75
91	N - 100	City of North Myrtle Beach	Long Bay Rd Widening	Widen Long Bay Road form SC90 to Champions Blvd.	$56.35
92	R - 2i	Georgetown County	Hagley Dr Roundabout	Cul de sac Hagley Dr	$4.30
93	W - 61	City of North Myrtle Beach	Champions Blvd and Sandridge Loop Connector	Pave and/or widen existing 2 lane road connecting Champions Blvd. to Sandridge Loop. Connect to Edge Pkwy. 2 to 4 lane widening	$32.12
94	W - 37	City of Conway	Cultra Road Widening	Widen Cultra Road from Church to Main St with center median and multipurpose path	$55.77

Table 9-7: North Carolina Unfunded Projects

Rank	Project ID	Local Government	Project Name	Project Description	Cost Estimate ($1,000s)
6	W - 28	Town of Shallotte	NC 179 Widening	Widen NC 179 to a multi-lane facility from US 17 BUS to Hale Swamp Road (future NC 179); 4-Lane W/median & multipurpose path	$65.99
7	B - 5	Town of Ocean Isle Beach	New Bridge on Brick Landing Rd	New Bridge from Brick Landing Road (SR 1143) to Shallotte Blvd (SR 1202)	$18.08
8	W - 46	Town of Shallotte	White St Widening	Widen White Street to a multi-lane facility from Smith Avenue (SR 1357) to Mulberry Street (SR 1357); 4-Lane W/Median	$22.03
9	W - 31	Brunswick County	SC 130 Widening	Widen NC 130 to a multi-lane facility from Smith to Sabbath Home Intersection; 4-Lane W/median & multipurpose path	$184.03
10	S - 3	Town of Shallotte	Ocean Hwy Superstreet	Upgrade roadway to superstreet from NC-211 to US 17 B (Main Street)	$33.31
11	S - 5	Town of Shallotte	Ocean Hwy Superstreet	Upgrade roadway to superstreet from the US 17 B (Main Street) to US 17 B (Main Street)	$26.90
12	W - 51	Town of Holden Beach	NC 130 Widening	Widen NC 130 to a multi-lane facility from Sabbath Home Intersection to the end of state maintenance; 4-Lane W/Median & Sidewalk	$30.41
13	W - 53	Town of Shallotte	NC 130 Widening	Widen NC 130 to a multi-lane facility from McMilly Road (SR 1320) Village Road (NC 179); 4-Lane W/Median & Sidewalk	$55.65
14	I - 2i	Town of Shallotte	Village Rd / Village Pond Rd Intersection	Intersection improvement at Village Rd (Hwy 179) & Village Point Rd	$6.76
15	W - 59	Town of Sunset Beach	NC 904 Widening	Widen NC 904 to a multi-lane facility from US 17 to NC 179 (Beach Drive); 4-Lane W/Median & Sidewalk	$99.64
16	W - 44	Town of Ocean Isle Beach	Ocean Isle Beach Rd Widening	Widen Ocean Isle Beach Road (SR 1184) to a multi-lane facility from US 17 to NC 179 (Beach Drive); 4-Lane W/Median	$96.21
17	I - 8	Brunswick County	Persimmon Rd / NC 179 Intersection	Intersection improvements at Persimmon Rd and NC 179	$6.76
18	W - 26	Town of Ocean Isle Beach	Beach Dr Access Mgmt	Access management	$10.77
19	S - 4	Town of Shallotte	Ocean Hwy Superstreet	Upgrade roadway to superstreet from US 17 B (Main Street) to NC-904	$35.20
20	W - 23	Town of Calabash	NC 179 Widening	Widen NC 179 to a multi-lane facility from the South Carolina State Line to Old Georgetown (SR 1163); 4-Lane W/Median & Multipurpose Path	$54.60
21	I - 1i	Town of Shallotte	Forest St Extension	Right in right out intersection with Forest St Ext. & Hwy 17 Bypass	$6.76
22	W - 40	Brunswick County	Longwood Rd Widening	Widen NC 904 to a multi-lane facility from Etheridge Road (SR 1308) to US 17; 4-Lane W/Median	$95.89
23	W - 22	Town of Sunset Beach	NC 179 Bus Widening	Widen NC 179 BUS to a multi-lane facility from NC 904 (Seaside Road) to the Sunset Blvd Bridge; 4-Lane W/Median	$50.13
24	S - 1	Town of Carolina Shores	Ocean Hwy Superstreet	Upgrade roadway to superstreet from the NC-904 to the South Carolina State Line	$44.84
25	W - 41	Brunswick County	Hickman Rd Widening	Widen Hickman Road (SR 1303) to a multi-lane facility from US 17 to State Line; 4-Lane W/Median	$73.66
26	W - 60	Town of Sunset Beach	NC 179 Widening	Widen NC 179 to a multi-lane facility from NC 904 (Seaside Road) to Beach Drive (179B); 4-Lane W/Median & Sidewalk	$103.98

Figure 9-1: Fiscally Constrained Projects by Type in Georgetown County, SC

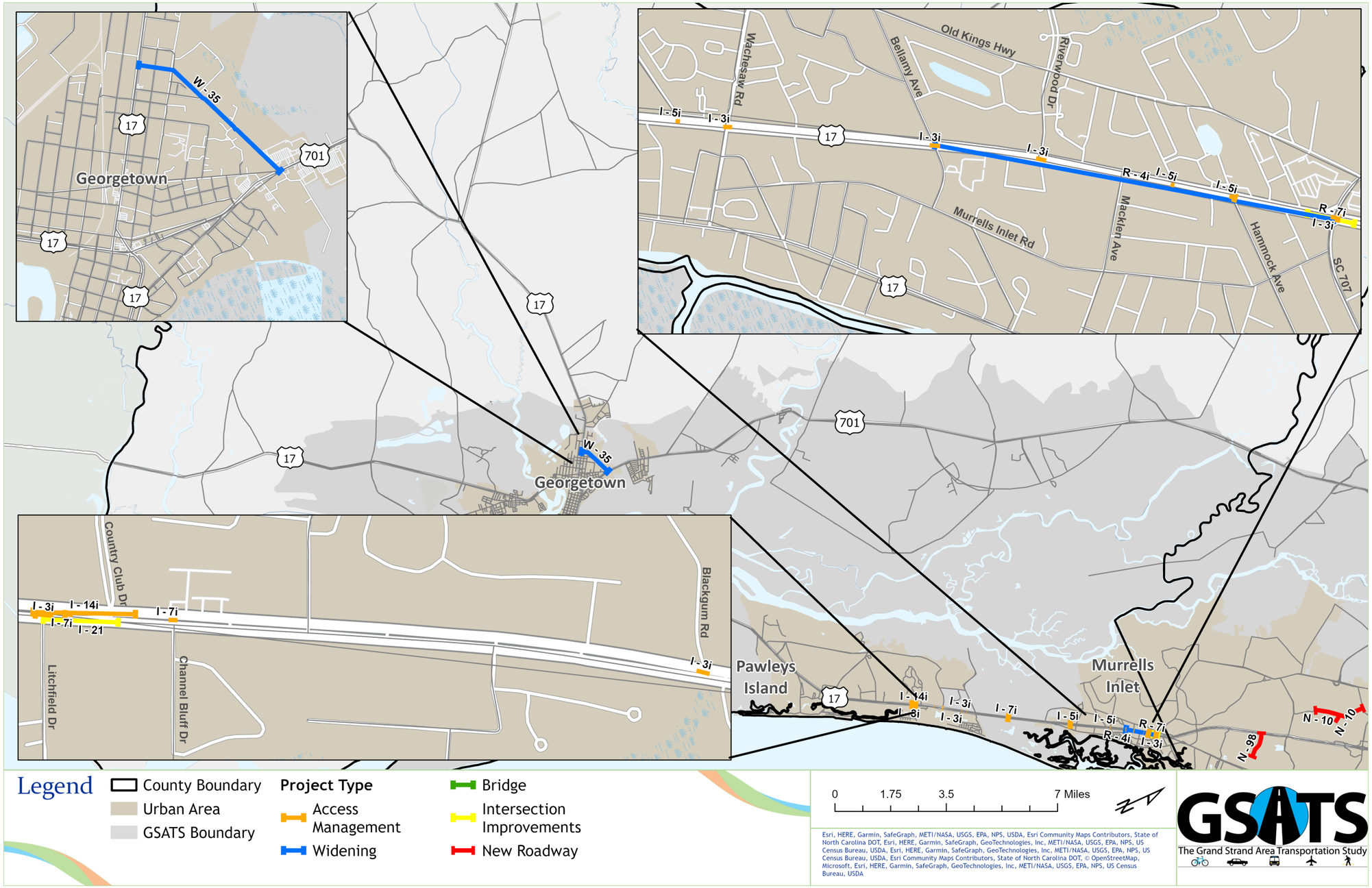


Figure 9-2: Fiscally Constrained Projects by Type in Horry County, SC

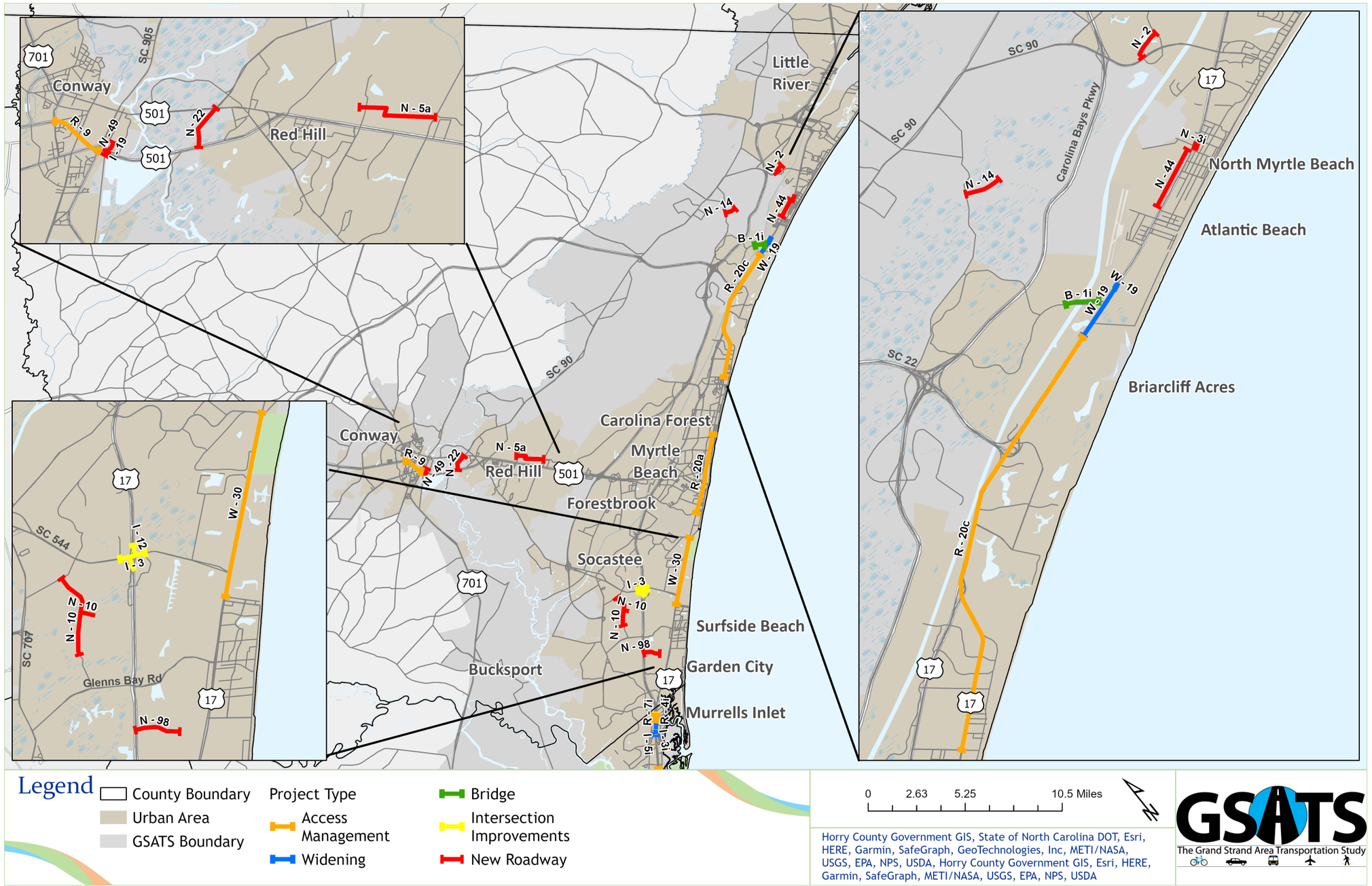
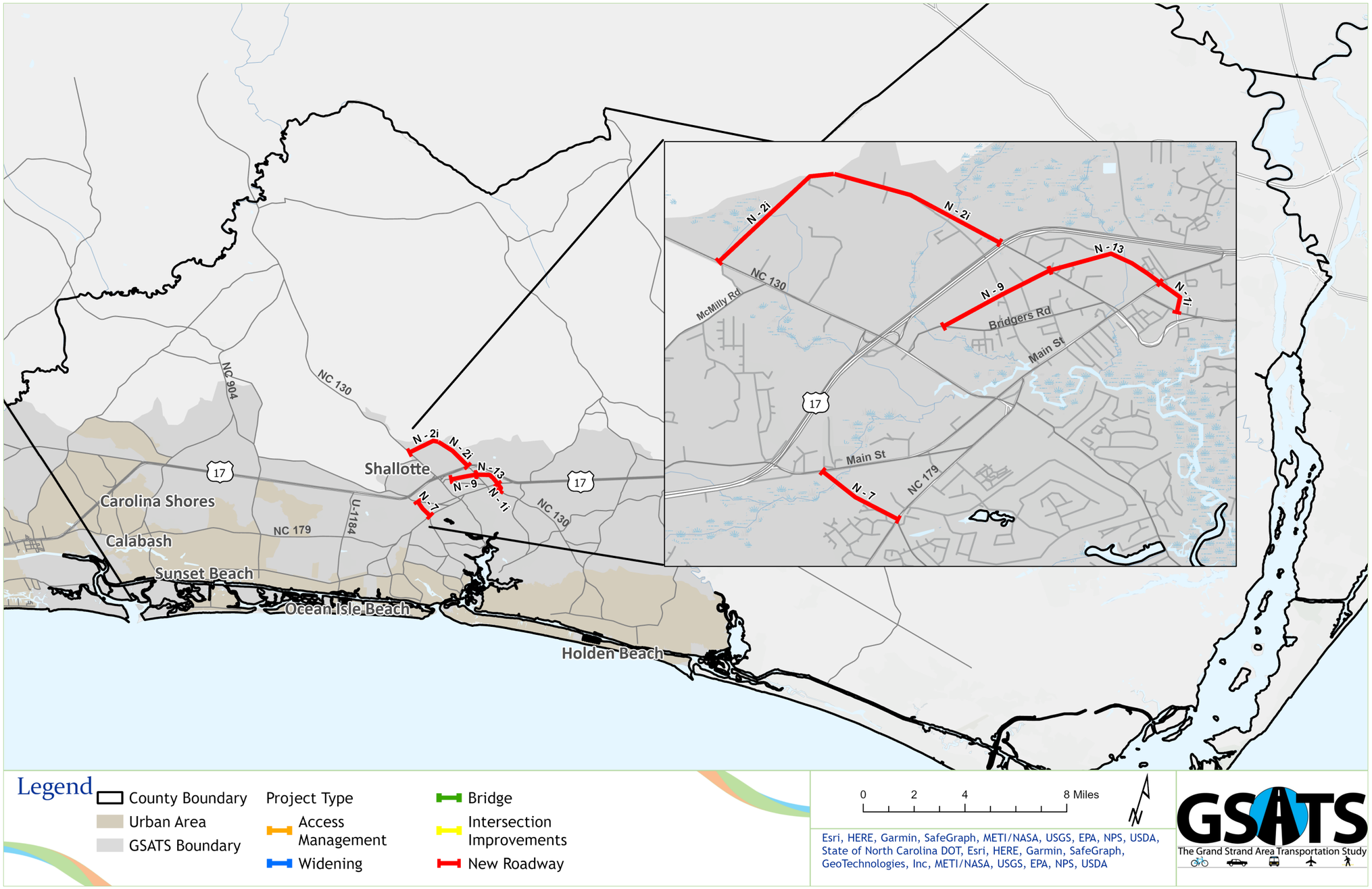


Figure 9-3: Fiscally Constrained Projects by Type in Brunswick County, NC



PERFORMANCE OF THE MTP NETWORK

Using the GSATS TDM, the regional network was updated to include the fiscally constrained project list. The results of the roadway network scenario are presented in **Table 9-8**. These comparisons against the Existing plus Committed network provide the performance of the fiscally constrained MTP project list. The Existing plus Committed performance should be considered the "do nothing" scenario against the scenario of funded projects identified through the MTP process. This illustrates the change in the distribution of lane miles at the various LOS. In **Table 9-9**, the overall change in vehicle miles of travel (VMT) and vehicle hours of travel (VHT) is detailed. This informs planners, decision-makers and the traveling public of the relative improvement in miles traveled on a typical peak season day across the entire GSATS roadway network. Ideally, VMT and VHT decrease when improvements are made. Exceptions to this are when new roadways are introduced providing a longer, yet more efficient, route for making trips. This would result in an increase in VMT and a decrease in VHT. A higher VHT suggests more time required to make trips, likely the result of congestion delays. To support the regional goals of a more efficient and more reliable network, the result of a decreased VHT is desired. Using the regional TDM to estimate this performance, the fiscally constrained project network results in a net decrease of 8,735 in VMT and a net decrease of 22,649 VHT. **This demonstrates a reduction of more 22,649 hours of autos and trucks operating on the regional highway system on an average peak season daily basis.**

Adding an analysis of VMT and VHT provides a more comprehensive view of the health of the transportation system. VMT specifically provides information on environmental effects such as emissions and energy consumption. In terms of safety, lower VMT correlates to less frequent and less severe collisions[23]. By reducing regional VMT, GSATS is also addressing its safety performance measures.

Table 9-9: VMT and VHT Performance of MTP Network (2045)

Functional Class	2045 E+C		2045 MTP Projects		Difference E+C and MTP	
	Model VMT	Model VHT	Model VMT	Model VHT	VMT	VHT
Expressway	2,704,599	108,105	2,697,255	107,985	-7,344	-120
Ramp	273,628	26,631	272,050	26,493	-1,578	-138
Divided Principal Arterial	5,273,784	241,030	5,266,821	231,967	-6,963	-9,062
Undivided Principal Arterial	1,726,252	116,728	1,719,633	115,601	-6,620	-1,126
Divided Minor Arterial	1,756,520	99,983	1,755,058	95,435	-1,461	-4,549
Undivided Minor Arterial	3,577,437	216,447	3,549,662	207,568	-27,775	-8,879
Divided Major Collector	45,716	3,426	45,737	2,526	+21	-900
Undivided Major Collector	1,445,136	43,039	1,433,349	41,846	-11,787	-1,192
Divided Collector	450,171	21,610	464,072	22,492	+13,901	+882
Undivided Collector	3,546,407	148,516	3,587,278	150,951	+40,871	+2,436
Total System Wide	**20,799,650**	**1,025,513**	**20,790,915**	**1,002,865**	**-8,735**	**-22,649**

Table 9-8: LOS Distribution (2019, 2045 E+C, 2045 MTP Projects)

Level of Service	2019 Base Year		2045 E+C		2045 MTP -Fiscally Constrained Project List	
	Lane Miles	Lane Mile Distribution (%)	Lane Miles	Lane Mile Distribution (%)	Lane Miles	Lane Mile Distribution (%)
A	2,962	59%	2,282	43%	2,292	43%
B	739	15%	872	17%	887	17%
C	720	14%	843	16%	848	16%
D	275	5%	441	8%	472	9%
E	195	4%	387	7%	368	7%
F	126	3%	432	8%	422	8%
Total	5,019	100%	5,257	100%	5,289	100%

[23] https://www.wri.org/research/sustainable-and-safe-vision-and-guidance-zero-road-deaths

SOUTH CAROLINA ACT 114

In 2007, the South Carolina General Assembly enacted Act 114. One of the landmark items in Act 114 was the requirement that the South Carolina Department of Transportation (SCDOT) establish a project prioritization process. In 2016, the General Assembly enacted Act 275. Act 275 eliminated some of Act 114's requirements but it retained the requirement for project prioritization. This requirement is codified in Section 57-1-370 of the South Carolina Code of Laws, 1976, as amended. Additional detail on the process is found in S.C. Code of Regulations 63-10, as amended.

SCDOT Planning Directive 15 provides the details of scoring and ranking processes for Metropolitan Planning Organizations (MPO) and Council of Governments (COG) for the following project improvement type classifications: corridor improvement/road widening, new-location roadway, and functional intersection. MPOs and COGs may choose to adopt the state defined ranking templates below or define a similar methodology compliant with Act 114 to prioritize projects. Specific MPO and COG ranking procedures are ratified by the SCDOT Commission.

The project scoring criteria described above were developed during the 2045 LRTP process in compliance with Act 114 and Planning Directive 15.

NCDOT SPOT 6.0 AND 7.0

The Strategic Transportation Investments (STI) is a process to determine how the North Carolina Department of Transportation, in partnership with local governments, will fund and prioritize transportation projects in the state of North Carolina. Under the STI, all modes will compete for the same funding. This means that roadway projects will compete with ferry projects which will compete with public transportation projects, and so on.

The STI places projects into three categories: Statewide Mobility, Regional Impact, and Division Needs levels. Metropolitan Planning Organizations (MPOs), Rural Planning Organizations (RPOs), and division engineers will assign local input points to projects in the Regional and Division levels. MPOs and RPOs are required to develop a methodology for the assignment of local input points. Funding levels are designated according to the 2013 Strategic Transportation Investments law. Each of the three categories identified under STI have their own criteria:

- Statewide Mobility Level
  - Projects of statewide significance will receive 40% of the available revenue; and
  - The project selection process will be 100% data-driven/quantitative scoring.

- Regional Impact Level
  - Projects of regional significance will receive 30% of the available revenue based on regional population. Projects on this level compete within specific regions made up of two NCDOT Divisions. GSATS is in Region B; and
  - Data / quantitative scoring will comprise 70% of the decision-making process and local rankings will comprise of the remaining 30%.

- Division Needs Level
  - Projects that address local concerns such as safety, congestion and connectivity will receive 30% of the available revenue shared equally over NCDOT's 14 Transportation Divisions. GSATS is in NCDOT Division 3; and the department will choose projects based 50% on data and 50% on local rankings.

NCDOT utilizes a cascading method as part of the funding eligibility criteria. Projects not funded in the Statewide Mobility category are eligible for funding in the Regional Impact category. Similarly, projects not funded in the Regional Impact category are eligible in the Division Needs category.

The Strategic Prioritization Office of Transportation (SPOT) will calculate quantitative scores for all projects based on the adopted methodology. Default criteria were recommended by the Prioritization 6.0 (P6.0) workgroup and agreed to by NCDOT to quantitatively score projects across all modes.

Due to rising costs for projects funded in the previously adopted 2020-2029 STIP, little to no funding was projected to be available for new projects in the 2024-2033 STIP timeframe. Therefore, on August 4, 2021, the P6.0 workgroup recommended, and the N.C. Board of Transportation approved, the P6.0 prioritization cycle be halted. The decision was made to develop the 2024-2033 STIP using existing projects from the previously adopted 2020-2029 STIP. The conclusion of the P6.0 cycle was the release of the quantitative scores and the local input point procedure was halted. The P6.0 workgroup was reconvened to finalize the methodology and procedures used for this one-time STIP development exception and the N.C. Board of Transportation approved the process. Projects with current construction schedules in the first three years (2024-2027), projects with right-of-way actively underway, and those with federal grants were programmed first; followed by a seniority approach of combined factors as oldest Prioritization cycle and highest scoring projects. There were no newly submitted projects from the P6.0 prioritization cycle included in the 2024-2033 STIP.

The Prioritization 7.0 (P7.0) workgroup began meeting monthly in October 2022. Workgroup recommendations were presented to the NC Board of Transportation on and approved on June 6, 2023. Project submittal officially opened to Prioritization partners on July 10, 2023.

It is expected that MPOs, RPOs and the NCDOT's division engineers will be given flexibility to develop alternative highway criteria weights and formulas for the quantitative evaluation and project scoring in the Regional Impact projects and Division Needs projects as part of P7.0 methodology. SPOT requires that any deviation from the adopted criteria be approved by MPOs and RPOs in the region and/or division. During the Prioritization 5.0 (P5.0) cycle, Region B and Division 3 chose not to deviate from the statewide default criteria.

GSATS' Local Input Point Assignment

The following process is used by GSATS to allocate local input points in NCDOT's prioritization process. It has been developed by the GSATS MPO for the purposes of participating in determining transportation funding priorities in the regional and division funding level in P7.0. This process will be used to rank all projects within the GSATS boundary in Brunswick County and is designed to be both data-driven and responsive to local needs. Local input can come in the form of surveys; comment periods; historical documentation that supports a priority project important to the community; nearby RPO, MPO, or Division priorities; or other evidence made available to the GSATS-North Carolina Transportation Advisory Committee (NCTAC).

The methodology has been developed to meet the requirements of North Carolina Session Law 2012-84 (NC Senate Bill 890), which requires that MPOs and RPOs have a process including both quantitative and qualitative elements for determining project prioritization. The MPO's participation in the Strategic Transportation Investments consists of the following steps: (1) select projects for consideration in the Statewide, Regional, and Division levels; (2) develop draft qualitative scoring of projects and ranking; (3) seek public involvement; and (4) finalize project scoring and ranking.

Schedule

As part of the STI process, GSATS requests projects from the local member governments (counties, towns, transit departments, airports, etc.). The GSATS-North Carolina Technical Coordinating Committee (NCTCC) then evaluates the candidate projects. The NCTAC and Policy Committee then approve the draft prioritized project list and point allocation pending public comment. New projects are submitted to the NCDOT's SPOT. GSATS next advertises the projects for a 30-day public comment period, as prescribed in the GSATS Public Participation Process, followed by NCTCC, NCTAC, and Policy Committee meetings to consider the public comments and any suggested modifications to the point allocation.

Local Point Methodology

During the P7.0 cycle, points will be allocated to projects in order of their MTP quantitative ranking. Projects partially located within the study area could be given up to 100 points and the balance of points necessary to provide 100 points could be shared with the neighboring MPO/RPO. If a points sharing arrangement is approved, both parties are required to agree to the number of points donated and to provide a written agreement to the SPOT Office. High priority projects that are expected to cascade to the Regional or Division funding levels could be awarded GSATS' local input points at the discretion of the NCTAC.

Non-highway projects are evaluated when received. Point allocation for non-motorized projects are only made when local matching funds could be reasonably expected. The P7.0 non-motorized project score will be provided by NCDOT and will be used, along with local input, to evaluate non-motorized projects.

Final Ranking and Local Points Assignment

Points are assigned to each project based on project MTP score and local input. The P7.0 DRAFT Local Input Point Allotments from February 2023 gives GSATS 1,100 points to assign toward Regional Projects and a submittal allotment of 14 per mode while Division 3 is given 2,500 points and a submittal allotment of 14 per mode. Each project can receive a maximum of 100 points. Division Consultation with the RPO, Division Engineer, Division Planning Engineer, and District Engineer for each project to gauge Division priority will occur prior to final point allocation. Any justification/rationale for point assignments made by the NCTAC which deviate from this local methodology will be placed on the GSATS website.

ALTERNATIVE FUNDING STRATEGIES

Federal and state transportation revenue streams are rapidly losing pace with needed investments. Federal gas taxes have not changed since the early 1990s, forcing states to increase taxes to maintain crumbling infrastructure. North Carolina raised the state gas tax to 40.5 cents per gallon in 2023. In 2017, the South Carolina General Assembly voted to increase the gas tax by 12 cents to a total of 28 cents per gallon, phased in over a 6-year period. An increase in oil prices in the mid-2000s caused people to adjust their driving habits and buy more fuel-efficient cars. Federal programs have made strides toward rejuvenating the automobile industry and decreasing emissions, but those advances have come at the cost of decreasing federal and state transportation revenue. According to data from the International Energy Agency (IEA)[24], nearly 1 million battery-powered or hybrid vehicles were purchased in the United States in 2022. IEA projects annual sales to exceed 3.3 million by 2025 and 7.8 million in 2030. The electrification of the overall vehicle fleet poses a revenue problem for funding road improvements in the future. In order to address the reduction in gas tax revenues due to fuel efficient cars, North Carolina enacted legislation in 2022 to allocate approximately six percent of annual sales tax revenue to the state highway fund.

Various suggestions have been made to bolster federal and state transportation funding mechanisms, including increasing the gasoline tax and/or indexing it to the consumer price index, increasing local vehicle registration fees, and imposing a local tax dedicated to transportation improvements. The South Carolina General Assembly recently raised the gas tax for the first time in decades, so additional increases in the near term are unlikely. Other suggestions include transitioning to a tax based upon miles driven, rather than gasoline consumed. GPS and other technologies to implement this type of solution have been around for years but concerns over privacy may limit this type of solution from widespread adoption.

At the local level, Horry County residents voted to extend a local option sales tax dedicated to transportation capital projects in 2016. Plans are already underway for the fourth installment of the Horry County one-cent sales tax for infrastructure. Local option taxes are increasingly becoming a solution for funding transportation projects across the country.

Impact Fees are one-time charges levied by local governments on new development. They are charged to developers to help municipalities mitigate growth-related infrastructure impacts. While impact fees can help municipalities make the required investments in infrastructure to accommodate growth, they can have the effect of shifting development to other areas with little or no regulation.

Nevertheless, MPOs must make some prediction on future revenue funding streams in order to try and keep up with the transportation infrastructure investments that are necessary to keep their regional economies competitive in the global marketplace.

POLICY RECOMMENDATIONS

Resilience and Green Infrastructure

In 2022, the Waccamaw Regional Council of Governments (WRCOG) partnered with the South Carolina Forestry Commission (SCFC) and the nonprofit Green Infrastructure Center, Inc. (GIC) to create a strategic green infrastructure network and plan for the South Carolina Waccamaw Region[25]. The plan provided regional implementation strategies for protecting and restoring green infrastructure habitat cores and connecting corridors statewide. Addressing significant issues such as stormwater, sea level

[24] https://www.iea.org/data-and-statistics/data-tools/global-ev-data-explorer

[25] https://gicinc.maps.arcgis.com/sharing/rest/content/items/fbe8cd5765fb473193e1ea4ffd8edd1b/data

rise, storm surge, and alternative energy sources will require regional collaboration. The following recommendations and strategies are critical toward creating a more resilient and adaptable Waccamaw Region.

- **Utilize data and maps from Green Infrastructure Plan to secure trail grants**. The WRCOG, counties, and municipalities should use the maps and data from this plan to secure grants for trail and greenway master planning, with a focus on habitat connectivity. This data could inform the selection of future Transportation Alternatives projects in the GSATS region to prioritize projects that encourage habitat connectivity.

- **Facilitate Collaborative Regional Planning to address Flooding and Stormwater.** Marshes and floodplains are extensive in the region and sea level rise and storm surge are risks likely to impact habitats and human use of the land in all three counties over the next 40 years. Another risk for the region is urban development, especially suburban sprawl patterned growth. Development risks are greatest in Horry and Georgetown counties, and around Myrtle Beach, Conway, Georgetown, and Andrews. GSATS can proactively work with these communities to encourage Green Infrastructure best practices such as bioswales, constructed wetlands, permeable pavers, tree planting, rain gardens, and green streets, alleys, and parking lots. Addressing regional stormwater issues is a multi-faceted approach and must include solutions at the local jurisdictional level.

- **Watershed Management Plans.** WRCOG has completed several watershed management plans in the Region funded by USEPA Section 319 and 604(b) grants through the South Carolina Department of Health and Environmental Control (SCDHEC). The 2014 Murrells Inlet Watershed Plan[26] identifies watershed management measures such as low impact development (LID) techniques and public education and outreach in order to address water quality issues. GSATS and WRCOG can identify areas of flooding and stormwater concern and investigate context-sensitive solutions. GSATS can advocate for these solutions during the design phase of transportation projects.

- **Climate Action and Resilience Plans.** A Climate Action & Resilience Plan provides evidenced-based measures to reduce greenhouse gas emissions and preventative measures to address the negative outcomes of extreme weather events. The South Carolina Office of Resilience recently completed the Strategic Statewide Resilience and Risk Reduction Plan[27] which offers recommendations on incorporating resilience into infrastructure design. GSATS can work with the Office of Resilience to ensure that future conditions are considered when transportation projects are planned and designed.

- **Utilize Free Planning Tools.** Several Federal agencies offer free web-based tools to assist with resilience planning efforts. Some examples include NOAA's CHaMP Tool[28], The Council on Environmental Quality's Climate & EJ Screening Tool[29], Climate Mapping for Resilience and Adaption (CMRA) Assessment Tool[30], and FEMA's Hazus software[31].

Agency Coordination for Integrated Infrastructure Planning and Programming

For continued efforts to integrate transportation and mobility planning with climate, resilience, stormwater, and other infrastructure improvement efforts, it is recommended that additional agencies and organizations be invited to engage in regional planning efforts. Future efforts could include additional municipal planning and infrastructure subject matter experts in utilities, stormwater, and resilience, representatives from the housing community, and participation from representatives of the travel and tourism industry. This allows for collaboration in the identification of infrastructure needs and leveraging funding across multiple project types to accomplish more goals in streamlined construction efforts.

Additional state agencies to consider may include:

- South Carolina Office of Resilience[32]
- North Carolina Office of Recovery and Resiliency[33]
- South Carolina Office of Regulatory Staff[34]
- North Carolina Utilities Commission[35]

North Carolina RISE (Regions Innovating for Strong Economies and Environment)

The North Carolina Office of Recovery and Resiliency (NCORR) and the NC Rural Center, in collaboration with the North Carolina Councils of Government (NC COGs) is working with NCORR's RISE Program to develop a portfolio of priority projects that strengthen regional resilience. This multi-phase effort includes a forward-looking vulnerability assessment, the identification of 5-10 high-priority projects, and a list of the actions needed to implement each proposed project. A diverse stakeholder partnership is guiding the project to ensure that the scope of work reflects local priorities. Brunswick County joined the RISE program in 2022.

WRCOG and GSATS will support Brunswick County and the RISE program in their aim to support resilience through hosting regional leadership training workshops that emphasize resilience as a tool for community economic development; developing the North Carolina Resilient Communities Guide, a statewide resource detailing the different avenues, supports, and opportunities for building community resiliency; and providing coaching and technical assistance to regional partners to support community vulnerability

[26] https://scdhec.gov/sites/default/files/media/document/Murrells%20Inlet%20Wtrshd%20Pln_2014.pdf
[27] https://scor.sc.gov/resilience
[28] https://champ.rcc-acis.org/
[29] https://screeningtool.geoplatform.gov/en/#3/33.47/-97.5
[30] https://resilience.climate.gov/
[31] https://msc.fema.gov/portal/resources/hazus

[32] https://scor.sc.gov/
[33] https://www.rebuild.nc.gov/about-us#:~:text=North%20Carolina%20Office%20of%20Recovery,mitigation%2C%20community%20development%20and%20resiliency.
[34] https://ors.sc.gov/
[35] https://www.ncuc.gov/

assessments, identify priority actions to reduce risk and enhance resilience in their region, and develop paths to implementation.

Environmental Mitigation

GSATS and its members are committed to protecting and enhancing natural resources, improving quality of life, and promoting compatibility of transportation improvements with state and local planned growth. Therefore, resource conservation and environmental and stormwater impact mitigation are key elements of the GSATS' transportation planning process. GSATS recognizes that not every project will require the same type or level of mitigation. Some projects involve major construction with considerable earth disturbance, while others, like intersection improvements, street lighting, and resurfacing projects, involve minor construction and minimal, if any, earth disturbance. The mitigation efforts used for a project should be dependent upon how severe the impact on environmentally sensitive areas is expected to be.

Equity and Justice40

Executive Order 14008[36], Tackling the Climate Crisis at Home and Abroad, created the "Justice40 Initiative" that aims to deliver 40 percent of the overall benefits of relevant Federal investments to disadvantaged communities. GSATS is committed to identifying transportation projects that improve accessibility and equity through a data-driven project prioritization process. GSATS can enhance their Justice40 screening by investing in data collection that defines and identifies the Region's underserved population such as citizens with no vehicle, citizens older than 65, citizens living below the poverty level, citizens with Limited English Proficiency (LEP). By better understanding the needs and locations of underserved populations, GSATS can ensure that these communities are being included in the transportation planning process.

Housing and Transportation

The Bipartisan Infrastructure Law (BIL) placed increased emphasis on housing considerations in an effort to better connect housing and employment through infrastructure investment. The BIL encourages MPOs to consult with affordable housing organizations as part of transportation planning process and emphasizes consideration of projects and strategies that will promote consistency between transportation improvements and State and local housing patterns. Through stakeholder engagement and data collection and analysis, GSATS will continue to actively foster the transportation-land use connection in the Region and ensure that housing, transportation, and economic development strategies are integrated in the transportation planning process.

Travel and Tourism

The passage of the FAST Act in 2015 added new provisions for long-range transportation planning, including the enhancement of travel and tourism. GSATS recognizes the role that travel and tourism have on the transportation system, and the need for the system to be intuitive and easy to navigate for the Region's visitors, as well as serving the Region's many tourist destinations. Tourism continues to be a major industry, and especially so as the Baby Boomer generation transitions out of the workforce with more disposable income and a greater degree of mobility compared to previous generations. As a process enhancement, GSATS will collect relevant transportation data related to tourism and use in transportation planning efforts. GSATS will also encourage involvement from local Convention and Visitors Bureau's and Chambers of Commerce in the transportation planning process.

System Preservation

Preserving the existing system and maintaining it in good condition will continue to be a high priority for the MPO. Adequate resources must be directed toward system preservation to keep the transportation network in good condition. These resources will be used to maintain high quality, smooth roadway surfaces, to quickly repair unexpected damages, and to reduce the number of structurally deficient bridges.

System Efficiency

Transportation System Management (TSM) strategies help to improve the safe and efficient movement of people and vehicles within the existing transportation system. They typically involve roadway improvements that increase capacity, optimize traffic operation, or apply traffic calming in residential areas. Generally, implementation of these strategies can be completed at relatively low cost, requiring minimal right-of-way, and often can be accomplished quickly.

Safety and Security

Safety may be defined as the freedom from unintended harm. Transportation safety planning considers ways that all elements of the system can operate efficiently while still being safe for users. This could include any number of projects or programs such as police surveillance, intelligent transportation systems (ITS), and improvements at high-crash locations. Security, on the other hand, may be defined as the freedom from intentional harm, including those inflicted by people and natural phenomena. Security goes beyond safety and includes planning to prevent, manage, and respond to threats to the regional transportation system. These threats could include a variety of events, such as natural disasters, terrorist threats, or hazardous spills, all of which endanger the lives of people and important transportation infrastructure. In the GSATS region, safety and security of the transportation system is coordinated within various agencies at the federal, state, and local levels.

Travel Demand Management

Travel Demand Management (TDM) is the application of strategies and policies to reduce travel demand (specifically that of single-occupancy private vehicles), to redistribute this demand in time or space, and to offer a set of strategies aimed at maximizing traveler choices. Managing demand can be a cost-effective alternative to increasing capacity and has the potential to deliver better environmental outcomes, improved public health, stronger communities, and more prosperous and livable cities.

[36] https://www.whitehouse.gov/briefing-room/presidential-actions/2021/01/27/executive-order-on-tackling-the-climate-crisis-at-home-and-abroad/

TDM strategies are effective in influencing travel patterns and behavior, increasing vehicle occupancy, promoting, and encouraging alternative transportation modes, and redistributing the timing of trips to reduce traveling peaks, thereby reducing the overall demand on the transportation system.

Additional TDM recommendations that would benefit the GSATS region include:

- **TDM Toolkit -** In order to educate local governments and developers on the benefits of TDM, a TDM toolkit could provide guidance for local governments and developers on the implementation of TDM strategies. A toolkit would provide information on how TDM can be encouraged and incorporated into development review, list and explain a variety of TDM strategies, and offer an interactive tool to assist local officials and developers with the selection context-sensitive TDM strategies.

- **Telecommuting -** It is quite feasible and practical to work closer to home with today's communication technologies. This is an excellent tactic for reducing the number of vehicles on the road. Additionally, other flexible work options which enable employees to shift their work schedules to earlier or later parts of the day spread out demand for travel, thereby reducing congestion.

- **Support for Transit -** Providing necessary support for transit ridership can be instrumental in encouraging people to use alternative modes of transportation. People value their time and the convenience of a vehicle; therefore, transit should provide frequent service and be accessible to multiple origins and destinations. Specific programs to encourage transit use include employer-provided, tax-free transit passes and guaranteed-ride-home programs.

- **Support for Walking and Bicycling -** Bicycle and pedestrian facilities that offer safe, accessible, contiguous, and direct pathways are most ideal and can take some of the burden off the roadway network.

- **School Considerations -** Schools generate a substantial amount of vehicular traffic when parents drive their children to and from school. Even the children living within close proximity to schools may not walk or bike to school because parents do not feel that the environment is safe. Programs such as Safe Routes to School and the Walking School Bus (which provides chaperoned walks to schools) are effective in providing safe and accessible walking environments. Better coordination between local governments and school districts can also help with selecting sites for new schools that are conducive to walking and bicycling.

Land Use and Urban Design

Land use and development in a region generally fall into the categories of where a person lives, works, or plays. These nodes of activity are oftentimes separated but are becoming more integrated as people realize the benefits of mixed-use. The links connecting the nodes of activity are the highways, roads, and other such pathways in a transportation system. Therefore, promoting smart and integrated land use and transportation development planning policies is vital for the overall health of a region. The MPO regularly works with stakeholders to promote the integration of transportation improvements and land use development, especially mixed-use development.

Technology and Electrification

In the last few years, the automobile and technology industry are undergoing dramatic innovations in vehicle technology, smart infrastructure advancement, and shared mobility concepts. Several major automakers are working towards fully autonomous vehicles (AVs) available to the public within the next decade. While current opinion suggests the anticipated increase in autonomous and connected vehicles will enhance safety and efficiency; changes in mode, ridesharing, parking, and number of vehicle trips are not fully understood.

GSATS should consider the following strategies to address the potential changes to the transportation system:

- **Leverage technology to enhance mobility.** Partner with transit agencies and private companies to adopt smartcards, open data, and universal apps to allow riders to compare, book and pay for trips that combine buses, trains, bikes and ridesharing vehicles. This will match customers with the most efficient travel choice.

- **Prioritize and modernize public transit.** The role of transit will evolve as AVs and shared mobility become widespread. Transit agencies should focus on high-frequency, high-capacity services in dense urban corridors (such as rail or bus rapid transit), provide first and last-mile connections through driverless shuttles, and expand kiss-and-rides/mobility hubs.

- **Implement dynamic pricing.** To ensure that AV use supports public objectives and complements public transit, localities may consider a dynamic road pricing plan that varies by origin, destination, number of passengers, congestion, and household income. This can be done through a combination of proven policy tools such as congestion pricing, zone pricing, variable tolls and vehicle miles traveled fee.

- **Plan for mixed-use, car-light neighborhoods.** AVs can unlock demand for living and working in mixed-use neighborhoods – whether they are urban or suburban. To shape this demand, localities need to plan for and incentivize mixed-use development, overhaul parking requirements, and reevaluate new public transit projects.

- **Encourage adaptable parking.** Fewer cars means fewer parking spaces, especially in city centers. Parking garages need to be built with housing or office conversion in mind and include level floors, higher ceiling heights and centralized ramps.

- **Promote equitable access to new jobs and services**. To support disadvantaged populations, cities must encourage public and private operators to provide alternative payment methods, access via dial-a-ride and equitable service coverage. Cities and private partners must also create new employment and training opportunities for drivers and others in legacy occupations.

- **Take active participation in the development and implementation of National Electric Vehicle Infrastructure** (NEVI) initiatives in both South Carolina[37] and North Carolina[38], and seek opportunities to participate in funding opportunities to provide access to charging infrastructure in the region.

Residential Shared Street Policy

A Residential Shared Street is defined as a street in a residential area that permits pedestrians, bikers, runners, and local motorists to safely occupy the same roadway without designated travel lanes. Many low-volume streets in the Grand Strand region's older neighborhoods already operate in this way without designated notices or street markings. Establishing a Residential Shared Streets policy can facilitate safe movement of all road users within the existing right-of-way with the use of low-cost and low-intensity materials, street furniture, or street designs.

The policy should provide the framework of the shared street concept, and should be accompanied by physical signage, street furniture, or roadway redesigns to clearly indicate to roadway users that they are sharing the space with other transportation modes. The signage, furniture, and redesign will be unique to each individual street. The National Association of City Transportation Officials (NACTO) provides design recommendations for implementing safe Residential Shared Streets. Characteristics of residential shared streets include the following, as seen in **Figure 9-4**[39]:

- Textured, painted, or pervious surfaces
- Street furniture, bollards, planters (etc.)
- Stormwater design elements, including bioretention
- Street signage
- Street width guidelines
- Staggering street furniture and chicane traffic calming

Figure 9-4. Residential Shared Street Example, Santa Monica, CA

To keep the implementation of Residential Shared Streets at a low cost, the use of textured, painted, or pervious surfaces can be used to indicate the presence of Residential Shared Streets. Paint markings and planters can be used to add traffic calming or indicate designated uses at a much lower cost than new asphalt, curbing, and restriping. Bioretention facilities and other Low Impact Development techniques eliminate the need for costly runoff detention basins and pipe delivery systems. Further, signage and paint can be utilized at entryways and intersections of shared streets to indicate to users where the shared space begins and ends while having the added benefit of placemaking at low costs.

Applicable Locations

A Residential Shared Street policy could be implemented in communities of the GSATS region, starting in areas that meet the following criteria:

Neighborhood Criteria

- Persistent Poverty or Disadvantaged Area (Justice40)
- Near the coastline or other bicycle and pedestrian generators

[37] https://www.scdot.org/projects/NEVI%20Formula-Program.aspx
[38] https://www.ncdot.gov/initiatives-policies/environmental/climate-change/Pages/national-electric-vehicle-infrastructure-program.aspx

[39] https://nacto.org/publication/urban-street-design-guide/streets/residential-shared-street/

Roadway Criteria

- High bike or pedestrian collisions or volumes
- Existing low traffic volumes and low speeds
- Limited right-of-way
- Limited or no curb present

Several communities in the GSATS region could benefit from the implementation of Residential Shared Streets. These neighborhood locations meet the previously identified criteria and can provide initial pilots as the shared streets policy is implemented along the residential streets of these neighborhoods. Potential neighborhoods in South Carolina are Litchfield Beach in Georgetown County and Surfside Beach, Downtown Myrtle Beach, Atlantic Beach, Cherry Grove Beach in Horry County. Communities in South Carolina that do not meet the identified criteria but would benefit from Residential Shared Streets include Murrells Inlet in Georgetown County and Garden City, Conway, and Little River in Horry County.

In North Carolina, the identified neighborhoods meeting the aforementioned criteria are Ocean Isle Beach and Holden Beach in Brunswick County. Communities in North Carolina that do not meet the identified criteria but would benefit from Residential Shared Streets include Shallotte and Calabash in Brunswick County.

The implementation will be subject to the preferences of the local agencies to fit within branding guidelines. However, a consistent design across the GSATS region will help motorists and non-motorists become familiar with the expected behavior of each other within the designated areas. Examples of funding sources for shared streets include:

- **GSATS TAP Funds:** The Transportation Alternatives Program (TAP) (officially known as the "Transportation Alternatives Set-Aside") is a Federal reimbursement grant program funded through the US Department of Transportation's Federal Highway Administration (FHWA). TAP allows local governments and other eligible entities to apply for grants for a variety of non-motorized transportation projects. As a Transportation Management Area (TMA), GSATS has a dedicated set-aside of TAP funds annually. The FY 2023 allocation for GSATS is $646,000.

- **Safe Streets for All (SS4A) Grants:** The Bipartisan Infrastructure Law (BIL) established the new SS4A discretionary program, with $5 billion in appropriated funds over 5 years, 2022-2026. The SS4A program funds regional, local, and Tribal initiatives through grants to prevent roadway deaths and serious injuries. SS4a Implementation grants can be used for applying low-cost roadway safety treatments, installing pedestrian safety enhancements and closing network gaps, and carrying out speed management strategies.

- **C Funds (SC Only):** C funds may be used for construction, improvements, or maintenance on the state highway system; local paving or improving county roads; street and traffic signs; and other road and bridge projects. Resurfacing, sidewalk construction, and drainage improvements are also eligible C Fund activities.

- **Powell Bill Funds (NC Only):** The Powell Bill funds are used primarily to resurface municipal streets but also may be used to maintain, repair, construct, or widen streets, bridges, and drainage areas. Municipalities can also use Powell Bill funds to plan, construct, and maintain bike paths, greenways, or sidewalks.

- **Community Development Block Grant (CDBG) Program:** The CDBG program offers an abundance of resources for communities nationwide, including grants to carry out a wide range of community development activities directed toward revitalizing neighborhoods, economic development, and providing improved community facilities and services. Not less than 70 percent of CDBG funds must be used for activities that benefit low- and moderate-income persons.