

CHAPTER 2: PLANNING FOR A SAFE, RELIABLE, EFFICIENT, AND WELL-CONNECTED TRANSPORTATION SYSTEM

The mission of the Gaston-Cleveland-Lincoln Metropolitan Planning Organization (GCLMPO) is to plan for a system of transportation modes that are consistent with the development and growth desired for the jurisdictions that comprise the MPO. The system of roadway, transit, freight, aviation, bicycle, and pedestrian travel modes will deliver safe and efficient movement of people and goods. The GCLMPO will strive to implement mobility options that positively coexist with the natural and built environments and strengthen the economic prosperity of the region while promoting community health and wellness.

FEDERAL PLANNING FACTORS

MPOs are required to consider certain factors in the transportation planning process. The factors provide guidance to aid in a unified transportation vision for the GCLMPO planning area and ensures that the MPO follows the 3C process as described in Chapter 1. The goals and objectives, projects, and strategies recommended in this MTP support the following federal planning factors¹:

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

SUPPORTING THE TEN PLANNING FACTORS

1. ECONOMIC VITALITY

The GCLMPO has worked extensively over the years with NCDOT and other state and federal agencies on transportation projects that enhance the economic prosperity of the study area. The GCLMPO has developed a local methodology for ranking and prioritizing local projects which considers freight and congestion and actively includes Chamber of Commerce representatives in the transportation planning process.

2. SAFETY

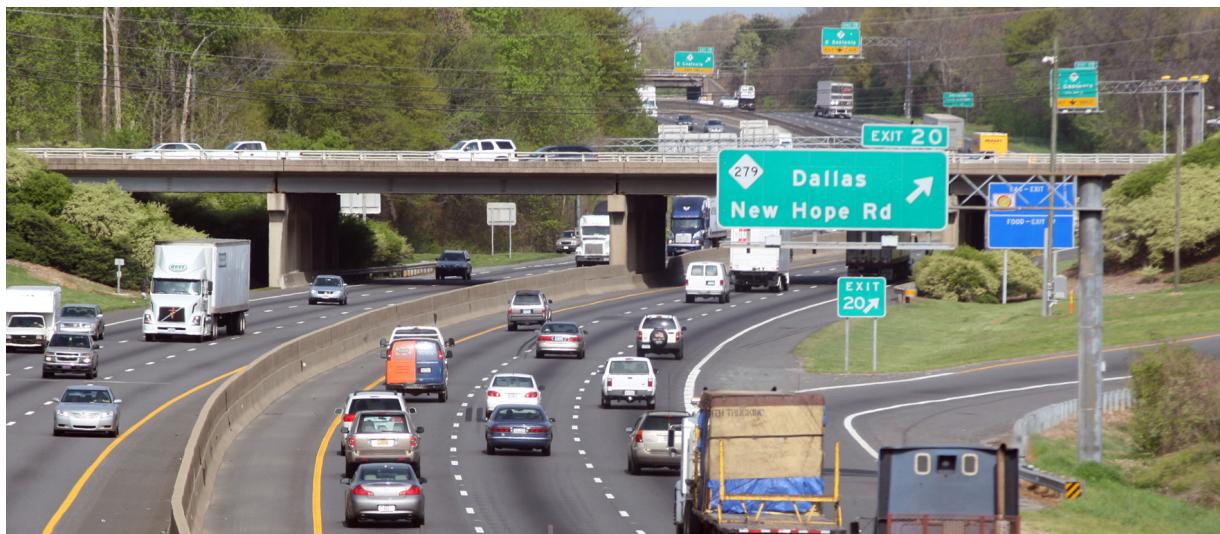
Safety is a priority for the GCLMPO, as evidenced by the inclusion of safety metrics in the project

¹ Source: *Code of Federal Regulations: Title 23, Part 450.306*

prioritization process for roadway and bicycle/pedestrian projects. Safety encompasses the prevention of unintentional harm to system users or their property. This includes vehicular crashes (whether of cars, trucks, buses, airplanes, or bicycles), train derailments, slope failures or other sudden destruction of roadways due to natural causes, and falls or injuries to pedestrians due to poorly constructed or absent facilities, among other issues.

The GCLMPO takes a number of measures to increase the safety of the transportation system for all users. NCDOT produces an annual inventory of high accident locations to identify where there may be a need for safety improvements. Projects are then developed to improve the conditions. NCDOT also has a safety program to address these needs.

Further efforts supported by the GCLMPO to ensure safety include: the construction of median guardrails on freeways, the replacement of deficient bridges and other roadway structures, the construction of sidewalks on non-freeway road projects, the addition of bike facilities on roadways, and programs to improve safety at school crossings.



Streets and Highways

Enhancing highway safety is critical to the health and well-being of the citizens of North Carolina and those who travel and conduct business on our streets and highways. Without the continued substantial improvement in highway safety, automobile crashes will continue to be a leading cause of death and injury for a large segment of the population. Ways to incorporate safety in transportation are reflected in the American Association of State Highway and Transportation Officials Strategic Highway Safety Plan and the North Carolina Strategic Highway Safety Plan.

The FAST Act maintains the Highway Safety Improvement Program (HSIP). This program is structured and funded to make significant progress in reducing fatalities on highways as well as other modes that use highway, railroads, and other conduits within the transportation network. The HSIP increases the funds for infrastructure safety and requires strategic highway safety planning focused on measurable results. States are required to have a safety data system to perform problem identification and countermeasure analysis on all public roads, adopt strategic and performance-based goals, advance data collection, analysis, and integration capabilities, determine priorities for the correction of identified safety problems, and establish evaluation procedures.

North Carolina's HSIP is structured into several distinct phases, including:

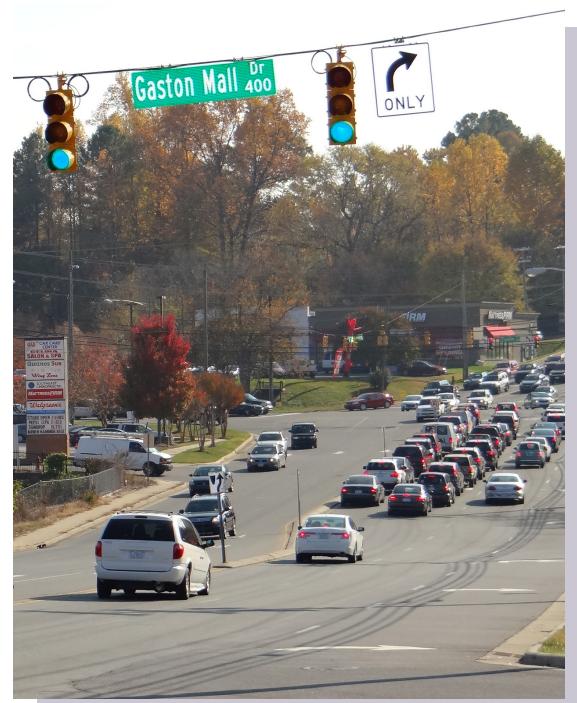
- System of safety warrants developed to identify locations that are possibly deficient.
- Locations that meet warrant criteria are categorized as potentially hazardous (PH) locations.
- Detailed crash analyses are performed on the PH locations with the more severe and correctable crash patterns.
- The Regional Traffic Engineering staff performs engineering field investigations.
- The Regional Traffic Engineering staff utilizes Benefit: Cost studies and other tools to develop safety recommendations.
- Depending on the cost and nature of the countermeasures, the investigations may result in requesting Division maintenance forces to make adjustments or repairs, developing Spot Safety projects (typically under \$250,000), developing Hazard Elimination projects (typically \$400,000-\$1,000,000), making adjustments to current TIP project plans or utilizing other funding sources to initiate countermeasures.
- Selected projects are evaluated to determine the effectiveness of countermeasures.

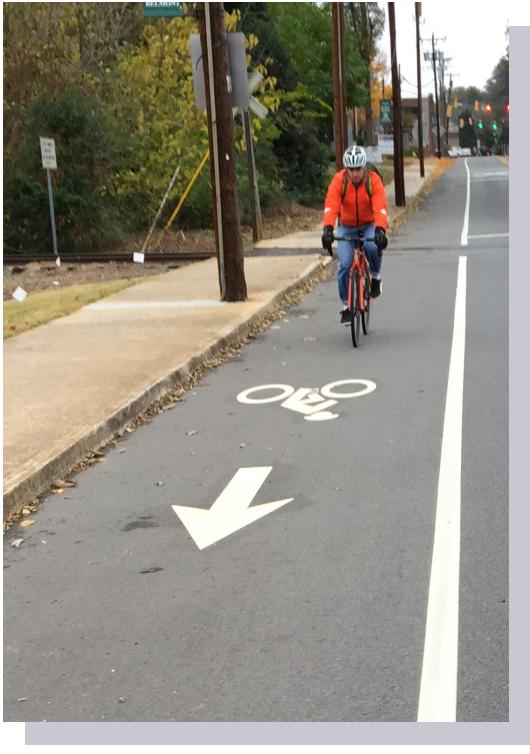
The ultimate goal of the North Carolina HSIP is to reduce the number of traffic crashes, injuries and fatalities by reducing the potential for and the severity of these incidents on public roadways.

Education is generally handled by the Governor's Highway Safety Program (GHSP). "Click It or Ticket" and "Booze It or Lose It" are examples of these educational programs. Education can also be conveyed through driver's education courses. Enforcement is important to the success of programs as Safety laws are only effective if they are enforced.

Crash data collected in the field by emergency service workers are the basis on which safety programs are developed. The collection of accurate crash data helps planners identify high-crash intersections and corridors and determine the type of crash and the contributing factors. The data are valuable in identifying and designing transportation improvements. The NCDOT Transportation Mobility and Safety Division currently provides the MPO with crash data from its Traffic Engineering Accident Analysis (TEAAS) data.

Congestion is a major contributor to crashes and also impedes the ability to effectively respond to and manage safety and security issues. Even with excellent enforcement and safety planning, crashes will happen. Quick emergency medical service can mean the difference between life and death and can reduce injury severity when crashes occur. Travel efficiency and level of service are directly related to congestion. Engineering new roads and improvements to reduce congestion on existing roads will effectively provide a safer transportation network. Intelligent Transportation Systems (ITS) tools can also manage the safe flow of traffic if an accident occurs.





Bicycle and Pedestrian

The National Highway Traffic Safety Administration has determined that pedestrian crashes are more likely to occur during peak travel periods in the morning and afternoon. Most crashes with pedestrians will occur in urban areas where the volume of pedestrian and vehicle traffic is high; however, rural areas can also be dangerous for pedestrians due to the lack of sidewalks, paths, wide shoulders and cross walks.

The NCDOT Integrated Mobility Division maintains and shares with the GCLMPO a database of bicycle and pedestrian crashes and relevant attributes for each crash. This data is useful for local agencies within the MPO and for NCDOT when identifying areas of safety concern for bicyclists and pedestrians. Safety countermeasures utilized within the GCLMPO include installation of buffers or planting strips, crosswalks, traffic calming devices, pedestrian refuge islands, etc.

Many municipalities within the GCLMPO have adopted bicycle and pedestrian plans that address the “Four-Es” (i.e. education, engineering, enforcement, and encouragement) of bicycle and pedestrian planning, with a strong emphasis on the importance of safety. Historically, the GCLMPO and NCDOT have promoted the Safe Routes to Schools (SRTS) program, a federal program that encourages and enables children to walk and bike to school by making these activities safe. This program supports the planning, development and implementation of projects that improve safety and reduce traffic, air pollution and fuel usage in the vicinity of schools.

3. SECURITY

While safety has long been a required planning factor for MPOs under federal transportation legislation, it was not until the terrorist attacks of September 11, 2001 that federal policy makers determined that transportation planners at all levels needed to consider security concerns more specifically.

Security involves the prevention of intentional harm to the transportation system or its users, including theft or dismemberment of elements of transportation infrastructure, assault on users of the system, or large-scale attacks intended to completely disrupt the movement of people and goods.

The GCLMPO is considering security projects, including the expansion of camera enforcement programs aimed at helping reduce congestion and providing for safe evacuation during emergency situations. Support for additional communication technologies allowing for the transfer of information across agencies and jurisdictions is a key factor in improving security during emergency events, evacuations and routine detours.

With the increasing attention put on emergency response, MPO staff and NCDOT personnel are becoming more comfortable and proactive in their roles as incident response partners and will continue to work with our emergency agencies at the local, regional and state level to develop a strong working relationship.

The Gastonia Transit safety and security plan works in conjunction with the City of Gastonia emergency operation plan in order to provide coverage to the users and its citizens. There is constant review of the plans to provide the best practices to use in case of a natural or man-made disaster.

The Strategic Highway Network (STRAHNET) is an important element in the security of the region, state and nation. STRAHNET provides the military with access, continuity and emergency transportation of personnel and equipment. The system totals over 62,500 miles of public highways designated by the Federal Highway Administration in partnership with the Department of Defense. Approximately 46,500 miles of Interstate and defense highways and about 16,000 miles of other highways make up the STRAHNET system. Additional highway routes link more than 200 military installations and ports to the STRAHNET system. The roads in the STRAHNET system are designed to support large military convoys and rapid mobilization and deployment of armed forces. Routes included in the STRAHNET system located in the GCLMPO area include I-85 through Gaston and Cleveland counties, US 321 north of I-85 in Gaston and Lincoln counties, and US 74 through Cleveland County.

Emergency Management

The National Guard maintains a database of state and local emergency responders called the Regional and State Online Resource for Emergency Management. The National Guard has located every fire, police, hospital, and local EMS provider across the country and has created a searchable database and mapping system. The four National Guard bases in the region, located in Belmont, Gastonia, Kings Mountain, and Lincolnton, serve to supplement the regular armed forces and assist during national emergencies and declared states of emergency.

4.ACCESSIBILITYANDMOBILITYOPTIONSOFPEOPLEANDFREIGHT

Increasing the accessibility and mobility options available to people and for freight is one of the most important objectives of GCLMPO. This is achieved by integrating land use and transportation planning, providing the necessary resources to enhance the existing transportation system, expanding the existing transit system and implementing fixed-route mass transit options.

The GCLMPO was a funding partner and Technical Advisory Committee member for the recently completed CONNECT Beyond: Regional Mobility Plan. CONNECT Beyond is a bold regional mobility plan that sets the vision for how to better connect the rural, suburban, and urban communities in our 12-county region. The plan will guide and coordinate future mobility investments and will serve as a blueprint for implementing a robust,



integrated public transit network that will combine high capacity transit lines, enhanced bus services, local mobility options, and innovative transportation technologies². More information on CONNECT Beyond and plan recommendations can be found in Chapter 7.

Land use and transportation policies are being instituted that support transit, walking and bicycling, and reduce the dependency on the automobile. More compact development patterns at activity centers and along transit corridors will make the transit system more economically self-sustaining. In neighborhoods, transit-oriented development that emphasizes a mix of uses and easy pedestrian access to shopping and services could reduce the need to drive. Collaborative efforts on the part of the transit agencies that serve the GCLMPO region will help realize this vision of a comprehensive transit network that serves as a viable alternative to driving.

Freight is the economy in motion. As the greater Charlotte region has grown, its economy has become more diverse and a growing population consumes an even wider range of goods and services. The movement of goods continues to be an essential building block of the region's economic competitiveness. For the Charlotte region, freight mobility planning is critical to help the region's planning organizations and leaders balance current and future demands for freight mobility, economic growth, and land development.

GCLMPO was an active participant in the Greater Charlotte Regional Freight Mobility Plan (December 2016). The Freight Mobility Plan serves urban, suburban, and rural areas of the region by:

- Aiding in the understanding of current and future levels of freight network activity,
- Identifying issues and opportunities,
- Defining feasible solutions supported by the private sector,
- Identifying new technologies to improve freight flow and attract new businesses to the region, and
- Guiding the region's investments in freight infrastructure.

MPO staff continues to participate in the Greater Charlotte Region Freight Advisory Committee, whose purpose is to guide and inform the implementation of freight plan recommendations and to provide insight into industry needs. To support freight mobility, the MTP project ranking process considers important freight-related variables, such as land access, travel time reliability, congestion, intermodal connections, and safety.

5. ENVIRONMENTAL PROTECTION, ENERGY CONSERVATION PROMOTION, QUALITY OF LIFE IMPROVEMENTS AND CONSISTENCY BETWEEN TRANSPORTATION IMPROVEMENTS AND STATE AND LOCAL PLANNED GROWTH AND ECONOMIC DEVELOPMENT

The GCLMPO is committed to protecting and enhancing the environment, promoting energy conservation, and improving the quality of life for people living, working and visiting the area. The member governments within the region look to protect its important resources by enacting environmentally sensitive land use policies and transportation choices, and promoting air quality education programs. In some localities, land use-decisions are being made to direct growth to reduce travel demand, which in turn leads to energy conservation and reduced pollutants.

² Source: CONNECT Beyond: Regional Mobility Plan (September 2021)

It is the responsibility of the GCLMPO to consult with local, state, and federal agencies involved in the stewardship of national resources, environmental protections, conservations, and historic preservation. During the development of the 2050 MTP, resource agencies were invited to review and comment on the draft fiscally-constrained project lists. Comments were received from the Army Corps of Engineers, NC Natural Heritage Program, and the U.S. Fish and Wildlife Service.

Natural Environment

Federal law mandates that long-range metropolitan transportation plans must include a discussion of the types of potential environmental mitigation activities and ways to carry out these activities in order to restore and maintain the environmental functions that may be affected by the transportation plan. Environmental considerations should include, but not be limited to: land-use impacts, economic impacts, air quality and water quality impacts, impacts to threatened or endangered species, floodplain impacts, etc. When planning for any transportation infrastructure, it is important to understand the natural environment that will be impacted by a project. A Natural Resources Inventory should be conducted and updated periodically to identify land cover types, soils, topography, hydrography, and other natural and historic resources that can be easily incorporated into transportation planning efforts.



Air Quality Conformity

As noted in Chapter 1, the Clean Air Act requires the United States Environmental Protection Agency (EPA) to set limits on how much of a particular pollutant can be in the air anywhere in the United States. National Ambient Air Quality Standards (NAAQS) are the pollutant limits set by the EPA; they define the allowable concentration of pollution in the air for six different pollutants – Carbon Monoxide, Lead, Nitrogen Dioxide, Particulate Matter, Ozone, and Sulfur Dioxide.

The Clean Air Act specifies how areas within the country are designated as either “attainment” or “non-attainment” of an air quality standard, and authorizes EPA to define the boundaries of non-attainment areas. For areas designated as non-attainment for one or more NAAQS, the Clean Air Act defines a specific timetable to attain the standard and requires that non-attainment areas demonstrate reasonable and steady progress in reducing air pollution emissions until such time that an area can demonstrate attainment. Each state must develop and submit a State Implementation Plan (SIP) that addresses each pollutant for which it violates the NAAQS. Individual state air quality agencies are responsible for defining the overall regional plan to reduce air pollution emissions to levels that will enable attainment and maintenance of the NAAQS.

In North Carolina, the agency responsible for SIP development is the North Carolina Department of Environmental Quality, Division of Air Quality (NC DEQ/DAQ). The delineation of non-attainment areas, coupled with the implementation of strategies to control emissions from on-road mobile sources, are significant elements of the state’s plan to improve air quality.

These actions link transportation and air quality planning activities within the non-attainment areas. The process of ensuring that a region’s transportation planning activities contribute to attainment of the NAAQS, or “conform” to the purposes of the SIP, is referred to as transportation conformity. In order to receive federal transportation funds within a non-attainment or maintenance area, transportation agencies must demonstrate, through a federally mandated conformity process, that the transportation investments, strategies and programs, taken as a whole, contribute to and/or maintain the air quality goals defined in the state air quality plan.

40 CFR PART 93 REQUIRES THAT A CONFORMING TRANSPORTATION PLAN SATISFY FIVE CONDITIONS:

- *The transportation plan must be consistent with the motor vehicle emissions budget(s) in an area where the applicable implementation plan or implementation plan submission contains a budget (40 CFR Part 93.118).*
- *The transportation plan, TIP, or FHWA/FTA project not from a conforming plan must provide for the timely implementation of transportation control measures (TCMs) from the applicable implementation plan (40 CFR Part 93.113b).*
- *The MPO must make the conformity determination according to the consultation procedures of 40 CFR Part 93.105.*
- *The conformity determination must be based on the latest emissions estimation model available (40 CFR Part 93.11).*
- *The conformity determination must be based on the latest planning assumptions (40 CFR Part 93.110).*

In order to ensure the conformity requirements are met, Section 176 (c) of the Clean Air Act authorizes the EPA Administrator to “promulgate criteria and procedures for demonstrating and assuring conformity in the case of transportation plans, programs, and projects.” This is accomplished through the Transportation Conformity Rule, developed by the EPA to outline all federal requirements associated with transportation conformity.

The GCLMPO must approve and adopt a Conformity Analysis and Determination Report for the Metrolina Area 2050 Metropolitan Transportation Plans (MTPs) and for the FY 2020-2029 Transportation Improvement Programs (TIPs). The purpose of this report is to comply with the provisions of the Clean Air Act Amendments of 1990 in concurrence with all conformity requirements as detailed in 40 CFR Parts 51 and 93 (the Transportation Conformity Rule) and 23 CFR Part 450 (the Metropolitan Planning Regulations). It demonstrates that the fiscally-constrained metropolitan transportation plans and the transportation improvement programs eliminate, reduce future violation, or maintain the NAAQS.

All federally funded projects, as well as regionally significant projects regardless of funding source, in areas designated by the EPA as air quality non-attainment or maintenance areas, must come from a conforming MTP and TIP. The Metrolina region is required by 40 CFR 51 and 93 to make a conformity determination on any newly adopted or amended fiscally-constrained MTP and TIP. In addition, the United States Department of Transportation (USDOT), specifically, the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA), must make a conformity determination on MPO Plans in the Metrolina region and the related TIPs in all non-attainment areas.

In response to the 8-hour ozone (O₃) non-attainment designation of “marginal” by the EPA, a new set of projections for the region’s travel demand model has been developed for the Charlotte

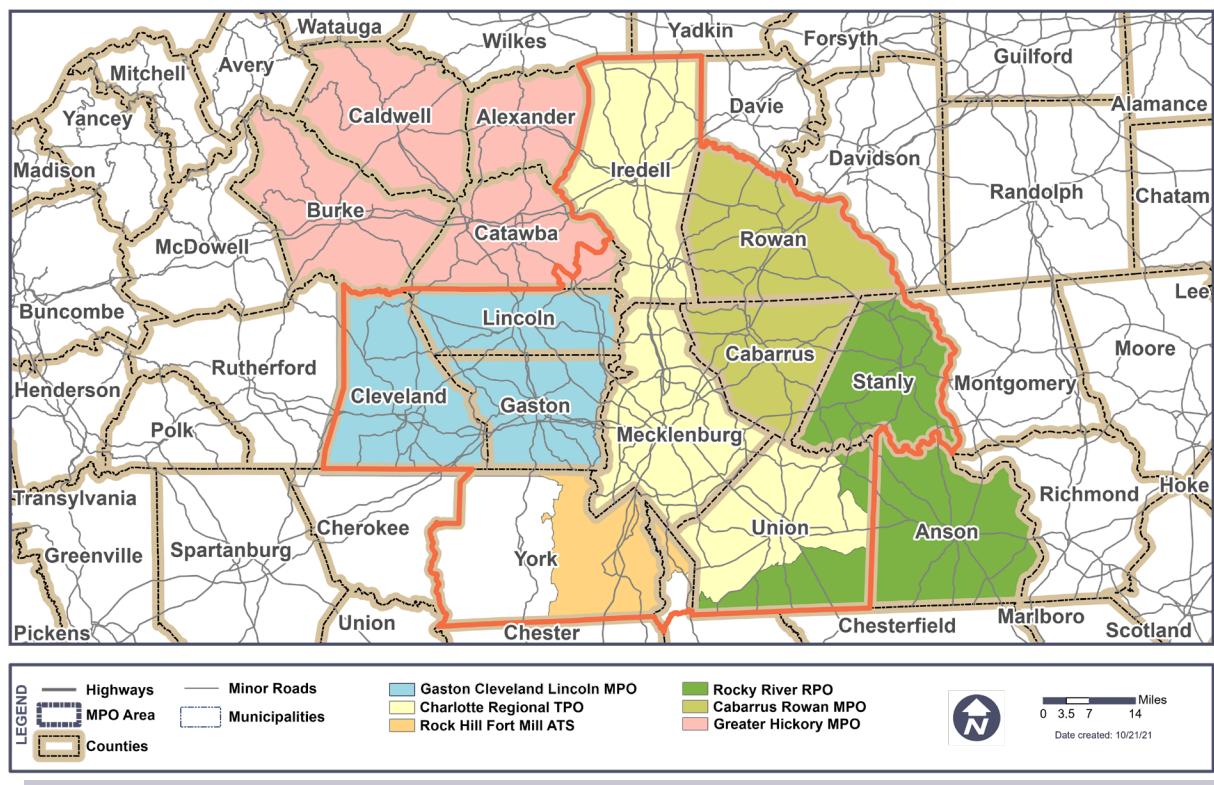


Figure 2-1: Metrolina Regional Model & Non-Attainment Area

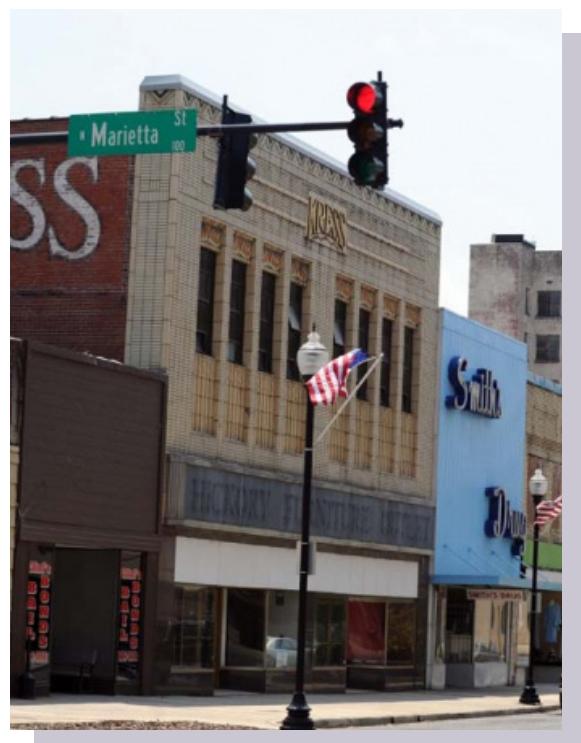
Metrolina Area. The regional travel demand model has been developed through coordination and collaboration with federal and state regulatory agencies, as well as GCLMPO's regional partners including the Charlotte Regional Transportation Planning Organization (CRTPO), Cabarrus – Rowan MPO (CRMPO), and the Rocky River Rural Planning Organization (RRRPO) in North Carolina and the Rock Hill – Fort Mill Area Transportation Study (RFATS) in South Carolina. The GCLMPO has successfully demonstrated transportation conformity for the 2050 MTP. Figure 2-1 shows the Metrolina Regional Model and Non-Attainment Area.

6. SYSTEM INTEGRATION AND CONNECTIVITY

The GCLMPO continues to develop and support programs and projects that enhance the development, integration, and connectivity of a multi-modal transportation system. The proposed Catawba Crossings as well as the expansion of the Charlotte Douglas International Airport and Intermodal Yard provides a critical link for movement of goods between rail, highway, and air. Park-and-ride lots will provide auto commuters an opportunity to access public transit and will be available for a future rapid transit system. Bike racks on buses allow people the flexibility to access bus stops by bike, improving the efficiency of the system. GCLMPO supports the addition of sidewalks on non-freeway roadways which will enable citizens to leave their vehicle at home for short trips.

In addition, a Commuter Rail Feasibility Study was completed in 2018 to determine the feasibility of implementing a new commuter rail service to connect Kings Mountain, Gastonia, and Belmont with Charlotte-Douglas International Airport and the new Charlotte Gateway Station. The new service would provide an additional transportation connection between the rural communities west of Charlotte to job centers. More information on this can be found in Chapter 7.

7. EFFICIENT SYSTEM MANAGEMENT AND OPERATIONS



The City of Gastonia is currently working to upgrade its traffic signal system, with 160 total intersections. Funded through a statewide Congestion Mitigation and Air Quality (CMAQ) grant, the upgrade will include replacing the existing field infrastructure, replacing the existing central system, migrating to an IP/Ethernet based communications network, expanding the closed-circuit television (CCTV) camera coverage, and retiming of the traffic signal operations. This will benefit traffic management by providing more reliable equipment with increased functionality, ultimately benefiting motorists by providing improved traffic flow through the city.

The City of Gastonia currently has 24 CCTV cameras, and with the signal system upgrade will be adding an additional 16 cameras. The traffic system in Gastonia is also linked to the Metrolina Regional Traffic Management Center (MRTMC) in Charlotte. The cameras are used to provide depictions of the traffic

patterns/flows during peak times, as well as during incidents that require the detour of I-85 traffic to Franklin Boulevard (US 29/74).

The City of Belmont and the Towns of Cramerton and McAdenville adopted the Build a Better Boulevard: Wilkinson Boulevard Corridor Study in January 2015 that proposes traffic management recommendations for improving traffic flows along the Wilkinson Boulevard (US 29/74) Corridor through the three municipalities. Working through STI, there is currently a project funded in the 2029-2029 State Transportation Improvement Program (STIP) to upgrade signal technology along Wilkinson Boulevard in eastern Gaston County, which will adjust signal phase order and duration based on real time measured traffic demand.

NCDOT Traffic Systems Operations is also in the process of implementing an Integrated Corridor Management (ICM) Project along I-85 in Gaston and Mecklenburg Counties between US 74 and Little Rock Road. The I-85 ICM Project will provide active guidance to drivers that decide to take US 74 as an alternate route due to an incident on I-85. The ICM Project will have a response integrated along the arterial to move people through the corridor, adding additional capacity for a short period of time.

In addition, NCDOT was awarded an Infrastructure for Rebuilding America (INFRA) Grant in 2020 for the US 74 corridor from Wilmington to Asheville to install fiber optic cable for future ITS technologies to enable signal synchronization, improvement traffic management, monitoring, and incident response.

8. PRESERVATION OF THE EXISTING SYSTEM

GCLMPO has worked with NCDOT for many years in establishing and maintaining a transportation planning program that incorporates a standard set of planning principles. These planning principles require the development of a safe and efficient transportation system by:

- Maximizing utilization of the existing facilities,
- Increasing operational efficiency and altering travel demands when appropriate, and
- Minimizing adverse impacts to the natural, social and economic environments.

The MPO is committed to providing the necessary resources for maintaining and preserving the existing and future transportation system.

9. IMPROVE RESILIENCY AND RELIABILITY OF THE EXISTING SYSTEM AND REDUCE (OR MITIGATE) STORMWATER IMPACTS

The USDOT defines resilience as: "An ability to anticipate, prepare for, and adapt to changing conditions and withstand, respond to, and recover rapidly from disruptions." The transportation



system is increasingly vulnerable to severe weather, climate change, natural disasters, and other unexpected events that impact the region's transportation network.

Planning for a system that reduces the impact of these potential threats is the intent of this planning factor. GCLMPO continues to partner with NCDOT and regional MPOs to identify and conduct planning studies and collect data that will contribute to improving transportation reliability in this growing and changing region. Through these efforts, the region is able to develop strategies that will help address transportation issues now and into the future.

In early 2020, Gaston, Cleveland, and Lincoln counties updated the Regional Hazard Mitigation Plan, which provides guidelines for evacuations, containment and first responder actions for both natural and manmade hazards. This Plan was written through coordination with transportation, law enforcement, planning and operational agencies. All three counties also operate 9-1-1 systems to serve the communities and local government agencies with effective communication services and facilitate communications for public safety agencies.

Recognizing the importance of mitigating against future hazards, the GCLMPO intends to explore the possibility of implementing these and/or similar strategies within its planning area, through a collaborative process with its partner agencies.

Other GCLMPO activities that contribute to a resilient and reliable transportation system include:

- Traffic monitoring and management
- Providing traveler information
- Traffic incident management
- Performance management

A MORE RESILIENT TRANSPORTATION SYSTEM CAN BE ACHIEVED BY ADDRESSING:

Existing Infrastructure Resilience: As environmental risks change, the probability of unexpected failures may increase; therefore, as existing infrastructure approaches the end of its service life, decisions about replacement or abandonment should take into account changing future risks.

New Infrastructure Resilience: Newly constructed infrastructure should be designed and built in recognition of the best current understanding of future environmental risks.

System Resilience: Best viewed across transportation modes and multiple system owners, some key elements of system resilience are obvious while other dependencies may be less recognized (e.g. transportation systems are interdependent when passengers or freight carriers rely on multiple transportation modes to reach their destination).

Specific analyses related to resiliency and reliability of the transportation system have not previously been conducted for the GCLMPO planning area. The NCDOT owns and operates much of the transportation infrastructure within North Carolina. The GCLMPO will continue to collaborate with NCDOT, as well as the area's other MPOs, to explore opportunities to evaluate the resiliency of the

regional transportation network and better understand the potential impacts. One such opportunity may be updating the 2001 ITS plan to incorporate more of an emphasis on transportation resilience in the GCLMPO region, alongside updated guidance based on more recent planning efforts.

Stormwater Management

Along with extreme weather events, when precipitation of any accumulation occurs over highways and other impervious surfaces, the resulting stormwater can carry debris, sediment, trash, gasoline, heavy metals, and other polluting chemicals into water sources, having a huge impact on water quality. Additionally, de-icing chemicals, sand, and salt that are used during snow and ice events can contaminate groundwater and pollute surface waters. Acid rain, which takes place when vehicle and industrial emissions are released into the atmosphere and react with water, oxygen, and other compounds, further pollute water sources.



The planning phase of any transportation project offers the greatest opportunity to avoid negative water quality impacts on a corridor. Proposed alignments for a project should avoid sensitive natural resources to the greatest extent possible. Oftentimes, avoidance is not entirely feasible. In these instances, providing an undisturbed buffer should be considered. Preserving natural areas such as undisturbed areas, floodplains, stream corridors, and wetlands helps to mitigate stormwater runoff and encourages water table recharge. Undisturbed buffers also serve as a natural filter, trapping pollutants from urban runoff in order to keep our water supplies healthy.

GCLMPO will continue to work with NCDOT to identify methods to control stormwater runoff along local streets and highways.

10. ENHANCE TRAVEL AND TOURISM

Whether maintaining existing infrastructure or constructing new roads, bicycle and pedestrian facilities, airports, and public transportation corridors, transportation is an integral part of the tourism industry. Visitors must have confidence that they can travel through a region safely and quickly, and tourism is an important industry for all of North Carolina, including Gaston, Cleveland, and Lincoln counties. In fact, according to Gaston County Travel and Tourism, visitors spent more than \$291 million in Gaston County in 2019, an increase of 5.55 percent from 2018.

In order to enhance travel and tourism, the MPO will continue to partner with NCDOT, member local governments, economic development groups, and the various Chambers of Commerce and tourism groups within the three-county planning area to better the transportation system and reduce any negative effects of increased traffic. In addition, the GCLMPO works closely with the Carolina Thread Trail to advance segments of the 15-county regional trail system. Trails not only bring new visitors and tourists to the region and inject new dollars into the local economy, but also promote connectivity between tourist destinations for visitors, as well as local residents³. More information about this exciting project and the MPO's various bicycle and pedestrian efforts can be found in Chapter 6.

³ Source: Carolina Thread Trail. (n.d.). Trail Benefits. www.carolinathreadtrail.org/trail-benefits/.

Gaston County Travel and Tourism

Gaston County has a “Go Gaston” campaign which encourages residents and visitors to take advantage of the numerous outdoor sites for family friendly activities, such as Crowders Mountain State Park and the Daniel Stowe Botanical Gardens. There are many other great tourist attractions including, but not limited to, golf courses, art centers, performance theaters, retail stores, and restaurants located throughout the MPO area.

HEALTH & WELLNESS HEALTH ASSESSMENTS



Transportation decisions affect our individual lives, economy and health. All across the United States, people use various modes of transportation to get to work or school, to seek medical care, to access healthy foods at grocery stores and markets, and to participate in countless other activities every day. However, too many people are negatively impacted by inequitable transportation decisions that are detrimental to public health. Public health, equity and transportation and advocacy efforts ensure that transportation policy helps, rather than hinders, public health.

Our nation’s transportation system has a direct and costly effect upon human health, by way of traffic accidents, mobile source air pollution, and influence on physical activity. These effects run into the hundreds of billions of dollars each year. Yet health is typically not considered in transportation policy and planning. Opportunities abound to increase alternative transportation options that support healthy activities like walking and cycling. The National Prevention Strategy and Action Plan is working to boost Americans’ health in part through encouraging the development of livable, walkable communities, bike lanes, and other healthy transit options. This snapshot, published online in October 2012, examines the health impacts and costs that should be factored into decisions about transportation and community development at all levels.

PUBLIC HEALTH AND EQUITY PRINCIPLES FOR TRANSPORTATION

Research increasingly indicates that current transportation investments can have a profound impact on public health, particularly for the poor, the elderly, people with disabilities and other vulnerable populations. These impacts may include increased risk of obesity, cancer, mental health disorders, asthma and heart disease. The public health community is strongly supportive of transportation investments that support the growth and establishment of health and equity in all communities; this is critical to the nation’s economic revival and health.

“The public health community envisions a transportation system that is carefully designed to support and improve community health. We must ensure that the billions of public dollars spent on transportation projects enhance the health, equity and well-being of communities.”

The GCLMPO has developed ten principles to be used in the review of transportation policies to ensure that health and equity are well-represented:

1. Encourage transportation and land-use planning policies, such as a Complete Streets policy, that support healthy communities.
2. Establish performance measures to promote safe, affordable and equitable public transit and alternative modes of transportation such as walking and cycling.
3. Conduct Health Impact Assessments (HIA) to inform and guide transportation policy, projects and planning.
4. Foster the participation of local communities and underserved populations in all stages of the transportation planning and development process.
5. Expand funding of community-based transportation programs and services that promote healthy lifestyles and provide access to healthy food and water, affordable housing, employment, schools, health care and recreation.
6. Fund programs that expand transportation options for disadvantaged populations and people with disabilities, and that promote safe, convenient transportation options for children and seniors.
7. Design and construct multi-modal transportation systems to meet the needs of users of all ages and abilities, including those in rural areas.
8. Collect data and fund research to evaluate how transportation and planning policies affect public health and health equity.
9. Support reductions in transportation-related emissions and greenhouse gases.
10. Increase vehicle, motorist, passenger, cyclist and pedestrian safety.

PHYSICAL ACTIVITY IN THE BUILT ENVIRONMENT POLICY INITIATIVE

The GCLMPO is highly involved with the Gaston County Healthcare Commission's Health in All Policies (HiAP) Workgroup. This Workgroup is focused on issues within Gaston County, but GCLMPO hopes to mirror this effort in Cleveland and Lincoln counties as well. The HiAP Workgroup is currently comprised of county and municipal planners and parks and recreation staff, health educators from the Gaston County Department of Health and Human Services, and representatives from CaroMont Health, Carolina Thread Trail, Gaston County Cooperative Extension, Gaston County Schools, and Gaston Together.

The highest priority of the HiAP Workgroup is to encourage local governments, businesses, and nonprofits to adopt a HiAP approach to decision making. HiAP is a collaborative approach that integrates health considerations into traditionally non-health/public health policy-making and program areas. HiAP improves personal health while contributing to community wellbeing and prosperity, with the goal of health equity.



The workgroup seeks to make physical activity an integrated part of daily life by identifying, publicizing and educating officials about policy barriers, and encouraging policy changes that result in transportation decisions that include all types of transportation users.

For most of the history of the United States, cities were designed and built in ways that made physical activity a normal part of daily life. Houses were built near workplaces, and sidewalks or paths were a standard part of street systems. People walked to work, to school, to church, and to the store. Various land uses were located in close proximity to each other, so people could satisfy their daily needs on foot. With the advent of the automobile, this changed. As narrow, walkable city streets designed and scaled for horses and people changed into wide roads built for automobiles, walking became dangerous.

In the post-World War II era, federal and state transportation policies were dominated by the push to build new highways and freeways so people could quickly travel from the city center to areas outside of the city. People began living farther from work, school, church, and stores in large properties that were increasingly spread out. This suburbanization gave people more freedom to travel around their cities and regions, but reduced the opportunity for physical activity in their daily lives. Physical activity changed from a routine and incidental part of life to an intended part of life. Walking or riding a bicycle switched from being a transportation choice to an exercise plan.

While land use decisions are generally made by local governments, transportation policies and decisions are made by state governments. North Carolina has made improvements in linking land use and transportation policies and in seeking local and regional government input into state transportation





policies. NCDOT adopted an updated Complete Streets Policy in August 2019 that outlines NCDOT's ongoing commitment to safe, multi-modal transportation. The Policy and Implementation Guide details how Complete Streets will be planned, prioritized, designed, constructed and maintained across the state.

Since street rights-of-way are often the largest public space in cities, how streets are designed and built makes a tremendous difference in the amount of incidental physical activity a person gets each day. If streets are designed and built with pedestrians and bicyclists in mind – and include sidewalks, bicycle lanes, narrow vehicle travel lanes, street trees, street furniture, and safe intersection crossings – then physical activity can again become an incidental part of life. In addition, special attention needs to be given to areas where vulnerable populations are located. This can only be accomplished by making policy changes at the state level at NCDOT and on the local level by making zoning changes to allow and promote walkable, mixed-use communities with an urban design.

The Eat Smart, Move More NC website provides staggering statistics on the results of a more sedentary lifestyle common to North Carolinians. According to the Overweight and Obesity in NC 2020 Update, an estimated 68% of North Carolina adults are either overweight or obese, which is slightly higher than the national average. According to the 2017 NC Behavioral Risk Factor Surveillance System (BRFSS) survey, over half (51%) of adults do not get the recommended 150 minutes per week of moderate-intensity aerobic physical activity and almost three out of four (71%) do not meet the weekly muscle-strengthening exercise recommendations. In addition, about one in three (31%) of children age 10 to 17 in North Carolina are either overweight or obese and 78% do not meet the recommendation to be active for at least an hour per day, seven days per week.

GCLMPO is applying a variety of best practices to cultivate a transportation network that promotes physical activity. These methods include prioritizing physical activity benefits in funding activities, supporting coordinated land use connections as part of locally administered transportation projects, working with communities on adopting complete streets policies, and focusing investments in designated activity centers and mobility hubs.

There are specific characteristics of a healthy built urban environment that should be addressed by policy:

1. Location of Development
 - a. Transit Oriented
 - b. Downtowns
 - c. Along Corridors
 - d. Mixed Use Centers
2. Urban Form and Character
 - a. Building Relationship to Street
 - b. Design and Aesthetics
3. Transit Access and Availability
 - a. Proximity
 - b. Frequency
 - c. Comfortable pedestrian environment
4. Connectivity of Streets
5. Roadway Design/Complete Streets
 - a. Width of Street and travel lanes
 - b. Speed design
 - c. Availability of on-street parking
 - d. Street trees
 - e. Pedestrian signals, refuge islands, crosswalks
 - f. Flexibility in standards for retrofits within existing right-of-way
 - g. Sidewalks set back from curb on all streets
6. Bicycle Facilities
 - a. Proximity
 - b. Design
 - c. Completeness of Network
7. Access to Parks and Open Space
 - a. Proximity
 - b. Quality
 - c. Perceived Safety

PERFORMANCE MANAGEMENT

A national performance-based planning requirement for federal, state, and regional agencies was originally established in 2012, with the Moving Ahead for Progress in the 21st Century (MAP-21) surface transportation program, in order to tie investments to transportation system performance. It was continued in 2015 with the passage of the FAST Act. The FAST Act continues the aggressive path toward performance-based planning and more specifically, performance-based transportation

outcomes. Several divisions of the U.S. Department of Transportation (USDOT) are responsible for administering the national surface transportation, performance-based planning program with rule-making oversight by the FHWA and FTA. The performance management framework is based upon seven (7) national goals established by MAP- 21 and FAST Act.

NATIONAL PERFORMANCE GOALS

- **Safety**—*To achieve a significant reduction in traffic fatalities and serious injuries on all public roads.*
- **Infrastructure condition**—*To maintain the highway infrastructure asset system in a state of good repair.*
- **Congestion reduction**—*To achieve a significant reduction in congestion on the National Highway System (NHS).*
- **System reliability**—*To improve the efficiency of the surface transportation system.*
- **Freight movement and economic vitality**—*To improve the national freight network, strengthen the ability of rural communities to access national and international trade markets, and support regional economic development.*
- **Environmental sustainability**—*To enhance the performance of the transportation system while protecting and enhancing the natural environment.*
- **Reduced project delivery delays**—*To reduce project costs, promote jobs and the economy, and expedite the movement of people and goods by accelerating project completion through eliminating delays in the project development and delivery process.*

Federally mandated rules associated with performance management include requirements for MPOs, State DOTs, and transit agencies to establish performance targets. Another significant component of performance management is monitoring and reporting on transportation system performance. As the MPO for Gaston, Cleveland, and Lincoln counties, the GCLMPO is responsible for reporting on performance management in its 2050 MTP. FIGURE 2-2 displays an overview of the performance-based planning process. The following pages contain more details about the requirements and related tasks accomplished by the GCLMPO.



Figure 2-2: Performance-Based Planning Process

FEDERAL PERFORMANCE MEASURES

Federal performance measures for both highway and transit have been established as part of the federal performance management initiative. For each performance measure, the effective (starting) date of the measure, the recommended data sources, and the network applicability (Interstate system, National Highway System, all public roads, etc.) have been defined. The highway system performance measures are listed in Table 2-1 and apply to all MPOs and State DOTs. The highway performance measures align with the seven national goals.

NATIONAL GOAL AREA	HIGHWAY CATEGORY	PERFORMANCE MEASURE	
Safety	Safety	Number of Fatalities	
		Rate of Fatalities	
		Number of Serious Injuries	
		Rate of Serious Injuries	
		Number of Non-Motorized Fatalities and Non-Motorized Serious Injuries	
Infrastructure Condition	Infrastructure	Percentage of Pavements in Good Condition (Interstate)	
		Percentage of Pavements in Poor Condition (Interstate)	
		Percentage of Pavements in Good Condition (Non-Interstate NHS)	
		Percentage of Pavements in Poor Condition (Non-Interstate NHS)	
		Percentage of Bridges in Good Condition (NHS)	
		Percentage of Bridges in Poor Condition (NHS)	
System Reliability	System Performance	Percent of Reliable Person-Miles Traveled (Interstate)	
		Percent of Reliable Person-Miles Traveled (Non-Interstate NHS)	
Freight Movement & Economic Vitality		Truck Travel Time Reliability (TTTR) for the Interstate System	
Environmental Sustainability		Total Emissions Reduction	
Congestion Reduction		Annual Hours of Peak Hour Excessive Delay (PHED) Per Capita on the National Highway System (NHS)	
		Percent of Non-Single Occupancy Vehicle (SOV) Travel	

Table 2-1: Highway System Performance Measures

Table 2-2 includes the transit system performance measures, which apply to transit agencies and State DOTs and also need to be established and monitored by MPOs.

TRANSIT CATEGORY	PERFORMANCE MEASURE
Transit Asset Management (TAM) and National Transit Database (NTD) Reporting	Equipment - Percent of equipment valued > \$50,000 (support, non-revenue service vehicles) that have met their Useful Life Benchmark (ULB)
	Rolling Stock - Percent of revenue vehicles surpassing their ULB by Asset Class
	Facilities - Percent of facilities with condition rating below 3.0 on FTA Transit Economic Requirements Model (TERM) Scale
	Infrastructure – Percent of guideway directional route miles with performance restrictions by class

Table 2-2: *Transit System Performance Measures*

FEDERAL PERFORMANCE TARGETS

Although federal performance measures are identified at the federal level, one of the key tasks for MPOs, State DOTs, and transit agencies is to establish performance targets based on those defined measures. Guidance is provided at the federal level regarding the development of performance targets, but it is up to each respective agency to coordinate to establish and monitor targets over time.

HIGHWAY TARGETS

Highway targets are generally required for State DOTs first, and then MPOs have 180 days after the State's targets are established to define their own targets. MPOs can establish targets one of two ways: 1) Agree to contribute toward the accomplishment of the State DOT target, or 2) Develop a quantifiable target for the MPO planning area.

Safety

NCDOT established its most recent safety targets in August 2021. Key facts are:

- Targets for each performance measure are based on 5-year rolling averages
- Targets are for calendar years
- Targets will be established annually
- NCDOT will coordinate with MPOs to establish targets
- NCDOT's targets call for a 50 percent reduction in the five metrics identified (by 2035)

The GCLMPO coordinated with NCDOT and adopted the state's 2022 safety performance targets on January 27, 2022. The NCDOT safety performance targets are listed in Table 2-3. The projects programmed in the GCLMPO's 2050 MTP are intended to contribute to the accomplishment of NCDOT's safety targets.

NCDOT documents and reports its safety performance targets in its annual Highway Safety Improvement Program. Detailed information about NCDOT's targets can be found in the North Carolina Strategic Highway Safety Plan.

CATEGORY	PERFORMANCE MEASURE	NC DOT TARGET (BY DEC. 31, 2022)
Safety	Number of Fatalities	1,254.9 (12.17% reduction)
	Rate of Fatalities	1.057 (13.78% reduction)
	Number of Serious Injuries	3,537.6 (19.79% reduction)
	Rate of Serious Injuries	2.962 (21.68% reduction)
	Number of Non-Motorized Fatalities and Non-Motorized Serious Injuries	486.0 (17.93% reduction)

Table 2-3: Safety Performance Measures & Targets

Infrastructure Condition

NC DOT established its infrastructure condition targets in May 2018, highlighted by the following:

- Targets are based on an evaluation of trends and external and internal factors. Details are provided in NC DOT's baseline report NC DOT Performance Based Planning: MAP- 21/FAST Act Compliance, Strategy, and Target Setting
- Target setting frequency: 2-year and/or 4-year
- The first performance period is January 1, 2018 through December 31, 2021
- States and MPOs will coordinate to establish targets

The GCLMPO coordinated with NC DOT and adopted the state's infrastructure condition targets on October 25, 2018. The NC DOT infrastructure condition targets are listed in Table 2-4. Target setting details are included in Appendix A.

NC DOT documented its infrastructure condition targets in a baseline performance period report submitted to FHWA in September 2018. It will report on progress in both a 2-year, mid-performance period progress report (October 1, 2020) and a 4-year, full performance period report (October 1, 2022). The 4-year targets can be adjusted in the mid-performance period progress report. Both progress toward achieving the first period performance targets and setting of new targets occur in the full performance period report.

CATEGORY	PERFORMANCE MEASURE	2 YEAR TARGET 1/1/2018 -12/31/2019	4 YEAR TARGET 1/1/2018 -12/31/2021
		N/A	37.00%
Infrastructure Condition	Percentage of Pavements in Good Condition (Interstate)	N/A	37.00%
	Percentage of Pavements in Poor Condition (Interstate)	N/A	2.20%
	Percentage of Pavements in Good Condition (Non-Interstate NHS)	27.00%	21.00%
	Percentage of Pavements in Poor Condition (Non-Interstate NHS)	4.20%	4.70%
	Percentage of Bridges in Good Condition (NHS)	33.00%	30.00%
	Percentage of Bridges in Poor Condition (NHS)	8.00%	9.00%

Table 2-4: Infrastructure Condition Measures & Targets

System Performance

NCDOT established its system performance targets in May 2018, highlighted by the following:

- Targets are based on an evaluation of trends and external and internal factors. Details are provided in NCDOT's baseline report NCDOT Performance Based Planning: MAP-21/FAST Act Compliance, Strategy, and Target Setting
- Target setting frequency: 2-year and/or 4-year
- State DOTs whose geographic boundaries include any part of a nonattainment or maintenance area for ozone, carbon monoxide, or particulate matter must establish 2-year and 4-year emissions targets for each of these applicable criteria pollutants and precursors
- State DOTs and MPOs in urbanized areas of more than 1 million people (first performance period) and more than 200,000 (subsequent performance periods) that are also in nonattainment or maintenance areas for ozone, carbon monoxide or particulate matter must establish a single, unified 2-year and 4-year target for annual hours of peak hour excessive delay (PHED) per capita and percent of non-single occupant vehicle (SOV) travel
- The first performance period is January 1, 2018 through December 31, 2021
- States and MPOs will coordinate to establish targets

GCLMPO attended two meetings with all MPOs and State DOTs in the Charlotte, NC-SC Urbanized Area (UZA) in March 2018 to establish the required single, unified targets. These targets were supported by all agencies in the spring of 2018. GCLMPO also provided emissions targets at these meetings to help in the establishment of the statewide emissions targets. The GCLMPO coordinated with NCDOT and adopted the state system performance targets on October 25, 2018. The NCDOT system performance targets are listed in Table 2-5. Target setting details are included in Appendix A.

NCDOT documented its system performance targets in a baseline performance period report submitted to FHWA in September 2018. It reports on progress in both a 2-year, mid-performance period progress report and a 4-year, full performance period report. The 4-year targets can be adjusted in the mid-performance period progress report. Both progress toward achieving the first period performance targets and setting of new targets occurs in the full performance period report.

PERFORMANCE MEASURE	2 YEAR TARGET 1/1/2018 -12/31/2019	4 YEAR TARGET 1/1/2018 -12/31/2021
Percent of Reliable Person-Miles Traveled (Interstate)	80.00%	75.00%
Percent of Reliable Person-Miles Traveled (Non-Interstate NHS)	N/A	70.00%
Truck Travel Time Reliability (TTTR) for the Interstate System	1.65	1.7
Total Emissions Reduction	21.00%	21.00%
Annual Hours of Peak Hour Excessive Delay (PHED) Per Capita on the National Highway System (NHS)	N/A	34
Percent of Non-Single Occupancy Vehicle (SOV) Travel	VOC: 0.252 kg/day	VOC: 0.504 kg/day
	NOx: 2.360 kg/day	NOx: 4.720 kg/day

Table 2-5: System Performance Measures & Targets

TRANSIT TARGETS

Transit agencies are defined in the federal regulations as either Tier I or Tier II agencies. These agency types are based upon the number of vehicles owned, operated, and managed by a respective transit agency:

- Tier I agencies own/operate/manage > 100 vehicles during peak service
- Tier II agencies own/operate/manage ≤ 100 vehicles during peak service

A Tier I agency is responsible for setting its own transit targets, whereas Tier II agencies can set their own targets or defer to group sponsors (typically State DOTs) to set the targets. Currently, there are no Tier I transit agencies within the GCLMPO. Tier II agencies include Gastonia Transit, Gaston

ASSET CATEGORY - PERFORMANCE MEASURE	ASSET CLASS	USEFUL LIFE BENCHMARK	2019 TARGET
REVENUE VEHICLES			
Age - % of revenue vehicles within a particular asset class that have met or exceeded their Useful Life Benchmark (ULB)	AO - Automobile	8	20%
	BU - Bus	14	20%
	CU - Cutaway Bus	10	20%
	MB - Mini-bus	10	20%
	MV - Mini-van	8	20%
	SV - Sport Utility Vehicle	8	20%
	VN - Van	8	20%
	Other	8	20%
EQUIPMENT			
Age - % of vehicles that have met or exceeded their Useful Life Benchmark (ULB)	Non Revenue/Service Automobile	8	20%
	Steel Wheel Vehicles	8	20%
	Trucks and other Rubber Tire Vehicles	8	20%
	Maintenance Equipment	Agency Determined	20%
	Computer Software	Agency Determined	20%
	Custom 1	Agency Determined	20%
FACILITIES			
Condition - % of facilities with a condition rating below 3.0 on the FTA Transit Economic Requirements Model (TERM) Scale	Administration	N/A	20%
	Maintenance	N/A	20%
	Parking Structures	N/A	20%
	Passenger Facilities	N/A	20%
	Shelter	N/A	20%
	Storage	N/A	20%
	Custom 1	N/A	20%

Table 2-6: Transit Asset Management (TAM) Plan Targets

County ACCESS, Transportation Lincoln County (TLC), and the Transportation Administration of Cleveland County (TACC). All Tier II agencies have elected to participate in NCDOT's Group Transit Asset Management (TAM) Plan and have agreed to support NCDOT targets. The transit asset targets shown in Table 2-6 have been established as part of the NCDOT TAM Plan and were adopted by the GCLMPO Board on May 23, 2019.

In addition, providers of public transportation systems that receive federal funds under the Federal Transit Administration (FTA) Urbanized Area Formula Grant must develop and adopt a Public Transportation Agency Safety Plan (PTASP) that includes Safety Performance Targets for transit-related fatalities, injuries, safety events, and system reliability (state of good repair). Gastonia Transit provided their transit safety targets to the GCLMPO on June 28, 2021. On July 22, 2021, the GCLMPO Board passed a resolution to support Gastonia Transit's transit safety targets and agreed to plan and program projects that contribute toward the accomplishment of the transit provider targets. The transit safety targets are listed in Table 2-7.

MODE OF TRANSIT SERVICE	FATALITIES (TOTAL)	FATALITIES (PER 100K VRM)	SERIOUS INJURIES (TOTAL)	SERIOUS INJURIES (PER 100K VRM)	SAFETY EVENTS (TOTAL)	SAFETY EVENTS (PER 100K VRM)	SYSTEM RELIABILITY
GASTONIA TRANSIT							
Fixed Route Bus	0	0	5	0.2	7	0.28	100,000
Paratransit	0	0	1	0.1	1	0.01	69,500

Table 2-7: Transit Safety Performance Targets

RELATED PERFORMANCE-BASED PLANS

There are several other plans maintained by transportation agencies that feed into performance management or include aspects of performance management. It is important that the goals and objectives of those plans are incorporated into GCLMPO's overall performance-based planning efforts. The following plans contain applicable performance management components:

NCDOT STRATEGIC HIGHWAY SAFETY PLAN (SHSP)

The NCDOT SHSP was first developed in 2002 as a document that was intended to be updated repeatedly. The last plan update was in 2019. The SHSP includes a vision, mission, and goals, as follows:

- Vision – Through our partnerships, we foster safety awareness and provide safe access throughout North Carolina for all users and modes of travel such that everyone arrives safely at their destination.
- Mission – Establish a collaborative, strategic approach to the identification and implementation of safety improvement programs and policies to achieve the statewide goals to reduce fatalities and serious injuries related to crashes on North Carolina's transportation system.
- Goal – Cut the fatalities and serious injuries in North Carolina in half by 2035, moving towards zero by 2050.

This goal is consistent with the safety targets set by NCDOT, and supported by the GCLMPO.

TRANSPORTATION ASSET MANAGEMENT PLAN (FOR THE NATIONAL HIGHWAY SYSTEM)

The development of an asset management plan that accounts for the National Highway System is one of the federal requirements associated with performance-based planning. NCDOT has currently developed a three-phased plan consisting of the following:

- Phase I – Initial draft of highway assets (including pavement lanes and shoulders, bridges, and tunnels, among others).
- Phase II – Consideration of other highway assets (including rest areas, weigh stations, and pump houses, among others).
- Phase III – Coverage of other NCDOT transportation modes (including ferries, airports, rail, and ports).

CMAQ PERFORMANCE PLAN

MPOs serving a transportation management area (TMA) with a population over 1 million that includes a nonattainment or maintenance area are required to develop a CMAQ Performance Plan to support the implementation of the CMAQ measures. In the CMAQ Performance Plan and its biennial updates, these MPOs report 2-year and 4-year targets, describe how they plan to meet their targets, and detail their progress toward achieving the targets over the course of the performance period.

GCLMPO developed its initial CMAQ Performance Plan in September 2018. A copy of the plan is included in Appendix A.



TRANSIT ASSET MANAGEMENT (TAM) PLAN

All transit providers that are recipients or subrecipients of Federal financial assistance under 49 U.S.C. Chapter 53 and own, operate, or manage transit capital assets used in the provision of public transportation are required to develop a TAM plan. The plan must be updated in its entirety at least every four years, and it must cover a horizon period of at least four years.

Tier I transit providers are required to develop and carry out their own TAM plans. As stated, the GCLMPO does not have a Tier I transit agency. Tier II providers may develop their own plans or participate in a group TAM plan (compiled by a Group Plan Sponsor – typically the State DOT). The North Carolina Department of Transportation-Public Transportation Division (NCDOT-PTD) prepared a Group TAM plan for all community transportation systems and small urban systems opting to be included in the plan. All four transit agencies within the GCLMPO area participated in the NCDOT Group TAM Plan.

PUBLIC TRANSPORTATION AGENCY SAFETY PLAN (PTASP)

A safety plan is also required by agencies that provide public transportation services. The FTA published the PTASP Final Rule on July 19, 2018 requiring public transportation systems that receive federal funds under FTA's Urbanized Area Formula Grants to develop and adopt a PTASP. The plan should include methods for identifying and evaluating safety risks, strategies to minimize exposure to hazards and unsafe conditions, as well as a process for conducting an annual review and update of the plan. The plan must include safety targets for performance measures associated with the transit safety plan. Gastonia Transit adopted its PTASP in December 2020.

NEXT STEPS

GCLMPO's performance measures and targets must be integrated into the regional planning framework and monitored over time. Coordination with NCDOT will continue to be a critical focus for the GCLMPO to best implement the performance measures, track targets, and monitor progress.

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GCLMPO MTP
CHAPTER THREE

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