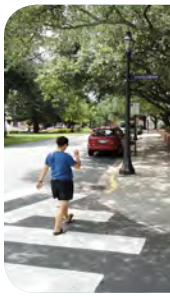

Greenville Metropolitan Transportation Plan

2045 Update

July 2019

Kimley»Horn

Greenville
URBAN AREA MPO

ACKNOWLEDGMENTS

On behalf of the project team, the Greenville Urban Area MPO thanks the diverse group of participants whose input was instrumental to creating the blueprint for a safe, multimodal, and interconnected transportation system for the region. The Greenville Metropolitan Transportation Plan 2045 Update reflects the collaborative efforts of the public, stakeholders, local staff and officials, the North Carolina Department of Transportation (NCDOT), the Federal Highway Administration (FHWA), and the steering committee. The efforts of everyone are greatly appreciated.

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Table of Contents

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Chapter 1
Vision & Framework

INTRODUCTION

What is the Greenville Metropolitan Transportation Plan?

The Greenville Metropolitan Transportation Plan (MTP), is the 2045 plan update for the Metropolitan Planning Organization (MPO) transportation network. It defines the vision for creating a mode-inclusive, regional transportation system that accommodates the current and future mobility needs of its citizens through the identification of projects, policies, and action steps. The plan acknowledges that transportation is a critical component of daily life that residents and visitors rely on access to education, health care, jobs, and entertainment throughout the region.

How is the plan used?

The Greenville MTP will serve as a blueprint for guiding transportation investments, directing federal, state, and local dollars towards projects that the community needs and values.

On a broader level, the MTP is governed by the Fixing America's Surface Transportation Act (FAST Act), transportation legislation that ensures that the plan meets federal requirements: strengthening America's highways, establishing a performance-based program, creating jobs and supporting economic growth, supporting the United States Department of Transportation's (USDOT) aggressive safety agenda, streamlining Federal Highway Administration (FHWA) transportation programs, accelerating project delivery, and promoting innovation. The FAST Act legislation extends through 2020.

The Greenville Urban Area is approximately 655 square miles and incorporates parts of Pitt County in North Carolina and fully encompasses the City of Greenville, Town of Winterville, Town of Ayden, and the Village of Simpson. The map to the right shows the study area boundary and member jurisdictions.

What's in the plan?

The following describes the chapters included in this plan and the content included in each:

Chapter 1 – Vision and Framework

- Chapter 1 outlines the framework of the plan and introduces the planning process.

Chapter 2 - Public Engagement

- Chapter 2 provides an overview of the public engagement process.

Chapter 3 – Existing Conditions

- Chapter 3 presents a review of existing conditions including a review of demographics and existing transportation assets.

Chapter 4 – Multimodal Recommendations

- Chapter 4 outlines the development of bicycle, pedestrian, and transit projects identified through the MTP in conjunction with the recently completed Greenville Active Transportation Plan.

Chapter 5 – Roadway Recommendations

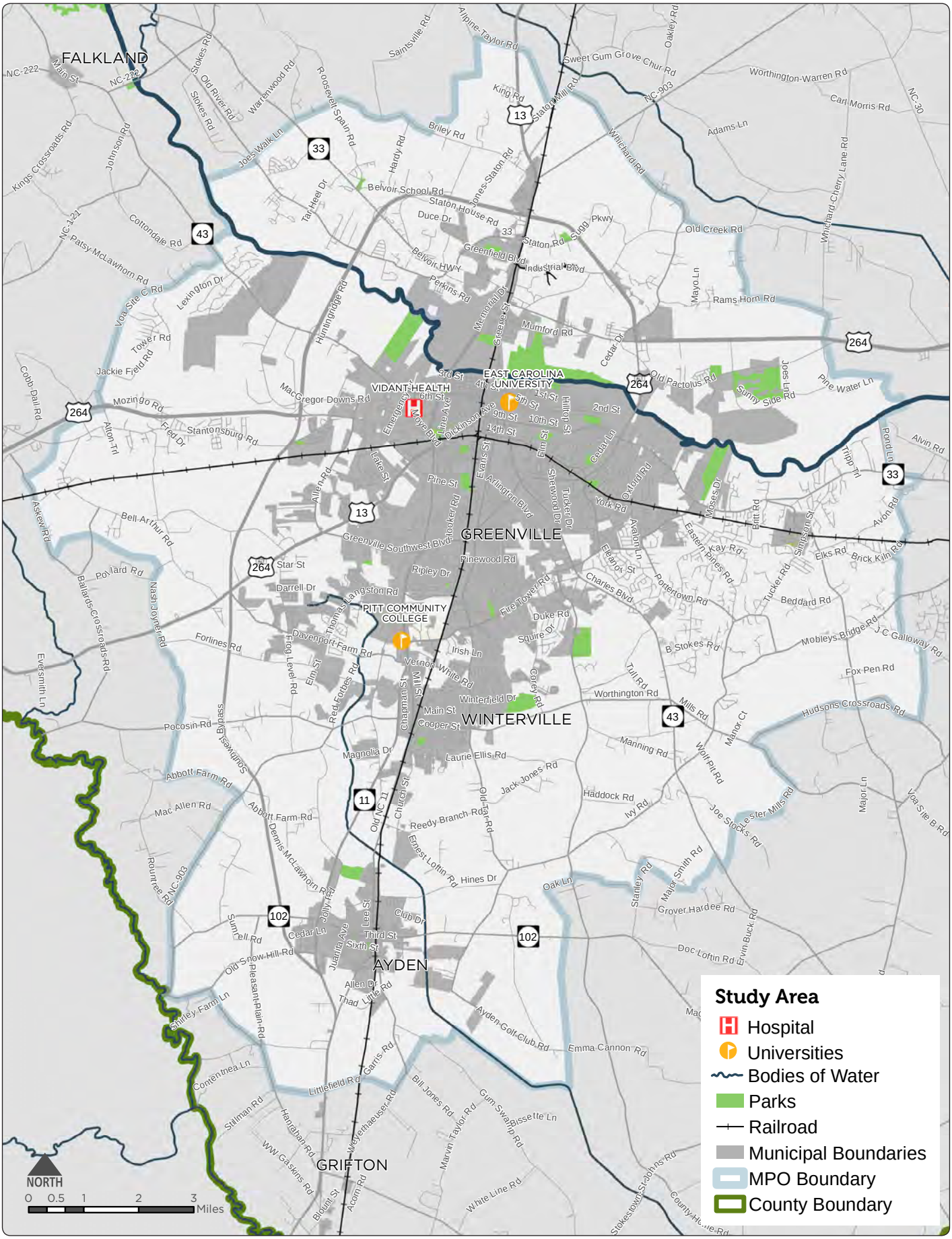
- Chapter 5 outlines the development of roadway projects identified through the MTP and introduces the methodology used to identify priority projects.

Chapter 6 – Performance Measures

- Chapter 6 discusses the role of performance-based planning and new requirements for monitoring and evaluation.

Chapter 7 – Investing in Transportation

- Chapter 7 explores available funding mechanisms at the federal, state, and local levels and offers an action plan for implementing projects.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Alpine-Taylor Rd
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Adams Ln
Whichard-Cherry Lane Rd
Kings Crossroads Rd
Johnson Rd
Belvoir School Rd
Jones-Staton Rd
Staton House Rd
Duce Dr
Tar Heel Dr
NC-121
Cottondale Rd
43
Patsy McLawhorn Rd
Staton Rd
Sugg Pkwy
Old Creek Rd
Greenfield Blvd
Industrial Blvd
Belvoir HWY
Perkins Rd
Mayo Ln
Rams Horn Rd
Voa Site C Rd
Lexington Dr
Tower Rd
Huntingridge Rd
Memorial Dr
Greene St
Mumford Rd
Cedar Dr
264
Jackie Field Rd
Cobb Dail Rd
MacGregor Downs Rd
3rd St
4th St
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5th St
9th St
10th St
2nd St
Hilltop St
Old Pactolus Rd
Joes Ln
Sunny Side Rd
Pine Water Ln
Mozingo Rd
Alton Trl
Fred Dr
Stantonsburg Rd
Emergency
Moye Blvd
The Ave
Jackson Ave
14th St
Elm St
Cedar Ln
Pond Ln
Tripp Trl
Alvin Rd
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Lake St
Allen Rd
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Evans St
Arlington Blvd
Sherwood Dr
Tucker Dr
Oxford Rd
York Rd
Moses Dr
Avalon Ln
Eastern Pines Rd
Britt Rd
Simpson St
Avon Rd
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Brick Kiln Rd
Kay Rd
Askew Rd
Bell Arthur Rd
Hooker Rd
Greenville Southwest Blvd
Pinewood Rd
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Ripley Dr
Darrell Dr
Eleanor St
Charles Blvd
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Tucker Rd
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Povlard Rd
Ballards Crossroads Rd
Nash Joyner Rd
Thomas Langston Rd
Fire Tower Rd
Duke Rd
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Irish Ln
Davenport Farm Rd
Forlines Rd
Frog Level Rd
Elm St
Vernon White Rd
Mobleys Bridge Rd
J C Galloway Rd
B Stokes Rd
Fox Pen Rd
Eversmith Ln
Red Forbes Rd
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Chapman St
Corey Rd
Winterfield Dr
Main St
Cooper St
Worthington Rd
Tull Rd
Mills Rd
Hudsons Crossroads Rd
Pocosin Rd
Southwest Bypass
Magnolia Dr
Laurie Ellis Rd
Manning Rd
Manor Ct
Wolf Pit Rd
Abbott Farm Rd
Jack Jones Rd
Haddock Rd
Ivy Rd
Mac Allen Rd
Old NC 11
Church St
Old Tar Rd
Reedy Branch Rd
Joe Stocks Rd
Major Ln
Voa Site B Rd
Rountree Rd
NC-903
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Ernest Loftin Rd
Hines Dr
Oak Ln
Stanley Rd
Major Smith Rd
Grover Hardee Rd
102
Summerell Rd
Cedar Ln
Lee St
Jolly Rd
Club Dr
Third St
Sixth St
Juanita Ave
Old Snow Hill Rd
Doc Loftin Rd
Erwin Buck Rd
Allen Dr
Thad Lane Rd
Shirley Farm Ln
Pleasant Plain Rd
Ayden Golf Club Rd
Emma Cannon Rd
Contentnea Ln
Littlefield Rd
Garris Rd
Bill Jones Rd
Gum Swamp Rd
Bissette Ln
Stillman Rd
Hanrahan Rd
Weyerhaeuser Rd
Marvin Taylor Rd
WW Gaskins Rd
Blount St
Acorn Rd
White Line Rd
Johns Rd
Stokestown St
County Home Rd
NORTH
0 0.5 1 2 3 Miles
Study Area
Hospital
Universities
Bodies of Water
Parks
Railroad
Municipal Boundaries
MPO Boundary
County Boundary

PLANNING PROCESS

How people move through their environment is a key factor for the success of any urban area. It is important to remember that transportation includes not just road and vehicular travel, but biking, walking, public transit, freight, and any other method that one might use to move people or goods from one place to another.

Vision

The guiding principles identified for the MTP reflect the regional vision for a future transportation system, as well as federal planning goals expressed through the FAST Act. These statements play a significant role in ensuring that project recommendations represent the region's intentions for the transportation system. The Greenville MTP includes six guiding principles, which can be seen throughout the plan as they influence recommendations.

MTP Guiding Principles

Quality of Life

Mobility & Connectivity

Network Preservation

Economic Vitality

Safety & Security

Congestion & Travel Time Reliability

MTP Guiding Principles

Quality of Life

Protect and enhance the environment and improve the quality of life for all citizens, while promoting consistency between transportation improvements and both local and State planned growth.

Safety & Security

Promote a safe and secure transportation system for all users, motorized and non-motorized.

Economic Vitality

Support the economic vitality of the entire Metropolitan Area by enabling competitiveness, productivity, and efficiency.

Network Preservation

Sustain and enhance the transportation system by promoting efficient management and operations.

Mobility & Connectivity

Create a balanced transportation system across all modes that encourages enhanced accessibility and connectivity for all people and freight.

Congestion & Travel Time Reliability

Consistently manage the transportation system to mitigate traffic congestion and ensure reliable travel times across the network.

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Chapter 2
Public Engagement

INTRODUCTION

Public involvement — direct and indirect contact with citizens, stakeholders, elected officials, and other community representatives— is an important part of successful planning processes. Fully understanding the region's vision and the dynamics involved in achieving it requires a collaborative approach. As a result, local staff and the project team reached out to citizens, stakeholders, elected officials, and other Town representatives throughout the planning process.

Public Engagement Opportunities

1

Online Survey

150+

Responses

71

Written Comments

14

Face-to-Face Interaction Opportunities

- 1 Community Event
- 2 Public Meetings
- 1 Day of Stakeholder Meetings
- 4 Steering Committee/Advisory Committee Meetings
- 6 Transportation Advisory Committee (TAC)/ Technical Coordination Committee (TCC) Presentations

STEERING COMMITTEE

A 17-person steering committee, composed of staff from member jurisdictions, transit agencies, and education organizations, met several times throughout the planning process. The Steering Committee had significant overlap with the MPO's TCC, so those regularly scheduled meetings were occasionally used in lieu of standalone meeting times. Committee members had the opportunity to:

- Provide direction for the development of the plan
- Establish plan goals
- Share local knowledge of transportation deficiencies and needs
- Share public engagement opportunities with constituents
- Vet multimodal recommendations
- Review the plan's final content

ADVISORY COMMITTEE

In addition to the Steering Committee, a 15-person Advisory Committee, composed of residents, business owners, elected officials, and advocates as well as steering committee members from the previously completed Greenville Active Transportation Plan, met twice during the planning process. The Advisory Committee provided input on area needs and reviewed final recommendations; these were then incorporated into the planning and documentation process.

STAKEHOLDER INTERVIEWS

Information was gathered through several stakeholder interviews. Stakeholder interviews were conducted in small groups organized around shared interests:

- Development Representatives
- Industry and Business Representatives
- Community Organizations
- School Representatives
- Town Representatives

FACE-TO-FACE INTERACTIONS

One community event and two public meetings gave the public the opportunity to voice their concerns and needs with regard to transportation.

Freeboot Friday

Sponsored by Uptown Greenville, Freeboot Friday is a community event held the day before several East Carolina University home football games each fall. The event promotes local businesses with booths, food, and entertainment. Participating in one of these events served as an ideal opportunity to engage the public in the early stages of the MTP. Feedback on current conditions and needs was solicited from the public.

Open House 1

The first public meeting for the Greenville Urban Area MTP was held on the evening of October 17, 2018. The meeting consisted of several interactive stations that allowed attendees to focus on the vision and needs of the Greenville area.

Stations Included:

- Information Wall
- One Word
- Priority Pyramid
- Thought Wall
- Mapping Exercise

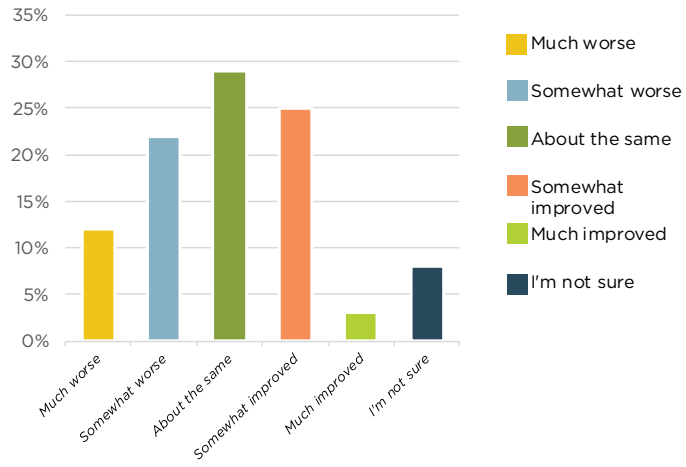
Open House 2

The second public workshop for the MTP was held on the evening of May 15, 2019. Attendees were invited to view and provide feedback on the draft multimodal recommendations along with project prioritization and financial constraint.

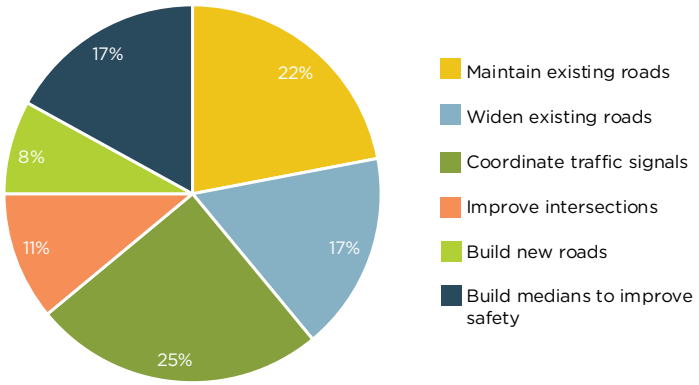
ONLINE SURVEY

An interactive online survey was available from mid-September 2018 through November 2018. Over 150 participants offered input on transportation in the Greenville Area. While the majority of responses came from those living within the City of Greenville, there was participation from Ayden, Winterville, Simpson, and unincorporated parts of the MPO. Additionally, the responses indicated a variety of age groups and income brackets. A sample of survey responses is shown here. A full summary of the survey can be found in Appendix A: Public Outreach Compendium.

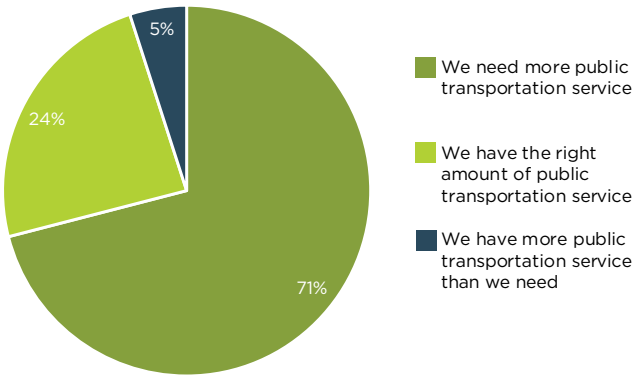
Over the past 5 years, do you think the transportation system in the region is:



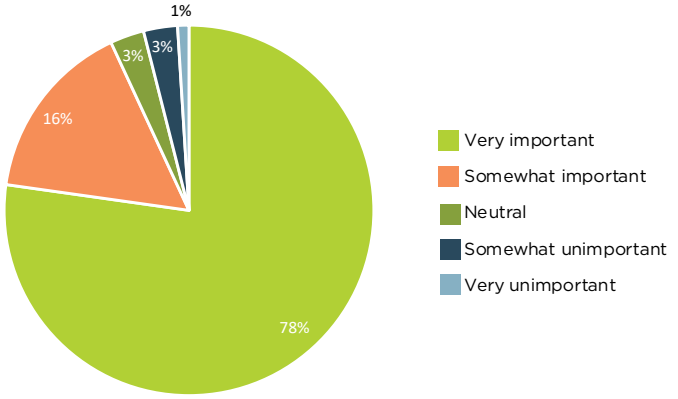
Now thinking only about driving, which improvements would you most like to see in the region?



When considering public transportation in the region, would you say...



How important is it to improve pedestrian facilities in the region?



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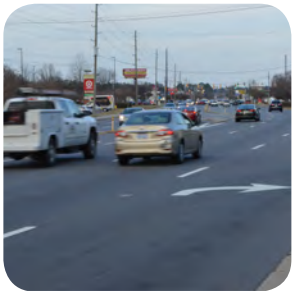


Chapter 3
Existing Conditions

DEMOGRAPHICS

The demographic makeup of the community is extremely important when considering transportation in the Greenville Region. This section uses the 2016 American Community Survey 5-year estimates from the US Census Bureau to gather relevant data for the community. This data helps to better understand the needs of the people in the Greenville Region, thereby helping to more appropriately tailor the recommendations of the final plan to those needs.

At a Glance

31.7

Median age of residents in the Greenville Urban Area

117,798 *2010*

175,150 *2016*

There has been significant growth in the region with a 48% increase in population in the region from 2010 to 2016

Top Industries

Educational Services

Healthcare and Social Assistance

*2015 data

46.8%

Percent minority population. African-American average population of 39%

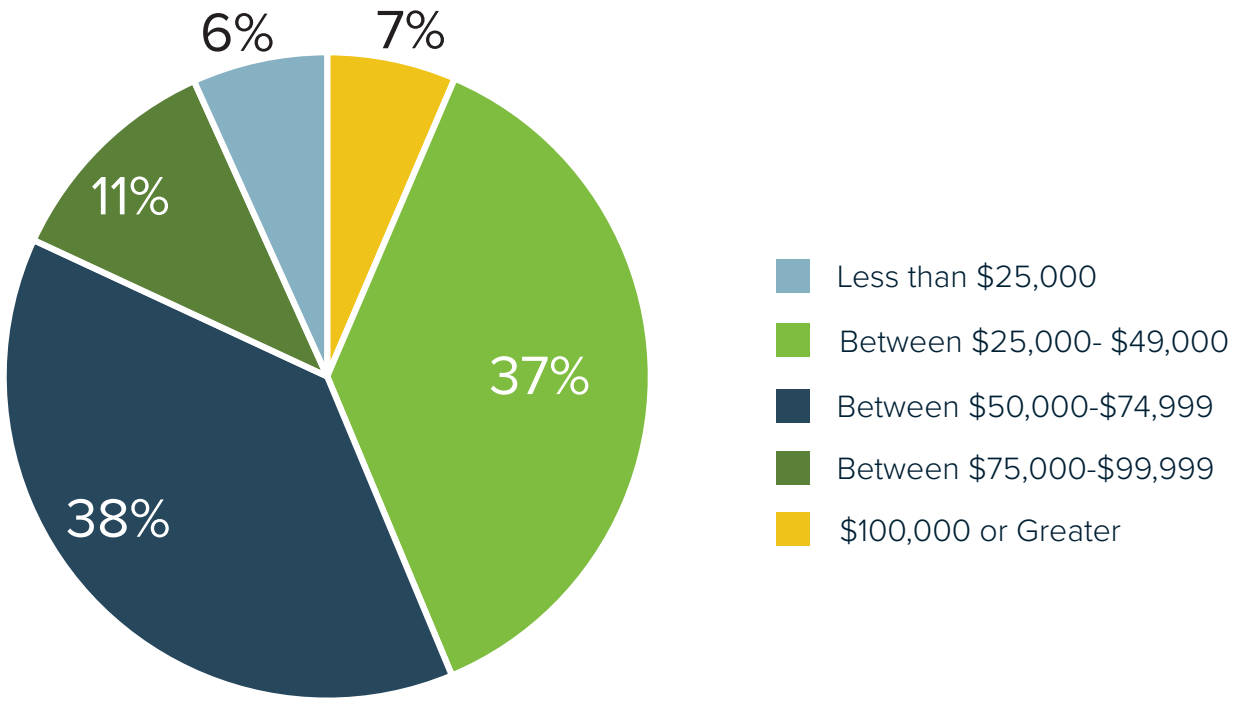
$38,916 *2010*

$42,308 *2016*

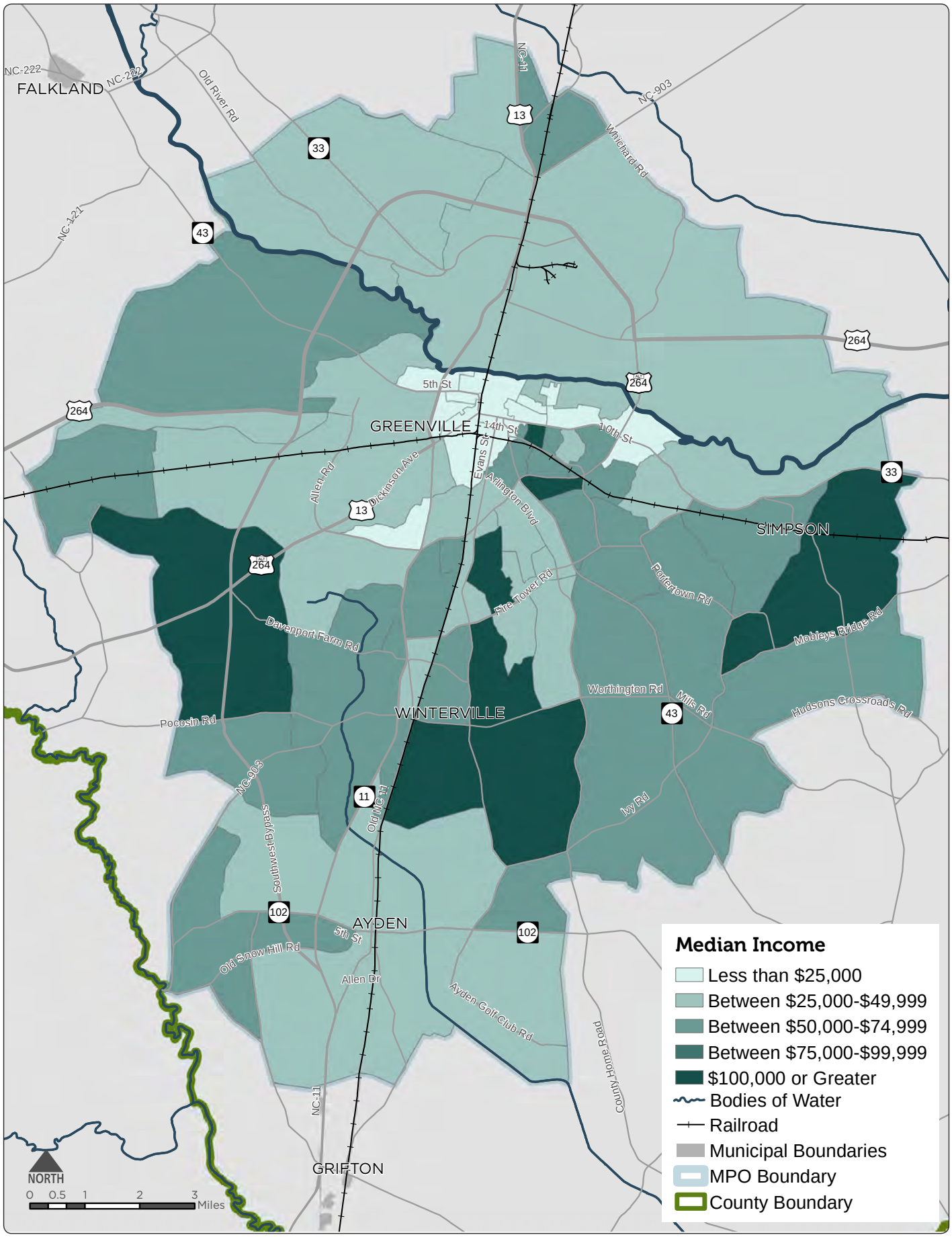
8% increase in median household income in the region from 2010 to 2016

Median Household Income

The majority of the MPO area has a median household income between $25,000 and $50,000, with the second largest majority being between $50,000 and $75,000. Downtown Greenville where the north/south and east/west rail lines meet is home to those with a median income of less than $25,000.



Note: Percentage is by census block group.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Allen Rd
Dickinson Ave
Fire Tower Rd
Portertown Rd
Mobleys Bridge Rd
Davenport Farm Rd
Worthington Rd
Mills Rd
Hudsons Crossroads Rd
Pocosin Rd
Southwest Bypass
Old NC 11
Ivy Rd
Old Snow Hill Rd
Allen Dr
Ayden Golf Club Rd
County Home Road
33
13
43
264
102
11
NORTH
0 0.5 1 2 3 Miles
Median Income
Less than $25,000
Between $25,000-$49,999
Between $50,000-$74,999
Between $75,000-$99,999
$100,000 or Greater
Bodies of Water
Railroad
Municipal Boundaries
MPO Boundary
County Boundary

Diversity: Minority Population

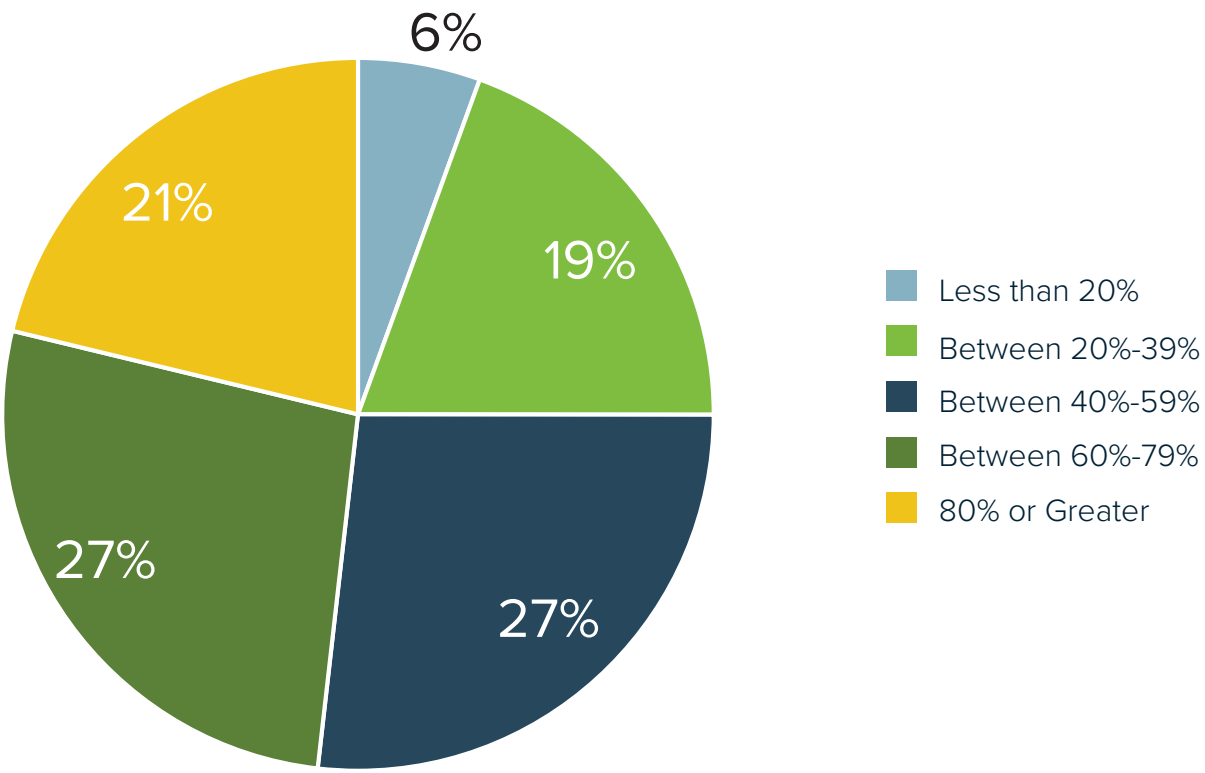
The majority of the MPO is between 40%-79% minority. Areas of higher minority population fall within the areas along both the north/south and the eastern rail lines within Greenville city limits, with the highest percentage along the Tar River. Areas of fewer minority populations trend toward the southeastern side of the study area.

Most Common Countries of Origin

- Mexico
- Canada
- Germany

Non-English Speakers- Most Common Languages

- Spanish
- Vietnamese
- Chinese
- French
- German



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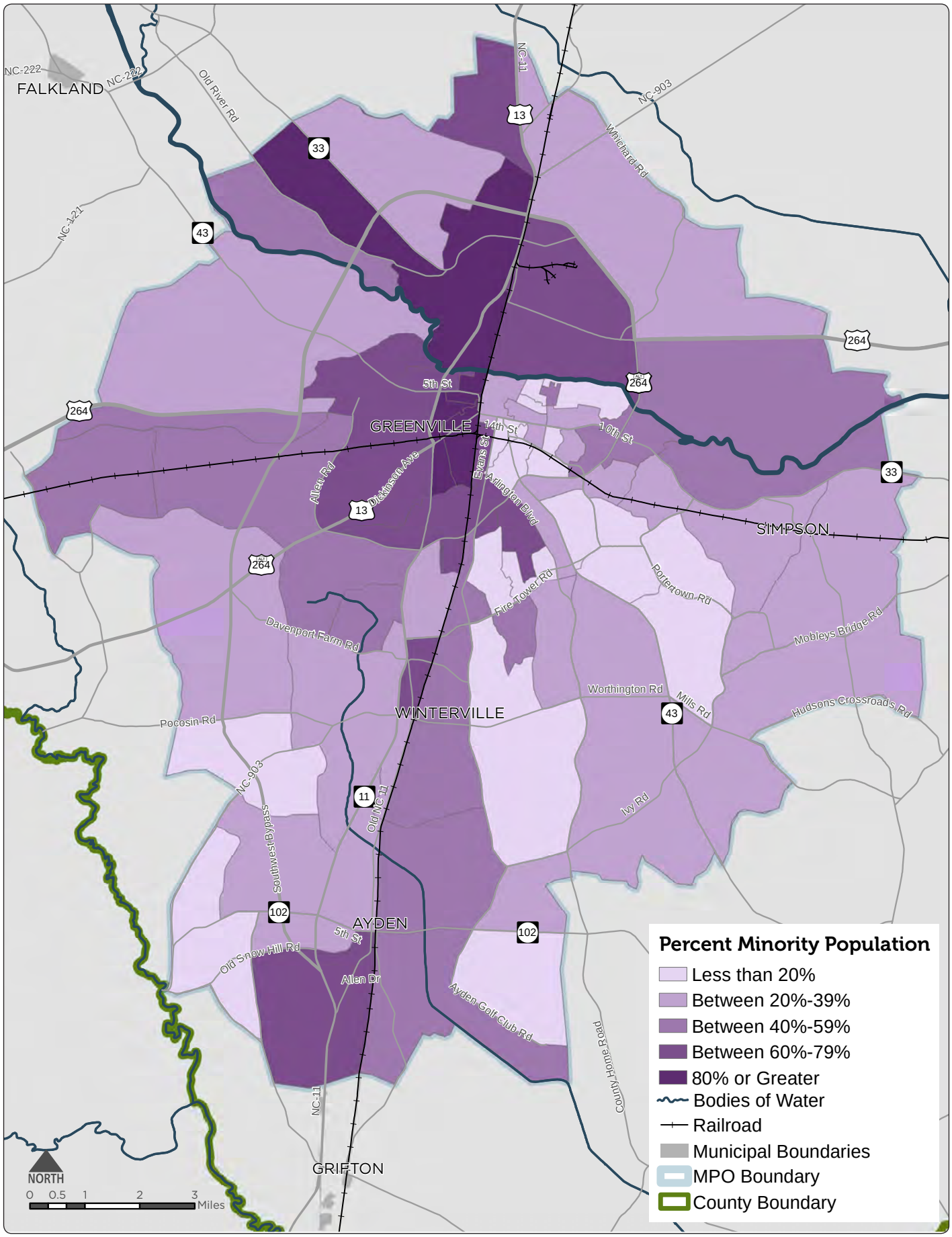
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264
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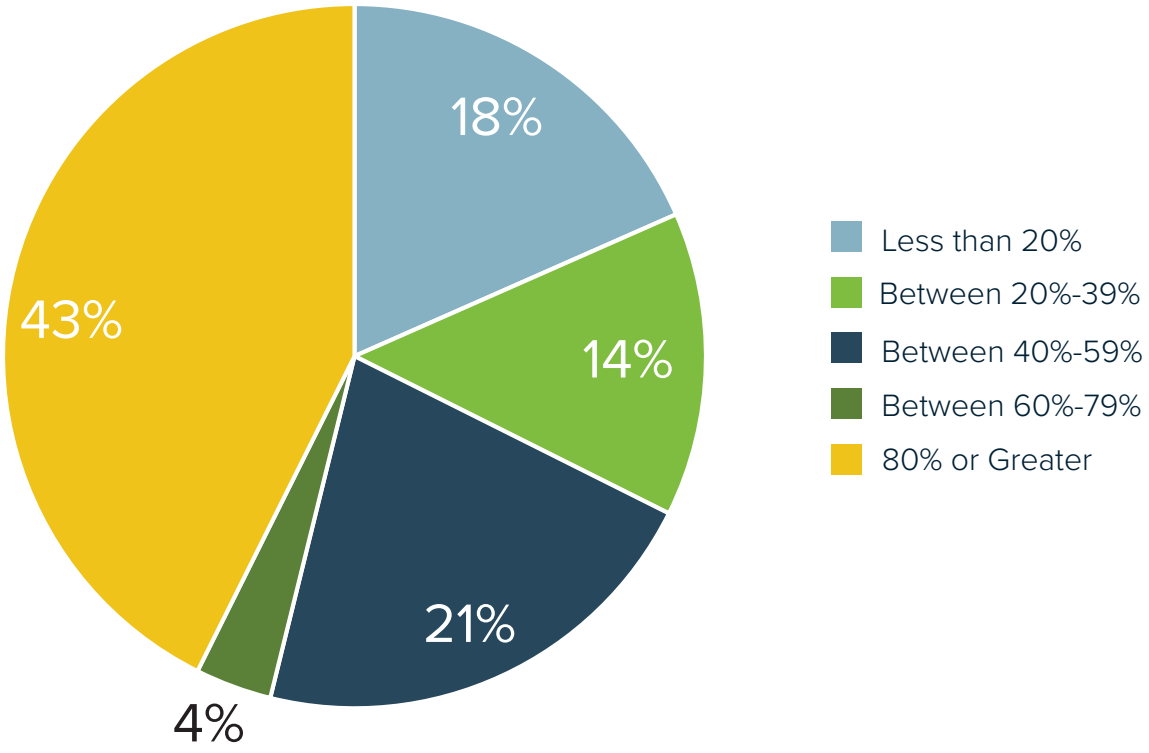
102
NORTH
0 0.5 1 2 3
Miles
Percent Minority Population
Less than 20%
Between 20%-39%
Between 40%-59%
Between 60%-79%
80% or Greater
Bodies of Water
Railroad
Municipal Boundaries
MPO Boundary
County Boundary

Diversity: Hispanic Population

When looking at the MPO in its entirety, an average of 3.85% of the population is Hispanic. Generally, the highly dense areas of Hispanic population are clustered in the southeast portion of the MPO, with a significant group north of Highway 33 and small pockets in downtown Greenville. Most of the more rural areas of the MPO as well as Winterville and Ayden have the lowest Hispanic populations.



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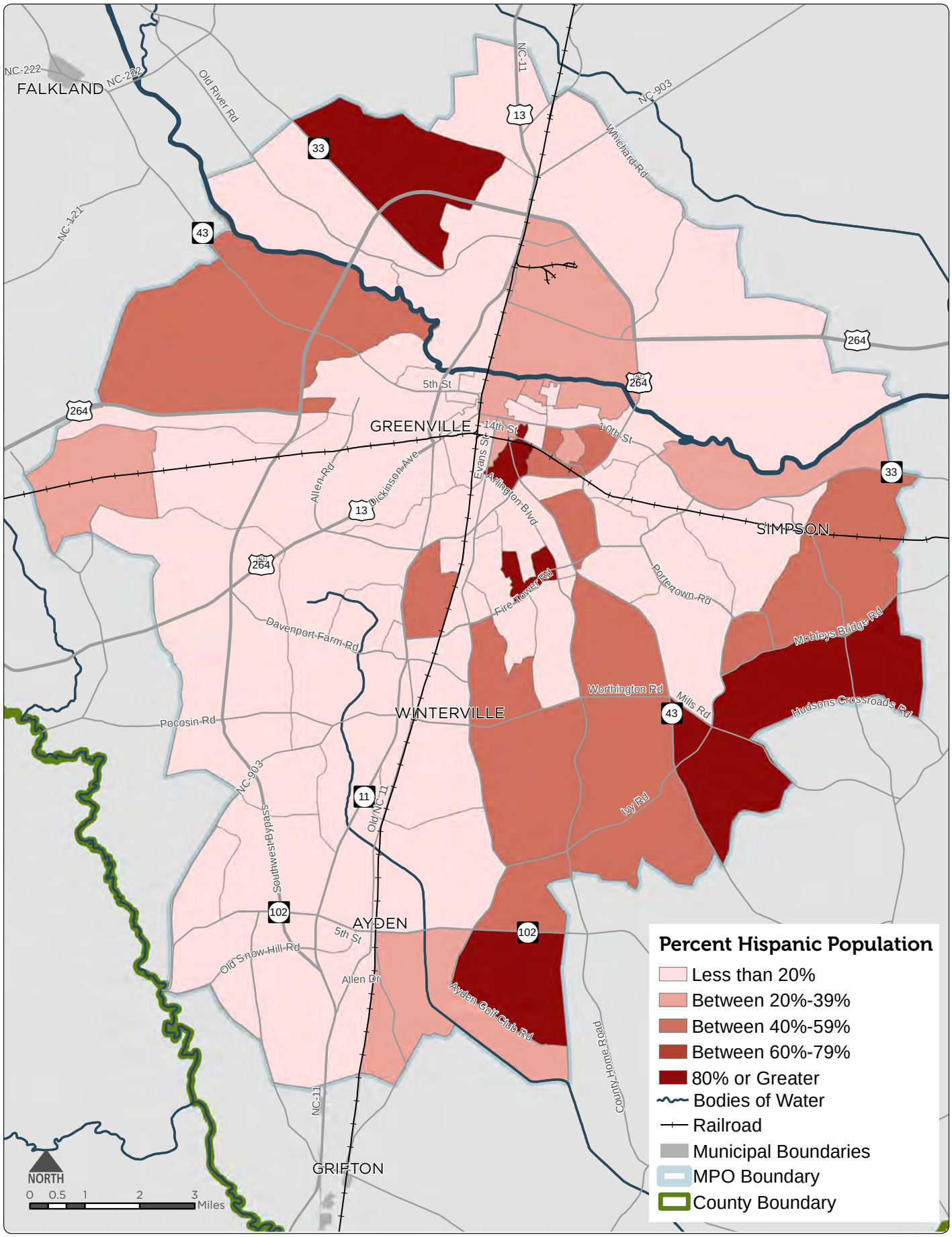
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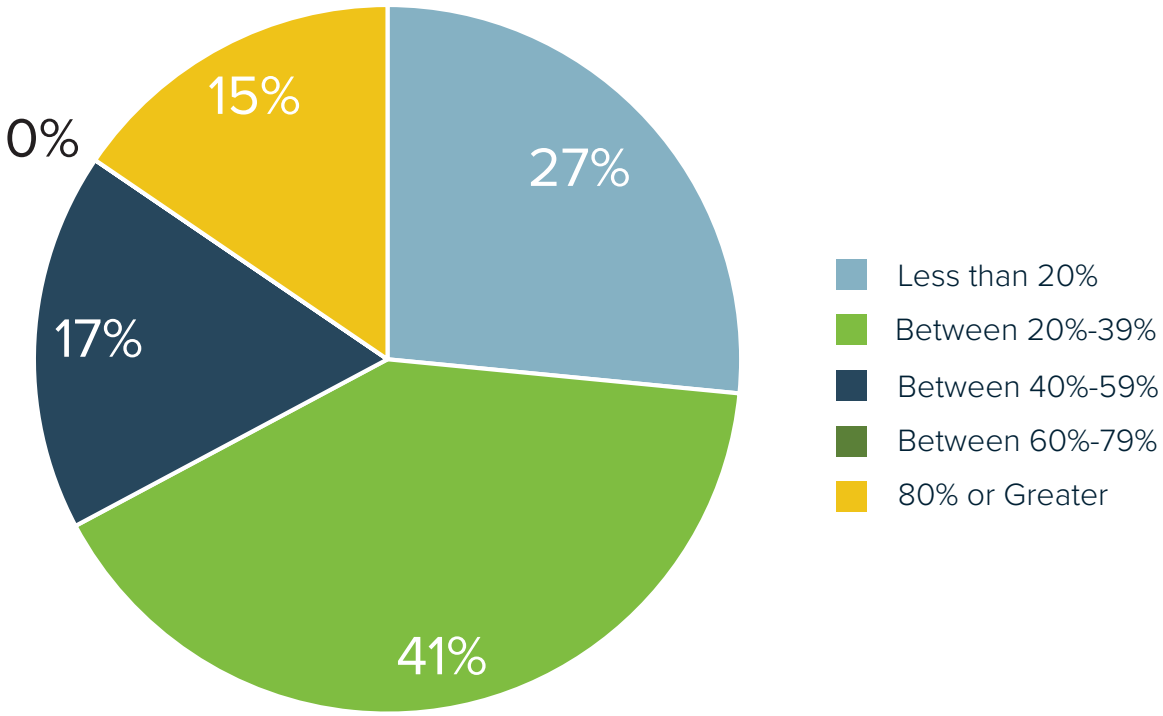
NORTH
0 0.5 1 2 3 Miles
Percent Hispanic Population
Less than 20%
Between 20%-39%
Between 40%-59%
Between 60%-79%
80% or Greater
Bodies of Water
Railroad
Municipal Boundaries
MPO Boundary
County Boundary

No Vehicle Households

A very small portion where the rail lines intersect in Downtown Greenville has greater than 80% of households without access to a vehicle. Based on feedback from stakeholders and public outreach, many of the people in this area chose not to have a personal vehicle and favor alternative means of transportation such as biking or taking local transit. Most of the MPO falls within the less than 20% range with small portions near Ayden and Greenville between 20%-40%.



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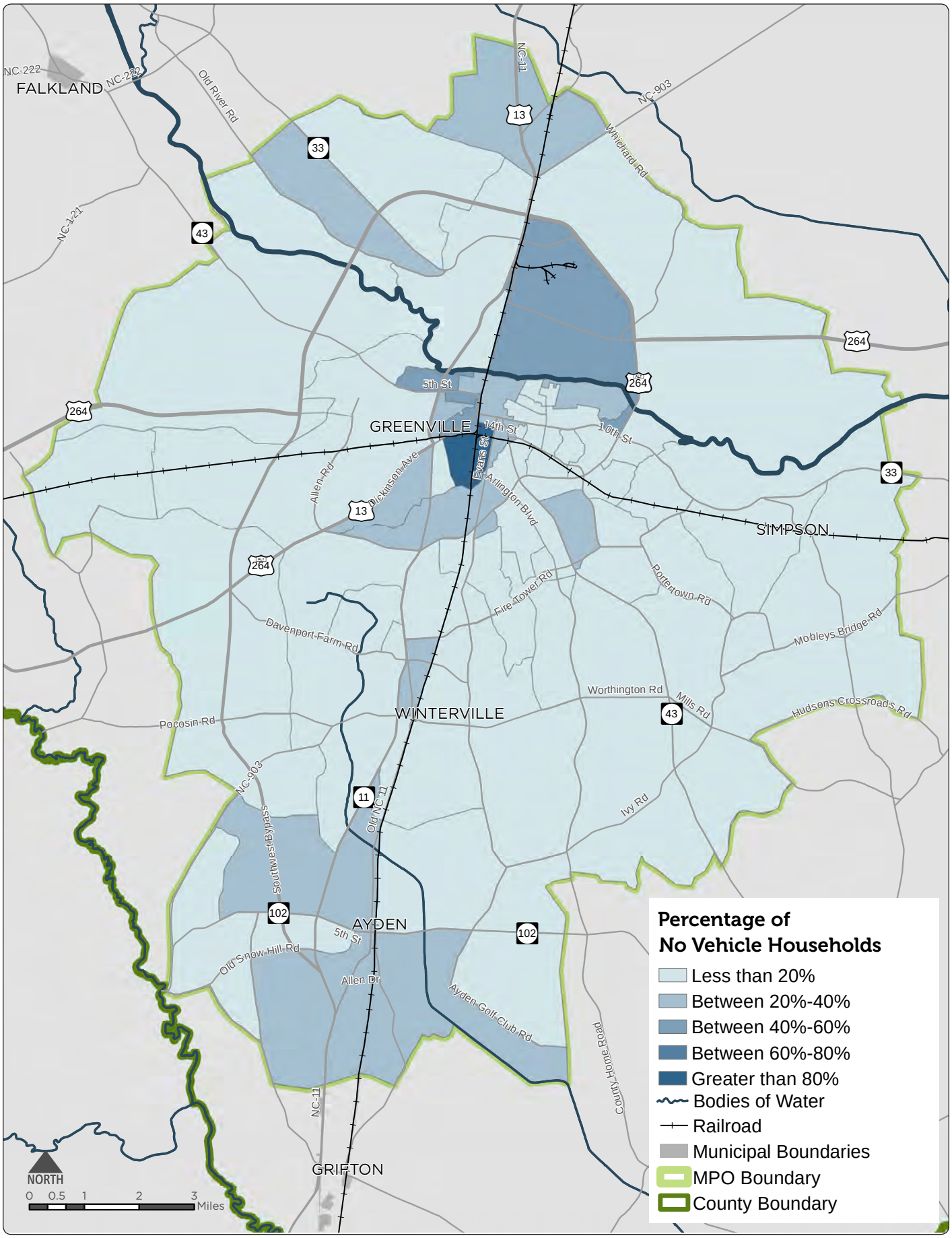
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Old Snow Hill Rd
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County Home Road
GRIFTON
NORTH
0 0.5 1 2 3 Miles
Percentage of
No Vehicle Households
Less than 20%
Between 20%-40%
Between 40%-60%
Between 60%-80%
Greater than 80%
Bodies of Water
Railroad
Municipal Boundaries
MPO Boundary
County Boundary

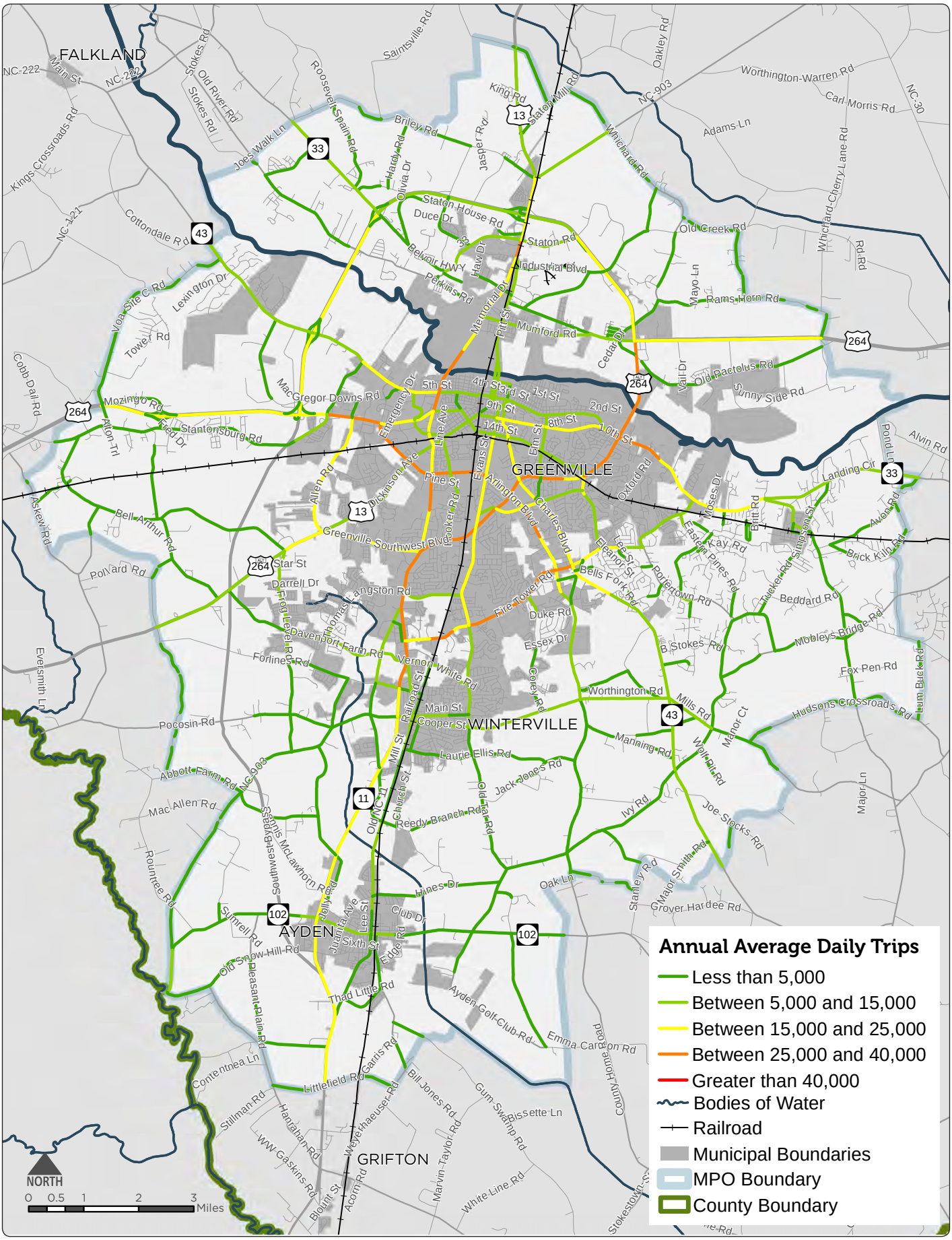
TRANSPORTATION CONSIDERATIONS

This section takes a closer look at the existing conditions related to transportation within and around the Greenville Region. This includes an overview of various transportation systems. Identifying strengths and opportunities for change in the current transportation system is critical to establishing recommendations for future growth. Data in this section was obtained from NCDOT, the Greenville Area travel demand model, and various other institutions.

Annual Average Daily Traffic (AADT)

The corridors with the highest AADT reflect the most frequently traveled roads in the Region. Data was obtained from NCDOT and is updated every few years to ensure accurate data. These roads are Greenville Boulevard, Fire Tower Road, Memorial Drive/NC 11, and US 264.

Number of Trips per Day	Percent
Less than 5,000	51%
5,000 - 15,000	28%
15,000 - 25,000	13%
25,000 - 40,000	8%
Greater than 40,000	0%


FALKLAND
GREENVILLE
WINTERVILLE
AYDEN
GRIFTON
Annual Average Daily Trips
Less than 5,000
Between 5,000 and 15,000
Between 15,000 and 25,000
Between 25,000 and 40,000
Greater than 40,000
Bodies of Water
Railroad
Municipal Boundaries
MPO Boundary
County Boundary
NORTH
0 0.5 1 2 3
Miles

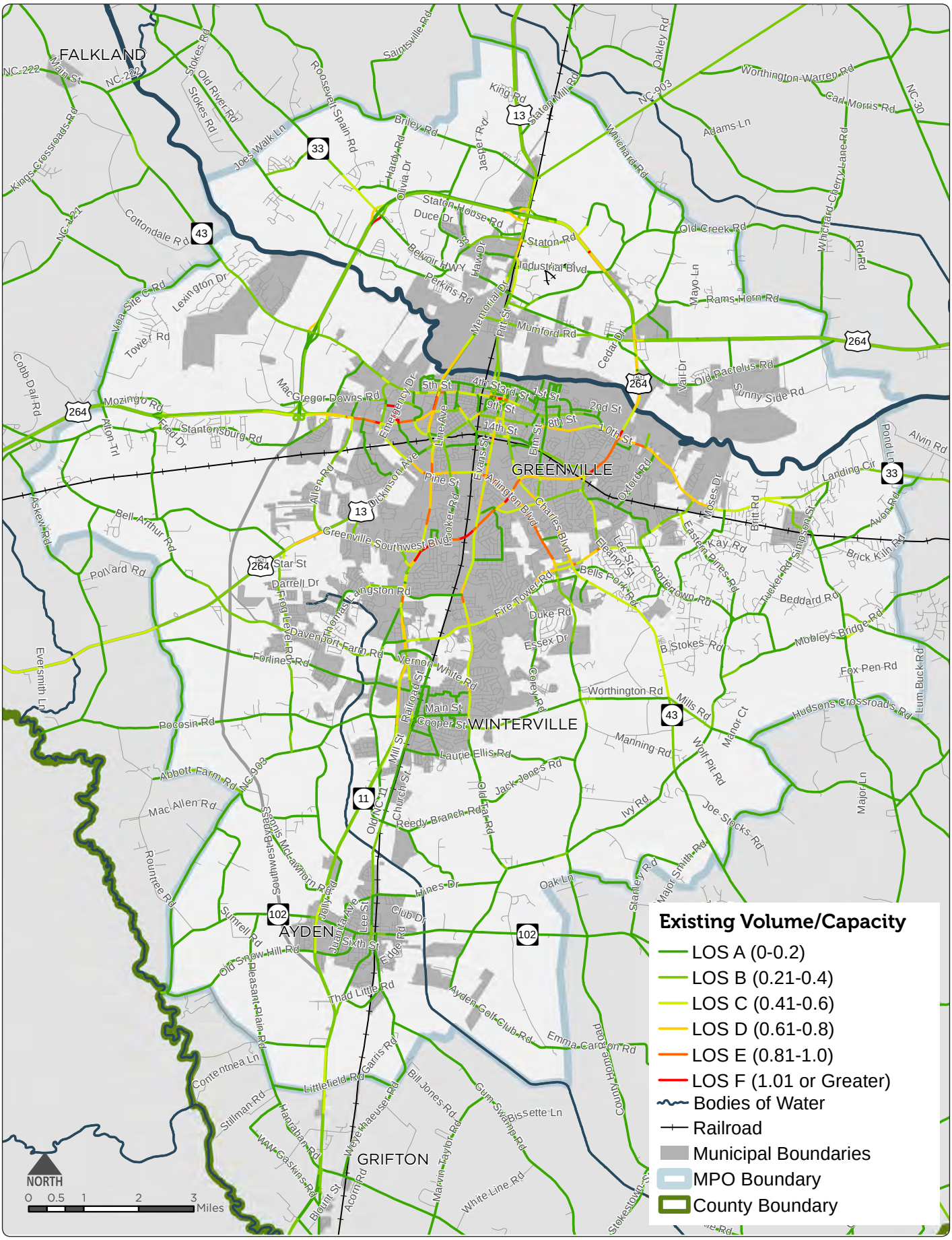
Existing Volume/Capacity

The majority of roads within the study area currently operating under capacity which allows for general, free flow traffic. 18% of roads are approaching or near capacity, while 6% of roads are over capacity. Despite the relatively small number of roads being near or at capacity, the ones that are are major arterials within the MPO. With regard to Level of Service (LOS, defined as an indication of the level of congestion graded like a school report card), the majority of roads have an LOS of B.

Roads Near or Over Capacity

- Stantonsburg Road (in front of Vidant Health)
- Greenville Boulevard
- Arlington Road
- Sections of Highway 11
- Sections of Evans Street

Existing Level of Service	Percent
LOS A (0.0-0.2)	20%
LOS B (0.21-0.4)	33%
LOS C (0.41-0.6)	21%
LOS D (0.61-0.8)	14%
LOS E (0.81-1.0)	8%
LOS F (1.01 or Greater)	3%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GRIFTON
Existing Volume/Capacity
LOS A (0-0.2)
LOS B (0.21-0.4)
LOS C (0.41-0.6)
LOS D (0.61-0.8)
LOS E (0.81-1.0)
LOS F (1.01 or Greater)
Bodies of Water
Railroad
Municipal Boundaries
MPO Boundary
County Boundary
NORTH
0 0.5 1 2 3
Miles

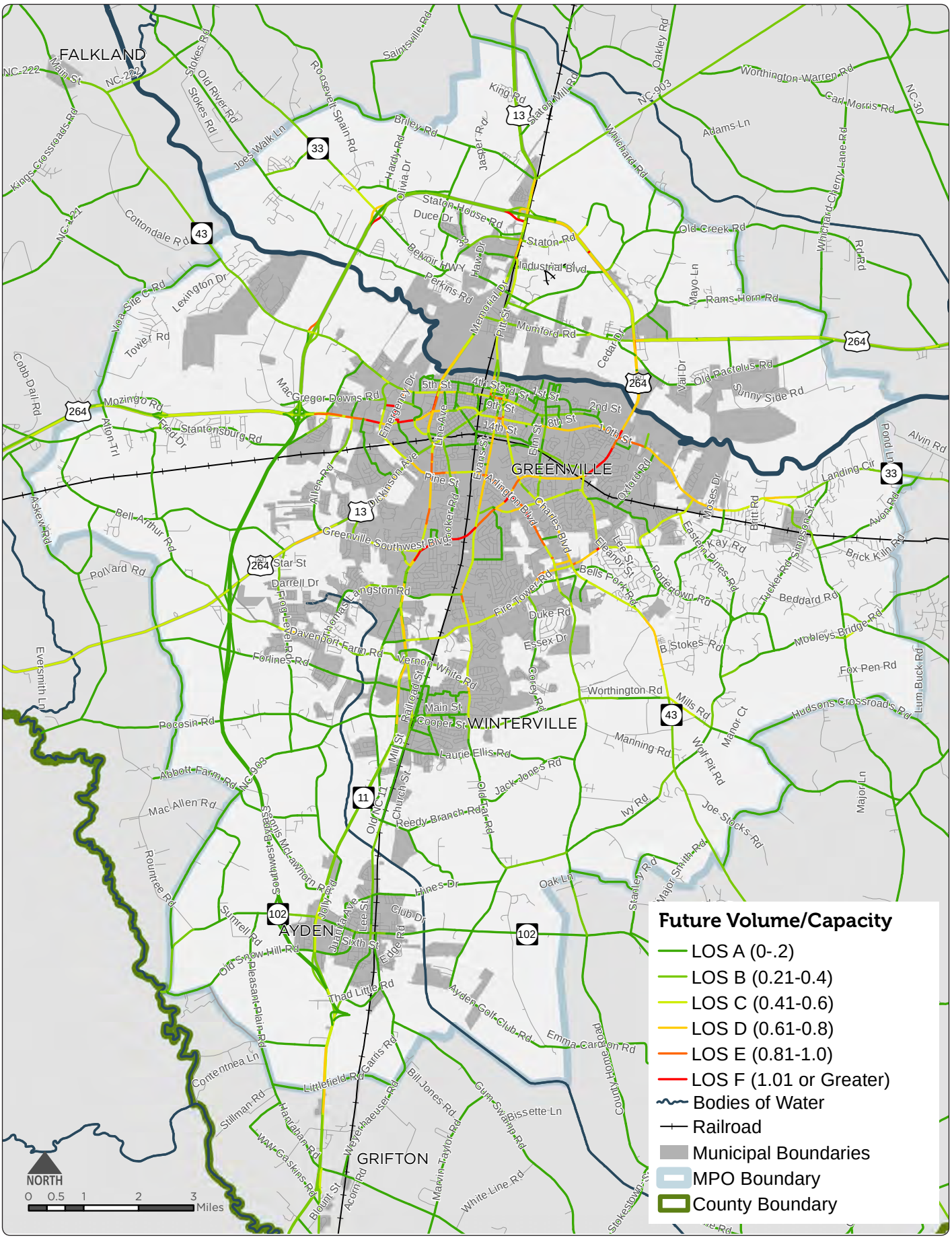
Future Volume/Capacity

The majority of roads within the study area that are currently operating at low or under capacity are projected to have volumes increasing closer to capacity by 2045. 7% of roads will be approaching or near capacity, while 5% of roads will be over capacity. Despite the relatively small number of roads being near or at capacity, most of the roadways at this level are major arterials that are approaching capacity in the base year. With regard to Level of Service, the majority of roads will maintain an LOS of B, however the percentage of roads with an LOS of C, D, and E is projected to increase.

Roads Near or Over Capacity

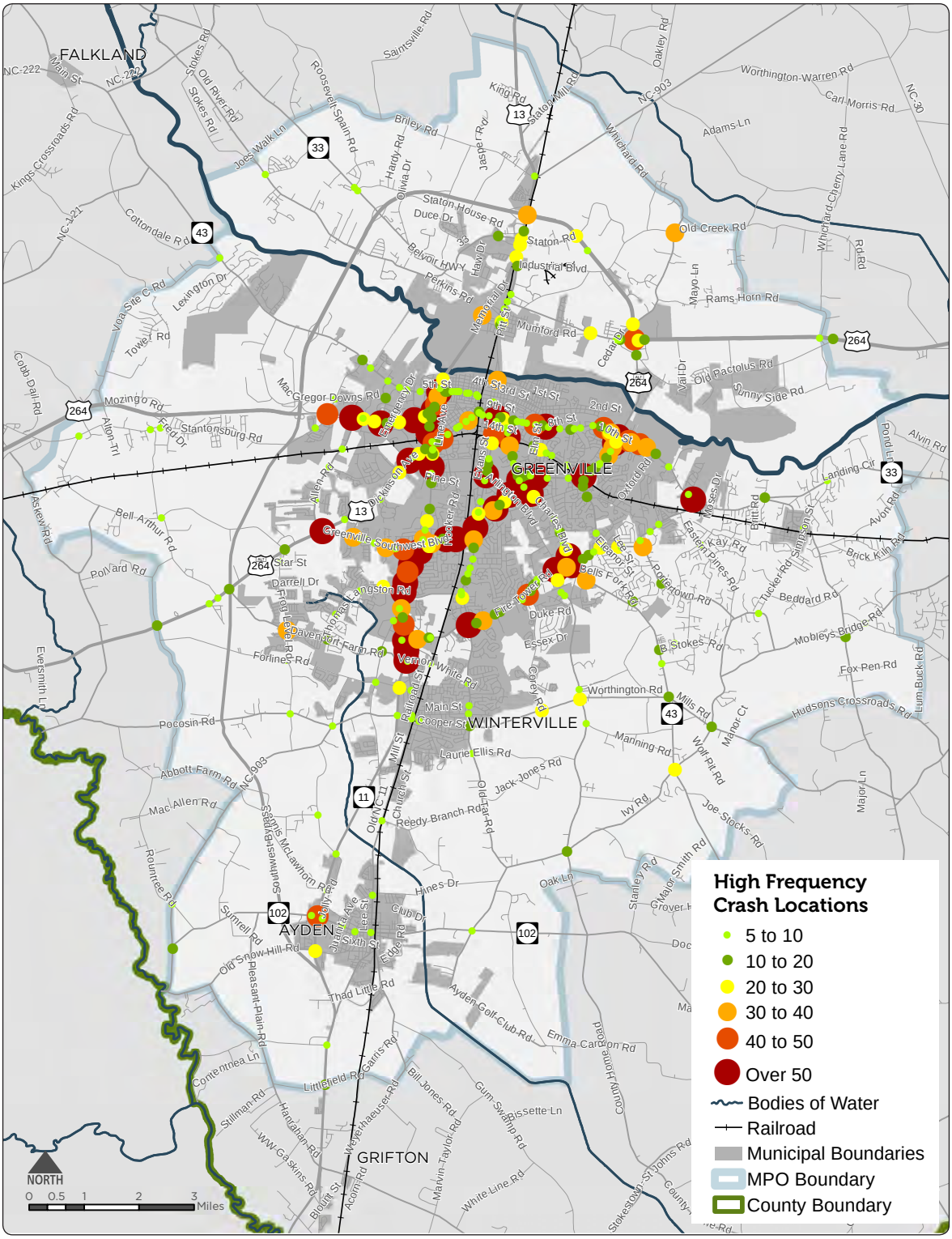
- Stantonsburg Road
- Greenville Boulevard
- Arlington Road
- Fire Tower Road
- 10th Street
- 5th Street
- Sections of Highway 11
- Sections of Evans Street

Existing Level of Service	Percent
LOS A (0.0-0.2)	19%
LOS B (0.21-0.4)	29%
LOS C (0.41-0.6)	23%
LOS D (0.61-0.8)	18%
LOS E (0.81-1.0)	11%
LOS F (1.01 or Greater)	2%


FALKLAND
GREENVILLE
WINTERVILLE
AYDEN
GRIFTON
Future Volume/Capacity
LOS A (0-.2)
LOS B (0.21-0.4)
LOS C (0.41-0.6)
LOS D (0.61-0.8)
LOS E (0.81-1.0)
LOS F (1.01 or Greater)
Bodies of Water
Railroad
Municipal Boundaries
MPO Boundary
County Boundary
NORTH
0 0.5 1 2 3
Miles

Crash Rates

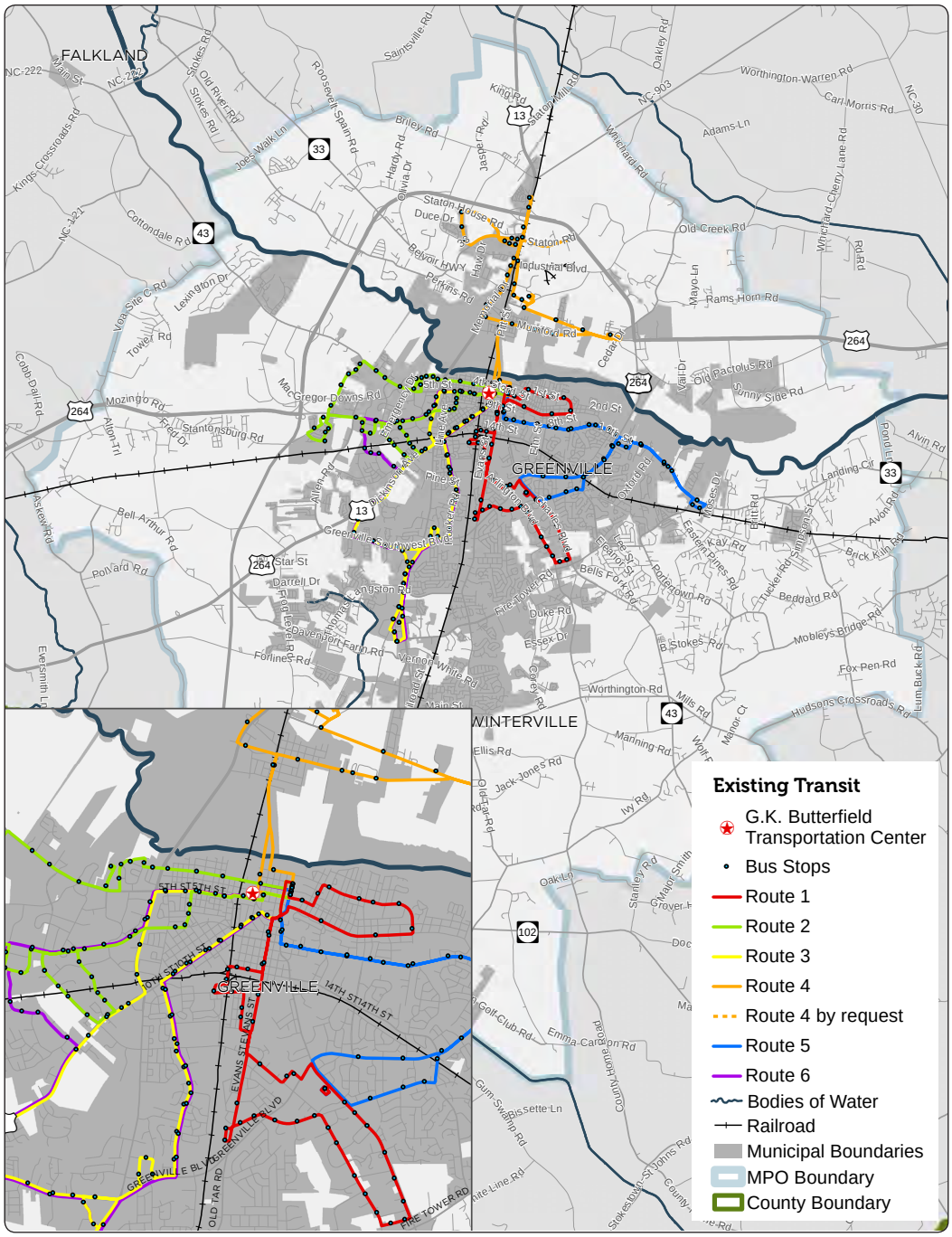
Crash rates have some correlation with road segments with high AADT ratings. High frequency crash locations are most notably seen on Memorial Drive/NC 11, 10th Street, Dickinson Avenue/US 13, and Greenville Boulevard. The majority of these high frequency crash locations are generally located within the City of Greenville.



Transit

Local transit service is operated by Greenville Area Transit (GREAT). The system has 6 routes that serve Greenville and part of Winterville. Route 4 has a portion that is by request. There are 281 total bus stops in the Region.

Additionally, East Carolina University operates an extensive bus system that transports students to and from campus and the various student living communities in the area. According to ECU's website, the transit system provides more than 2.5 million rides each year. It offers 18 daytime routes and 7 nighttime routes. ECU's transit service recently partnered with a service called NextBus that allows students to access real time bus arrival information as well as set up alerts for particular routes through the ECU mobile app.



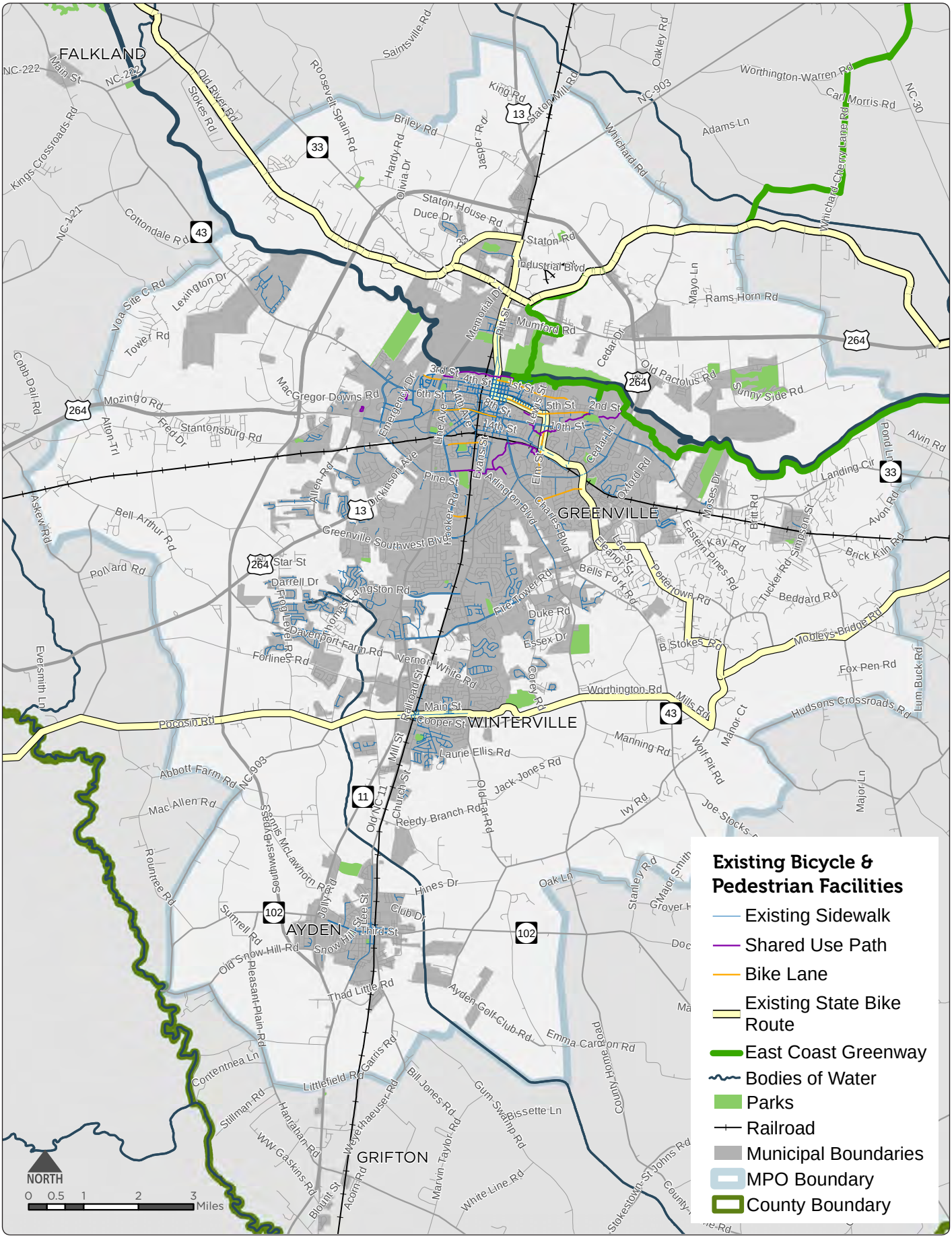
Bicycle and Pedestrian

Alta Planning and Design recently completed the Greenville MPO Active Transportation Plan As part of the plan, existing facilities were identified. Sidewalks are found throughout the municipal areas, but tend to focus around the downtown areas. There are small sections of sidepaths in Greenville along the Tar River. The East Coast Greenway runs along the eastern part of the Tar River and continues north to connect to the Mountains-to-Sea route.

Existing Facility Types

- 9 Publicly-Owned Bicycle Racks
- 7.1 Miles of Bicycle Lanes
- 9.0 Miles of Greenways/Trails
- 0.7 Miles of Side Paths
- 25 Miles of Paved Shoulders

- 168 Miles of Sidewalks
- 9.0 Miles of Greenways/Trails
- 0.7 Miles of Side Paths
- 25 Miles of Paved Shoulders

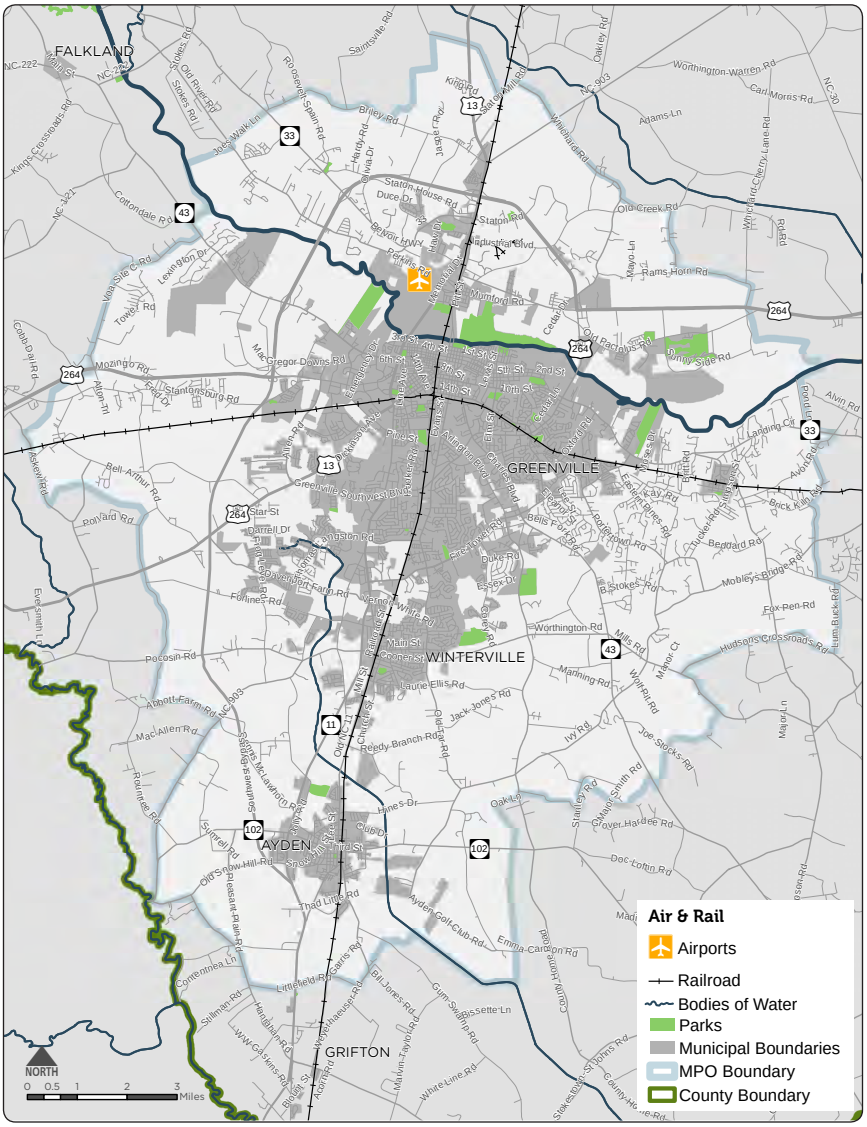

FALKLAND
GREENVILLE
WINTERVILLE
AYDEN
GRIFTON
Existing Bicycle & Pedestrian Facilities
Existing Sidewalk
Shared Use Path
Bike Lane
Existing State Bike Route
East Coast Greenway
Bodies of Water
Parks
Railroad
Municipal Boundaries
MPO Boundary
County Boundary
NORTH
0 0.5 1 2 3 Miles

Air and Rail

Pitt-Greenville Airport is the only airport within the study area. Originally built in 1940 as part of the Works Project Administration, the airport was leased to the United States Navy in 1942 as an extension of the Cherry Point Marine Corps Air Station. Following WWII, it returned to being a municipal airport.

The airport consists of two runways and slightly under 1,000 acres. The longest runway as of 2014, is 6,500 feet long. The airport is serviced commercially by American Airlines, which offers five flights a day. It additionally provides general aviation and private aviation services. A 2011 renovation/expansion added an additional 30,000 square feet, including two new gates, to the terminal. The Pitt-Greenville Airport does not divide parking into short and long term. Instead, they offer one 250-space lot with hourly rates.

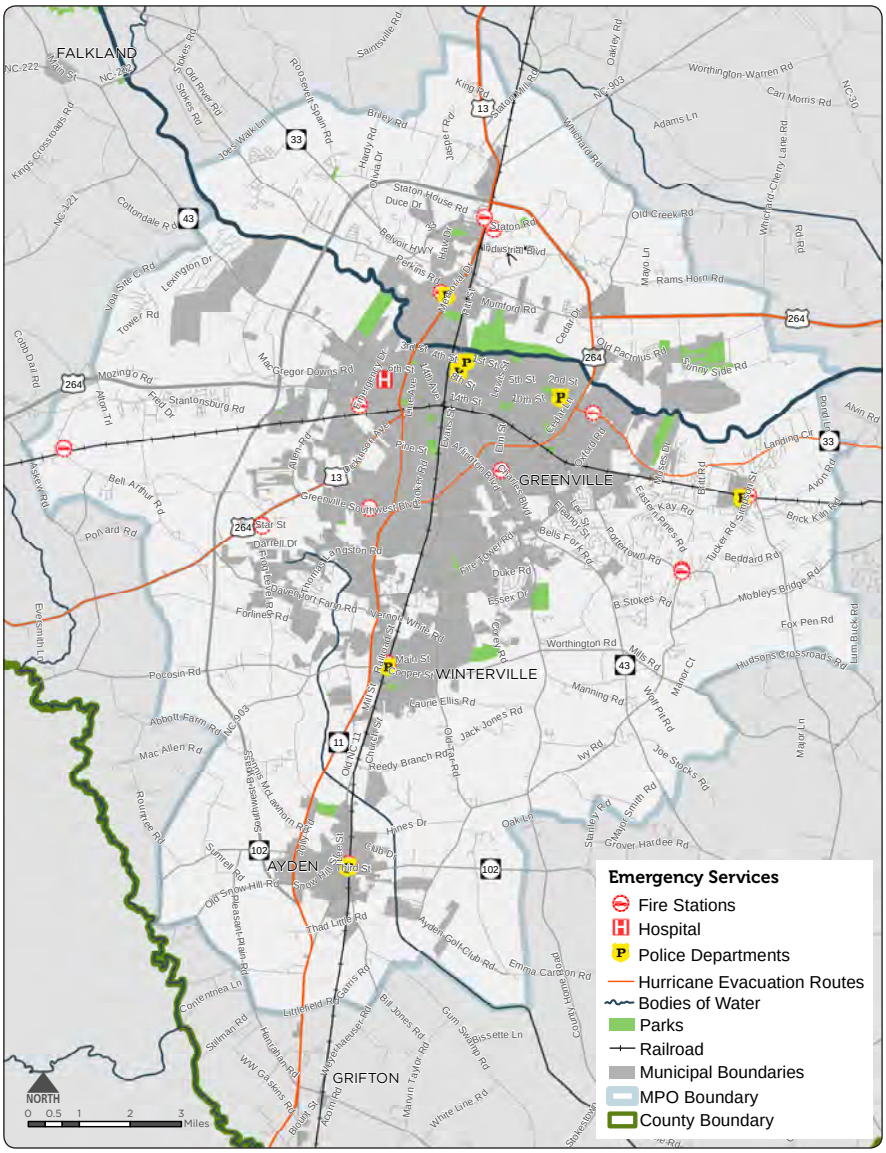
Two railroads run north-south and east-west through the region and intersect just south of Downtown Greenville. They are operated by North Carolina Shortlines and CSX Transportation. Rail lines can sometimes be viewed as a barrier, however 68 rail crossings allow for continued traffic flow for vehicles, as well as bicyclists and pedestrians.



Emergency Services

Emergency services can be found throughout each of the jurisdictions. Vidant Medical Center, located in Greenville, is the largest medical facility in the MPO area. There are 3 hurricane evacuation routes that run through the study area: US 11/US 13, US 264, and US 264 Alt/NC 33. Additional travel resources can be found on the NCDOT website.

Facility Type	Number of Facilities
Fire Stations	16
Hospitals	1
Police Stations	7
Hurricane Evacuation Routes	3



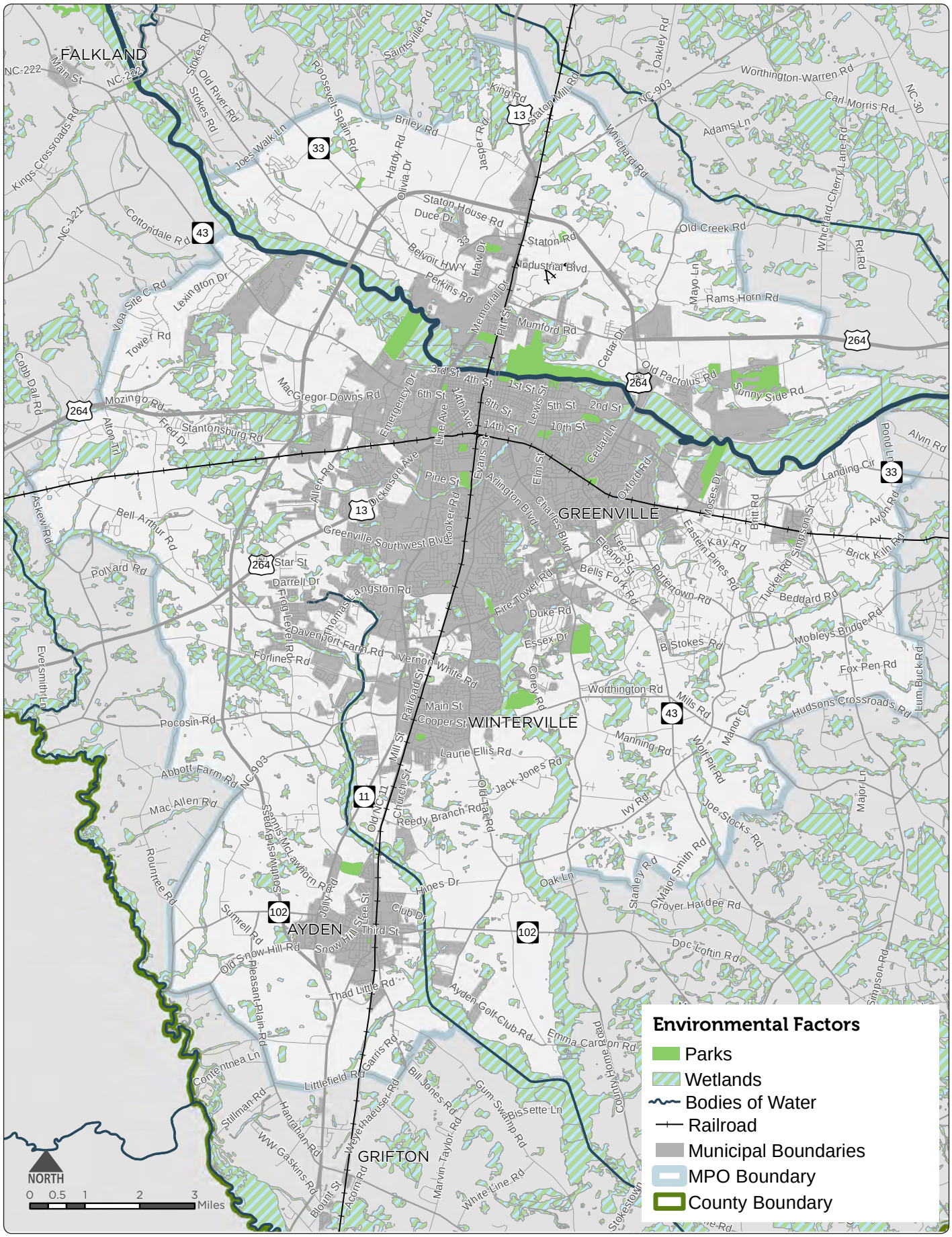
Environment

The Greenville MPO is part of the Tar River Watershed. It is classified as WS-IV, being highly developed and is nutrient sensitive. This classification means it is used as a water source supply for drinking, culinary, or food processing purposes according to the North Carolina Department of Environmental Quality. Much of the area wetlands are due to the Tar River, Contentnea Creek, Swift Creek, Fork Swamp, and other creeks and streams. The Tar River is 215 miles in total, with approximately 18 miles running through the Greenville urban area. The Tar River is home to the Tar River spiny mussel, a species of freshwater mussel which are currently critically endangered.

There are over 35 recreation and parks facilities in the MPO area as well as 9.0 miles of greenways and trails as discussed in the Bicycle and Pedestrian portion of this report.

Recreation and Park Facilities

- Alice F Keene
- Eastside Park
- Greenfield Terrace Park
- Greensprings Park
- Greenville Town Common and Toyota Amphitheater
- H. Boyd Lee Park
- Hillcrest Park
- Jaycee Park
- Phil Carroll Nature Preserve
- River Park North
- Town Commons
- Winterville Park


FALKLAND
GREENVILLE
WINTERVILLE
AYDEN
GRIFTON
Environmental Factors
Parks
Wetlands
Bodies of Water
Railroad
Municipal Boundaries
MPO Boundary
County Boundary
NORTH
0 0.5 1 2 3
Miles

Education

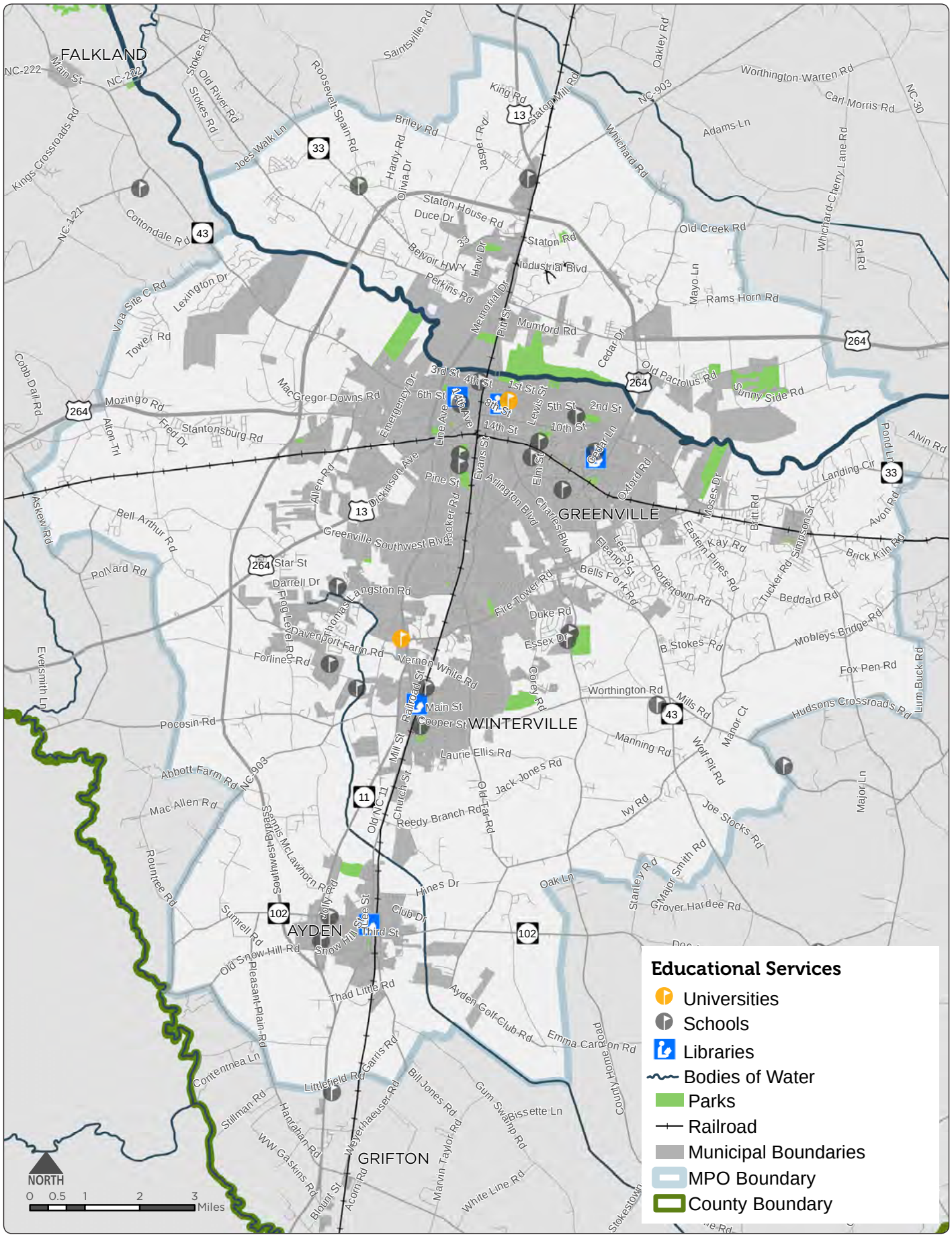
There are 38 schools ranging from primary to high school within the MPO, as well 2 universities, Eastern Carolina University (ECU) and Pitt Community College (PCC). As of 2017, ECU has a total enrollment of 29,131 students, while as of 2015, PCC has a total enrollment of 11,678.

There are 4 public libraries in the study area; 3 in Greenville and 1 in Winterville. The Town of Ayden runs a municipally owned library, the Quinerly-Olschner Library, which has been in operation in various forms since 1933 and in it's current location since 1970.

University	Number of Students	Student/Faculty Ratio	% Commuter
East Carolina University	29,131	19:1	20%
Pitt Community College	11,678	15:1	76%*

*Note that 24% of Pitt Community College students are part of the distance learning program.

Quinerly-Olschner Library, Ayden, NC


FALKLAND
GREENVILLE
WINTERVILLE
AYDEN
GRIFTON
Educational Services
Universities
Schools
Libraries
Bodies of Water
Parks
Railroad
Municipal Boundaries
MPO Boundary
County Boundary
NORTH
0 0.5 1 2 3
Miles

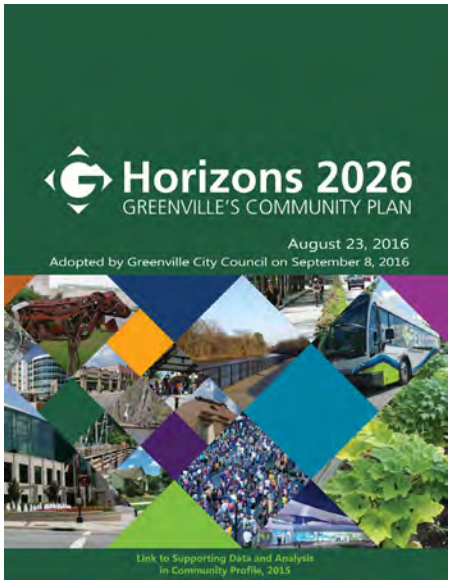
POLICY REVIEW

It is vital to understand transportation recommendations that already exist and to leverage work that has already been conducted by planning professionals. This section outlines various planning efforts that contain recommendations relevant to the update of the MTP. All recommendations listed are summarized from their respective documents.

Horizons 2026: Greenville's Community Plan (2016)

Overview

Horizons 2026 provides an updated vision and blueprint for the future of Greenville, building on the 2010 update to the previous comprehensive plan from 2004. The plan renews the values and priorities of the community, as well as the goals, policies, and strategies needed to achieve the community vision.



Relevant Recommendations

- Improve the safety of streets, such as improvements to sidewalks and roadways, encouraging alley creation, and implementing traffic calming strategies.
- Ensure Greenville residents and visitors are able to travel to places throughout the city using a variety of safe, timely, and convenience travel options.
- Design transportation projects and infrastructure to be context-sensitive.
- Ensure a sufficient amount of accessible yet discrete vehicular parking.
- Improve quality of infrastructure that supports Greenville as a regional transportation hub.
- Expand airport service from the Pitt-Greenville Airport.

Key Takeaways

The objective of the transportation chapter is to highlight opportunities to increase transportation options, improve traffic flow, expand access throughout the region, and create a healthy, safe, accessible, and fiscally-sound transportation network for people and industry.

https://www.greenvillenc.gov/government/community-development/planning-division

Greenville MPO Active Transportation Plan (2017)

Overview

Completed in 2017, the Greenville Area Metropolitan Planning Organization (MPO) Active Transportation Plan provides an update to the 2011 Bicycle and Pedestrian Master Plan. The City of Greenville and the Greenville Urban Area MPO collaborated on this effort to renew priorities, tools, and programs for improvement the bicycle and pedestrian environments in the Greenville urban area, as well as expand the focus to include shared use trails.

Relevant Recommendations

- Establish land development regulations and street design policies that promote walkable and bikeable new development and capital projects.
- Implement a bike rack program which allows for business owners and residents to request bike parking and for bike parking to be provided within the street right-of-way.
- Implement traffic calming measures on neighborhood streets.
- Develop clear and concise guidelines for traffic calming measures, and implement the strategies on neighborhood streets.
- Implement a comprehensive safety campaign that includes education, encouragement, and enforcement components, as well as current Safe Routes to School programming.
- Local governments in the Greenville Urban Area MPO should update design guidelines to include current, innovative treatments found in the Active Transportation Plan's section on design resources.
- Local governments in the Greenville Urban Area MPO should update typical street cross-sections, using the examples in the Active Transportation Plan for guidance.
- Greenville MPO should work with GREAT and ECU Transit to plan walksheds (half-mile radius) and bikesheds (3-mile radius) around each priority transit stop.
- Partner with Greenville GREAT to provide amenities at priority transit stops and improve pedestrian and bike connections to regional transit centers and park-and-ride lots.

Key Takeaways

Successful implementation of the action steps identified in the plan to help create better walking and bicycling connections will require support from elected officials, strong local advocates, close coordination with NCDOT, and the dedication of a well-organized bicycle and pedestrian coordinator.

https://www.greenvillenc.gov/government/public-works/engineering/greenville-urban-area-metropolitan-planning-organization

2014-2040 Greenville Urban Area MPO MTP

Overview

The 2014-2040 Greenville Urban Area MPO Metropolitan Transportation Plan (MTP) provides an update to the previous 2009-2035 MTP, as required by federal guidelines. The document contains a review of existing conditions, as well as a discussion, listing, and map of candidate transportation projects organized by mode. Transportation modes and infrastructure overviewed include highways and bridges, bicycle, pedestrian, transit, rail, and aviation. Major projects include the Southwest Bypass, 10th Street Connector, King George Road Bridge Replacement, and the South Tar River Phase 3 greenway. In addition to the chapters overviewing the transportation modes, there are also sections dedication to financial planning, environmental mitigation, environmental justice, safety and security, and public involvement.

Relevant Recommendations

- Sustain commitment to collaborating on constructing a comprehensive greenway network in Greenville
- Include pedestrian facilities in all thoroughfare and bridge projects
- Facilitate more coordination efforts among the transit providers in Pitt County
- Protect existing stream quality by encouraging Low Impact Development practices and other innovative methods and practices
- Provide equal access to the transportation network in minority and low-income areas in addition to providing alternative transportation choices and multi-modal options by further extending alternative transportation options and public transportation services into suburban areas of the region while also improving and expanding service times

Key Takeaways

Development and demographic patterns have remained largely unchanged since the previous MTP; much of the Greenville Metropolitan Planning Area remains zoned residential and medical, service, manufacturing, and educational industries continue to dominate. The plan concludes that there are sufficient revenues to fund the fiscally-constrained transportation projects identified. No comments were received during the public comment period.

https://www.greenvillenc.gov/government/public-works/engineering/greenville-urban-area-metropolitan-planning-organization

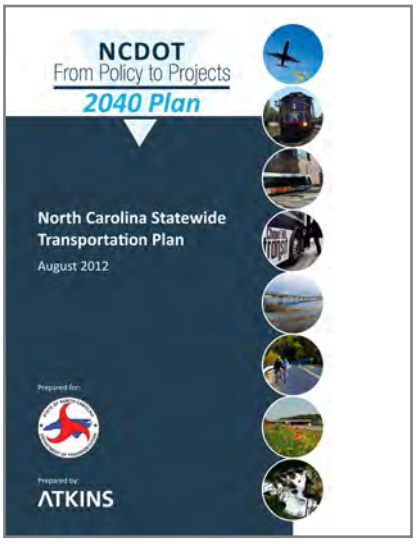
NCDOT North Carolina Statewide Transportation Plan 2012-2040

Overview

The North Carolina Statewide Transportation 2040 Plan was developed in 2012 by NCDOT. It outlines the investment and policy priorities for the statewide transportation system over the next few decades. Identified in the document are transportation needs, estimated revenue to fund those needs, and investment strategies and policies supporting them. The aims of the plan are to enhance safety, improve mobility, and reduce congestion for all transportation modes.

The primary challenges to addressing the state's transportation needs in the coming decades include growing and changing personal mobility needs, preservation of transportation infrastructure health, growing and changing freight movement and logistics needs, financial sustainability, and environmental stewardship.

The State is currently in the process of updating this plan.



Relevant Recommendations

- Focus investment on multimodal facilities of statewide importance
- Work with regional planning partners to increase flexibility and responsiveness
- Reward entities that better integrate land use and transportation planning
- Expedite project development and delivery through improved efficiency and flexibility
- Strengthen planning processes to recognize North Carolina's diversity
- Maximize economic opportunity and job creation via improved freight initiatives
- Establish new sources of revenue for transportation investments
- Increase funding flexibility to recognize regional, urban, and rural differences
- Embrace and capitalize on technological advances

Key Takeaways

NCDOT's current funding streams are insufficient to maintain current LOS. Without additional funding, infrastructure health and mobility will suffer as NC grows, becomes more urban, and systems age.

The importance of the transportation network to the state's economy cannot be understated. The effective management of the transportation assets and transport services across the public and private sectors is vital to sustain expected growth in the state's population, business sector, manufacturing, agriculture, military, and tourism, and to serve the mobility and transport needs of that growth.

https://www.ncdot.gov/initiatives-policies/Transportation/plan/Pages/default.aspx

NCDOT State Transportation Improvement Program (STIP)

Overview

The STIP is a multi-year capital improvement document which denotes the scheduling and funding of construction projects across the state over a minimum 4 year time period as required by State and Federal laws. North Carolina's STIP is updated every two years and developed in concert with federal and state revenue forecasts, NCDOT's Strategic Prioritization process, pre-construction and project development timetables, and in adherence with federal and state laws. North Carolina state law requires Board of Transportation (BOT) action to approve the STIP. The STIP covers a 10 year period, with the first 5 years (2018-2022) referred to as the "delivery STIP" and the latter five years (2023-2027) as the "developmental STIP."

Key Takeaways

The STIP shows a significant amount of investment in the urban areas of the Greenville MPO Region, with emphasis on linkages between them with public transit projects and capital improvements like the Greenville Southwest Bypass.

Key Project Notes*

- Pitt County Rural Projects in STIP: **3**
- Key Rural Project(s) - **Greenville Southwest Bypass**
- Pitt County Interstate Projects in STIP: **1**
- Key Interstate Project(s) - **Future I-587 interchange**
- Pitt County Urban Projects in STIP: **14**
- Key Urban Project(s) - **Firetower Road widening, 10th Street connector**
- Pitt County Bridge Projects in STIP: **6**
- Key Bridge Project(s) - **Tar River Bridge (730024) replacement**
- Pitt County Aviation Projects in STIP: **5**
- Pitt County Bike/Pedestrian Projects in STIP: **5**
- Key Bike/Pedestrian Project(s) - **South Tar River Greenway Phase 3**
- Pitt County Public Transit Projects in STIP: **13**
- Key Public Transit Project(s) - **Operations and shelter improvements**

*Please note this does not include all STIP project in the area.

https://connect.ncdot.gov/projects/planning/pages/state-transportation-improvement-program.aspx

Pitt County Comprehensive Transportation Plan 2005/2006

Overview

The 2005/2006 Pitt County Comprehensive Transportation Plan was developed in partnership by the Transportation Planning Branch of NCDOT and the Pitt County Planning as an update to the 1993 Pitt County Thoroughfare Plan. The document contains an examination of present and future transportation needs, as well as recommended improvements and cost estimates based on the anticipated growth and development of the planning area reflecting current zoning trends. Recommendations are for three planning elements: the Highway Map, the Public Transportation and Rail Map, and the Bicycle Map.


North Carolina Department of Transportation
Transportation Planning Branch

PITT COUNTY NORTH CAROLINA

Comprehensive Transportation Plan
Study Report for
Pitt County

Adopted by the Pitt County Board of Commissioners on
October 17, 2005
Adopted by the North Carolina Department of Transportation on
July 13, 2006

Relevant Recommendations

- Pitt County should consider adopting an access management policy to promote development design that adequately manages accesses and reduces congestion levels on roads.
- US 264 should be upgraded from an Expressway to a Freeway.
- US 13/NC 11 should be upgraded from a Boulevard to a Freeway in the Comprehensive Transportation Plan.
- NC 33 should be widened to a four-lane facility.
- NC 43 should be improved to provide better access and relieve growing congestion; southern and northern sections should be widened to a four-lane facility.
- NC 903 should be improved to provide better access and relieve growing congestion.
- The following facilities have travels lanes less than twelve feet wide and, as travel volume increases, mad be necessary to widen the lanes to twelve feet: NC 30, NC 118, NC 222, NC 102, NC 121, SR 1565

Key Takeaways

Pitt County is a growing community that will require improvements to its transportation systems over the next 25 years. Responsibility for implementation lies with NCDOT and the member municipalities. It will be imperative that the local areas aggressively pursue funding for desired projects.

https://www.pittcountync.gov/252/Comprehensive-Transportation-Plan-Update

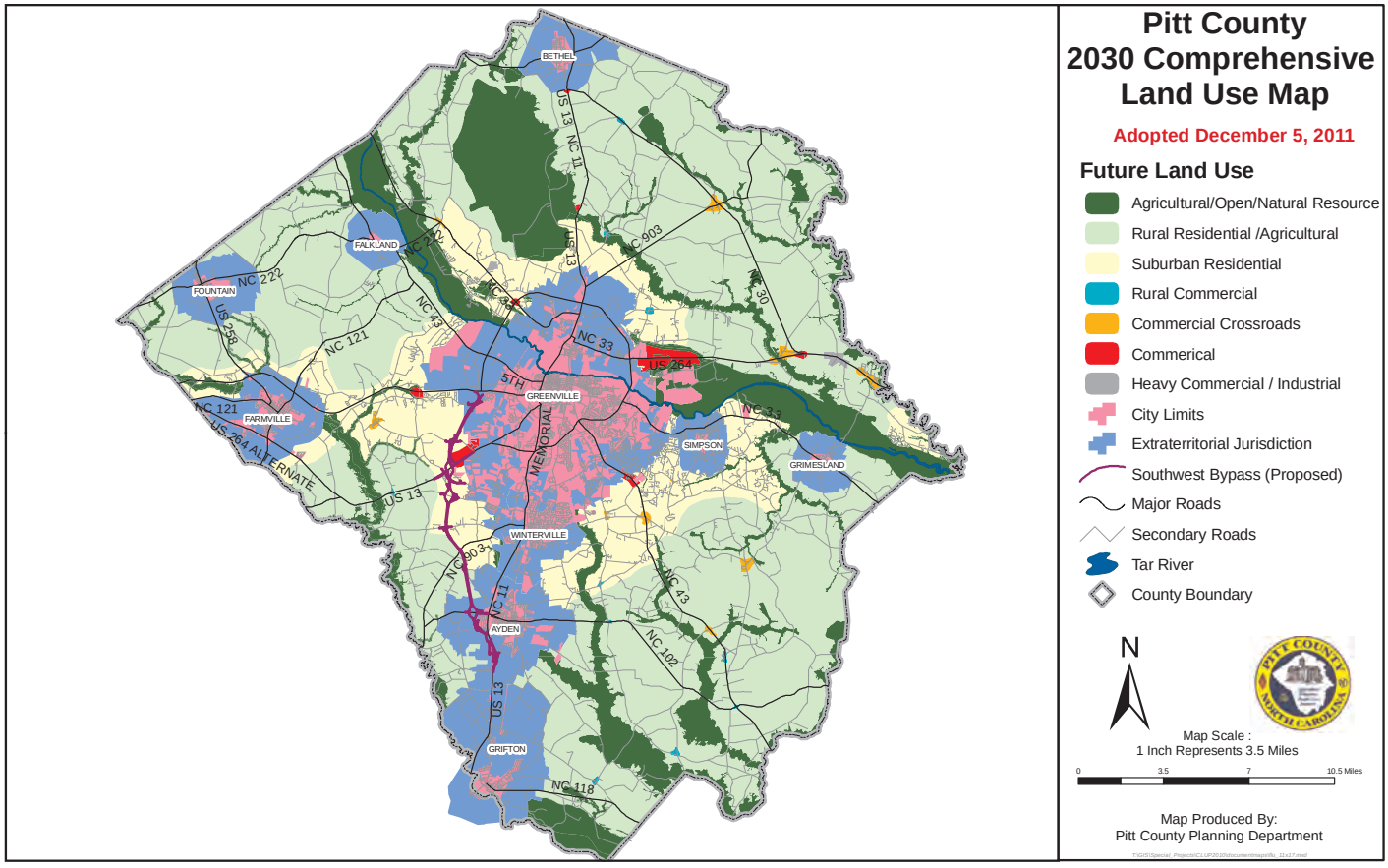
Pitt County 2030 Comprehensive Land Use Plan

Overview

The 2030 Comprehensive Land Use Plan was adopted by the Board of Commissioners on December 5, 2011, and serves as an integral guide for development in Pitt County. The plan establishes a planning horizon of 20 years from the adoption date and focuses on key goals and objectives such as: appearance, community health, community services and facilities, growth and development, housing, land use, natural environment, and transportation. The plan considers how the future land use in the region will shape development and growth. The future land use map is shown below.

Key Takeaways

New commercial areas related to the future Southwest Bypass should be considered in the MTP process. Additionally, commercial crossroads areas in the unincorporated areas between Winterville and Simpson will likely have transportation impacts in the future. Suburban residntial growth on the urban fringes has potential to increase congestion on key corridors into the urbanized areas and employment centers.

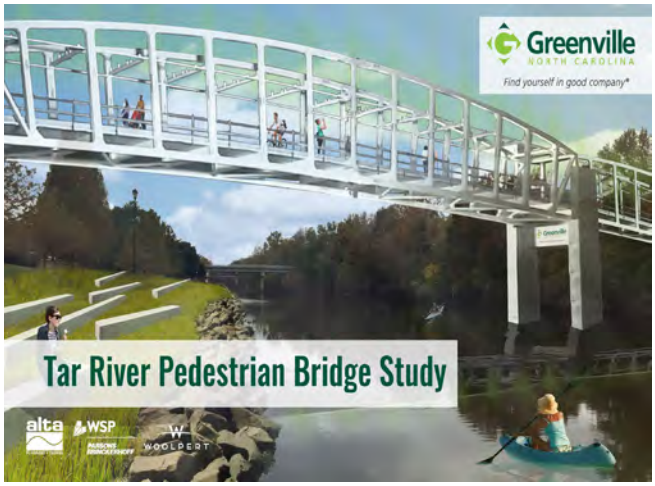


https://connect.ncdot.gov/projects/planning/pages/state-transportation-improvement-program.aspx

Tar River Pedestrian Bridge Study

Overview

The City of Greenville, with support from MPO funding, conducted a three-day charrette to examine alternatives for a bicycle/pedestrian crossing over the Tar River, connecting Town Common Park in Uptown Greenville with River Park North. The City had already submitted a $2 million bicycle/pedestrian project through the State SPOT process that would improve the existing Greene St. Bridge and a greenway following a sewer easement into River Park North. NCDOT approved the possibility of using the same dollar amount submitted to SPOT for a standalone bridge, prompting this study of alternative river crossings.



Relevant Recommendations

- Alternative 1: Low build, which would repurpose the existing Greene Street vehicular bridge to provide a safer facility to carry pedestrians across the Tar River without impacting the flood plain;
- Alternative 2: Cantilever off existing bridge, which would cause minor, if any, impacts to the flood plain;
- Alternative 3: Adjacent bridge options, which would result in a new pedestrian bridge running parallel to and directly beside the existing Greene Street vehicular bridge, but does not provide multiple vantage points and does not give a direct route to River Park North;
- Alternative 4: Highly visible bridge options, which would directly connect to River Park North and give much better vantage points, but there would be significant impacts to the flood plain are anticipated.
- The plan study describes the costs, pros and cons, length, and additional considerations for each alternative.

Key Takeaways

For a project alternative to move forward, additional funding (likely private sources) will be needed. Since the Tar River is a FEMA regulated stream with a very wide Flood Hazard Area (FHA), next steps include hydraulic modeling of the proposed crossing to determine. The study does not draw a conclusion on which alternative is preferred.

https://www.greenvillenc.gov/home/showdocument?id=15174

Southwest Bypass Land Use Plan

Overview

The Southwest Bypass Land Use Plan provides a vision for commercial and residential development along a four-lane median-divided highway being constructed from the US 264 Bypass to NC 11. It is scheduled to be completed in mid-2020. The objective of the bypass project is to help relieve congestion and improve traffic safety in Greenville. The Land Use Plan guides future development to ensure the corridor is managed appropriately and is compatible with long-term plans for the communities along the Southwest Bypass.

Relevant Recommendations

- Encourage a land use pattern that capitalizes on opportunities for commercial and industrial development while limiting strip development.
- Encourage development design in Mixed Use and Neighborhood Commercial areas that provide gateways into towns.
- Update active transportation greenway plans to reflect proposed future land use and the need for a pedestrian connection between Forlines Road and Pitt Community College.
- Explore potential Urban Service Area designation to focus growth and development in areas with access to utilities and to reduce pressure on agricultural lands.
- Update development regulations to improve connectivity and preserve capacity of existing roadways.
- Conduct future study and pursue improvement to address impacts of future growth and development around the Bypass.

https://www.pittcountync.gov/715/Southwest-Bypass-Land-Use-Plan

Key Takeaways

The construction of the Southwest Bypass has major implications for land use and transportation decisions for the future. Development is likely to spread west in order to have easier access to the new facility.

Additional Plans/Studies in Development

- Ayden Land Use Plan
- Eastern NC Regional Freight Study
- Greenville Urban Area MPO CTP
- NCDOT Statewide Transportation Plan
- Various Project Level Feasibility Studies
- Winterville Greenway Master Plan
- Winterville Land Use Plan

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Chapter 4
Roadway Network

INTRODUCTION

One of the unique demands in sustaining a successful and balanced transportation network is ensuring access and connectivity while also preserving mobility. This blending of system elements begins with the roadway recommendations. These recommendations also provide a starting point for advancing the concept of complete streets, a street design method that that incorporates facilities, improvements, and access for bicycles, pedestrians, and transit users.

As growth occurs and travel demand continues to increase, roadway improvements are needed to manage traffic congestion and improve safety. Often in the Greenville area, neighborhoods and activity centers rely on just a few transportation corridors to provide essential links between home, school, employment, shopping, social, and recreational destinations. To successfully support a vibrant community, roadway improvements should be planned to strengthen these critical connections between activity centers, provide alternative routing options, and support additional travel modes. In this chapter, the process used to identify existing and future roadway needs is presented, along with resulting recommendations for roadway projects.

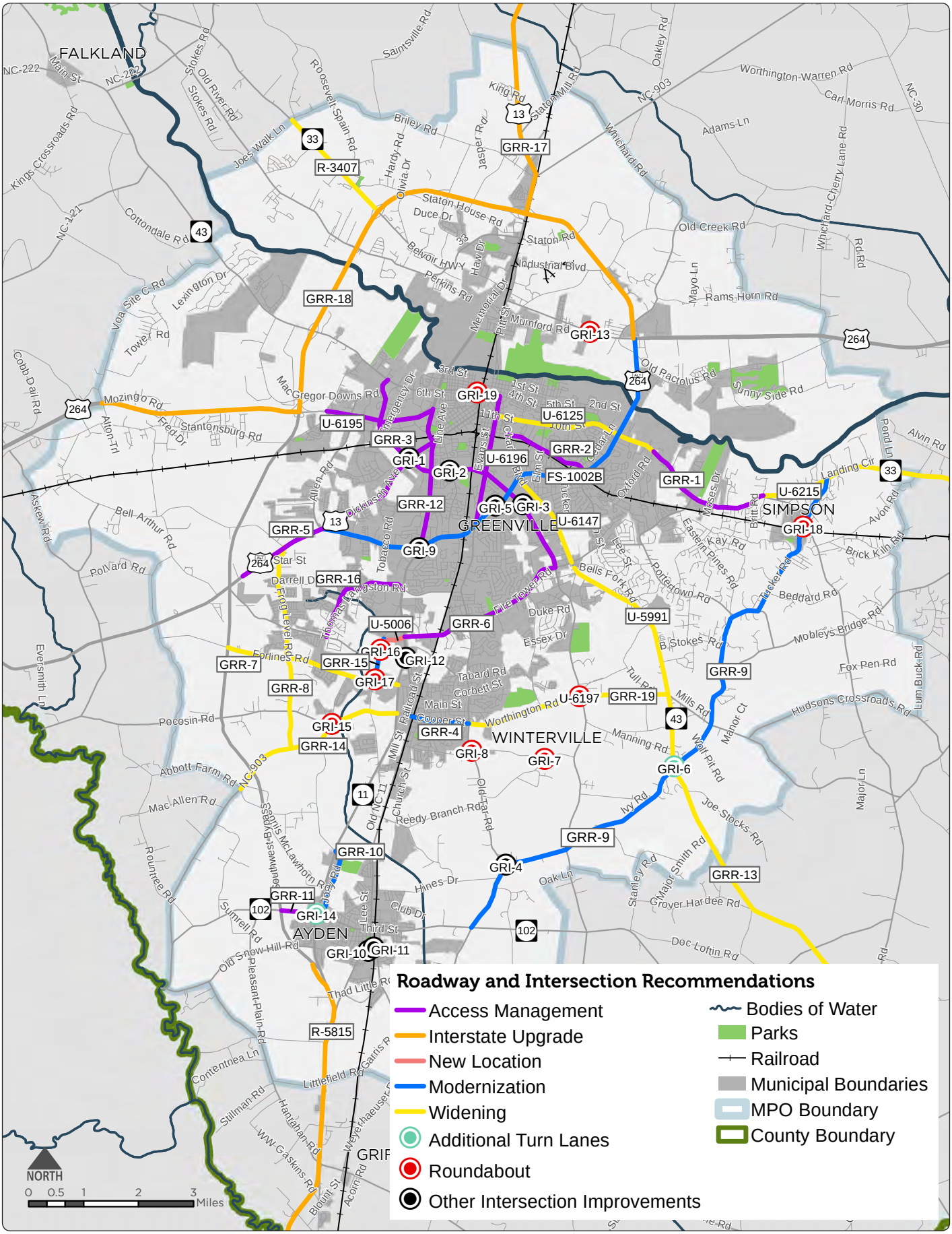
ROADWAY RECOMMENDATIONS

The map to the right highlights the roadway projects in the Greenville Urban Area that were identified through previous planning efforts as well as the Greenville 2045 MTP outreach efforts and needs assessment.

Projects were prioritized through an evaluation process described later in this chapter. This process helped determine the projects that can reasonably be funded by the year 2045. This list of projects, or the financially constrained project list, is outlined in Chapter 7. Due to typical funding levels, only a portion of the needs identified in this plan can be addressed, while the remainder of projects will need to be considered and reevaluated in future plans.

INTERSECTION RECOMMENDATIONS

In total, the MTP recommends 20 intersection and interchange improvements throughout the region. Their locations are shown in the map to the right. Exact locations are shown in the table on the following page. These projects were identified based on safety, operational, or congestion issues. The exact scope of improvements determined here will be identified as projects move forward in the funding cycle.


FALKLAND
GREENVILLE
WINTERVILLE
AYDEN
SIMPSON
R-3407
GRR-17
GRR-18
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GRR-2
GRR-3
GRR-4
GRR-5
GRR-6
GRR-7
GRR-8
GRR-9
GRR-10
GRR-11
GRR-12
GRR-13
GRR-14
GRR-15
GRR-16
GRI-1
GRI-2
GRI-3
GRI-4
GRI-5
GRI-6
GRI-7
GRI-8
GRI-9
GRI-10
GRI-11
GRI-12
GRI-13
GRI-14
GRI-15
GRI-16
GRI-17
GRI-18
GRI-19
U-6195
U-6196
U-6197
U-6125
U-6147
U-5006
U-5991
U-6215
FS-1002B
R-5815
NORTH
0 0.5 1 2 3 Miles
Roadway and Intersection Recommendations
Access Management
Interstate Upgrade
New Location
Modernization
Widening
Additional Turn Lanes
Roundabout
Other Intersection Improvements
Bodies of Water
Parks
Railroad
Municipal Boundaries
MPO Boundary
County Boundary

PRIORITIZATION

Prioritization is a critical tool for implementation of the identified transportation projects for the Greenville Urban Area. This financially constrained prioritization exercise takes into account a wide variety of factors and project characteristics, including cost, adherence to local and regional guiding principles, economic benefits, and more. This section outlines the details of the prioritization methodology, and the results.

Methodology

The assessment of roadway projects for the Greenville Metropolitan Transportation Plan (MTP) includes both quantitative and qualitative metrics. The metrics used for analysis were defined using the NCDOT SPOT 5.0 methodology as the baseline and modified based on the Greenville MTP guiding principles, outreach efforts, and the availability of local data. Similar to the statewide methodology, projects in the Greenville MTP were analyzed with respect to their state funding category: Statewide (Mobility), Regional (Impact), and Division (Needs).

Statewide Mobility Prioritization Criteria

The statewide mobility category considers projects based on both quantitative and qualitative data for the MTP prioritization process. This is a deviation from the statewide methodology, as typically statewide projects are scored using only quantitative data. The following table outlines the metrics used to prioritize statewide projects. Eligible roadways include US 264, US 13, and more.

Statewide Mobility Prioritization Criteria

Metric	Weight	Guiding Principle Served
Congestion	30%	▸ Mobility & Connectivity ▸ Congestion & Travel Time Reliability
Cost Effectiveness	25%	▸ Mobility & Connectivity ▸ Network Preservation ▸ Congestion & Travel Time Reliability
Freight	20%	▸ Economic Vitality
Safety	10%	▸ Safety & Security
Economic Competitiveness	10%	▸ Economic Vitality ▸ Congestion & Travel Time Reliability
Public Support	5%	▸ Quality of Life ▸ Mobility & Connectivity ▸ Network Preservation ▸ Economic Vitality ▸ Safety & Security ▸ Congestion & Travel Time Reliability

Regional Impact Prioritization Criteria

Regional impact projects will be considered based on both quantitative and qualitative data for the MTP prioritization process. Unlike the SPOT 5.0 prioritization process, the Greenville MTP considers economic competitiveness at the regional level. Additionally, the SPOT process attributes 30% to local input. For the Greenville MTP, half of this (15%) will be counted towards public support and the remaining half will be distributed to the additional metrics not given a formal weight in the SPOT process (economic competitiveness, multimodal benefit, lane and shoulder width, and pavement condition). Roadways that are categorized as regional include 10th Street, Dickinson Avenue, NC 43, NC 33, and more.

Regional Impact Prioritization Criteria

Metric	Weight	Guiding Principle Served
Congestion	20%	▸ Mobility & Connectivity
Cost Effectiveness	20%	▸ Mobility & Connectivity ▸ Network Preservation
Safety	10%	▸ Safety & Security
Accessibility/Connectivity	10%	▸ Quality of Life ▸ Mobility & Connectivity ▸ Congestion & Travel Time Reliability
Freight	10%	▸ Economic Vitality
Economic Competitiveness	5%	▸ Economic Vitality ▸ Network Preservation ▸ Congestion & Travel Time Reliability
Multimodal Benefit	5%	▸ Quality of Life ▸ Mobility & Connectivity
Lane and Shoulder Width	2.5%	▸ Safety & Security ▸ Network Preservation
Pavement Condition	2.5%	▸ Network Preservation
Public Support	15%	▸ Quality of Life ▸ Mobility & Connectivity ▸ Network Preservation ▸ Economic Vitality ▸ Safety & Security ▸ Congestion & Travel Time Reliability

Division Needs Prioritization Criteria

Projects in the division needs category will be considered based on both quantitative and qualitative data for the Greenville MTP prioritization process. Like regional impact projects, economic competitiveness was added to the prioritization metrics. Additionally, the SPOT process attributes 50% to local input. For the Greenville MTP, half of this (25%) will be counted towards public support and the remaining half will be distributed to the additional metrics not given a formal weight in the SPOT process (economic competitiveness, multimodal benefit, lane and shoulder width, and pavement condition). Eligible roadways include NC 11, Fire Tower Road, 14th Street, Jolly Road, and more.

Division Needs Prioritization Criteria

Metric	Weight	Guiding Principle Served
Congestion	15%	▸ Congestion & Travel Time Reliability
Cost Effectiveness	15%	▸ Network Preservation ▸ Congestion & Travel Time Reliability
Safety	10%	▸ Safety & Security
Accessibility/Connectivity	5%	▸ Quality of Life ▸ Mobility & Connectivity ▸ Network Preservation
Freight	5%	▸ Economic Vitality
Economic Competitiveness	5%	▸ Economic Vitality
Multimodal Benefit	10%	▸ Quality of Life ▸ Mobility & Connectivity
Lane and Shoulder Width	5%	▸ Safety & Security ▸ Network Preservation ▸ Congestion & Travel Time Reliability
Pavement Condition	5%	▸ Network Preservation
Public Support	25%	▸ Quality of Life ▸ Mobility & Connectivity ▸ Network Preservation ▸ Economic Vitality ▸ Safety & Security ▸ Congestion & Travel Time Reliability

Intersection Prioritization Criteria

Following the same considerations as roadway prioritization, intersection prioritization places a large emphasis on safety as this is the primary concern at intersections. The SPOT process attributes 50% to safety. Other metrics that the used for intersection prioritization in the Greenville MTP are freight (15%), accessibility/ connectivity (15%), economic competitiveness (10%), and public support (10%)

Intersection Prioritization Criteria

Metric	Weight	Guiding Principle Served
Safety	50%	▸ Safety & Security
Freight	15%	▸ Economic Vitality
Accessibility/Connectivity	15%	▸ Quality of Life ▸ Mobility & Connectivity ▸ Network Preservation
Economic Competitiveness	10%	▸ Economic Vitality
Public Support	10%	▸ Quality of Life ▸ Mobility & Connectivity ▸ Network Preservation ▸ Economic Vitality ▸ Safety & Security ▸ Congestion & Travel Time Reliability

Prioritization Results: Corridors (Listed in Priority Order)

Project ID	Project Name	From	To	Prioritization Tier
GRR-12	NC 11/Memorial Drive	Farmville Boulevard	Greenville Boulevard	Access Management
GRR-1	10th Street	Oxford Road	Blackjack-Simpson Road	Access Management
U-6196	Evans Street (SR 1702)	Greenville Boulevard	W 5th Street	Access Management
U-6125	NC 33/10th Street	Oxford Road	Evans Street	Widening
GRR-3	Arlington Boulevard	Fire Tower Road	NC 43/West 5th Street	Access Management
FS-1002B	US 264-A (Greenville Boulevard)	US 264-A	US 13 (Dickinson Avenue)	Modernization
GRR-5	Dickinson Avenue	Memorial Drive	Southwest Bypass	Widening
U-5006	Fire Tower Road Extension	NC 11	Southwest Bypass	New Location
GRR-6	Fire Tower Road	Memorial Drive	Arlington Boulevard	Access management
U-6147	NC 43/Charles Boulevard	Greenville Boulevard	Bells Fork Road	Widening
GRR-16	Thomas Langston Road	NC 11	Davenport Farm Road	Access Management
R-3407	NC 33	US 264	MPO Boundary	Widening
GRR-18	US 264	MPO Boundary	US 264	Interstate Upgrade
GRR-11	NC 102	Southwest Bypass	Ayden Town Limits	Access Management
U-6195	Stantonsburg Road (SR 1200)	B's Barbeque Road (SR 1204)	NC 11	Access Management
GRR-17	US 13	US 264	US 64	Interstate Upgrade
GRR-2	14th Street	Greenville Boulevard	Charles Boulevard	Access Management
U-6215	NC 33	Blackjack-Simpson Road	Mobley's Bridge Road	Widening
GRR-4	Cooper Street	Old Tar Road	Mill Street	Modernization
R-5815	NC 11	Southwest Bypass	Pitt County Line	Interstate Upgrade
GRR-9	Ivy Road/Tucker Road/Ayden Golf Club Road	NC 102	NC 33 E/ E 10th Street	Modernization
GRR-10	Jolly Road	NC 11	NC 102	Modernization
U-5991	NC 43	Bells Fork Road	Worthington Road	Widening
GRR-13	NC 43	Worthington Road	NC 102	Widening
GRR-7	Forlines Road	NC 11	Southwest Bypass	Widening
GRR-8	Frog Level Road (SR 1127)	US 13	NC 903	Widening
GRR-15	Reedy Branch Road	Forlines Road	NC 11	Modernization
GRR-19	Worthington Road	Old Tar Road	NC 43	Widening
GRR-14	NC 903	NC 11	MPO Boundary	Widening

Prioritization Results: Intersections (Listed in Priority Order)

Project ID	Project Name	Prioritization Tier
GRI-12	Mill Street/Vernon White Road and NC 11	TBD
GRI-18	Tucker Road and Blackjack-Simpson Road	Roundabout
GRI-9	Memorial Drive and Greenville Boulevard	TBD
GRI-13	Mumford Road and NC 33	Roundabout
GRI-14	NC 102 and NC 11	New Turn Lanes
GRI-3	Arlington Boulevard and Red Banks Road	TBD
U-6197	SR 1711 (Worthington Road) and SR 1725 (County Home Road)	Roundabout
GRI-1	Arlington Boulevard and Dickinson Road	TBD
GRI-19	W 5th Street and Elizabeth Avenue	Roundabout
GRI-2	Arlinton Boulevard and Hooker Road	TBD
GRI-5	Greenville Boulevard and Red Banks Road	TBD
GRI-10	Mill Street and East Lee Street	TBD
GRI-11	Mill Street and West Avenue	TBD
GRI-15	Pocosin Road/Red Forbes Road and NC 903	Roundabout
GRI-4	Ayden Golf Club Road and Old Tar Road	TBD
GRI-6	Ivy Road and NC 43	New Turn Lanes
GRI-7	Jack Jones Road and Laurie Ellis Road	Roundabout
GRI-8	Laurie Ellis Road and Old Tar Road	Roundabout
GRI-16	Reedy Branch Road and Davenport Farm Road	Roundabout
GRI-17	Reedy Branch Road and Forlines Road	Roundabout

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Chapter 5

Multimodal Recommendations

INTRODUCTION

The Greenville Urban Area Metropolitan Transportation Plan acknowledges that regional decisions can enhance mobility and safety for motorists, cyclists, and pedestrians alike. Developing the system-level recommendations began with a review of previous plans, followed by discussions with stakeholders, Steering Committee members, members of the public, and local agencies and officials, and recommendations for the roadway network, the most heavily used transportation mode, were explored in the previous chapter. These sources indicate that even as the need persists to move traffic more efficiently there is a great demand for enhanced bicycle, pedestrian, and transit facilities, as well as an improved freight network to support local and regional economic initiatives. Underlying concepts to modal integration, livability, and connectivity are consistent themes in the coordinated transportation strategies that follow. The plan for roadways coordinates closely with these other elements, notably through an emphasis on incidental projects for cyclists and pedestrians and the general notion that improvements to the roadway network benefit future transit opportunities and expansion. Furthermore, many of the identified roadway projects are designed to support current and future freight movements.

ACTIVE TRANSPORTATION NETWORK

The Greater Greenville Area has been working together to create better walking and bicycling connections for many years. In 2016-2017, the City of Greenville and the Greenville Urban Area Metropolitan Planning Organization (MPO) began updating their 2011 Bicycle and Pedestrian Master Plan. The purpose was to renew plan priorities, tools and programs for improving the bicycle and pedestrian environments in the City of Greenville, Town of Ayden, Town of Winterville, Village of Simpson, and portions of Pitt County. Another major update to the plan is the additional focus on shared use trails, or "greenways". The plan serves as the MPO's most detailed set of recommendations for for bicycle, pedestrian, and greenway infrastructure, programs, and policies, now known as the MPO's "Active Transportation Plan" (ATP). This section of the MTP captures a brief summary of the ATP recommendations, and was developed in coordination with the 2019 updates to the the ATP. The full ATP should be referenced for details.

> *"The Greater Greenville Area will offer residents and visitors many options for walking and bicycling, through well-designed and beautifully maintained greenway trails, and through walkable, bicycle-friendly streets. People of all ages, abilities, and incomes will be able to safely and conveniently get to where they want to go."* – Vision Statement from the ATP Steering Committee

ATP 2019 Updates

The 2017 ATP was updated in coordination with the current Greenville MTP planning process. All ATP maps and many of the priority project cutsheets were updated to reflect a change in approach in the City of Greenville from recommended on-street separated bicycle lanes in the 2017 plan, to recommended sidepaths & sidewalks in the 2019 update. The reasoning for this change was to better reflect public desire to be out of the roadway on busy corridors, as well as NCDOT's Division-level reservations about constructing and maintaining separated bike lanes on-street. Additional updates included:

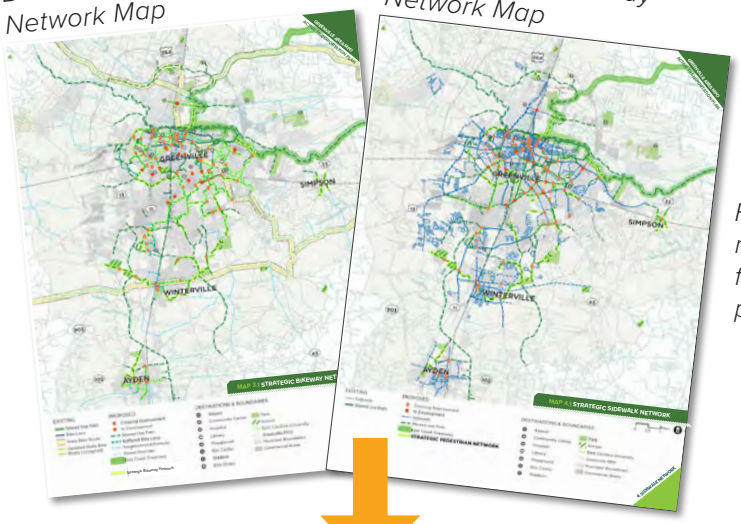
- Two new Project Cut-Sheets to reflect recent roadway construction, development, and trail opportunities (Downtown Rail-Trail and Tar River Greenway Extension)
- Policy information for shared active transportation (bike share and scooters)
- Program information for the Watch for Me NC Safety Campaign
- Design guidance for sidepath crossings at driveways and intersections (to support the new sidepath recommendations)
- Design Guidance for bicycle/pedestrian/path crossings at railroads

BICYCLE AND PEDESTRIAN RECOMMENDATIONS

The proposed bicycle and pedestrian networks are a result of a collaborative planning process that involved extensive public engagement, data collection, and technical analysis. Findings from the ATP's equity analysis, crash analysis, and level of traffic stress analysis provided quantitative data that directly informed the network recommendations. Additionally, more qualitative input from the public and the Steering Committee helped to inform the project team in developing a recommended network of well-connected, low-stress facilities. The main resulting bicycle and pedestrian network maps are shown on the following pages—please see the full ATP for the priority project project sheets (referred to as cutsheets in the ATP) and implementation action steps noted below.

Bikeway & Greenway Network Map

Sidewalk & Greenway Network Map



Full-page maps on following pages.

28 **Priority Project Cutsheets**

Featuring individual project maps, cost estimates, and other details.
Chapter 5 of the ATP

The priority projects have the greatest impact in terms of safety and connectivity. Examples include greenways, sidewalks, bicycle lanes, bicycle shared-lane markings, side paths, and similar facilities. These projects have the potential to spur momentum for longer-term projects.

39 **Implementation Action Steps**

Along with detailed recommendations for policies, programs, design, and implementation.
Chapter 6 & 7 of the ATP

Successful implementation will require a consistent, coordinated effort by local leaders, MPO transportation planners, municipal planners and engineers, multiple NCDOT agencies, private partners, stakeholders, and advocates in the region. The plan's facility design guidelines provide a go-to resource for statewide and national best practices. A combination of federal, state, local and private/non-profit funding sources are recommended to get these projects from planning and design stages to implementation.

The Strategic Bikeway Network

The Strategic Bikeway Network builds upon existing infrastructure and areas that are bicycle friendly today, especially neighborhoods. These projects can be thought of as 'low-hanging fruit', consisting of lower cost, easier to implement projects that are critical to the overall network.

The map on the following page shows an overview of this network; its key features include:

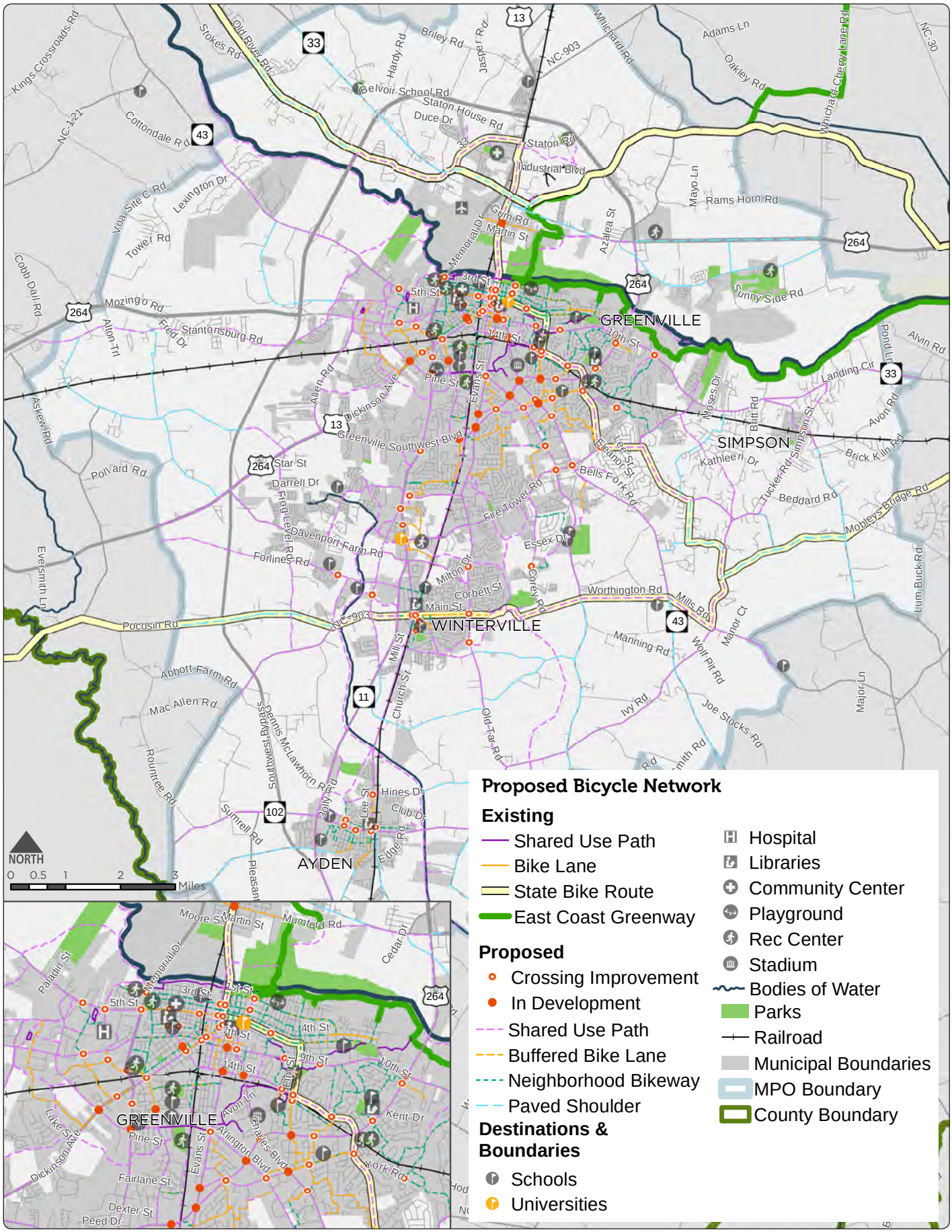
- Relative ease of implementation
- Potentially greater return on investment
- Connects to the existing greenway network
- Connects key destinations
- Avoids barrier roadway corridors that carry high automobile traffic volumes and speeds
- Uses neighborhood streets, many of which already have traffic calming features such as speed tables
- Uses some neighborhood streets that are very wide, allowing an opportunity to stripe buffered bike lanes (this space can also aid pedestrians).
- Highlights strategic crossings of major roadway corridors
- Proposes short sections of shared use paths to make key links where necessary
- Complements the ongoing process of improvements to major corridors that presently do not accommodate bicyclists (and that only minimally accommodate pedestrians).

Featured Facility Types In the Strategic Bikeway Network:

Neighborhood Bikeways

Buffered Bike Lanes

Shared Use Paths



See Maps 3.1-3.10 of the Greenville MPO Active Transportation Plan for more detail.

The Strategic Pedestrian Network

The design of the Strategic Pedestrian Network faces similar challenges as that of the Strategic Bicycle Network. Pedestrian friendly areas such as neighborhoods and uptown Greenville are separated by high-speed, high traffic volume "barrier" roadways. Many of these roadways have existing sidewalks, but due to lack of or limited buffer space, a lack of driveway access management, and high traffic volumes and speeds, some existing sidewalks still offer a low level of service to pedestrians. Examples include sidewalks along Greenville Blvd, Arlington Blvd, and Memorial Dr.

The Strategic Pedestrian Network builds upon the extensive existing network of sidewalks. There are over 160 miles of existing sidewalks in the study area, found in the downtown area of each community, in many neighborhoods, and along more recently (re)constructed major roadways.

The map on the following page shows an overview of this network (highlighted in lime green), which has the following key features:

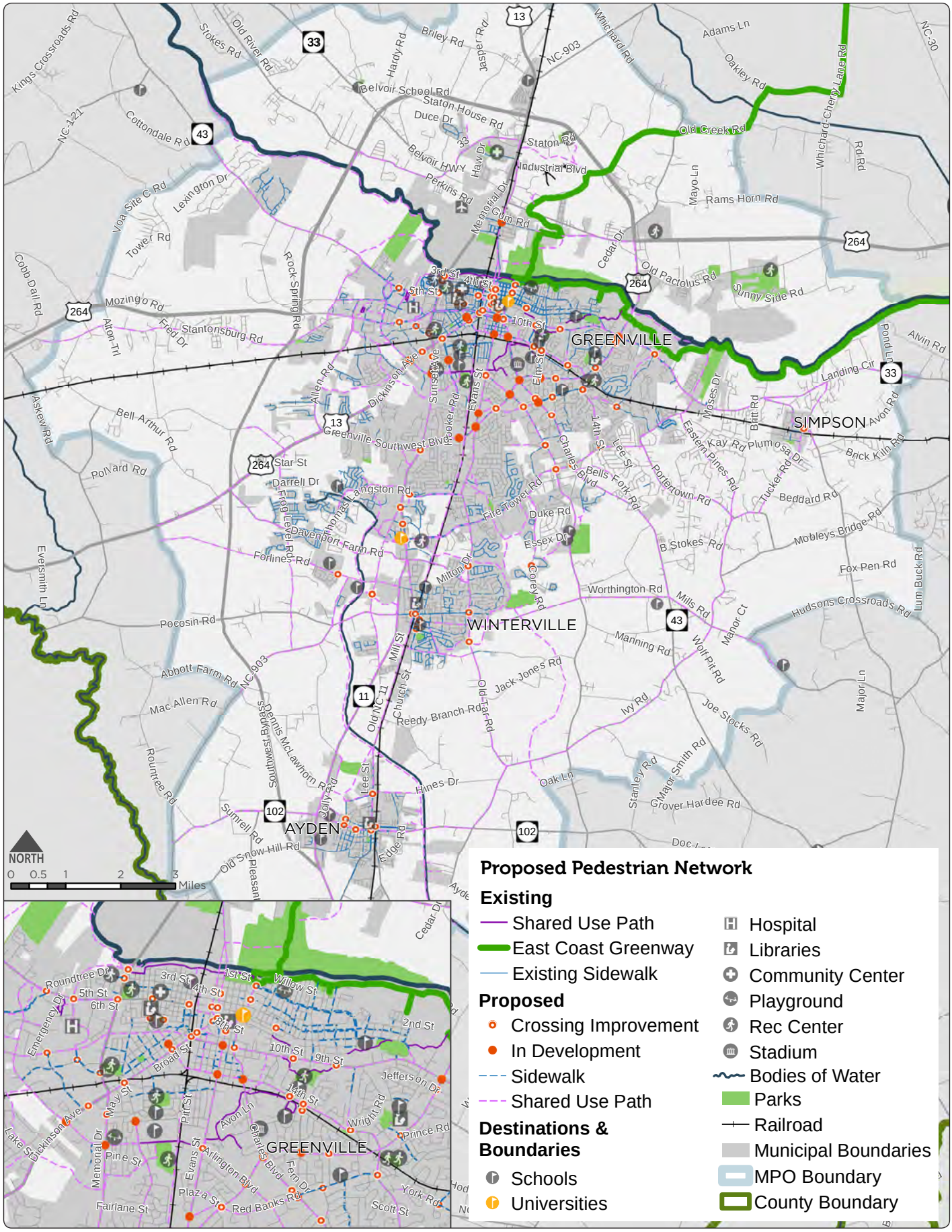
- Connects to the existing greenway network and existing extensive sidewalk network
- Connects key destinations
- Improves pedestrian conditions along barrier roadway corridors that carry high automobile traffic volumes and speeds
- Highlights strategic crossings of major roadway corridors
- Proposes short sections of shared use paths to make key links where necessary
- Complements the ongoing process of improvements to major corridors that presently only minimally accommodate pedestrians (and that do not accommodate bicyclists).

Featured Facility Types In the Strategic Pedestrian Network:

Sidewalks

Shared Use Paths

Crossing Improvements



See Maps 4.1-4.10 of the Greenville MPO Active Transportation Plan for more detail.

TRANSIT NETWORK

As outlined in the existing conditions analysis, the Greenville Urban Area has a unique opportunity to leverage two growing transit agencies that serve the area: Greenville Area Transit (GREAT), and ECU Transit. The transit element of the MTP evaluates recent and ongoing transit planning efforts and recommends policy-based strategies and system-level service improvements to enhance access and mobility for area residents. The plan's recommended improvements for existing service and programs were influenced by the MTP guiding principles and community input.

Recommendations and Considerations

While both GREAT and ECU Transit are responsible for their own planning efforts, there were several recommendations and considerations that came out of the public and stakeholder outreach process that bear noting. These items are listed below:

- The MPO should encourage and prioritize efforts that align with the current planning efforts for Greenville Area Transit and ECU Transit.
- Investigate methods to further integrate Greenville Area Transit and ECU Transit.
- Considerations should be given to improving the Greyhound Intercity Bus Service to enhance regional transit and connectivity.
- New services are not financially constrained because these will require new funding sources.

The MTP does not include financial considerations for ECU Transit and the Vidant bus service.

FREIGHT AND AVIATION NETWORK

The MTP assessed the existing freight network, trends, and public feedback to develop strategies that enhance the movement of goods within and through the region. As the Greenville region continues to grow and the economy places higher demands on the freight network, the condition and efficiency of freight movement into, out of, and through the region will be a major contributor to its economic well-being.

The region's major freight corridors include US 264, US 13, NC 11, NC 43, NC 33, NC 903, and more. These corridors connect commercial and economic hubs to locations within the Greenville area and to other regions in eastern North Carolina and beyond. These highways are joined by railroads, airports, and pipelines to complete the region's freight network. The network's performance impacts growth and development as well as economic vitality.

Recommendations and Considerations

Successful freight movement planning efforts incorporate roadway recommendations that increase capacity along select routes. Roadway network improvements should facilitate freight movement; however, the MPO should consider the additional items below:

- The Greenville MPO should continue to monitor increases in freight activity to ensure infrastructure is in place to efficiently move goods.
- The Greenville MPO should continue to coordinate with regional, state, and federal planning agencies on freight efforts.
- Regional freight planning efforts, such as those being undertaken through the Eastern North Carolina Regional Freight Study, should be continued to provide a more in-depth view of operations, data, and recommendations
- Aviation projects are included in the 2018-2027 STIP, but have caps on funding.
- Freight considerations have been included as part of the roadway prioritization process.
- There are no freight rail projects identified in the current STIP.

AREAS OF FUTURE STUDY

The areas for future study identified in this section were items often brought up during the planning process but warranted a deeper dive prior to identifying a solution or strategy. The items below outline the thought process behind each potential study.

Passenger Rail

There is a demand for passenger rail connections to larger regional cities, such as Raleigh. Expansion of Amtrak services to connect Greenville and Raleigh would have economic benefits for both regions. In the future, other passenger rail connections could be made to Raleigh and other points east, to the north (Rocky Mount, Norfolk) and to the south (Wilmington). These regional connections will help to foster economic growth and improve the livability for the Greenville Urban Area.

Micromobility

Micromobility modes, such as e-scooters and bikes, are making impacts across the country and world. As these systems expand, there should be consideration given to how these modes integrate with the current transportation system. Understanding these technologies and others that may be on the horizon will allow the Greenville region to be prepared for future private investments in the micromobility system that will impact the area.

Expanded Connections

As the Greenville Area continues to grow and expand, alternative connections to surrounding communities should be explored. The MPO should work with the Mid East Rural Planning Organization (RPO), which is composed of areas including Pitt, Beaufort, and Martin Counties, to identify potential greenway connections. Two communities that have expressed interest in such connections are nearby Farmville and Washington.

Transportation Technology

Emerging Technology

While the impacts of some technological developments are limited to their field, there are others—like the printing press, the telephone, and the computer—that have the capacity to introduce a much more significant impact and transform the lifestyle of a generation. The introduction and advancements of connected and automated vehicles (CAV) is one such development. Connected vehicles are defined as vehicles equipped with technology for communication with other vehicles and roadside infrastructure. Autonomous vehicles are defined as vehicles that can perform driving functions without a driver at any time.

Already, Amazon and other companies are experimenting with driverless freight. A little closer to home, NCDOT is in the process of exploring potential deployments for Olli, a 12-passenger, #D-printed, fully electirc autonomous shuttle produced by Local motors. The City of Greenville, in partnership with ECU, has submitted an application to deploy Olli to connect the G.K. Butterfield transportation Center to the ECU main campus and ECU medical campus. The use of Olli transportation is a cost-effective, sustainable, user-friendly alternative way to travel the campus and immediate area.

As CAV advancements continue to expand daily and are introduced into existing transportation systems, it becomes more challenging for agencies to prepare and plan for these advancements. CAV will introduce changes in the way states and local agencies implement transportation projects and future developments. The figure below captures a sampling of the opportunities and impacts that many agencies have recently identified with respect to CAV.

What Role Does Greenville Play?

With the development and introduction of CAV technologies, the infrastructure, investments, and planning to support CAV's increasing presence will need to be thoroughly strategized for the future. Within each travel mode, there are potential strategies and challenges that can be considered now to help facilitate the eventual incorporation of CAV technologies. In many instances, these planning issues will need to be assessed at a regional level to make their implementation feasible. The Greenville MPO can serve as an advocate to encourage the consideration of these issues. Some examples of this are shown in the table below. Future updates to the Metropolitan Transportation Plan should continue to update both the current state and future outlook for CAV and other emerging transportation technologies.

Near-Term Planning Issues for Connected and Autonomous Vehicles (CAV)

Travel Mode	Near-Term Planning Strategies
General	Consider the future impacts of autonomous vehicles on land development.
Roadway	Consider design requirements to enhance detection equipment and controller equipment to collect and broadcast speed and safety information.
Roadway	Consider how to begin accommodating autonomous vehicles within a mixed vehicle fleet.
Roadway	Assess the safety and mobility impacts of providing two-way left turn lanes in a CAV setting.
Parking	Consider the implications of converting on-street parking into pick up and drop off lanes.
Bicycle and Pedestrian	Consider impacts of greenway crossings at surface streets in a CAV setting.
Bicycle and Pedestrian	Consider the design impacts to bike lanes as autonomous vehicles are introduced into the fleet
Bicycle and Pedestrian	Explore additional education and outreach programs designed for both bicyclists and motorists.
Transit	Consider future impacts of potential design requirements to accommodate autonomous transit vehicles
Transit	Consider dynamic routing and agility in transit stops in response to real-time ridership needs.

Chapter 6
Performance Measures

INTRODUCTION

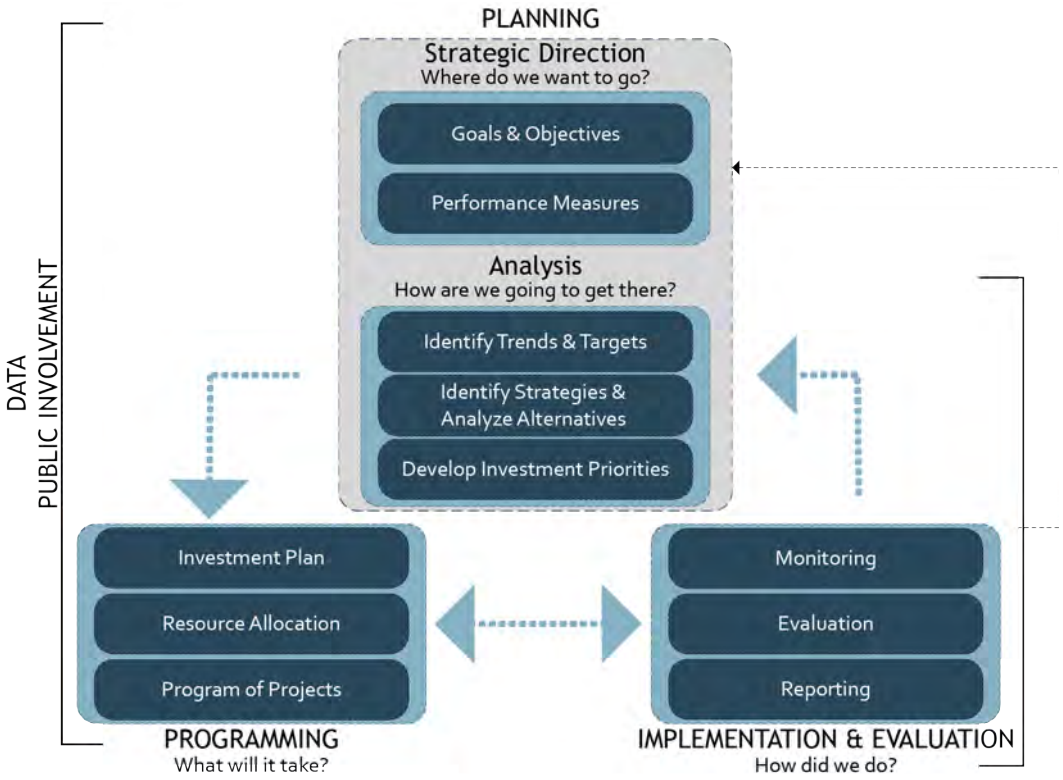
The Greenville Metropolitan Transportation Plan (MTP) is the result of an ongoing partnership between local, state, and federal representatives. The guiding principles of this plan reflects the community's vision for the transportation system as well as the MAP-21 (Moving Ahead for Progress in the 21st Century) planning factors, local context, and regional needs. MAP-21 was signed into law on July 6, 2012 and allocated over $105 billion for fiscal years 2013 and 2014 to fund surface transportation programs. Following MAP-21, the Fixing America's Surface Transportation Act (FAST Act) was signed into law on December 4, 2015 and allocates over $305 billion for fiscal years 2016 to 2020 to fund highway and motor vehicle safety, public transportation, motor carrier safety, hazardous materials safety, rail, research, technology, and statistics programs to continue MAP-21's overall performance management approach. Additionally, the FAST Act is the first federal legislation that provides a dedicated source of federal funding for freight projects. The concept of performance management is implemented through this process to better serve the community and make effective funding decisions.

Performance-Based Planning and Programming (PBPP) refers to the methods transportation agencies use to apply performance management and standard practice in their planning and programming processes. The goal of PBPP is to ensure that transportation investment decisions – both long term planning and short-term programming – depend on the ability to meet established goals. As a federal requirement, states will invest resources in projects to achieve individual targets that make collective progress toward national goals. MPOs are also responsible for developing MTPs and TIPs through a performance-driven, outcome-based approach to planning.

This chapter provides insight into the MPO's transition to a more strategic PBPP. Notably, the performance measurement targets and methodology detailed in this chapter are focused on overall system-wide performance. Project-level performance for roadway projects has been addressed through this plan's prioritization process, which is covered in Chapter 4.

This chapter contains the following sections:

- National goal areas and measures
- Federal requirements
- Performance targets
- Performance measures summary



NATIONAL GOALS AND MEASURES

Highway Performance

Specific performance measures correlate with the national goal areas developed in MAP-21 and the FAST Act. The Federal Highway Administration (FHWA) requires state department of transportations (DOTs) and metropolitan planning organizations (MPOs) to monitor the transportation system using these specific performance measures. The goals are illustrated through seven broad planning factors identified for special focus within the MPO's long-range transportation planning program. The Greenville MTP addresses these national goals areas for highway performance and performance measures.

Safety

To achieve a significant reduction in traffic fatalities and serious injuries on all public roads.

- Number of fatalities
- Fatality rate (per 100 million vehicle miles traveled)
- Number of serious injuries
- Serious injury rate (per 100 million vehicle miles traveled)
- Number of non-motorized fatalities and non-motorized serious injuries

Infrastructure Condition

To maintain the highway infrastructure asset system in a state of good repair.

- Percentage of pavements on the Interstate System in Good condition
- Percentage of pavements on the Interstate System in Poor condition
- Percentage of pavements on the non-Interstate National Highway System (NHS) in Good condition
- Percentage of pavements on the non-Interstate National Highway System (NHS) in Poor condition
- Percentage of NHS bridges classified as in Good condition
- Percentage of NHS bridges classified as in Poor condition

Congestion Reduction

To achieve a significant reduction in congestion on the National Highway System.

- Annual hours of peak-hour excessive delay per capita
- Percent of non-single-occupant vehicle travel*

*Only applies in areas designated as Transportation Management Areas (TMAs).

System Reliability

To improve the efficiency of the surface transportation system.

- Percent of person miles traveled on the Interstate System that are reliable
- Percent of person miles traveled on the non-Interstate NHS that are reliable

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.

- Truck Travel Time Reliability Index

Environmental Sustainability

To enhance the performance of the transportation system while protecting and enhancing the natural environment.

- Total emissions reduction*

*Only applies in non-attainment or maintenance areas over a prescribed population threshold.

Reduced Project Delivery Delays

To reduce project costs, promote jobs and the economy, and expedite the movement of people and goods by accelerating project completion through eliminating delays in the project development and delivery process, including reducing regulatory burdens and improving agencies' work practices.

Transit Performance

Recipients of public transit funds – which can include states, local authorities, and public transportation operators – are required to establish performance targets for safety and state of good repair; to develop transit asset management and transit safety plans; and to report on their progress toward achieving targets. Public transportation operators are directed to share information with MPOs and states so that all plans and performance reports are coordinated. The list below identifies performance measures goals outlined in the National Public Safety Transportation Plan, released by the Federal Transit Administration (FTA), and in the final rule for transit asset management. The Greenville Urban Area MPO will be required to coordinate with Greenville Area Transit (GREAT) to set targets for these measures.

Safety

- Total number of reportable fatalities and rate per total vehicle revenue miles by mode
- Total number of reportable injuries and rate per total vehicle revenue miles by mode
- Total number of reportable events and rate per total vehicle revenue miles by mode
- Mean distance between major mechanical failures by mode

Infrastructure Condition (State of Good Repair: Transit Asset Management)

- Equipment: Percentage of vehicles that have met or exceeded their Useful Life Benchmark (ULB)
- Rolling Stock: Percentage of revenue vehicles within a particular asset class that have met or exceeded their ULB
- Facilities: Percentage of facilities within an asset class rated below 3.0 on the FTA Transit Economic Requirements Model scale

FEDERAL REQUIREMENTS

Federal performance measurement guidance has sought to identify and streamline a process for the introduction of performance-based planning into MPO led documents such as the MTP and TIP. The target identification, reporting, and assessment phases of this process are described in this section.

Targets

- The Greenville Urban Area MPO is required to establish performance targets no later than 180 days after NCDOT or a public transportation operator sets performance targets.
- For each performance measure, the Transportation Advisory Committee (TAC) will either decide to support a statewide target or establish a quantifiable target specific to the planning area.
- NCDOT, MPOs, and public transit operators must coordinate performance measure targets to ensure consistency to the extent practicable.

Reporting

- The Greenville MTP and subsequent updates must describe the performance measures and targets, evaluate the performance of the transportation system, and report on progress made.
- The TIP must link investment priorities to the targets in the MTP and describe, to the extent practicable, the anticipated effect of the program on achieving established targets.
- The Greenville Urban Area MPO must also report to NCDOT the baseline roadway transportation system condition, performance data, and progress toward achieving targets.

Assessments

- FHWA and FTA will not directly evaluate the MPO's progress toward meeting performance measure targets. Instead, the MPO's performance will be assessed as part of regular cyclical transportation planning process reviews.
- FHWA will determine if NCDOT has met or made significant progress toward selected targets for the highway system.

PERFORMANCE TARGETS

The Greenville MTP is shaped by several elements, including federal legislation and the direction of state and local agencies. Establishing performance targets is an ongoing process and must be coordinated between the NCDOT and MPOs. Once the statewide performance targets are established, the MPO staff and Transportation Advisory Committee (TAC) members must decide whether to adopt the statewide targets or establish their own targets.
This section is intended to be dynamic and will undergo several revisions following the initial adoption of this plan. As performance targets get adopted by the TAC, they will be incorporated into this section.

Performance Targets Summary

A summary of performance targets for the Greenville Area MPO is provided in the table on the following page. This table is intended to be continuously updated as additional performance targets are adopted by the Greenville MPO TAC.

Performance Targets Summary

National Goal Areas	Measure	FAST Act Target			Adopted on
Safety	Number of fatalities	reduce by	5.10%	each year	2/27/2018
	Fatality rate(per 100 million vehicle miles traveled)	reduce by	4.75%	each year	2/27/2018
	Number of serious injuries	reduce by	5.10%	each year	2/27/2018
	Serious injury rate (per 100 million vehicle miles traveled)	reduce by	4.75%	each year	2/27/2018
	Number of non-motorized fatalities and non-motorized serious injuries	reduce by	5.30%	each year	2/27/2018
Infrastructure Condition	Percentage of pavements on the Interstate System in Good condition (4-Year Target)		37.0%	by 2021	7/11/2018
	Percentage of pavements on the Interstate System in Poor condition (4-Year Target)		2.2%	by 2021	7/11/2018
	Percentage of pavements on the non-Interstate National Highway System (NHS) in Good condition (2-Year Target)		27.0%	by 2019	7/11/2018
	Percentage of pavements on the non-Interstate NHS in Good condition (4-Year Target)		21.0%	by 2021	7/11/2018
	Percentage of pavements on the non-Interstate NHS in Poor condition (2-Year Target)		4.2%	by 2019	7/11/2018
	Percentage of pavements on the non-Interstate NHS in Poor condition (4-Year Target)		4.7%	by 2021	7/11/2018
	Percentage of NHS bridges classified as in Good condition (2-Year Target)		33.0%	by 2019	7/11/2018
	Percentage of NHS bridges classified as in Good condition (4-Year Target)		30.0%	by 2021	7/11/2018
	Percentage of NHS bridges classified as in Poor condition (2-Year Target)		8.0%	by 2019	7/11/2018
	Percentage of NHS bridges classified as in Poor condition (4-Year Target)		9.0%	by 2021	7/11/2018
System Reliability	Percent of person miles traveled on the Interstate System that are reliable (2-Year Target)		80.0%	by 2019	7/19/2018
	Percent of person miles traveled on the Interstate System that are reliable (4-Year Target)		75.0%	by 2021	7/11/2018
	Percent of person miles traveled on the non-Interstate NHS that are reliable (4-Year Target)		70.0%	by 2021	7/11/2018
Freight Movement and Economic Vitality	Truck Travel Time Reliability Index (2-Year Target)		1.65	by 2019	7/11/2018
	Truck Travel Time Reliability Index (4-Year Target)		1.70	by 2021	7/11/2018
Congestion Reduction*	Annual hours of peak-hour excessive delay per capita		N/A		
	Percent of non-single-occupant vehicle travel		N/A		
Environmental Sustainability**	Total emissions reduction		N/A		

*Only applies in regions designated as Transportation Management Areas.
**Only applies in non-attainment or maintenance areas over a prescribed population threshold.

Chapter 7
Investing in Transportation

INTRODUCTION

Transportation planning has historically balanced the technical aspects with engaging the public and elected leaders in the decision-making process. However, there is often a disconnect between public policy and this approach. This can make it difficult to evaluate how well the transportation system addresses the community's needs and how well future transportation projects will improve quality of life. The Greenville Area Metropolitan Transportation Plan bridges this disconnect by developing a long-range transportation strategy that combines technical data with engagement results in a quantifiable prioritized process.

In accordance with state and federal requirements, this plan is also financially constrained. This process demonstrates how the recommended and prioritized projects can realistically be funded during the life of the plan. Due to limited transportation funding, it is critical that measures be taken to ensure that appropriate projects and programs are prioritized and eventually implemented.

To do this, the MPO must demonstrate a reasonable expectation of future funding levels, estimate project costs, and project the future needs of all travel modes. The financially-constrained plan allows the MPO and supporting agencies to focus on near-term opportunities and identify strategies for implementation.

This chapter discusses the process used to determine financial constraint, including project prioritization and estimated funding levels. The overall condition of the region is also explored through the lens of performance measurement.

FINANCIAL PLAN DEVELOPMENT

Overview

The Fixing America's Surface Transportation Act (FAST Act), Public Law 114-94, was signed into law on December 4, 2015. The FAST Act funds transportation programs for fiscal years 2016 through 2020. It is the first long-term surface transportation authorization enacted in a decade that provides funding certainty for surface transportation. The FAST Act supports critical transportation projects to ease congestion and facilitate freight movement on major roads by establishing and funding new policies and programs. The FAST Act builds off the prior federal legislation- Public Law 112-141, the Moving Ahead for Progress in the 21st Century Act (MAP-21)- and continues that law's emphasis on performance evaluation and addresses national priorities, as identified below.

The financially-constrained plan, required by the FAST Act and MAP-21 for regional MTPs, shows proposed investments that are realistically based on future funding availability during the life of the plan and a series of funding availability during the life of the plan and a series of funding periods. Meeting this test is referred to as "financial constraint." The funding periods identified for The Greenville Area Metropolitan Transportation Plan are:

- 2019-2027
- 2028-2035
- 2036-2045
- Unfunded Vision

The first funding period (2019-2027) is reflective of the time period of the state and MPO's currently adopted Transportation Improvement Program. As such, projects reflected during this time period are considered to be already committed. The second and third funding periods (2028-2035 and 2036-2045 respectively) are consistent with the interim years guidance for metropolitan areas subject to air quality conformity requirements. As such, the funding bands reflected are also the time periods being modeled in the conformity process.

Revenue forecasts were developed after a review of previous state and local expenditures, current funding trends, and likely funding levels. The revenue forecasts involved consultation with the MPO, NCDOT, and FHWA. All dollar figures discusses in this chapter initially were analyzed in current year dollars (i.e. 2018) and then inflated to reflect the midpoint of the projected opportunity band. Based on an assessment of recent trends and on guidance from MPO staff, an annual inflation rate of 2% was used to forecast revenues. FHWA guidance suggested an annual inflation rate of 4% to forecast costs. These differing projections suggest that costs will increase at a greater rate than available revenues. This chapter provides an overview of revenue assumptions, probable cost estimates, and financial strategies along with the detailed research results used to derive these values. Since this a planning level funding exercise, all funding programs, projects, and assumptions will have to be reevaluated in subsequent plan updates.

Roadway Maintenance Funding

Although the Greenville MTP is primarily focused on capital improvements to the multimodal system, maintenance funding also needs to be considered. Maintenance funding in the Greenville region is applied to areas such as roadway maintenance, bridge replacements, or bicycle and pedestrian infrastructure. Maintenance of these types of uses is funded either by state and federal sources or by local sources, depending on the ownership of the facility being considered. Future year maintenance funding was not projected. However, it is reasonable to assume that all maintenance funding that is made available within the MPO area will be fully utilized.

Capital Roadway Funding

Projections of funding for capital roadway projects are based in large part on current funding levels shown in the draft FY 2018-2027 Statewide Transportation Improvement Program (STIP). The Greenville MPO has a total of $244 million funded for roadway capital projects in the 2018-2027 STIP. Revenue forecasts were adjusted within the MTP's projection period to reflect a 2% inflation rate. Local funds, composed of the Powell Bill capital roadway project allocation within Greenville, Winterville, Ayden, and Simpson, City of Greenville GO Bonds, and the City of Greenville Capital Improvement Program were also estimated and then projected out to 2045 without the addition of inflation to better account for historic trends.

Based on this forecasting methodology, the available capital highway funding for the Greenville Area MPO totals approximately $866 million over the life of the MTP. The table below summarizes the anticipated capital roadway funding broken out by Federal/State and local funding.

Capital Roadway Funding by Horizon Year

Opportunity Band	Federal/State Funding	Local Funding	Total Roadway Capital
2019 - 2027	$244,116,000	$6,507,000	$250,623,000
2028 - 2035	$212,641,000	$5,784,000	$218,425,000
2036 - 2045	$409,919,000	$7,230,000	$417,149,000
Total	**$866,676,000**	**$19,521,000**	**$886,197,000**

The capital roadway projects in the 2018-2027 STIP are shown on the following page.

Greenville Urban Area MPO 2018-2027 STIP

STIP #	Project Name	ROW Year	Construction Year	Total Amount
R-2250	NC 11/NC 903 (Greenville Southwest Bypass)	Under Construction		$239,805,000
R-5815	NC 11	2025	2026	$194,400,000
U-2817	SR 1700 (Evans Street/Old Tar Road)	2019	2020	$85,766,000
U-3315	SR 1467 (Stantonsburg Road)/ SR 1598 (10th Street Connector)	Planning/Design In Progress		$69,808,000
U-5606	SR 1598 (Dickinson Avenue)	2019	2019	$12,054,000
U-5785	SR 1708 (Firetower Road)	2020	2021	$22,560,000
U-5870	SR 1708 (Firetower Road)	2020	2021	$36,706,000
U-5875	SR 1203 (Allen Road)	Under Construction		$28,390,000
U-5917	SR 1704 (14th Street)	2019	2020	$12,468,000
U-5991	NC 43	2021	2022	$35,940,000
U-5952	Greenville	2019	2020	$8,572,000
U-5730	US 13 (Memorial Drive)	2019	2020	$2,350,000
U-6215	NC 33	Programmed for Planning & Environmental Study Only		-
U-6125	NC 33 (10th Street)	Planning/Design & ROW In Progress		-
U-6147	NC 43 (Charles Boulevard)	Programmed for Planning & Environmental Study Only		-
U-6195	SR 1204 (Stantonsburg Road)	Programmed for Planning & Environmental Study Only		-
U-5921	SR 1713 (Laurie Ellis Road)	Planning/Design In Progress		$1,543,000
U-5919	SR 1126 (Boyd Street)	Programmed for Planning & Environmental Study Only		$1,710,000
U-6197	SR 1711 (Worthington Road)	Programmed for Planning & Environmental Study Only		-

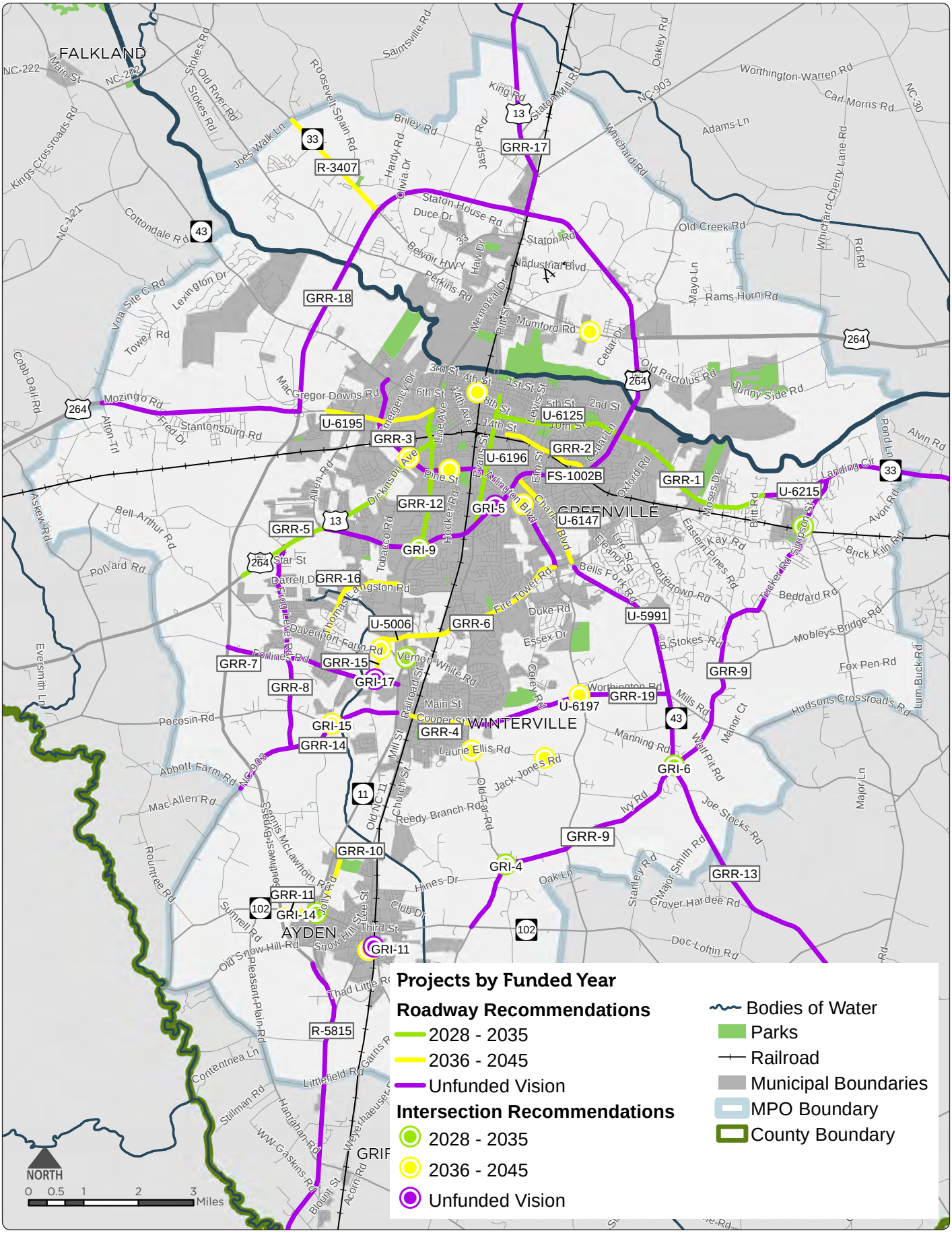
The following table presents the projects in 2028-2035, 2036-2045, and Vision (Unfunded) Opportunity Bands and their cost estimates inflated to the midpoint year of the opportunity band. Each of these lists of projects is constrained based on the amount of revenue projected to be available during the opportunity band time period. Unfunded Vision projects, while not projected to receive funding as a part of this plan, are still considered viable recommendations and as so remain in the plan. The supporting map following this table shows the roadway projects included all of the time periods of the MTP.

Financially Constrained Project List by Horizon Year

Project ID	Project Name	Extents	Project Cost
2028-2035 (Median Year 2032)			
GRR-12	NC 11/Memorial Drive	10th Street to Greenville Boulevard	$24,926,000
GRR-1	10th Street	Oxford Road to Blackjack-Simpson Road	$18,133,000
U-6196	Evans Street (SR 1702)	Greenville Boulevard to W 5th Street	$43,292,000
U-6125	NC 33/10th Street	Oxford Road to Evans Street	$42,809,000
GRR-5	Dickinson Avenue	Memorial Drive to Southwest Bypass	$73,906,000
GRI-12	Mill Street/Vernon White Road and NC 11		$3,791,000
GRI-18	Tucker Road and Blackjack-Simpson Road		$3,791,000
GRI-9	Memorial Drive and Greenville Boulevard		$4,213,000
GRI-14	NC 102 and NC 11		$527,000
GRI-4	Ayden Golf Club Road and Old Tar Road		$2,106,000
GRI-6	Ivy Road and NC 43		$527,000
2036-2045 (Median Year 2041)			
GRR-6	Fire Tower Road	Memorial Drive to Arlington Boulevard	$46,702,000
U-6147	NC 43/Charles Boulevard	Greenville Boulevard to Bells Fork Road	$44,341,000
U-5006	Fire Tower Road Extension	Reedy Branch Road to NC 11	$10,061,000
GRR-16	Thomas Langston Road	NC 11 to Davenport Farm Road	$29,233,000
R-3407	NC 33	US 264 to MPO Boundary	$69,379,000
GRR-11	NC 102	Southwest Bypass to Ayden Town Limits	$6,449,000

Project ID	Project Name	Extents	Project Cost
2036-2045 (Median Year 2041) Continued			
U-6195	Stantonsburg Road (SR 1200) Stantonsburg Road (SR 1200)	B's Barbeque Road (SR 1204) to NC 11	$72,046,000
GRR-2	14th Street	Greenville Boulevard to Charles Boulevard	$16,576,000
GRR-4	Cooper Street	Old Tar Road to Mill Street	$15,191,000
GRR-10	Jolly Road	NC 11 to NC 102	$16,423,000
GRR-15	Reedy Branch Road	Forlines Road to NC 11	$9,749,000
GRI-13	Mumford Road and NC 33		$5,396,000
GRI-3	Arlington Boulevard and Red Banks Road		$5,996,000
U-6197	SR 1711 (Worthington Road) and SR 1725 (County Home Road)		$5,396,000
GRI-1	Arlington Boulevard and Dickinson Road		$5,996,000
GRI-19	West 5th Street and Elizabeth Avenue		$5,396,000
GRI-2	Arlington Boulevard and Hooker Road		$5,996,000
GRI-10	Mill Street and East Lee Avenue		$5,996,000
GRI-15	Pocosin Road/Red Forbes Road and NC 903		$5,396,000
GRI-7	Jack Jones Road and Laurie Ellis Road		$5,396,000
GRI-8	Laurie Ellis Road and Old Tar Road		$5,396,000
GRI-16	Reedy Branch Road and Davenport Farm		$5,396,000
Unfunded Vision (2046- The year following forcasted projections)			
GRR-3	Arlington Boulevard	Fire Tower Road to NC 43/West 5th Street	$692,008,000
FS-1002B	US 264- A (Greenville Boulevard)	US 264-A to US 13 (Dickinson Avenue)	$596,857,000
GRR-18	US 264	MPO Boundary to US 264	$553,666,000
GRR-17	US 13	US 264 to MPO Boundary	$123,618,000
U-6215	NC 33	Blackjack Simpson Road to MPO Boundary	$132,914,000
R-5815	NC 11	Southwest Bypass to Pitt County Lane	$176,096,000
GRR-9	Ivy Road/Tucker Road/Ayden Golf Club Road	NC 102 to NC 33 E/E 10th Street	$202,999,000

Project ID	Project Name	Extents	Project Cost
Unfunded Vision (2046- The year following forcasted projections) Continued			
U-5991	NC 43	Bells Fork Road to Worthington Road (SR 1711)	$87,078,000
GRR-13	NC 43	Worthington Road to NC 102	$237,238,000
GRR-7	Forlines Road	NC 11 to Southwest Bypass	$95,243,000
GRR-8	Frog Level Road (SR 1127)	US 13 to NC 903	$111,018,000
GRR-19	Worthington Road	Old Tar Road to NC 43	$98,372,000
GRR-14	NC 903	NC 11 to MPO Boundary	$80,952,000
GRI-5	Greenville Boulevard and Red Banks Road		$7,295,000
GRI-11	Mill Street and West Avenue		$7,295,000
GRI-17	Reedy Branch Road and Forlines Road		$6,565,000


FALKLAND
GREENVILLE
WINTERVILLE
AYDEN
GRIF
R-3407
GRR-17
GRR-18
U-6195
GRR-3
U-6196
GRR-2
U-6125
FS-1002B
GRR-1
U-6215
U-6147
GRR-12
GRI-5
GRR-5
GRI-9
GRR-16
U-5006
GRR-6
U-5991
GRR-7
GRR-15
GRI-17
GRR-8
GRR-19
U-6197
GRR-9
GRI-15
GRR-4
GRR-14
GRI-6
GRR-10
GRI-4
GRR-13
GRR-11
GRI-14
GRI-11
R-5815
Projects by Funded Year
Roadway Recommendations
2028 - 2035
2036 - 2045
Unfunded Vision
Intersection Recommendations
2028 - 2035
2036 - 2045
Unfunded Vision
Bodies of Water
Parks
Railroad
Municipal Boundaries
MPO Boundary
County Boundary
NORTH
0 0.5 1 2 3 Miles

Active Transportation

Bicycle and Pedestrian Maintenance Funding

Currently funding for bicycle and pedestrian maintenance can be provided using Powell Bill funds or other local funding, although none of the member jurisdictions have a dedicated amount of funding set aside for the up-keep of bicycle and pedestrian facilities. Pedestrian and bicycle facilities that are part of state-maintained facilities are typically maintained as part of those larger facilities.

Capital Bicycle and Pedestrian Funding

Currently, new bicycle and pedestrian facilities in the Greenville Urban Area are primarily funded using federal programs, discretionary funds, and local dollars. There are five bicycle and pedestrian projects included in the 2018-2027 STIP. Additional information on bicycle and pedestrian projects and funding can be found in the Greenville Active Transportation Plan.

In order to ascertain potential future funds available for these projects, the amount currently dedicated to bicycle and pedestrian projects in FY 2018-2027 STIP was combined with 25% of the annual capital Powell Bill funding allocation for Greenville, Winterville, Ayden, and Simpson. In generating future revenues, Powell Bill allocations were not inflated, and state funding revenues are inflated by 2% annually starting in 2028. Using this methodology, the available bicycle and pedestrian funding for the duration of the 2045 MTP is estimated to total $18,802,900.

Anticipated Capital Funding for Active Transportation by Revenue Band

Revenue Band	Revenues
2019 - 2027	$6,098,900
2028 - 2035	$5,384,300
2036 - 2045	$7,319,700
Total	**$18,802,900**

Public Transportation

The table to the right reflects the proposed costs and revenues for public transportation projects over the life of the metropolitan transportation plan. The costs and revenues are broken up between public transportation capital projects and operations and maintenance (from the 2018-2027 STIP). An estimated $17.5 million and $17.3 million are currently included in the 2018-2027 STIP for public transportation capital projects and operations/ maintenance, respectively. In order to better ascertain an average for future transit capital project funding, the annual average considers prior year funding levels still reflected in the STIP along with the funding allocated in 2018-2027, after which annual values were inflated at 2%. To better project operations and maintenance funding, annual projections from 2028-2045 are based on funding amounts shown in the first five years of the STIP.
This portion of the STIP shows a more comprehensive view of the costs associated with operations and maintenance. An annual inflation value of 2% was applied to these operations and maintenance funding levels as well. The Greenville Area MPO will continue to work closely with NCDOT and Greenville Area Transit to understand the financial needs of the transit system into the future. Greenville Area Transit will continue to provide more detailed insight into their costs and revenues through their own independent planning efforts.

Anticipated Transit Funding by Revenue Band

Revenue Band	Transit Capital	Transit Operations & Maintenance
2019 - 2027	$14,579,000	$12,076,000
2028 - 2035	$25,510,000	$25,334,000
2036 - 2045	$38,133,000	$37,865,000
Total	**$78,222,000**	**$75,275,000**

Aviation and Freight

Aviation projects in the Greenville area are funded using a blend of federal, state, and local funds. The table below shows revenue anticipated for capital projects as part of the STIP. Local capital, operations, and maintenance funds are not reflected here. The Pitt-Greenville Airport Authority prepares its own master planning and financial assessments, which will continue to serve as an in-depth and comprehensive look at the funding levels for that entity.

Anticipated Aviation Funding by Revenue Band

Revenue Band	Revenues
2019 - 2027	$3,852,000
2028 - 2035	$3,372,400
2036 - 2045	$5,040,700
Total	**$12,265,100**

Freight is included as a metric in the recommended roadway projects. For that reason, it is not separately identified for funding. Additionally, freight rail does not have projects identified in the 2018-2027 STIP, however as seen in Chapter 5, freight opportunities should continue to be investigated moving forward.

CONCLUSION

The Greenville Urban Area MTP envisions a region that ensures equitable access to reliable transportation, provides a wide variety of travel options, and promotes a high quality of life throughout. This plan is a regional vision for mobility that supports economic development and social equity while complementing the natural and man-made qualities that make the Greenville region unique. Included in the Greenville MTP are transportation strategies that consider the existing and future needs of residents, visitors, and employers. The creation of this financially constrained plan ensures that the identified projects can reasonably be funded and implemented during the life of the MTP and that the priorities expressed throughout the public involvement process will influence the region's transportation planning decisions.

The Greenville Urban Area MTP is more than just a plan and a funding mechanism.

With this document, the leaders and citizens of the Greenville area can set the stage for the region's future and how this region will accommodate its needs in the coming decades.

Among other accomplishments, The Greenville Urban Area MTP:

- Funds 26 capital roadway projects (beyond those included in the 2018-2027 STIP)
- Invests a total of $615,927,000 in roadway infrastructure
- Defines the community's expectations as leaders move forward with major transportation investments
- Sets the stage for smart investing by emphasizing access management, connectivity, and modally balanced transportation strategies

As the region moves forward and projects advance toward funding and implementation, the Greenville Urban Area MPO will continue to work with NCDOT, FHWA, and FTA to determine how best to advance recommended projects and will continue to engage the public to adjust future planning efforts and project lists as necessary. Ultimately, continued collaboration between state, local agencies, and the general public will provide more opportunities to foster a safe and well-balanced multimodal transportation system that makes the Greenville Urban Area a great place to live.

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Appendices

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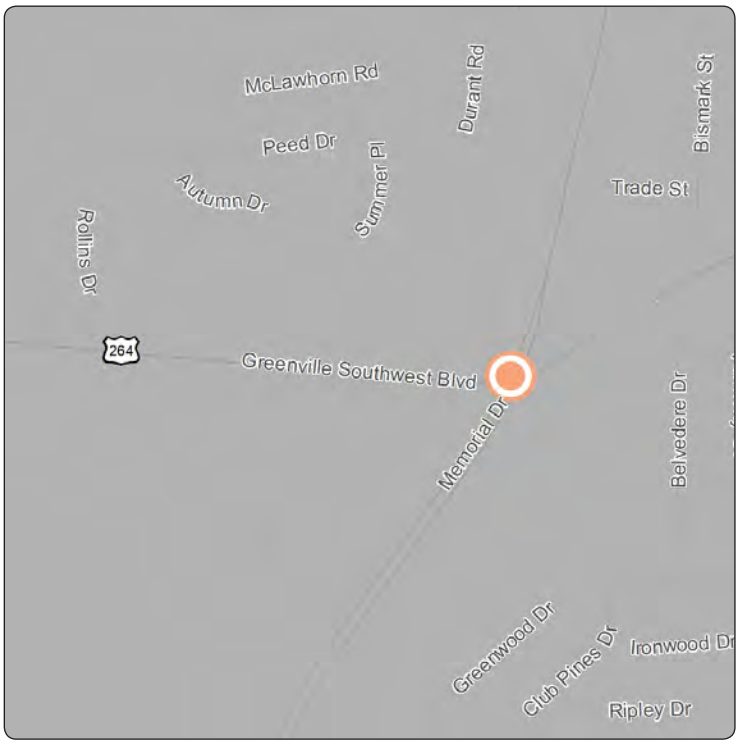
Appendix A
Project Sheets

GRI-9: MEMORIAL DRIVE AND GREENVILLE BOULEVARD

Vicinity Map



Project Attributes

Improvement Type: Intersection Improvements

Estimated Cost: $2.5 M (2018 $)

Horizon Year: 2028-2035

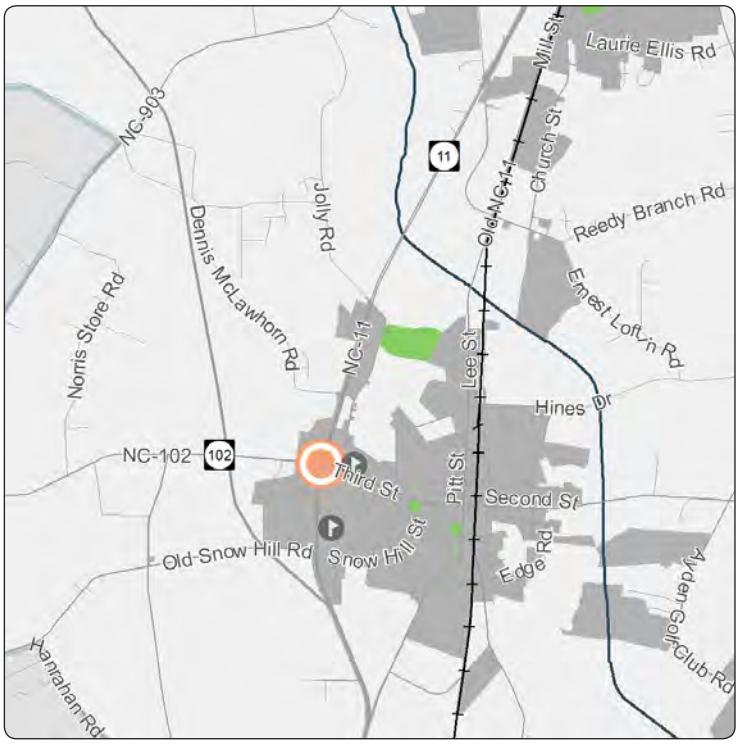
Project Description

The intersection of Memorial Drive and Greenville Boulevard is a major crossing point in the heart of a commercial district. The Greenville MTP recommends appropriate intersection improvements to increase safety, efficiency, and capacity through this intersection. This will allow seamless traffic flow from the major corridors to the surrounding shops and dining nearby.

Aerial

GRI-14: NC 102 AND NC 11

Vicinity Map



Project Attributes

Improvement Type: New Turn Lanes

Estimated Cost: $0.3 M (2018 $)

Horizon Year: 2028-2035

Project Description

The intersection of NC 102 and NC 11 is within the Town of Ayden in the center of shops, grocery stores, and dining. Ayden Elementary School and Ayden Middles school are also located near the intersection. The Greenville MTP recommends the addition of new turn lanes to improve safety, traffic flow, and congestion. With a number of access points in proximity to the intersection, strategic improvements to the intersection are needed.

Aerial

GRR-1: 10TH STREET (OXFORD ROAD TO BLACKJACK-SIMPSON ROAD)

Vicinity Map

Project Description

10th Street from Oxford Road to Blackjack-Simpson Road is currently a 4-lane road plus a two-way center left turn lane. The Greenville MTP recommends replacing the existing center turn lanes with a median and improving the intersections for capacity. The 10th Street corridor has a number of access points along it and installing a median may improve safety.

Project Attributes

Length: 2.46 miles

Estimated Cost: $10.9 M (2018 $)

Horizon Year: 2028-2035

Operational Characteristics

Existing

Travel Lanes: 5

V/C Ratio: 0.60

Volume: 22,079 VPD

Future

Travel Lanes: 4

V/C Ratio: 0.65

Volume: 24,129 VPD

Multimodal Facilities

Existing	Planned
[P] Sidewalk	[X] Sidewalk
[ ] Shared-Use Path	[X] Shared-Use Path
[P] Transit Route	[P] Transit Route
[ ] On-street Bike	[ ] On-street Bike
[ ] Freight Route	[ ] Freight Route

P: Partial X: Full

GRR-5: DICKINSON AVENUE (SOUTHWEST BYPASS TO MEMORIAL DRIVE)

Vicinity Map

Project Description

Dickinson Avenue is currently a 2-lane highway from the Southwest Bypass to Arlington Boulevard and a 4-lane roadway from Arlington Boulevard to Memorial Drive. roadway. The Greenville MTP recommends widening Dickinson Avenue from the Southwest Bypass to Memorial Drive to a consistent 4-lane divided facility with access management improvements. This project could be potentially phased.

Project Attributes

Length: 4.30 miles

Estimated Cost: $44.4 M (2018 $)

Horizon Year: 2028-2035

Operational Characteristics

Existing

Travel Lanes: 2, 4, 5

V/C Ratio: 0.36

Volume: 12,729 VPD

Future

Travel Lanes: 4

V/C Ratio: 0.43

Volume: 14,915 VPD

Multimodal Facilities

Existing	Planned
[ ] Sidewalk	[X] Sidewalk
[ ] Shared-Use Path	[X] Shared-Use Path
[P] Transit Route	[P] Transit Route
[X] On-street Bike	[ ] On-street Bike
[ ] Freight Route	[ ] Freight Route

P: Partial X: Full

GRR-12: NC 11/MEMORIAL DRIVE (FARMVILLE BOULEVARD/STANTONSBURG ROAD TO GREENVILLE BOULEVARD/ US 264 ALT)

Vicinity Map

Project Description

NC 11 is a major corridor connecting north-south travelers in Greenville. The Greenville MTP recommends adding medians between Farmville Boulevard and Greenville Boulevard as well as protected left turn lanes at major signalized intersections. The major signalized intersections along the NC 11 are Farmville Boulevard, Moye Boulevard, Dickinson Avenue, Arlington Boulevard, and Greenville Boulevard.

Project Attributes

Length: 2.57 miles

Estimated Cost: $15.0 M (2018 $)

Horizon Year: 2028-2035

Operational Characteristics

Existing

Travel Lanes: 5, 7

V/C Ratio: 0.63

Volume: 18,974 VPD

Future

Travel Lanes: 4, 6

V/C Ratio: 0.63

Volume: 18,984 VPD

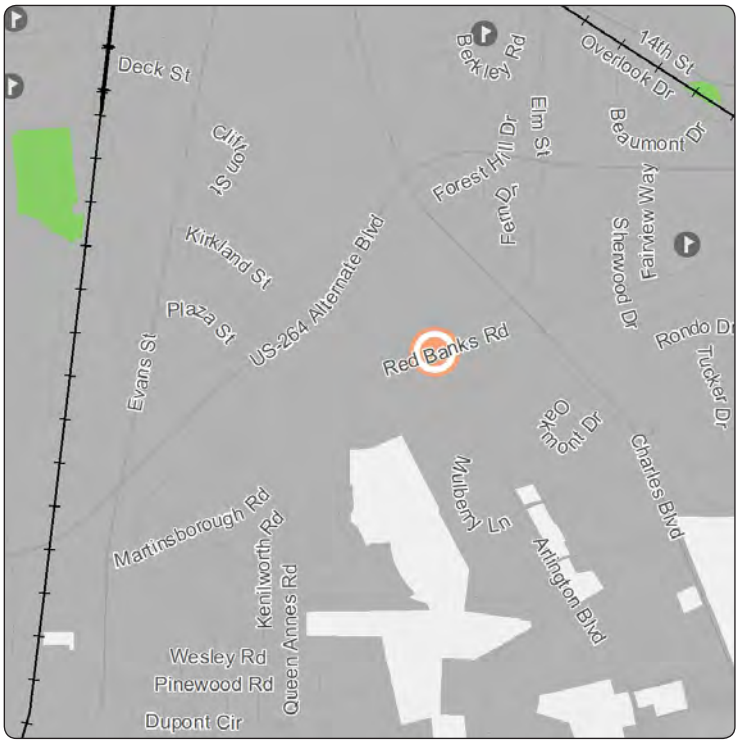
Multimodal Facilities

Existing	Planned
[ ] Sidewalk	[X] Sidewalk
[ ] Shared-Use Path	[X] Shared-Use Path
[P] Transit Route	[P] Transit Route
[ ] On-street Bike	[ ] On-street Bike
[X] Freight Route	[X] Freight Route

P: Partial X: Full

GRI-3: ARLINGTON BOULEVARD AND RED BANKS ROAD

Vicinity Map



Project Attributes

Improvement Type: Intersection Improvements

Estimated Cost: $2.5 M (2018 $)

Horizon Year: 2036-2045

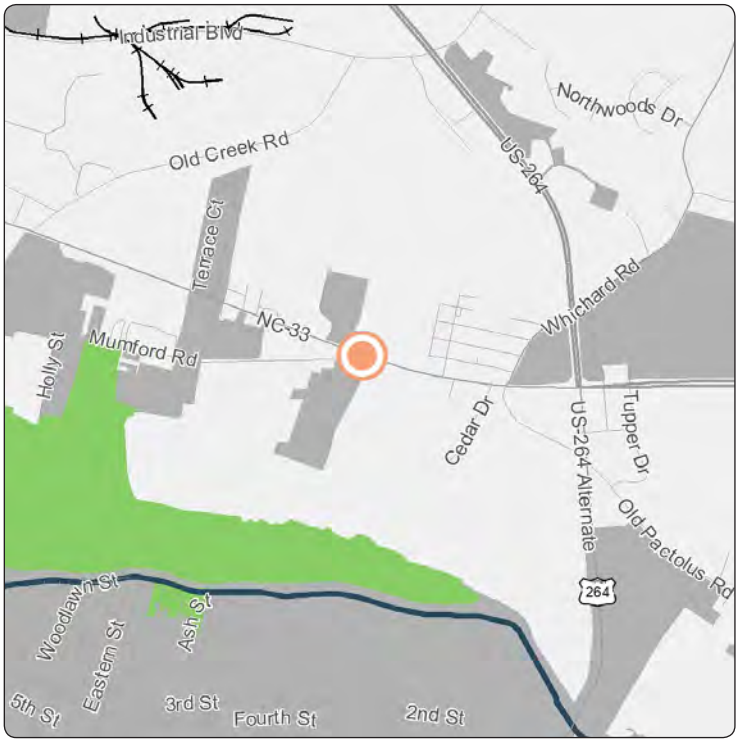
Project Description

The intersection of Arlington Boulevard and Red Banks Road is a conversion point for two 5-lane major corridors. The Greenville MTP recommends incorporating intersection improvements to enhance transportation in this area.

Aerial

GRI-13: MUMFORD ROAD AND NC 33

Vicinity Map



Project Attributes

Improvement Type: Roundabout

Estimated Cost: $2.3 M (2018 $)

Horizon Year: 2036-2045

Project Description

This project recommends a roundabout along NC 33 at the intersection of Mumford Street. NC 33 provides east-west connection north of Greenville and has the operational characteristics of a rural highway. Incorporating a roundabout at this intersection will provide free flow travel at each approach of the intersection increasing the efficiency on the minor street (Mumford Street) while enhancing safety by eliminating a skewed intersection.

Aerial

GRI-15: POCOSIN/RED FORBES AND NC 903

Vicinity Map

Project Description

NC 903 is a 2-lane rural highway connecting traffic east to west. This specific intersection point of Pocosin Road, Red Forbes Road, and NC 903 meet at a geometrically-challenging angle where sight distances from the either of the minor streets are limited. The recommendation for this intersection is to install a modern roundabout to improve sight distance and to maintain free flow speed along NC 903.

Aerial

Project Attributes

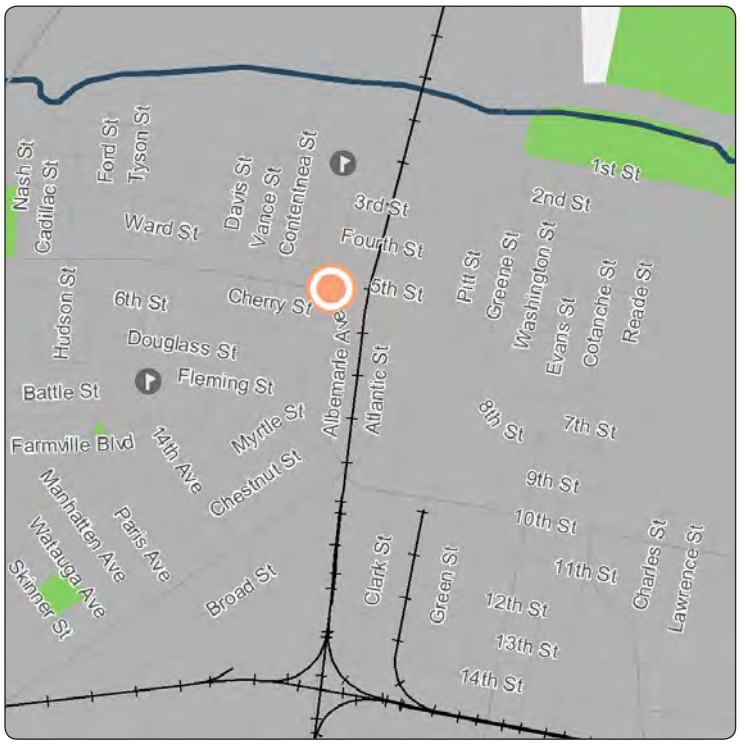
Improvement Type: Roundabout

Estimated Cost: $2.3 M (2018$)

Horizon Year: 2036-2045

GRI-19: WEST 5TH STREET AND ELIZABETH STREET

Vicinity Map



Project Attributes

Improvement Type: Roundabout

Estimated Cost: $2.3 M (2018 $)

Horizon Year: 2036-2045

Project Description

The Greenville MTP recommends installing a modern roundabout at the intersection of West 5th Street and Elizabeth Street. The curvature of the roadway contributes to limited sight distance and unsafe approaches to the intersection. A modern roundabout will provide traffic calming measures as well as adequate sight distance entering the intersection.

Aerial

GRR-2: 14TH STREET (CHARLES BOULEVARD TO GREENVILLE BOULEVARD/US 264 ALT)

Vicinity Map

Project Description

14th Street is a key corridor for many residents within Greenville, specifically north Greenville, to connect to other major roadway facilities as well as ECU, Dowdy-Ficklen Stadium, three schools, two churches, and various other sporting arenas and businesses. The Greenville MTP recommends adding medians along the corridor with protected left turn lanes at the signalized intersection between Charles Boulevard and Greenville Boulevard to increase safety and efficiency.

Project Attributes

Length: 1.58 miles

Estimated Cost: $7.0 M (2018 $)

Horizon Year: 2036-2045

Operational Characteristics

Existing

Travel Lanes: 2, 3

V/C Ratio: 0.26

Volume: 7,476 VPD

Future

Travel Lanes: 2

V/C Ratio: 0.28

Volume: 7,832 VPD

Multimodal Facilities

Existing	Planned
[P] Sidewalk	[X] Sidewalk
[ ] Shared-Use Path	[X] Shared-Use Path
[ ] Transit Route	[ ] Transit Route
[ ] On-street Bike	[ ] On-street Bike
[ ] Freight Route	[ ] Freight Route

P: Partial X: Full

GRR-4: COOPER STREET (MILL STREET TO OLD TAR ROAD)

Vicinity Map

Project Description

The Greenville MTP recommends modernizing Cooper Street from Old Tar Road to Mill Street. It is currently a 2-lane residential roadway in Winterville. The upgrades to this section may include restriping, lane reconfiguration, and partial curb and gutter enhancements.

Project Attributes

Length: 1.06 miles

Estimated Cost: $6.4 M (2018 $)

Horizon Year: 2036-2045

Operational Characteristics

Existing

Travel Lanes: 2

V/C Ratio: 0.15

Volume: 4,028 VPD

Future

Travel Lanes: 2

V/C Ratio: 0.16

Volume: 4,090 VPD

Multimodal Facilities

Existing	Planned
[P] Sidewalk	[X] Sidewalk
[ ] Shared-Use Path	[X] Shared-Use Path
[ ] Transit Route	[ ] Transit Route
[ ] On-street Bike	[ ] On-street Bike
[ ] Freight Route	[ ] Freight Route

P: Partial X: Full

GRR-6: FIRE TOWER ROAD (PART 1: MEMORIAL DRIVE TO EVANS STREET/OLD TAR ROAD)

Vicinity Map

Project Description

Project GRR-6 is divided into three parts. The first section is along Fire Tower Road from Memorial Drive to Evans Street/Old Tar Road. The existing facility is currently a 4-lane road with a two-way center left turn lane. This section is heavily commercial with some residential access. The Greenville MTP recommends replacing the existing center turn lane with a median while also improving the intersections along the study segment for capacity.

Project Attributes

Length: 1.22 miles (3.16 miles total)

Estimated Cost: $19.7 M total (2018 $)

Horizon Year: 2036-2045

Operational Characteristics

Existing

Travel Lanes: 5

V/C Ratio: 0.45

Volume: 18,128 VPD

Future

Travel Lanes: 4

V/C Ratio: 0.53

Volume: 21,420 VPD

Multimodal Facilities

Existing	Planned
[X] Sidewalk	[X] Sidewalk
[ ] Shared-Use Path	[X] Shared-Use Path
[ ] Transit Route	[ ] Transit Route
[ ] On-street Bike	[ ] On-street Bike
[ ] Freight Route	[ ] Freight Route

P: Partial X: Full

GRR-6: FIRE TOWER ROAD (PART 2: EVANS STREET/ OLD TAR ROAD TO COREY ROAD)

Vicinity Map

Project Description

Project GRR-6 is divided into three parts. The second section is along Fire Tower Road from Evans Street/Old Tar Road to Corey Road. The existing facility is currently a 4-lane road with planted medians and channelized left turn lanes. This section along Fire Tower Road is mostly accessing residential neighborhoods. The Greenville MTP recommends improving the intersections along the study segment for capacity.

Project Attributes

Length: 1.21 miles (3.16 miles total)

Estimated Cost: $19.7 M total (2018 $)

Horizon Year: 2036-2045

Operational Characteristics

Existing

Travel Lanes: 5

V/C Ratio: 0.49

Volume: 25,208 VPD

Future

Travel Lanes: 4

V/C Ratio: 0.55

Volume: 28,114 VPD

Multimodal Facilities

Existing	Planned
[X] Sidewalk	[X] Sidewalk
[ ] Shared-Use Path	[X] Shared-Use Path
[ ] Transit Route	[ ] Transit Route
[ ] On-street Bike	[ ] On-street Bike
[ ] Freight Route	[ ] Freight Route

P: Partial X: Full

GRR-6: FIRE TOWER ROAD (PART 3: COREY ROAD TO ARLINGTON BOULEVARD/COUNTY HOME ROAD)

Vicinity Map

Project Description

Project GRR-6 is divided into three parts. The third section is along Fire Tower Road from Corey Road to Arlington Boulevard/County Home Road. The existing facility is currently a 4-lane road with a two-way center left turn lane. This section is heavily residential with some commercial access. The Greenville MTP recommends replacing the existing center turn lane with a median while also improving the intersections along the study segment for capacity.

Project Attributes

Length: 0.73 miles (3.16 miles total)

Estimated Cost: $19.7 M total (2018 $)

Horizon Year: 2036-2045

Operational Characteristics

Existing

Travel Lanes: 2, 4, 5

V/C Ratio: 0.73

Volume: 27,087 VPD

Future

Travel Lanes: 4

V/C Ratio: 0.79

Volume: 29,043 VPD

Multimodal Facilities

Existing	Planned
[P] Sidewalk	[X] Sidewalk
[ ] Shared-Use Path	[X] Shared-Use Path
[ ] Transit Route	[ ] Transit Route
[ ] On-street Bike	[ ] On-street Bike
[ ] Freight Route	[ ] Freight Route

P: Partial X: Full

GRR-10: JOLLY ROAD (NC 11 TO NC 102)

Vicinity Map

Project Description

Jolly Road from NC 11 to NC 102 is due east of NC 11 just north of Ayden. This 2-lane roadway currently serves as a residential and industrial access road to NC 11. The Greenville MTP recommends modernizing and upgrading the roadway with edge treatments and lane widening.

Project Attributes

Length: 1.28 miles

Estimated Cost: $6.9 M (2018 $)

Horizon Year: 2036-2045

Operational Characteristics

Existing

Travel Lanes: 2

V/C Ratio: 0.04

Volume: 1,119 VPD

Future

Travel Lanes: 2

V/C Ratio: 0.03

Volume: 758 VPD

Multimodal Facilities

Existing

[ ] Sidewalk

[ ] Shared-Use Path

[ ] Transit Route

[ ] On-street Bike

[ ] Freight Route

Planned

[ ] Sidewalk

[ ] Shared-Use Path

[ ] Transit Route

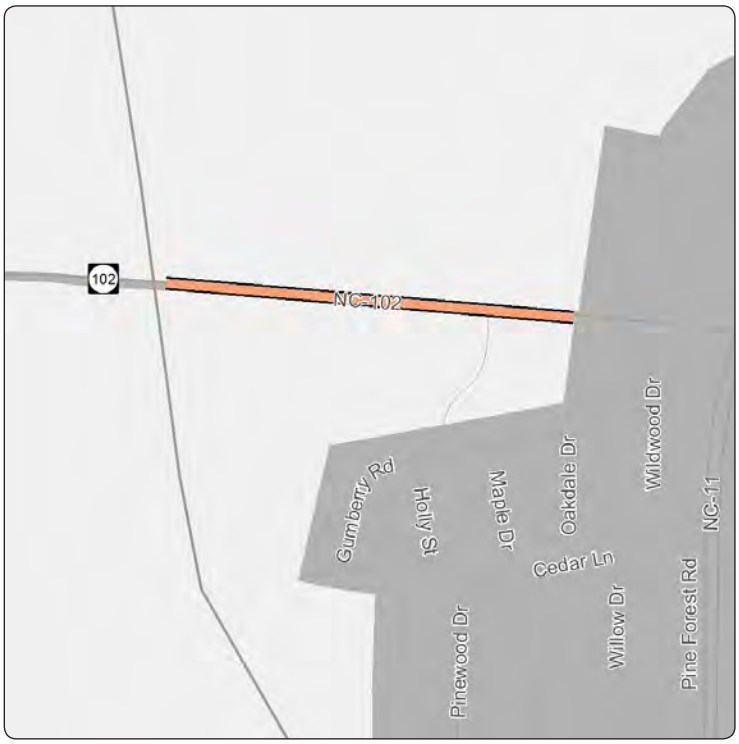
[ ] On-street Bike

[ ] Freight Route

P: Partial X: Full

GRR-11: NC 102 (SOUTHWEST BYPASS TO AYDEN TOWN LIMITS)

Vicinity Map



Project Description

NC 102 provides east-west connectivity south of Greenville into the heart of Ayden. The Greenville MTP recommends upgrading NC 102 from the Southwest Bypass to the Ayden Town Limits by installing an urban median section to help with access management. The intersection at NC 102 and NC 11 is the gateway intersection into the Town of Ayden and enhancing this corridor may provide functional and aesthetic value to the community.

Project Attributes

Length: 0.45 miles

Estimated Cost: $2.7 M (2018 $)

Horizon Year: 2036-2045

Operational Characteristics

Existing

Travel Lanes: 4

V/C Ratio: 0.11

Volume: 3,394 VPD

Future

Travel Lanes: 4

V/C Ratio: 0.20

Volume: 6,177 VPD

Multimodal Facilities

Existing	Planned
[ ] Sidewalk	[ ] Sidewalk
[ ] Shared-Use Path	[ ] Shared-Use Path
[ ] Transit Route	[ ] Transit Route
[ ] On-street Bike	[ ] On-street Bike
[ ] Freight Route	[ ] Freight Route

P: Partial X: Full

GRR-15: REEDY BRANCH ROAD (FIRE TOWER ROAD EXTENSION TO FORLINES ROAD)

Vicinity Map

Project Description

The Greenville MTP recommends modernizing Reedy Branch Road from Forlines Road to Fire Tower Road Extension. Modernization features may include turn lane improvements, edge treatments, lane widening, or other modernization enhancements. This segment of roadway connects Brookhaven Christian School, Greenville Seventh-Day Adventist Church, Opendoor Church, and Reedy Branch Free Will Baptist Church.

Project Attributes

Length: 0.76 miles

Estimated Cost: $4.1 M (2018 $)

Horizon Year: 2036-2045

Operational Characteristics

Existing

Travel Lanes: 2

V/C Ratio: 0.19

Volume: 3,073 VPD

Future

Travel Lanes: 2

V/C Ratio: 0.18

Volume: 3,546 VPD

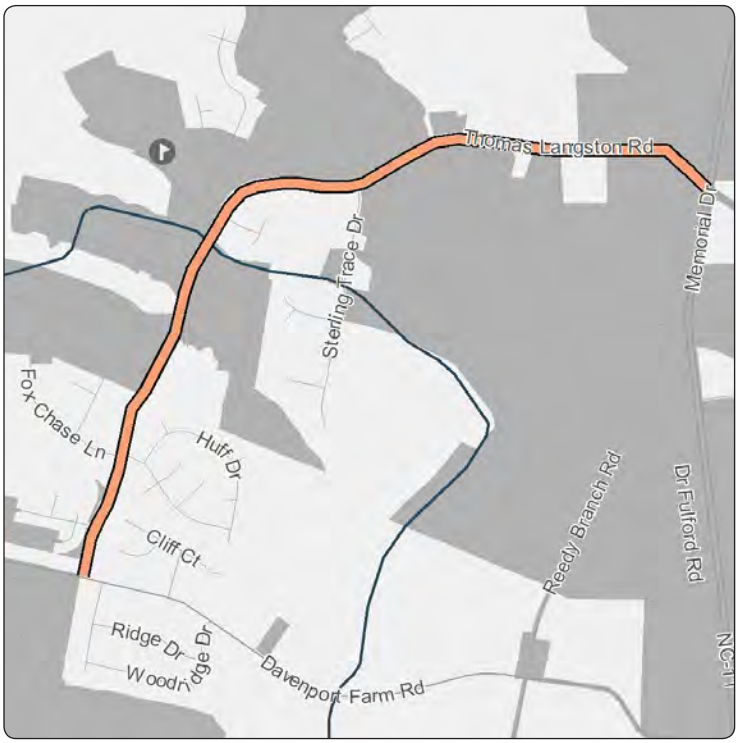
Multimodal Facilities

Existing	Planned
[ ] Sidewalk	[X] Sidewalk
[ ] Shared-Use Path	[X] Shared-Use Path
[ ] Transit Route	[ ] Transit Route
[ ] On-street Bike	[ ] On-street Bike
[ ] Freight Route	[ ] Freight Route

P: Partial X: Full

GRR-16: THOMAS LANGSTON ROAD
(DAVENPORT FARM ROAD TO NC 11)

Vicinity Map



Project Description

Thomas Langston Road from NC 11 to Davenport Farm Road is currently a 2-lane roadway providing connectivity and access to many residential homes and neighborhoods, businesses, as well as Ridgewood Elementary School. The Greenville MTP recommends access management featuring a 2-lane divided section incorporating protected left turn lanes.

Project Attributes

Length: 2.04 miles

Estimated Cost: $12.3 M (2018 $)

Horizon Year: 2036-2045

Operational Characteristics

Existing

Travel Lanes: 2

V/C Ratio: 0.28

Volume: 11,705 VPD

Future

Travel Lanes: 2

V/C Ratio: 0.31

Volume: 12,623 VPD

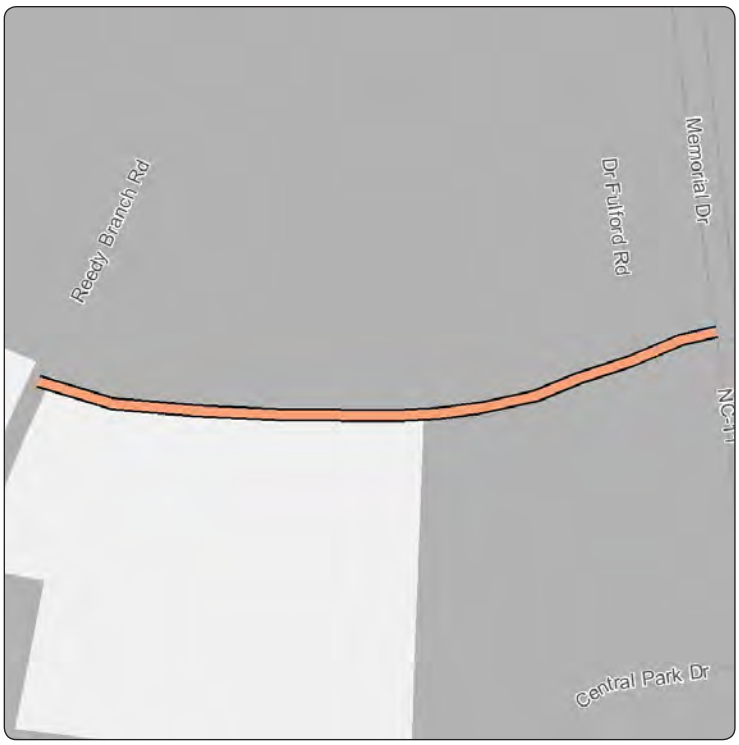
Multimodal Facilities

Existing	Planned
[ ] Sidewalk	[ ] Sidewalk
[ ] Shared-Use Path	[X] Shared-Use Path
[ ] Transit Route	[ ] Transit Route
[ ] On-street Bike	[ ] On-street Bike
[ ] Freight Route	[ ] Freight Route

P: Partial X: Full

U-5006: FIRE TOWER ROAD EXTENSION
(REEDY BRANCH ROAD TO NC 11/WINTERVILLE PARKWAY)

Vicinity Map



Project Description

Fire Tower Road is proposed to be extended west to Reedy Branch Road beyond its current terminus at NC 11/ Winterville Parkway in Winterville. This extension would provide additional options for traffic to travel east to west beyond the existing roadways and provide connection to the Southwest Bypass. The Greenville MTP recommends this new roadway to be a 4-lane divided facility. Additional improvements will be made to Reedy Branch Road and Forlines Road.

Project Attributes

Length: 0.37 miles

Estimated Cost: $4.2 M (2018 $)

Horizon Year: 2036-2045

Operational Characteristics

Existing

Travel Lanes: N/A

V/C Ratio: N/A

Volume: N/A

Future

Travel Lanes: 4

V/C Ratio: 0.30

Volume: 8,161 VPD

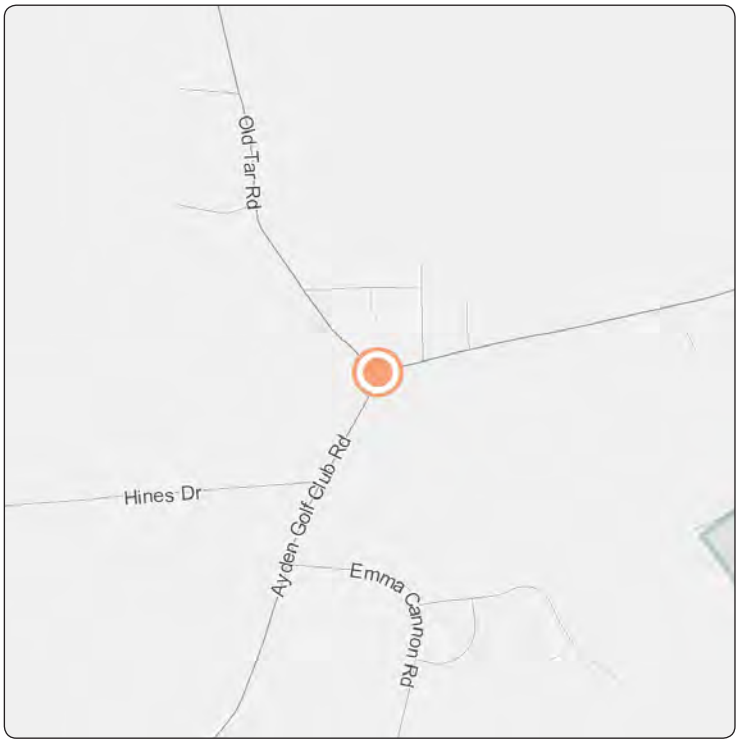
Multimodal Facilities

Existing	Planned
[ ] Sidewalk	[X] Sidewalk
[ ] Shared-Use Path	[X] Shared-Use Path
[ ] Transit Route	[ ] Transit Route
[ ] On-street Bike	[ ] On-street Bike
[ ] Freight Route	[ ] Freight Route

P: Partial X: Full

GRI-4: AYDEN GOLF CLUB ROAD AND OLD TAR ROAD

Vicinity Map



Project Attributes

Improvement Type: Intersection Improvements

Estimated Cost: $1.3 M (2018 $)

Horizon Year: Unfunded Vision

Project Description

The Greenville MTP recommends intersection improvements at Ayden Golf Club Road and Old Tar Road. The curvature of Ayden Golf Club Road and the angle of its intersection with Old Tar Road creates a safety concern. Safety and geometric improvements at ths intersection will enhance connectivity to this part of the region.

Aerial

GRR-7: FORLINES ROAD (SOUTHWEST BYPASS TO NC 11)

Vicinity Map

Project Description

Forlines Road is currently a 2-lane thoroughfare that serves residential neighborhoods, South Central High School, Creekside Elementary School, Brookhaven Christian School, and various industrial businesses. The Greenville MTP recommends widening the section from NC 11 to the Southwest Bypass to a 4-lane median divided facility. The widening is intended to improve safety and increase capacity along the roadway.

Project Attributes

Length: 3.20 miles

Estimated Cost: $33.0 M (2018 $)

Horizon Year: Unfunded Vision

Operational Characteristics

Existing

Travel Lanes: 2

V/C Ratio: 0.03

Volume: 570 VPD

Future

Travel Lanes: 4

V/C Ratio: 0.03

Volume: 648 VPD

Multimodal Facilities

Existing	Planned
[ ] Sidewalk	[X] Sidewalk
[ ] Shared-Use Path	[X] Shared-Use Path
[ ] Transit Route	[ ] Transit Route
[ ] On-street Bike	[ ] On-street Bike
[ ] Freight Route	[ ] Freight Route

P: Partial X: Full

GRR-8: FROG LEVEL ROAD (DICKINSON AVENUE/US 264 ALT TO NC 903)

Vicinity Map

Project Description

Frog Level Road is currently a 2-lane thoroughfare that serves residential neighborhoods and various industrial businesses. The Greenville MTP recommends widening the section from Dickinson Avenue to NC 903 to a 4-lane median divided facility. The recommendation is intended to improve safety and increase capacity along the roadway.

Project Attributes

Length: 3.73 miles

Estimated Cost: $38.5 M (2018 $)

Horizon Year: Unfunded Vision

Operational Characteristics

Existing

Travel Lanes: 2

V/C Ratio: 0.26

Volume: 6,830 VPD

Future

Travel Lanes: 4

V/C Ratio: 0.17

Volume: 4,618 VPD

Multimodal Facilities

Existing	Planned
[ ] Sidewalk	[X] Sidewalk
[ ] Shared-Use Path	[X] Shared-Use Path
[ ] Transit Route	[ ] Transit Route
[ ] On-street Bike	[ ] On-street Bike
[ ] Freight Route	[ ] Freight Route

P: Partial X: Full

GRR-9: IVY ROAD/TUCKER ROAD/AYDEN GOLF CLUB ROAD (PART 1: NC 102 TO NC 43)

Vicinity Map

Project Description

Project GRR-9 is divided into three parts. The first section is along Ivy Road/Ayden Golf Club Road from NC 102 to NC 43. The existing facility is currently a 2-lane rural highway. This section is heavily residential with access to driveways. The Greenville MTP recommends modernization additions such as intermittent turn lanes, lane widening, and edge treatments. The project could potentially be phased.

Project Attributes

Length: 4.89 miles (11.29 miles total)

Estimated Cost: $70.4 M total (2018 $)

Horizon Year: Unfunded Vision

Operational Characteristics

Existing

Travel Lanes: 2

V/C Ratio: 0.15

Volume: 3,982 VPD

Future

Travel Lanes: 2

V/C Ratio: 0.17

Volume: 4,474 VPD

Multimodal Facilities

Existing	Planned
[ ] Sidewalk	[X] Sidewalk
[ ] Shared-Use Path	[X] Shared-Use Path
[ ] Transit Route	[ ] Transit Route
[ ] On-street Bike	[ ] On-street Bike
[ ] Freight Route	[ ] Freight Route

P: Partial X: Full

GRR-9: IVY ROAD/TUCKER ROAD/AYDEN GOLF CLUB ROAD (PART 2: NC 43 TO TUCKER ROAD)

Vicinity Map

Project Description

Project GRR-9 is divided into three parts. The second section is along Ivy Road from NC 43 to Tucker Road. The existing facility is currently a 2-lane rural highway. This section is heavily residential with access to driveways. The Greenville MTP recommends modernization additions such as intermittent turn lanes, lane widening, and edge treatments. The project could potentially be phased.

Project Attributes

Length: 3.62 miles (11.29 miles total)

Estimated Cost: $70.4 M total (2018 $)

Horizon Year: Unfunded Vision

Operational Characteristics

Existing

Travel Lanes: 2

V/C Ratio: 0.12

Volume: 3,070 VPD

Future

Travel Lanes: 2

V/C Ratio: 0.14

Volume: 3,535 VPD

Multimodal Facilities

Existing	Planned
[ ] Sidewalk	[X] Sidewalk
[ ] Shared-Use Path	[X] Shared-Use Path
[ ] Transit Route	[ ] Transit Route
[ ] On-street Bike	[ ] On-street Bike
[ ] Freight Route	[ ] Freight Route

P: Partial X: Full

GRR-9: IVY ROAD/TUCKER ROAD/AYDEN GOLF CLUB ROAD (PART 3: TUCKER ROAD TO NC 33)

Vicinity Map

Project Description

Project GRR-9 is divided into three parts. The third section is along Tucker Road/Simpson Street from Tucker Road to NC 33. The existing facility is currently a 2-lane rural highway. This section is heavily residential with access to driveways. The Greenville MTP recommends modernization additions such as intermittent turn lanes, lane widening, and edge treatments. The project could potentially be phased.

Project Attributes

Length: 2.78 miles (11.29 miles total)

Estimated Cost: $70.4 M total (2018 $)

Horizon Year: Unfunded Vision

Operational Characteristics

Existing

Travel Lanes: 2

V/C Ratio: 0.11

Volume: 2,961 VPD

Future

Travel Lanes: 2

V/C Ratio: 0.10

Volume: 2,800 VPD

Multimodal Facilities

Existing	Planned
[ ] Sidewalk	[X] Sidewalk
[ ] Shared-Use Path	[X] Shared-Use Path
[ ] Transit Route	[ ] Transit Route
[ ] On-street Bike	[ ] On-street Bike
[ ] Freight Route	[ ] Freight Route

P: Partial X: Full

GRR-13: NC 43 (WORTHINGTON ROAD TO NC 102)

Vicinity Map

Project Description

NC 43 is currently a 2-lane rural highway that serves as a connection for the east of Greenville. The Greenville MTP proposes to widen the section from Worthington Road to NC 102 to a 4-lane median divided facility. The proposal is intended to improve safety and increase capacity along the roadway.

Project Attributes

Length: 9.11 miles total (3.29 miles within MPO)

Estimated Cost: $82.3 M total ($29.7 M in MPO, 2018 $)

Horizon Year: Unfunded Vision

Operational Characteristics

Existing

Travel Lanes: 2

V/C Ratio: 0.18

Volume: 5,253 VPD

Future

Travel Lanes: 4

V/C Ratio: 0.19

Volume: 5,533 VPD

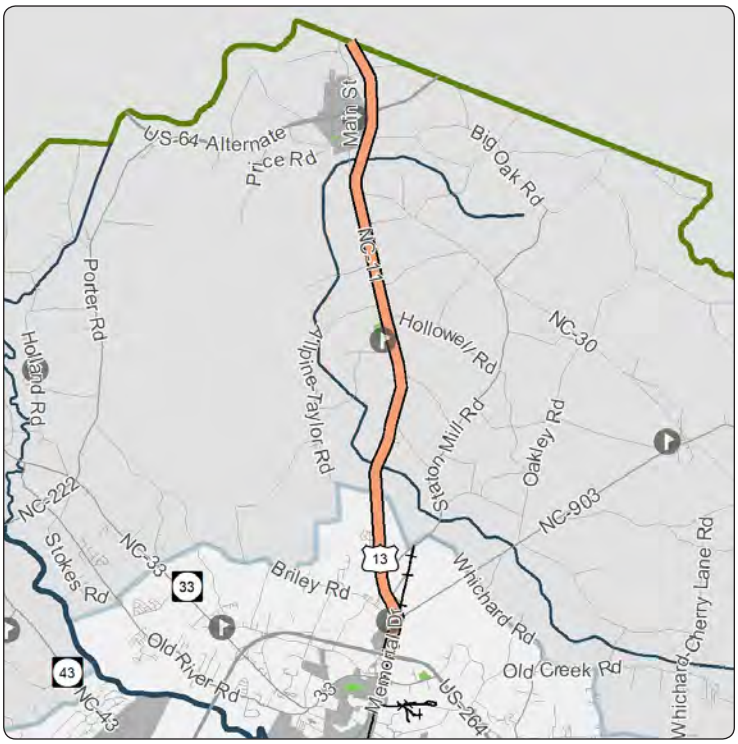
Multimodal Facilities

Existing	Planned
[ ] Sidewalk	[ ] Sidewalk
[ ] Shared-Use Path	[ ] Shared-Use Path
[ ] Transit Route	[ ] Transit Route
[ ] On-street Bike	[X] On-street Bike
[ ] Freight Route	[ ] Freight Route

P: Partial X: Full

GRR-17: US 13 (US 264 TO US 64)

Vicinity Map



Project Description

US 13 is a major corridor north of Greenville providing north-south connection between Greenville, Bethel, and other points north. The Greenville MTP proposed recommendation is to upgrade the existing roadway from US 264 to US 64 to interstate standards, including shoulder work, access control, and interchange improvements. This project could potentially be phased.

Project Attributes

Length: 11.92 miles total (3.07 miles within MPO)

Estimated Cost: $166.5 M total ($42.9 M in MPO, 2018 $)

Horizon Year: Unfunded Vision

Operational Characteristics

Existing

Travel Lanes: 4

V/C Ratio: 0.26

Volume: 9,141 VPD

Future

Travel Lanes: 4

V/C Ratio: 0.32

Volume: 10,560 VPD

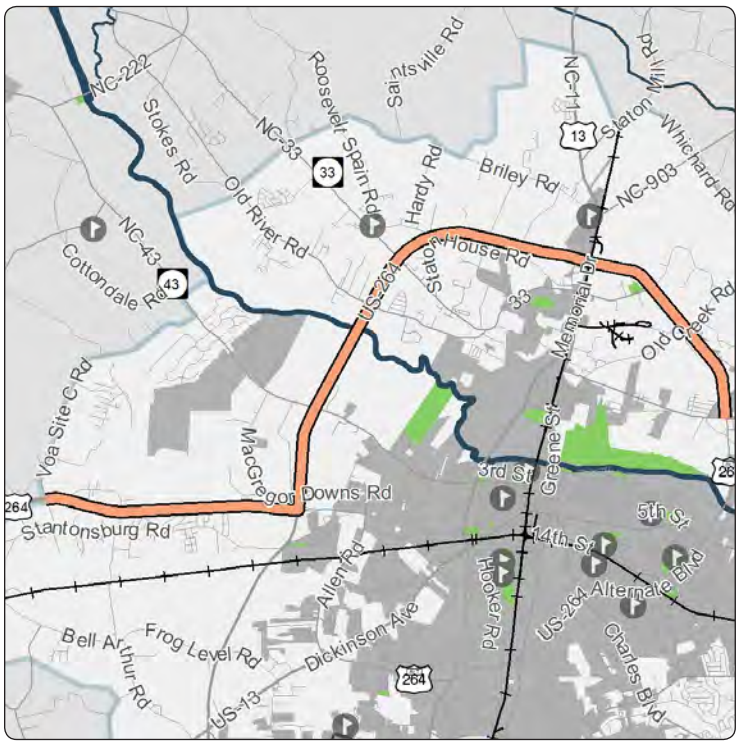
Multimodal Facilities

Existing	Planned
[ ] Sidewalk	[ ] Sidewalk
[ ] Shared-Use Path	[ ] Shared-Use Path
[P] Transit Route	[P] Transit Route
[ ] On-street Bike	[ ] On-street Bike
[X] Freight Route	[X] Freight Route

P: Partial X: Full

GRR-18: US 264 (MPO BOUNDARY TO US 264/PACTOLUS HIGHWAY

Vicinity Map



Project Description

US 264 is a major corridor surrounding Greenville and providing connections through and around the area. The Greenville MTP recommends upgrading the existing roadway from the MPO Boundary to US 264 to interstate standards, including shoulder work, access control, and interchange improvements. This project could potentially be phased.

Project Attributes

Length: 13.75 miles

Estimated Cost: $192.0 M (2018 $)

Horizon Year: Unfunded Vision

Operational Characteristics

Existing

Travel Lanes: 4

V/C Ratio: 0.31

Volume: 9,139 VPD

Future

Travel Lanes: 4

V/C Ratio: 0.37

Volume: 10,831 VPD

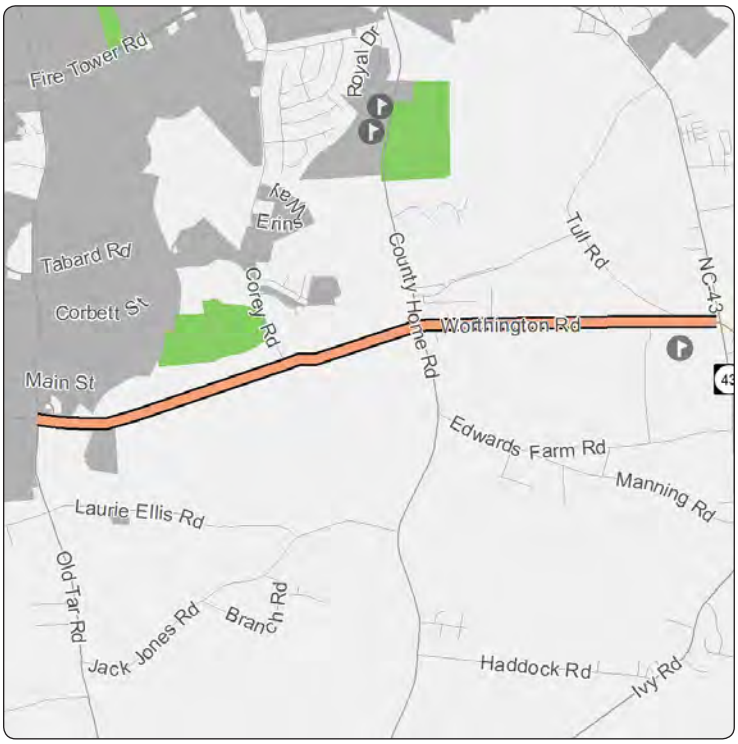
Multimodal Facilities

Existing	Planned
[ ] Sidewalk	[ ] Sidewalk
[ ] Shared-Use Path	[ ] Shared-Use Path
[ ] Transit Route	[ ] Transit Route
[ ] On-street Bike	[ ] On-street Bike
[X] Freight Route	[X] Freight Route

P: Partial X: Full

GRR-19: WORTHINGTON ROAD (OLD TAR ROAD TO NC 43)

Vicinity Map



Project Description

Worthington Road is currently a 2-lane thoroughfare that serves residences, D. H. Conley High School, H. Boyd Lee Park, and various small businesses. The Greenville MTP recommends widening the section from Old Tar Road to NC 43 to a 4-lane median divided facility. The proposal is intended to improve safety and increase capacity along the roadway.

Project Attributes

Length: 3.71 miles

Estimated Cost: $34.1 M (2018 $)

Horizon Year: Unfunded Vision

Operational Characteristics

Existing

Travel Lanes: 2

V/C Ratio: 0.16

Volume: 3,879 VPD

Future

Travel Lanes: 4

V/C Ratio: 0.18

Volume: 4,336 VPD

Multimodal Facilities

Existing	Planned
[ ] Sidewalk	X] Sidewalk
[ ] Shared-Use Path	[X] Shared-Use Path
[ ] Transit Route	[ ] Transit Route
[ ] On-street Bike	[ ] On-street Bike
[ ] Freight Route	[ ] Freight Route

P: Partial X: Full

U-6215: NC 33 (BLACKJACK-SIMPSON ROAD TO MOBLEYS BRIDGE ROAD)

Vicinity Map

Project Description

NC 33 is a 2-lane minor thoroughfare that begins at Blackjack Simpson Road and terminates at Mobleys Bridge Road. The roadway is mostly rural but connects to many residential streets. The Greenville MTP recommends widening the existing section of NC 33 to a 4-lane median divided roadway with paved shoulders. It also proposes to improve select intersections and create partial access control at minor intersections to improve safety. The bridge over Chicod Creek is recommended to be replaced.

Project Attributes

Length: 5.59 miles total (2.91 within MPO)

Estimated Cost: $88.6 M ($46.1 M in MPO, 2018 $)

Horizon Year: Unfunded Vision

Operational Characteristics

Existing

Travel Lanes: 2

V/C Ratio: 0.45

Volume: 17,320 VPD

Future

Travel Lanes: 4

V/C Ratio: 0.53

Volume: 20,424 VPD

Multimodal Facilities

Existing	Planned
[ ] Sidewalk	[X] Sidewalk
[ ] Shared-Use Path	[X] Shared-Use Path
[ ] Transit Route	[ ] Transit Route
[ ] On-street Bike	[ ] On-street Bike
[ ] Freight Route	[ ] Freight Route

P: Partial X: Full

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Appendix B

Public Engagement Compendium

INTRODUCTION

Public involvement — direct and indirect contact with citizens, stakeholders, elected officials, and other community representatives— is an important part of successful planning processes. Fully understanding the region's vision and the dynamics involved in achieving it requires a collaborative approach. As a result, local staff and the project team reached out to citizens, stakeholders, elected officials, and other Town representatives throughout the planning process.

Public Engagement Opportunities

1

Online Survey

150+

Responses

71

Written Comments

14

Face-to-Face Interaction Opportunities

- 1 Community Event
- 2 Public Meetings
- 1 Day of Stakeholder Meetings
- 4 Steering Committee/Advisory Committee Meetings
- 6 Transportation Advisory Committee (TAC)/ Technical Coordination Committee (TCC) Presentations

STEERING COMMITTEE

A 17-person steering committee, composed of staff from member jurisdictions, transit agencies, and education organizations, met several times throughout the planning process. The Steering Committee had significant overlap with the MPO's TCC, so those regularly scheduled meetings were occasionally used in lieu of standalone meeting times. Committee members had the opportunity to:

- Provide direction for the development of the plan
- Establish plan goals
- Share local knowledge of transportation deficiencies and needs
- Share public engagement opportunities with constituents
- Vet multimodal recommendations
- Review the plan's final content

ADVISORY COMMITTEE

In addition to the Steering Committee, a 15-person Advisory Committee, composed of residents, business owners, elected officials, and advocates as well as steering committee members from the previously completed Greenville Active Transportation Plan, met twice during the planning process. The Advisory Committee provided input on area needs and reviewed final recommendations; these were then incorporated into the planning and documentation process.

STAKEHOLDER INTERVIEWS

Information was gathered through several stakeholder interviews. Stakeholder interviews were conducted in small groups organized around shared interests:

- Development Representatives
- Industry and Business Representatives
- Community Organizations
- School Representatives
- Town Representatives

PITT Community College

ECU

Baldwin Design Consultants, PA
ENGINEERING · SURVEYING · PLANNING

Bill Clark Homes
Building Family Traditions

Greenville
NORTH CAROLINA
Find yourself in good company®

AYDEN

uptown GREENVILLE

VILLAGE of SIMPSON
together for progress

Town of WINTERVILLE
A slice of the good life!

Greenville-Pitt County Chamber of Commerce

General Takeways

- There is significant development happening between Winterville and Simpson and will likely continue and around the NC 43 corridor.
- Having interstate designations will be a huge economic boom to the region as this will draw more businesses to the area.
- There is a want for expanded transit. This is especially true of commuter rail as it has great potential for employees of Vidant Health, ECU, etc. to live in Raleigh and commute to Greenville of vice versa.
- Moving forward, an emphasis should be placed on alternative transportation. Regional bike/ped networks were discussed as a great opportunity to connect people to destinations without the use of a personal vehicle.
- There is a want and a need to merge local transit agencies to form a singular functioning unit that serves the existing area as well as underserved areas such as Pitt Community College, Winterville, and Ayden.
- Walkability and pedestrian safety is a big push right now, especially in the Uptown Greenville area.

FACE-TO-FACE INTERACTIONS

One community event and two public meetings gave the public the opportunity to voice their concerns and needs with regard to transportation.

Freeboot Friday

Sponsored by Uptown Greenville, Freeboot Friday is a community event held the day before several East Carolina University home football games each fall. The event promotes local businesses with booths, food, and entertainment. Participating in one of these events served as an ideal opportunity to engage the public in the early stages of the MTP. Feedback on current conditions and needs was solicited from the public.

Open House 1

The first public meeting for the Greenville Urban Area MTP was held on the evening of October 17, 2018. The meeting consisted of several interactive stations that allowed attendees to focus on the vision and needs of the Greenville area.

Stations Included:

- Information Wall
- One Word
- Priority Pyramid
- Thought Wall
- Mapping Exercise

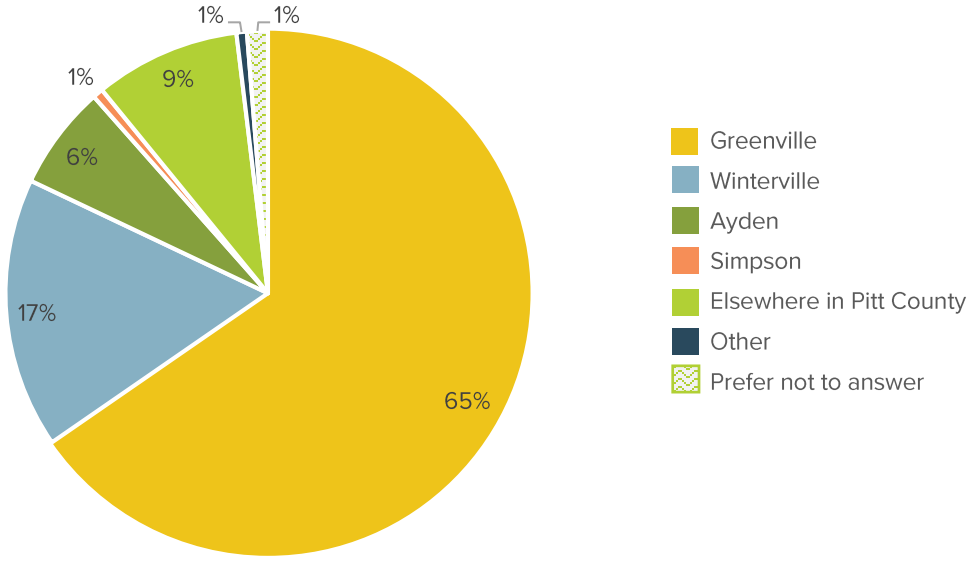
Open House 2

The second public workshop for the MTP was held on the evening of May 15, 2019. Attendees were invited to view and provide feedback on the draft multimodal recommendations along with project prioritization and financial constraint.

ONLINE SURVEY

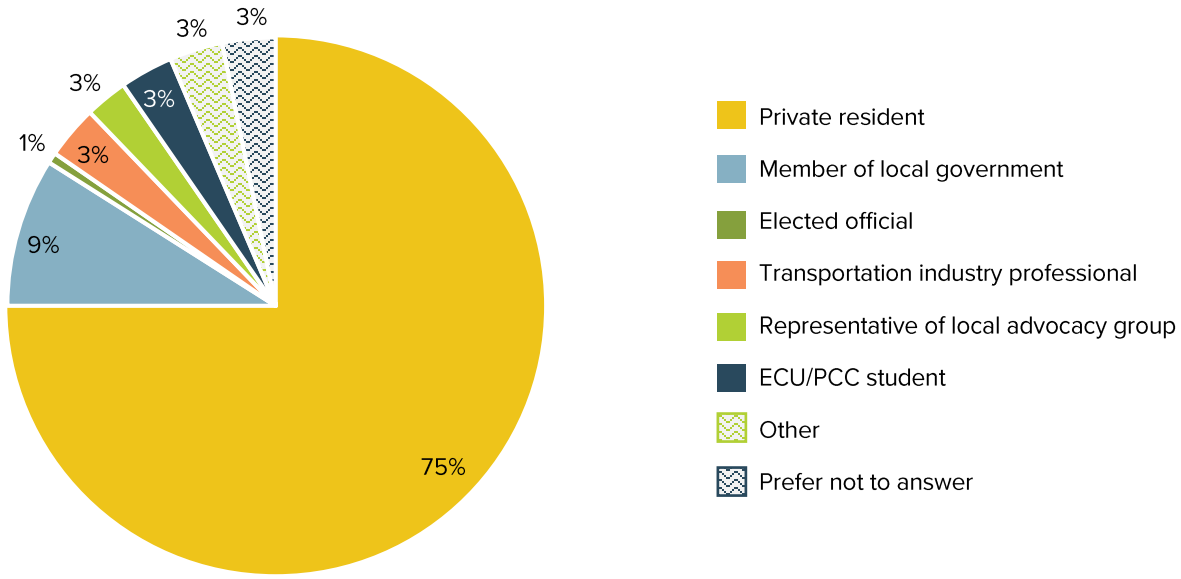
An interactive online survey was available from September through November 2018. 154 individuals completed all questions in the survey. The first several figures show the demographic characteristics of the individuals that participated in the survey. The figures that follow show participants' responses to a series of questions. A brief summary of each of their results can be found below and on the following pages.

Where do you live?

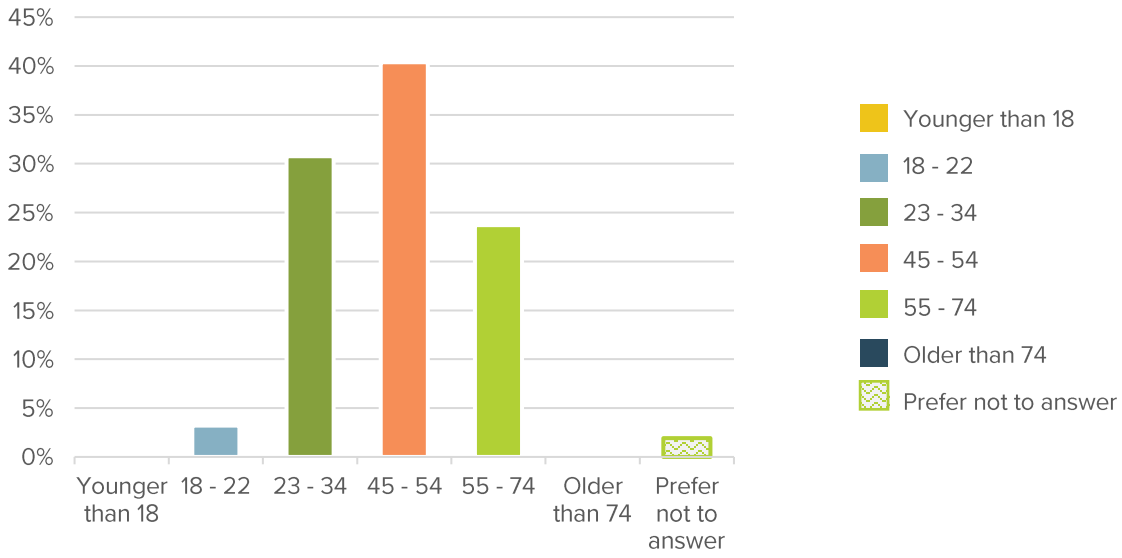


Most survey respondents live in Greenville, with individuals from Winterville, Ayden, Simpson, and other parts of Pitt County also participating.

What best describes you?

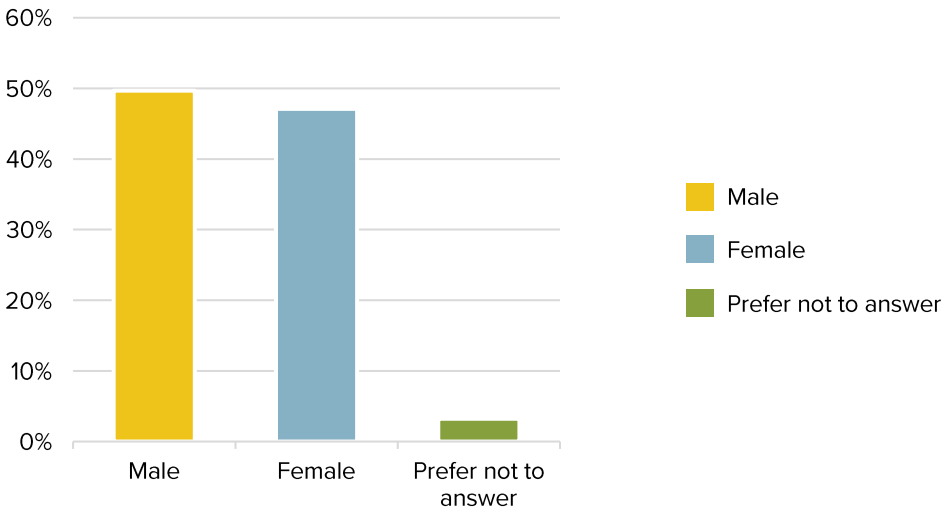


What age range best represents you?

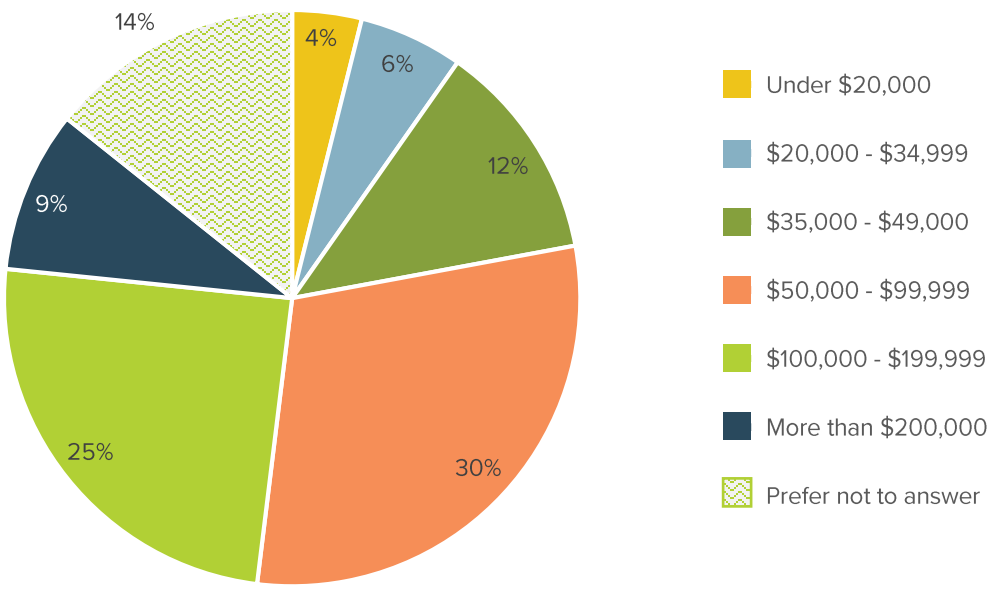


The range of individuals participating in the survey that shared their age ranged from 18-74, with plurality of participants being between the ages 45 and 54.

What is your gender?

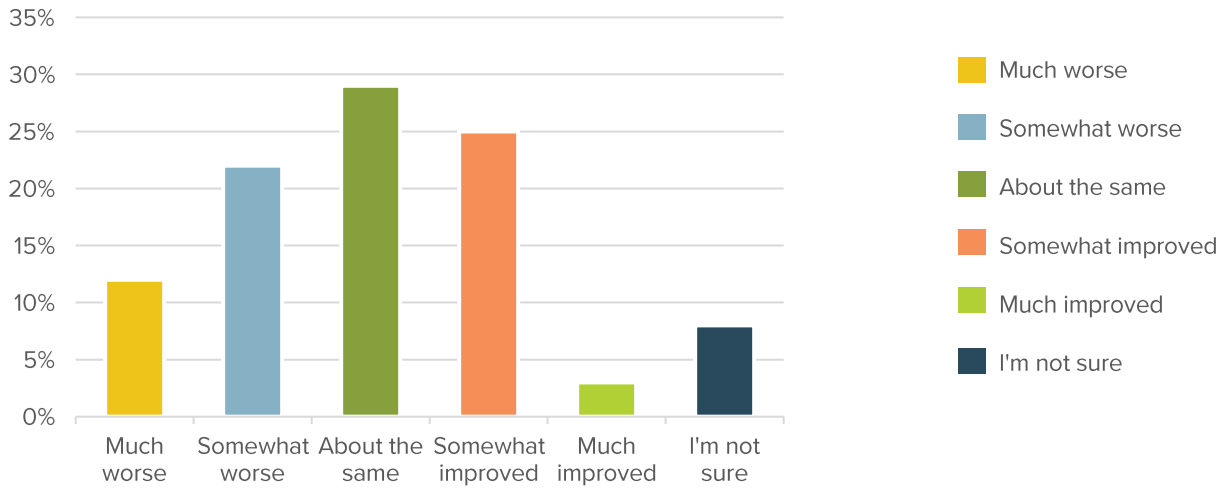


What best describes your total household income?



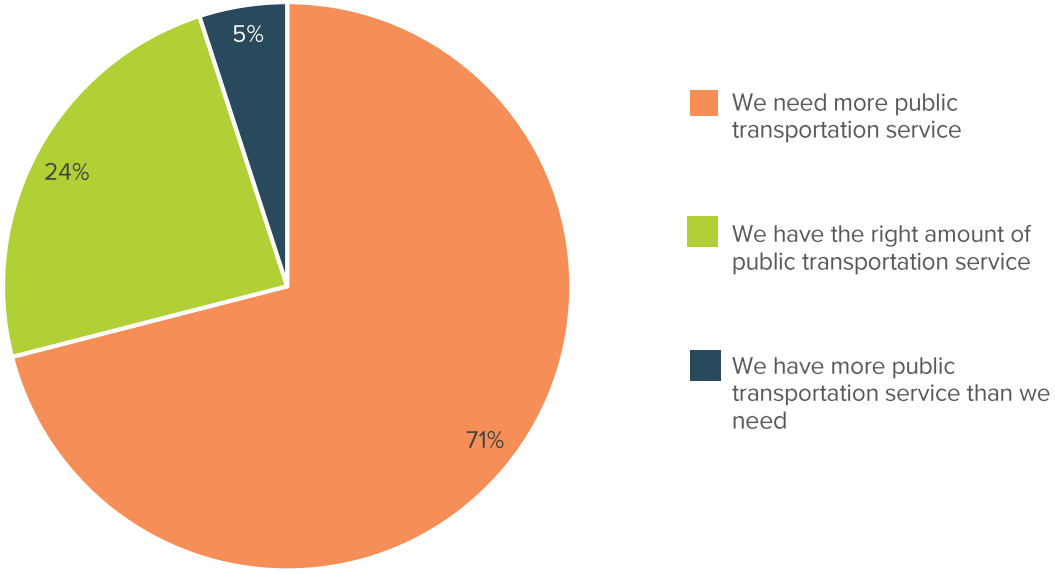
More survey respondents fell in the $50,000 - $99,000 category than any other, with many respondents also falling in the $100,000 - $199,000 category.

Over the past 5 years, do you think the transportation system in the region has become:



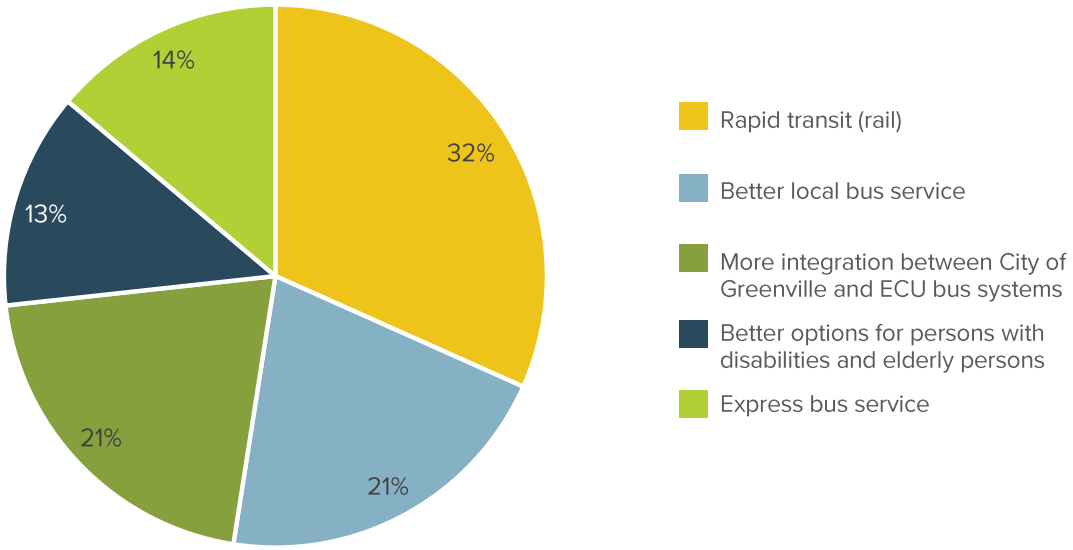
Most survey respondents indicated that the transportation system in the region has not changed much in the past 5 years. More respondents indicated that the transportation system has gotten worse than indicated it has improved.

When considering public transportation in the region, would you say...



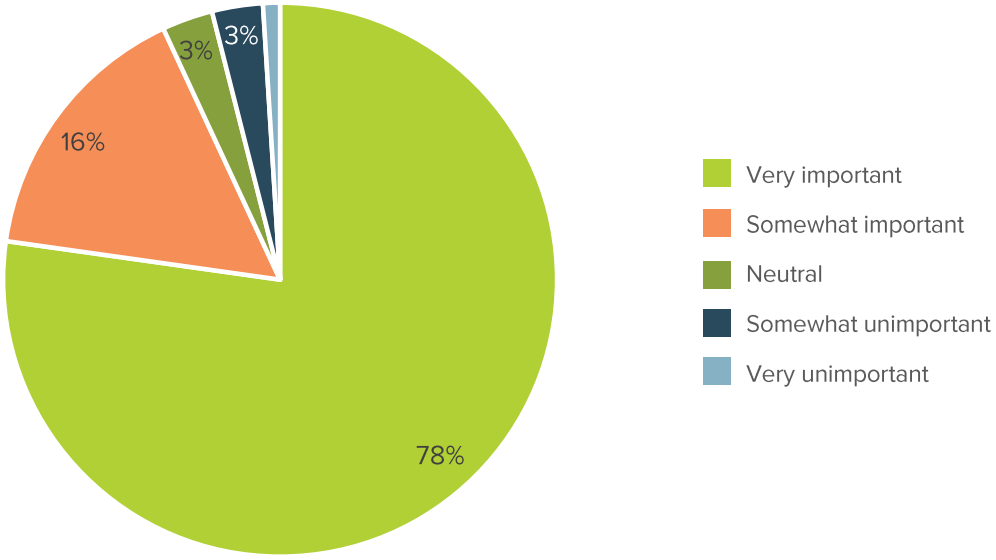
A strong majority of survey respondents expressed the need for more public transportation services in the region.

What public transportation improvements would you MOST like to see in the region? (Select 2)



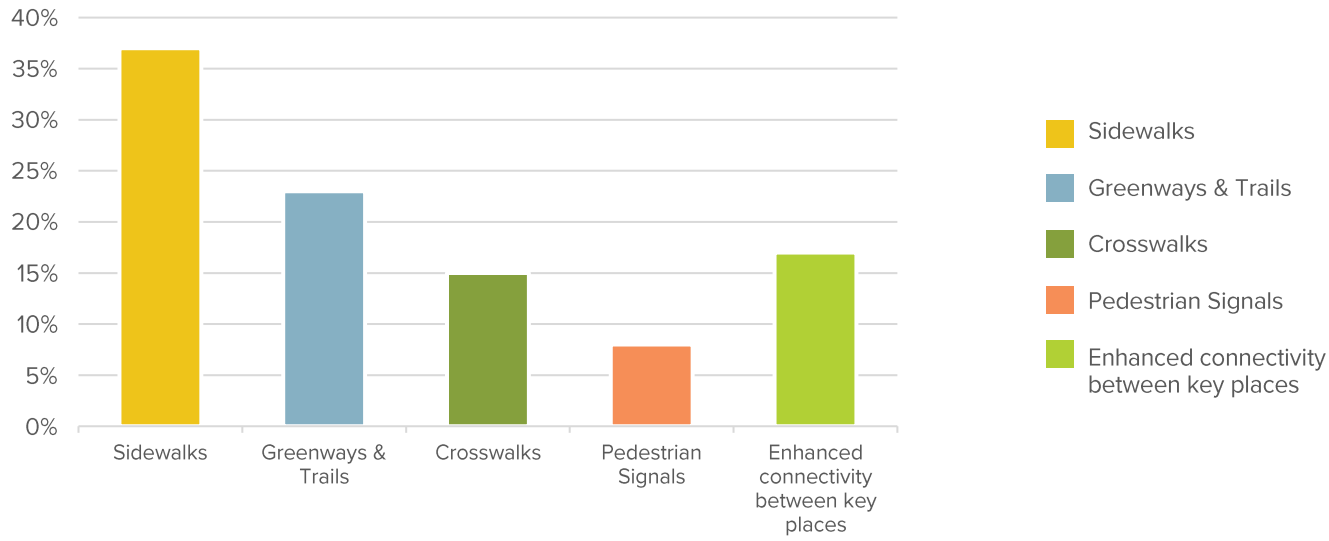
Responses for this question were more mixed. A plurality of survey respondents indicated an interest in rail rapid transit service, with better bus service and integration with the ECU bus system also being wanted improvements.

How important is it to improve pedestrian facilities in the region?



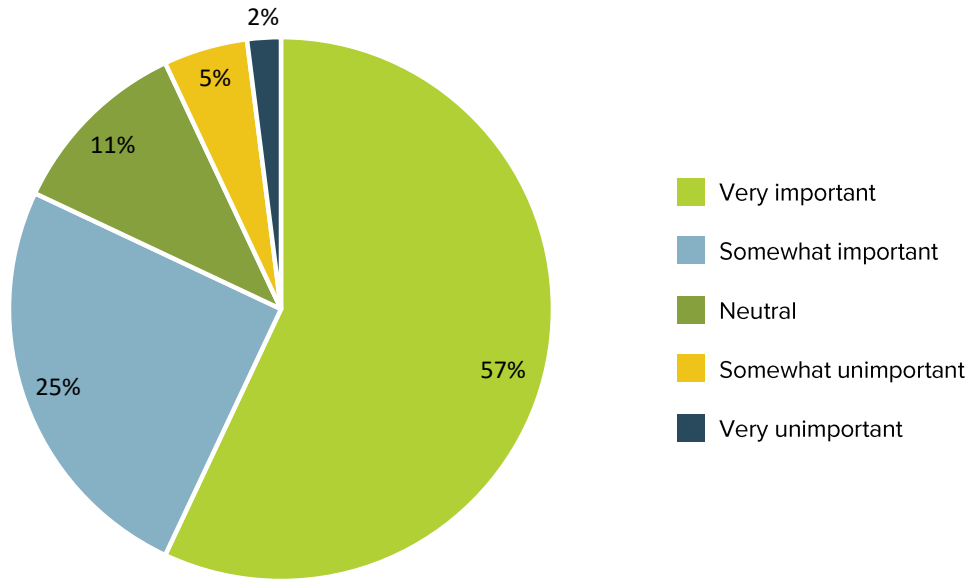
A strong majority of survey responses indicated that is is very important to improve pedestrian facilities in the region.

Which of the following pedestrian improvements are most important to you?



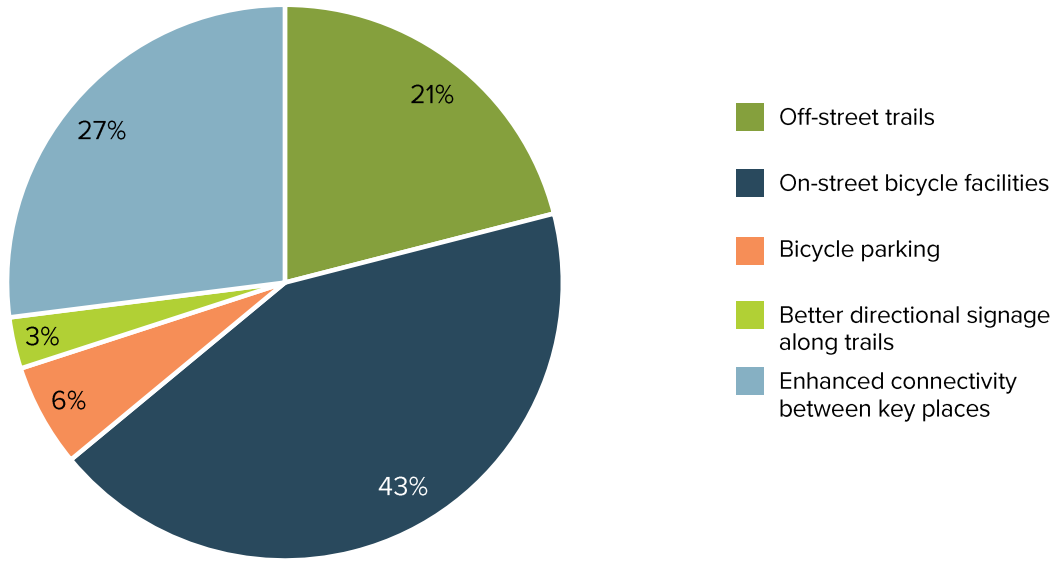
A notable number of survey respondents indicated that sidewalks are their top priority for improving pedestrian access in the region.

How important is it to improve bicycle facilities in the region?



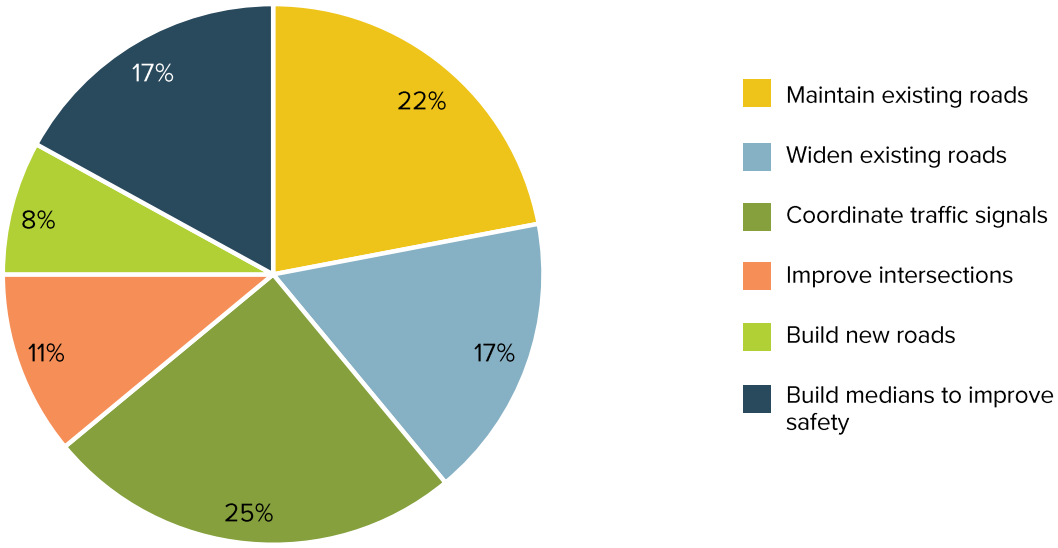
Over 75% of survey respondents indicate that it is important to improve bicycle facilities in the region.

Which of the following bicycle improvements would you most like to see in the region?



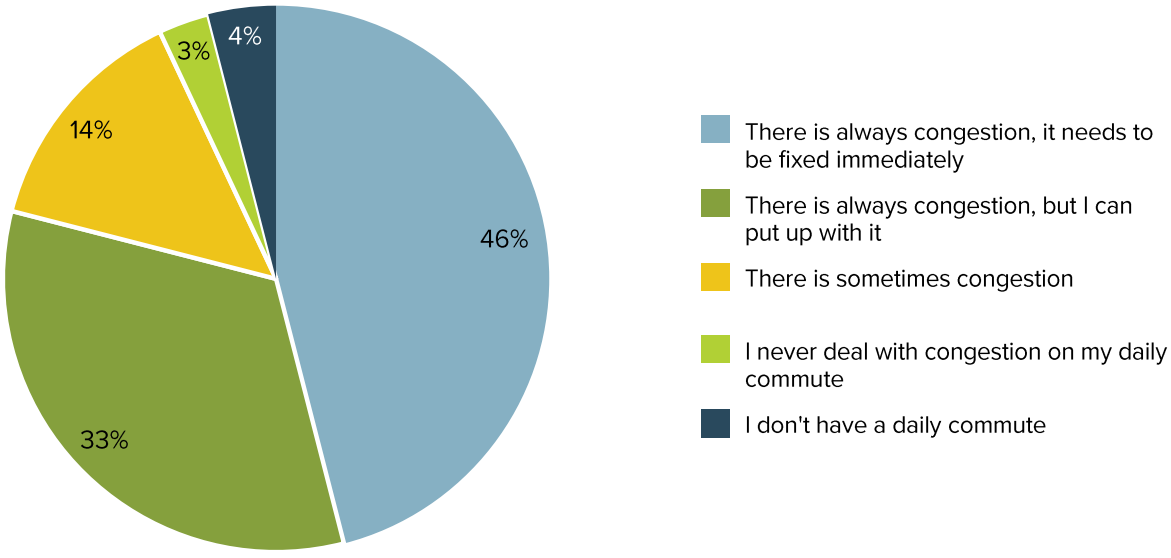
Many survey respondents indicated that they would most like to see on-street bicycle facilities in the region, with a substantial number also indicating interest for enhanced connectivity between places.

Now thinking only about driving, which improvements would you most like to see in the region?



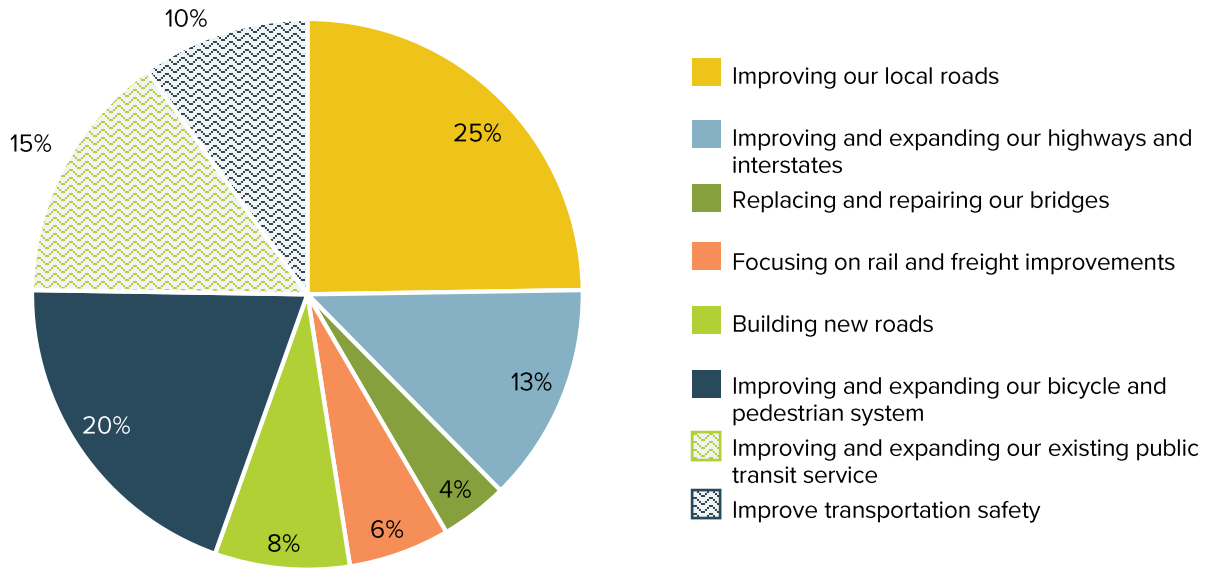
More survey respondents indicated an interest in coordinating traffic signals than any other improvement, but many also indicated a desire for roads to be maintained, widened, or be modified to include a median.

How would you describe congestion on your daily commute?



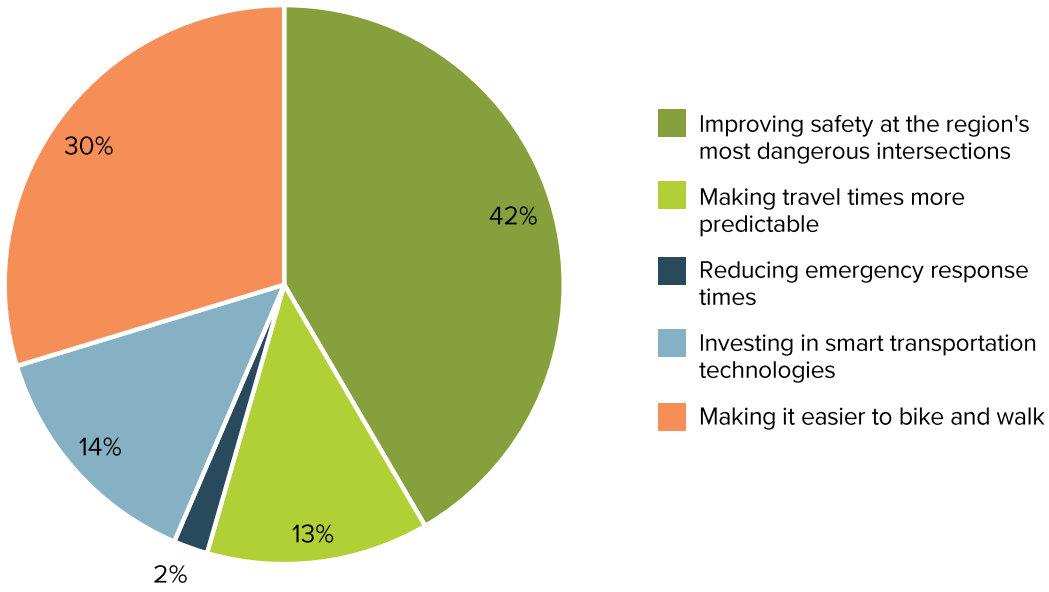
Most survey respondents indicated that there was always congestion along their commute, and many indicated that they thought it should be fixed immediately.

Which transportation improvements would have the most positive impact on our region's economy? (Select three)



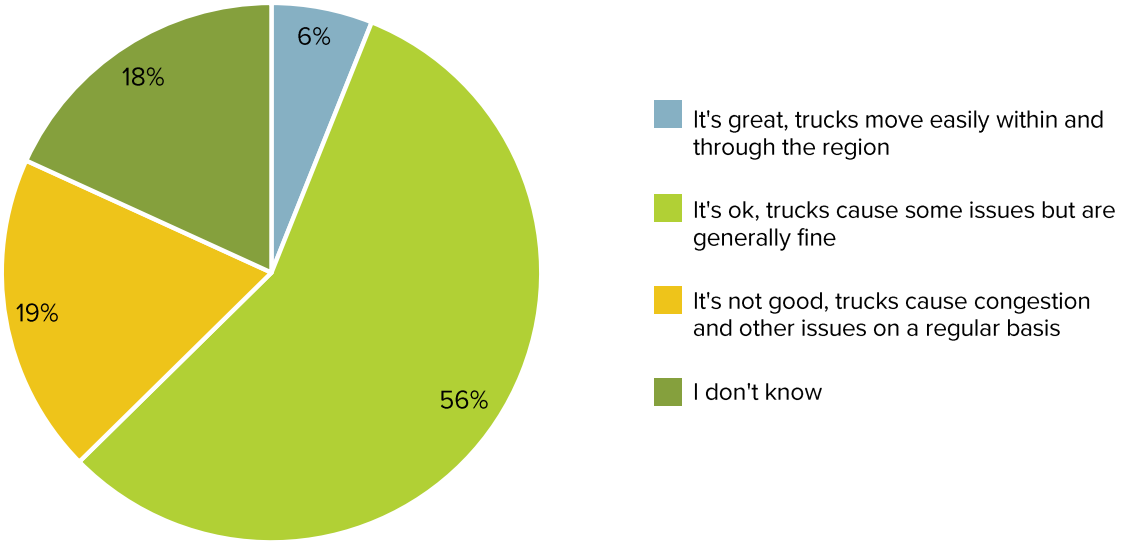
When asked about the potential impact on the region's economy, survey respondents said that improving local roads, improving highways and interstates, and improving public transit would have the most positive impact.

When considering transportation safety and security, we should be focusing on:



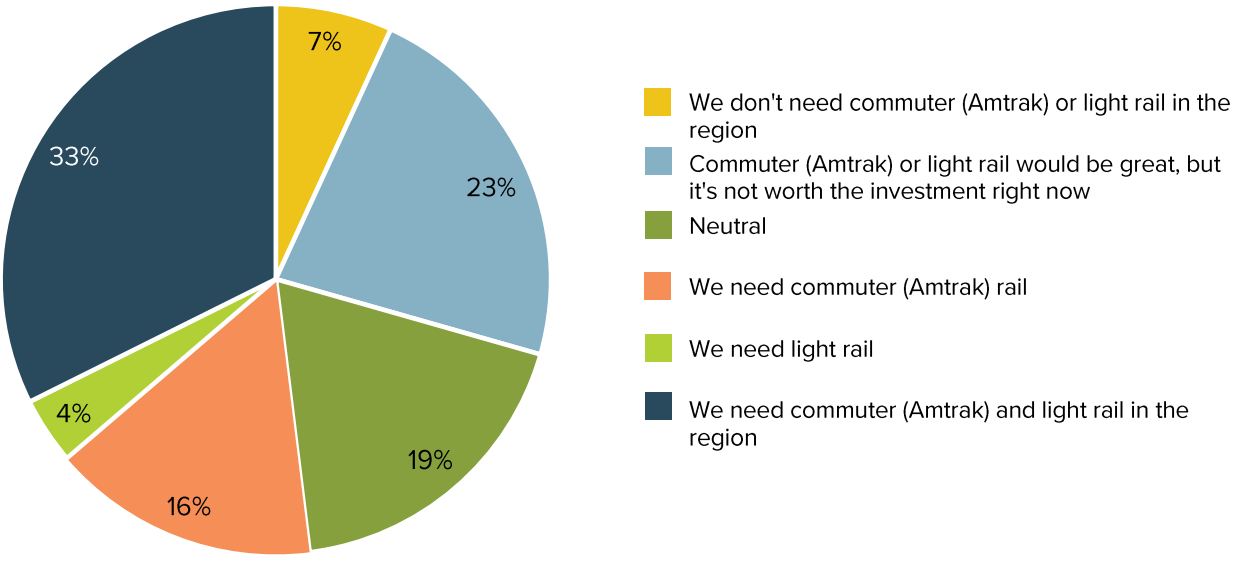
Many survey respondents indicated that the region should be focused on improving safety at the region's most dangerous intersections and making it easier to bike and walk.

Which of the following best describes freight travel in the region?



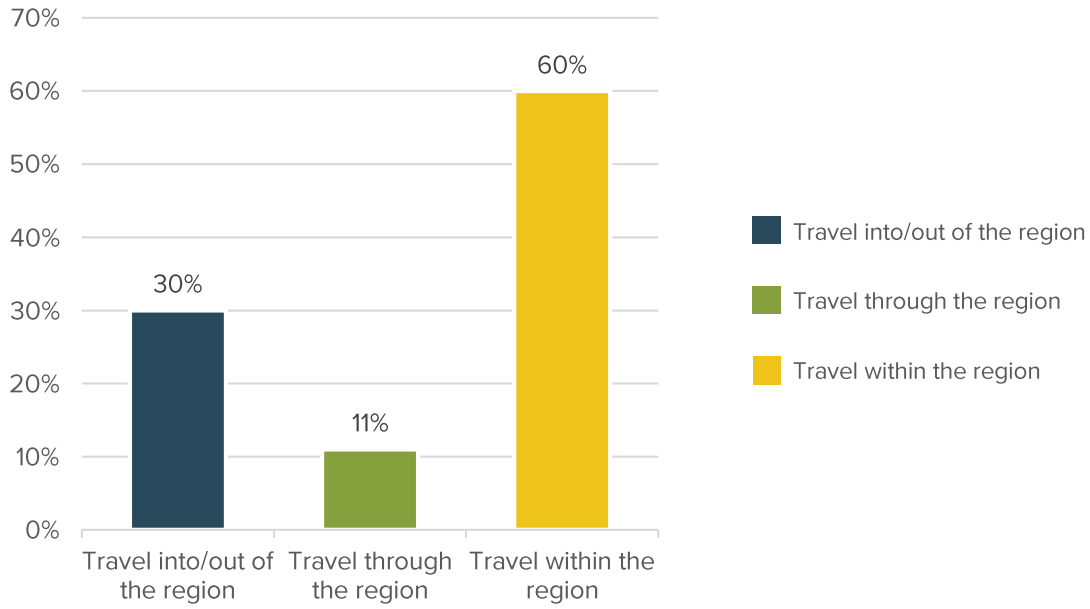
Most survey respondents indicated that freight travel in the region causes some issues but is generally fine.

What are your thoughts on rail travel and development in the region?



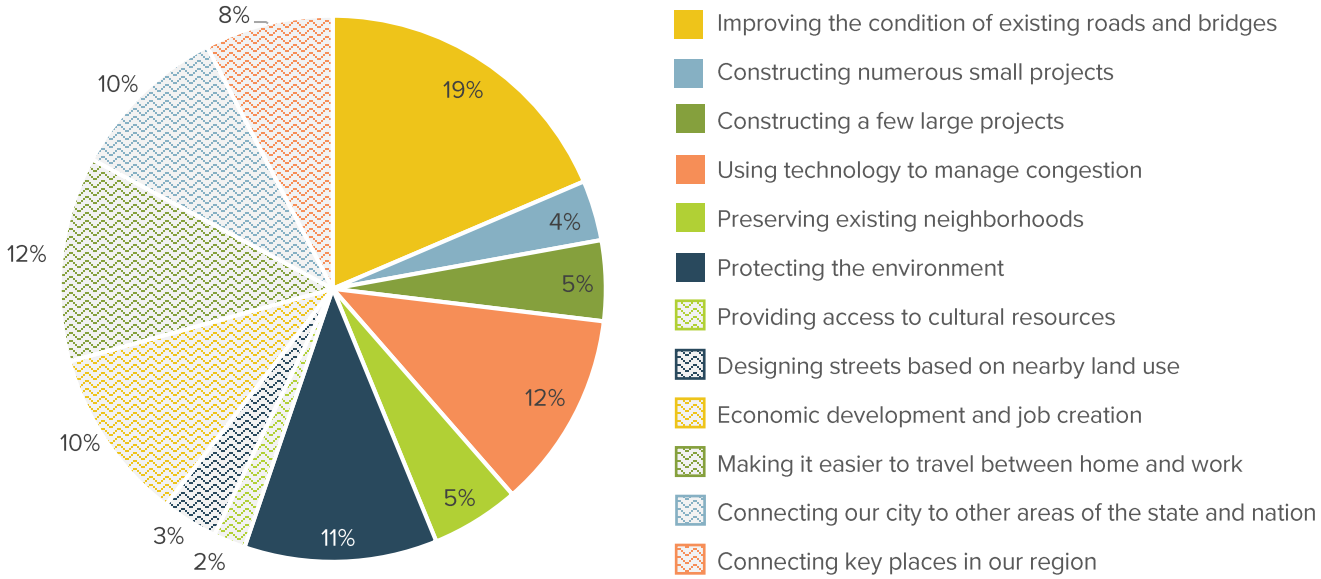
Most survey respondents said that the region is need of some type of rail, with many respondents saying the region needs both light rail and commuter rail.

What type of travel should be prioritized in the region?



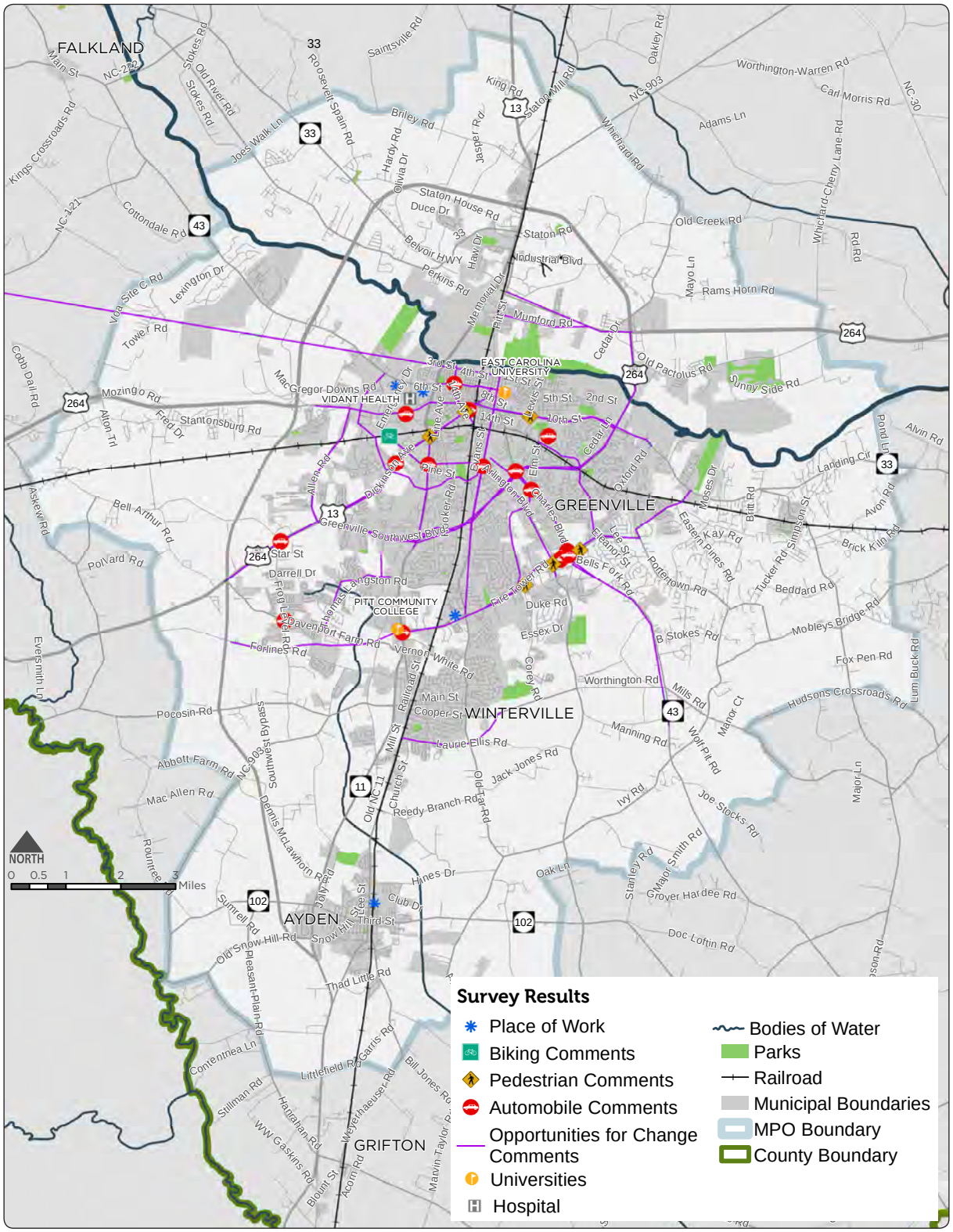
Most survey respondents said that travel within the region should be prioritized over travel through or into/out of the region.

When making transportation investment decisions, the region should consider... (Select 3)



Survey responses showed that participants believed improving the conditions of existing roads and bridges, using technology to maintain congestion, and connecting key places in the region should all be considered when making transportation investment decisions.

A mapping exercise was made available for respondents to note locations where they experience issues currently or would like to see improvements. The mapping exercise allowed respondents to select the particular travel mode they had interest in and also provide a comment with additional detail. The locations of the map comments received are shown in the figure below.



Survey Map Comments

Biking Comments

- Sections of Arlington do not continue the bike lane markers and cars will move into those areas at-will. We need more markers for the increase in bike traffic

Pedestrian Comments

- Sidewalks needed!
- Need some sort of viable pedestrian crossing, even if there is no sidewalk connector on any side. This is a dangerous intersection with too many people trying to cross on foot for work, church, school, etc.
- Need immediate signaling for pedestrian crossing.
- There can be light foot traffic along County Home that cars have to swerve to avoid as there are no sidewalks
- Sidewalks are inconsistent on Fire Tower Road and the southern end of 14th Street.
- Provide grade separated crossing for ECU students to get from housing to classes.

Automobile Comments

- Improve intersection design @ Firetower and 11 to make more driver and pedestrian friendly.
- Home
- Work
- Unsafe turn lane - need medians
- Unsafe intersection - need median to prevent left turn movements
- Overly congested area
- Roundabout here please. Traffic control is needed and 4-way stop not sufficient from LoS perspective (congestion easily reaches NCDOT LoS D during peak hours).
- Consider a signalized intersection here. Mornings/evenings can be brutal.
- Arlington + Evans Intersection - introduce medians and directionalized turn lanes to improve traffic flow, consider Clifton as quadrant.
- Signal is timed poorly and out of synch with Arlington traffic
- The development in the Dickinson area has been outstanding, but parking facilities lag behind and hamper usage.
- Traffic is nasty from 4:30pm to 6:30pm.
- Nasty Traffic. Gets backed up.
- Construct Roundabout and remove traffic signal.
- Channelize intersection with Frog Level Road to restrict turning movements for safety.

Opportunities for Change Comments

- Completion of “Emerald Necklace” Multi-Use Path/Greenway VA Center to Arlington Blvd - improves easement access for Public Works and provides rehabilitation opp. for Green Mill Run pollution
- Bike Lanes and/or Multi-Use Path (in lieu of sidewalk) as North-South Collector/Connector for bicycle/pedestrian traffic
- Bike lanes near elementary school - SRTS funding available to defray local match requirement.
- Bike lane + connection to Tar River Greenway Phase III.a.
- Bike lane/neighborhood “Bikeway” providing equity connection to downtown
- Protected Bike Lane for N/S Connector

Opportunities for Change Comments Continued

- Bike lanes along 10th Street to Book Valley for E/W Connector
- More frequent buses, later routes, and Sunday service would make it easier to travel back and forth for work and shopping.
- Drop speed limit to 35 along 10th street corridor
- Sidewalk complete 14th St corridor
- Continue sidewalk
- Complete Streets Allen Rd
- Complete Streets inside city limits Evans
- Fire Tower complete street
- Complete streets Portertown
- Road diet with on street parking sidewalks and bike lanes
- Improve sidewalks, include sharrows on road
- Sidewalks both sides, lower speed limits and add sharows
- Improve and add sidewalks, bike lanes
- Improve and add sidewalks as needed, both sides, and add bike lanes
- Sidewalks, sharrows, speed reduction
- I fully support the widening of Evans St. Congestion.
- Rail travel between Greenville and Raleigh (or Rocky Mount)
- Widen to 4 lane divided roadway with bike lane and sidewalk.
- Convert center turn lane to median and provide bike accommodations and sidewalk.
- Construct new multilane connector between Davenport Farm Road and Greenville Blvd with bike lanes and sidewalk.
- Convert center turn lane into median to improve safety, Provide bike accommodations and provide sidewalk.
- Widen to multilane divided facility with bike lanes and sidewalk.
- Construct 4 lane divided roadway with bike lanes and sidewalk to connect fire Tower Road from Memorial to New Southwest Bypass.
- Upgrade to 4 lane divided roadway with Bike lane and fill in missing sidewalk.
- Realign Worthington Road to tie into Laurie Ellis Road to create east west connector across south side of Winterville to NC11. Construct as 4 lane divided with bike lanes and sidewalk.
- Upgrade roadway to 4 line divided with bike lanes and sidewalk to create east west corridor to connect to NC11.
- Rename Tenth Street and upgrade to 4 lane divided with bike accommodations and fill in missing sidewalk.
- Upgrade to 4 lane divided with bike accommodations and fill in missing sidewalk.
- Upgrade to 4 lane divided with bike lane and fill in missing sidewalk.
- Convert to 6 lane divided with bike lanes and fill in missing sidewalk.