MARCH 2021 | FINAL

ENVISION 2045

New Bern Area MPO Metropolitan Transportation Plan

New Bern Area Metropolitan Planning Organization

Metropolitan Transportation Plan

Developing Continuing, Cooperative and Comprehensive Transportation

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Executive Summary

The New Bern Area Metropolitan Planning Organization (NBAMPO) is the federally designated agency responsible for working with residents and local, state, and federal agencies to coordinate transportation planning and project development within the New Bern urbanized area. Federal legislation requires urbanized areas with populations greater than 50,000 to have an MPO to carry out the transportation planning process among the member jurisdictions within its established planning area boundary.

MTP Purpose

An MTP is a federally-required plan for any urbanized area over 50,000 in population that looks at least 20 years out, serves as a vision for the future of the region, and includes a fiscally-constrained list of recommended transportation improvements that will be needed to support the vitality and transportation needs of the region going forward. The process is guided by federal regulations and is designed to assist the NBAMPO in prioritizing short- and long-term investments in the area's transportation system over the next 25 years. The MTP must be updated every five years. The current MTP update, Destination 2040, was adopted in May 2016.

MTP Process

The study was conducted over a 13-month period beginning in February 2020 and concluded with the adoption in March 2021. The study was overseen by NBAMPO staff, and North Carolina Department of Transportation (NCDOT) staff. Regular progress updates were presented to the Transportation Advisory Committee (TAC) and the Technical Coordinating Committee (TCC) to discuss goals, priority projects, and community engagement strategies. A virtual public input meeting was held on January 26, 2021 to review the draft final plan. A public comment period was open after the meeting until February 28, 2021.

Visions, Goals and Objectives

Envision 2045 Vision

Envision 2045 supports investment in a multimodal transportation network supporting a vibrant and prosperous New Bern region where all residents have access to opportunities and a good quality of life, and where businesses can grow and thrive while natural and cultural resources are protected.

Envision 2045 Goals and Objectives

Envision 2045 goals and objectives were selected in consideration of existing conditions and pressing transportation concerns in the community. Comments received from both the Transportation Advisory

Committee and Technical Coordinating Committee during the Envision 2045 process were also considered when formalizing the vision, goals, and objectives for the plan.

Goal 1 Provide a safe, secure, comprehensive, and effective transportation system for moving freight and people to bolster regional economic development

Goal 2 Provide a transportation system that enables mobility choices

Goal 3 Seek to optimize the existing transportation system

Goal 4 Promote equity and accessibility in transportation options for transportation -disadvantaged populations

Goal 5 Integrate land use and transportation planning

MTP Recommendations

A fiscally constrained plan, Envision 2045 lays out aviation, bicycle, pedestrian, roadway, and transit improvements across the funding horizons that correspond to the adopted New Bern Area travel demand model horizon years: 2025, 2035 and 2045. Additional projects that were identified but not included in the fiscally constrained project list will be carried forward as an update to the region's Comprehensive Transportation Plan (CTP).

Next Steps

Now that the NBAMPO MTP is adopted, the MPO will continue to work on the following next steps:

- Updating the CTP
- Reviewing projects in the MTP and CTP for future STI Prioritization submittal
- Reviewing the MTP for amendments as needed
- A full update of the MTP will be due in 2026

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1 Introduction

1.1 New Bern Area MPO

A Metropolitan Planning Organization (MPO) is a federally designated agency responsible for coordinating transportation planning and programming in urbanized areas with populations of 50,000 or more. The MPO's mission is to provide planning and programming services for the safe and efficient movement of people and goods consistent with the region's overall land use, economic, social and environmental goals. Special emphasis is placed on providing equal access to a variety of transportation mode choices (public transportation, bicycling, walking, and automobile) and ensuring effective public involvement throughout the planning process. The MPO discusses transportation planning and related planning issues on a regional scale, makes transportation planning decisions and sets transportation planning policies for the metropolitan planning area it covers.

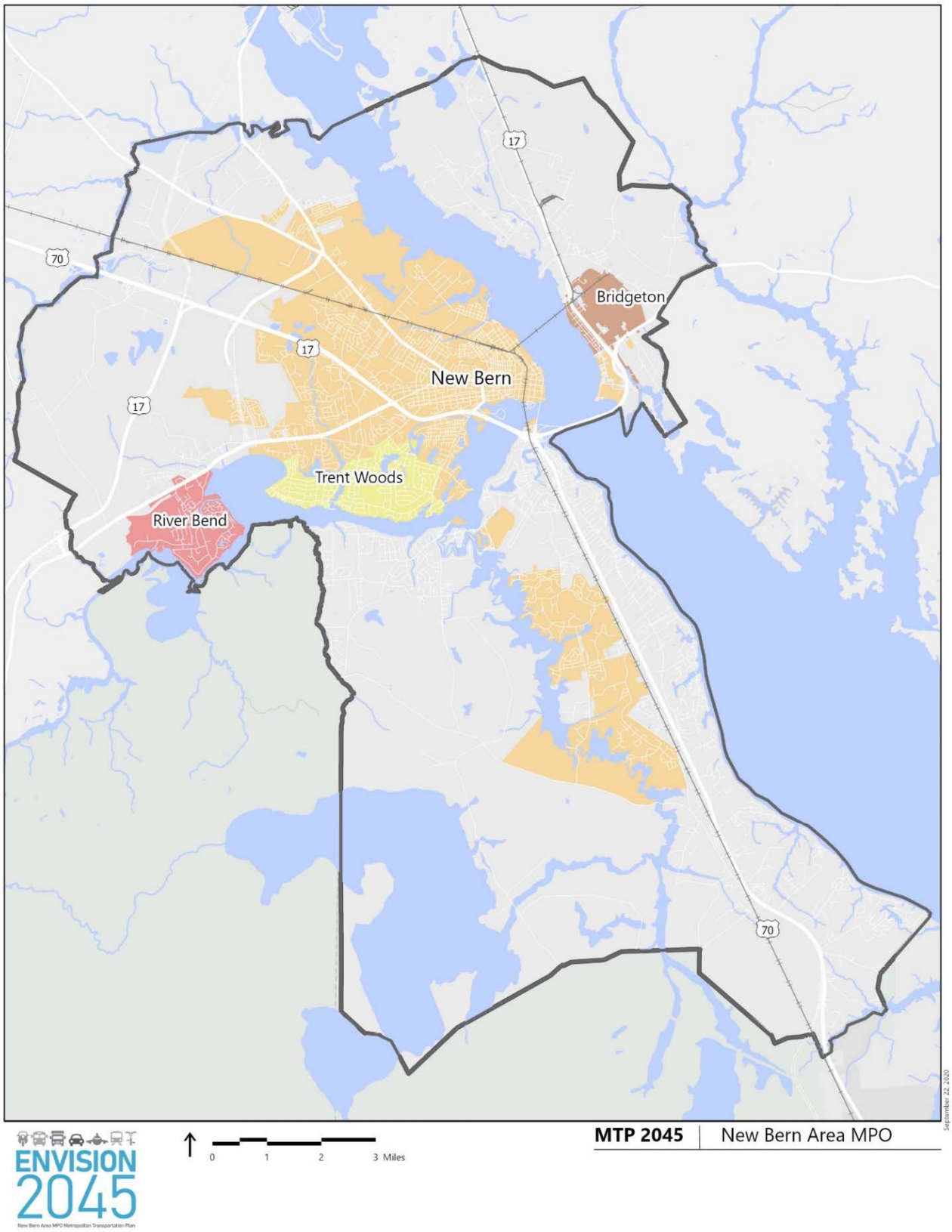
The New Bern Area Metropolitan Planning Organization (NBAMPO) was formed in April 2013 in response to the 2010 Census designation of Urbanized Area. The City of New Bern serves as the Lead Planning Agency for the MPO and provides staff to assist in developing a continuing, cooperative and comprehensive transportation Planning process. To accomplish the required task, the MPO staff works with the Technical Coordinating Committee (TCC) and the Transportation Advisory Committee (TAC).

In Partnership with FHWA, NCDOT and area transit providers, the New Bern Area MPO provides transportation planning for the following jurisdictions:

- City of New Bern
- Town of Bridgeton
- Town of Trent Woods
- Town of River Bend
- The rural portion of Craven County

A map of the New Bern Metropolitan Planning Area is shown in Figure 1-1.

Figure 1-1: New Bern Area Metropolitan Planning Area



1.2 What is Envision 2045?

Envision 2045 is the NBAMPO's latest Metropolitan Transportation Plan (MTP) update. The plan identifies the New Bern area's transportation needs across various modes and provides a vision and a course of action for the next 25 years to improve the transportation network to support the growth and development of the region and its people and businesses. The process of bringing a transportation project to implementation requires many steps and is often a seven-to-fifteen-year process in North Carolina (and sometimes longer), depending on funding availability, environmental and community concerns, and project complexity. Adopting a fiscally constrained, long range transportation plan for the region is one of many steps; this planning process helps the local jurisdictions and stakeholder agencies coordinate their approach and prioritize which projects are the most important to advance in the near term.

MTPs are one type of plan in a series of regional and local small area plans that MPOs work on. A Comprehensive Transportation Plan (CTP) reflects the transportation needs of the region for a slightly longer (25 to 30-year) timeframe, without the fiscal constraint. Unfunded projects identified as part of Envision 2045 are incorporated into the Comprehensive Transportation Plan for the NBAMPO region. Corridor studies, transportation master plans for specific municipalities, bicycle and pedestrian plans, feasibility studies and other small area plans, and mode-specific plan updates remain important tools both to identify transportation issues and to explore potential solutions. The NBAMPO will continue to utilize North Carolina's strategic prioritization process to advance projects drawn from long-range plans and locally adopted plans for funding in the Transportation Improvement Program (TIP) and the Statewide Transportation Improvement Program (STIP).

NBAMPO MTP is a blueprint for future transportation systems within the New Bern Metropolitan Planning Area (MPA). It is a vision for a safe and efficient transportation infrastructure that will adequately serve the region, which includes the City of New Bern, Town of Bridgeton, Town of Trent Woods, Town of River Bend and the rural portion of Craven County.

1.3 Envision 2045 Vision, Goals and Objectives

Working with the study Steering Committee and subcommittees, the NBAMPO staff and study team developed a guiding Vision statement as well as goals and objectives for the plan. The goals and objectives were cross correlated with the ten federally required transportation planning factors to ensure that the required elements were included as part of the plan considerations. The goals and objectives were used to inform the project selection methodology for the plan, shown visually in Figure 1-2.

Figure 1-2: From Vision to Strategies and Projects

1.3.1 Envision 2045 Vision

Envision 2045 supports investment in a multimodal transportation network supporting a vibrant and prosperous New Bern region where all residents have access to opportunities and a good quality of life, and where businesses can grow and thrive while natural and cultural resources are protected.

1.3.2 Envision 2045 Goals and Objectives

Envision 2045 goals and objectives were selected in consideration of existing conditions and pressing transportation concerns in the community. Comments received from both the Transportation Advisory Committee and Technical Coordinating Committee during the Envision 2045 process were also considered when formalizing the vision, goals, and objectives for the plan. Table 1-1 lists the identified goals and objectives as well as the performance metrics which will be used to track them.

Table 1-1: Goals and Objectives and Performance Metrics

	Goals and Objectives	Metrics
GOAL 1	**Provide a safe, secure, comprehensive, and effective transportation system for moving freight and people to bolster regional economic development**	
Objective 1A	Enhance mobility and accessibility and manage congestion across the transportation system and across modes of transportation	• Travel Time Reliability utilizing TTI (Travel Time Index from INRIX/HERE data) for interstates and US routes • Bicycle, pedestrian and transit access to passenger rail stations (metric to be refined)
Objective 1B	Support projects, programs, and policies that advance safe and secure travel for all transportation system users	• Reduce non-motorized fatalities and serious injuries rate (5-year average) (utilizing NCDOT data) • Reduce serious injury and fatality crash rates (utilizing NCDOT data)
Objective 1C	Plan and support a freight transportation system that allows for the efficient movement of goods	• The number of at-grade rail crossings
Objective 1D	Improve resiliency and reliability of the transportation system through increasing roadway network connectivity and supporting multiple route options	• The number of deficient bridges/roads
GOAL 2	**Provide a transportation system that enables mobility choices**	
Objective 2A	Integrate walking and bicycling with vehicular travel and encourage the use of walking and bicycling	• Miles of existing sidewalks, bike facilities and greenways

		• Number of communities within the region recognized as Walk-Friendly or Bicycle-Friendly Communities • Funding for a follow-up study to identify bicycle and pedestrian network gaps
Objective 2B	Maximize rail and air transportation opportunities (no changes)	• Percentage of identified future economic development sites that can be potentially served by rail
GOAL 3	**Seek to optimize the existing transportation system**	
Objective 3A	Prioritize maintaining existing assets before exploring system expansion options	• Number of deficient/posted bridges
Objective 3B	Utilize existing transportation capacity through targeted economic redevelopment in areas with sufficient infrastructure	
GOAL 4	**Promote equity and accessibility in transportation options for transportation-disadvantaged populations**	
Objective 4A	Improve opportunities to serve transportation-disadvantaged populations with convenient transportation to needed services and desired travel destinations	• Percentage of the region's block groups with a high EJ concern score located within ¼ mile of transit • Percentage of the region's key community resources including town halls, parks, libraries, post offices, K-12 schools, colleges, universities, health and social services offices and grocery stores within ¼ mile of transit
Objective 4B	Provide meaningful opportunities for public involvement in the transportation planning process (No change)	
Objective 4C	Use inclusive design to make the system work for all users	• Number of ADA transition plans for local communities completed or updated in the last 10 years
GOAL 5	**Integrate land use and transportation planning**	
Objective 5A	Support land use planning strategies that facilitate efficient transportation system use and development	• Number of activity centers (nodes) across the region designated as accessible (via walk and transit)

		Number of locally-adopted comprehensive plans
Objective 5B	Align the transportation infrastructure investment with community vision of future growth	• Percentage of major transportation capacity projects that align with locally-adopted plans for growth areas
Objective 5C	Encourage density and destination clustering which will increase accessibility and multimodal transportation options	• Residential and employment density in activity centers
Objective 5D	Support areas designated for additional economic development potential under programs such as Opportunity Zones and North Carolina Industrial Commission Certified Sites through transportation infrastructure investments	• Percentage of major transportation capacity projects that overlap with and/or provide access to designated Opportunity Zones, N.C. Industrial Commission Certified sites or other locations designated for targeted economic development

1.4 Transportation Planning Factors

A Metropolitan Transportation Plan is required to address the transportation planning factors established by Federal transportation legislation. Eight of those factors were initially defined in the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU)[1], enacted in 2005, and carried forward by MAP-21[2] in 2012.

Fixing America's Surface Transportation Act (FAST Act)[3] is the most recent transportation authorization law in place that provides guidelines for the NBAMPO to follow. The Moving Ahead for Progress in the 21st Century Act (MAP-21), enacted in 2012, included provisions to make the Federal surface transportation more streamlined, performance-based, and multimodal, and to address challenges facing the U.S. transportation system, including improving safety, maintaining infrastructure condition, reducing traffic congestion, improving efficiency of the system and freight movement, protecting the environment, and reducing delays in project delivery. The FAST Act builds on the changes made by MAP-21.

The FAST Act, signed into law in 2015, included the addition of two planning factors (focused on resiliency and reliability, and on tourism), for a total of ten transportation planning factors. The projects and strategies recommended in the MTP must support these planning factors. The Federal planning factors can be summarized as follows:

- Support the economic vitality of the metropolitan area
- Increase the safety of the transportation system for motorized and non-motorized users
- Increase the security of the transportation system for motorized and non-motorized users
- Increase the accessibility and mobility of people and for freight
- Protect and enhance the environment, promote energy conservation, and improve the quality of life

- Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight
- Promote efficient system management and operations
- Emphasize the preservation of the existing transportation system
- Improve the resiliency and reliability of the transportation system and reduce or mitigate stormwater impacts of surface transportation
- Enhance travel and tourism

As can be seen in Table 1-2, the MTP goals align with the federal planning factors to ensure that the federal guidelines are addressed throughout the MTP 2045 plan development. The solid fill circles denote the federal planning factor fully satisfies the corresponding goal and the open circles denotes partial fulfillment of the corresponding goal.

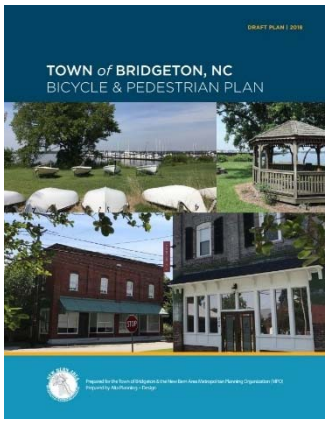
Table 1-2: MTP Goals and Objectives and federally-required Transportation Planning Factors

	NBAMPO MTP Goals and Objectives				
Federal Planning Factors	Goal 1: Provide a safe, secure, comprehensive, and effective transportation system for moving freight and people to bolster regional economic development	Goal 2: Provide a transportation system that enables mobility choices	Goal 3: Seek to optimize the existing transportation systems	Goal 4: Promote equity and accessibility in transportation options for transportation-disadvantaged populations	Goal 5: Integrate land use and transportation planning
Support the economic vitality of the metropolitan area	○	●	●	○	●
Increase the safety of the transportation system for motorized and non-motorized users	●	●	●	●	○
Increase the security of the transportation system for motorized and non-motorized users	●	○	○		
Increase the accessibility and mobility of people and freight	●	●	●	●	●
Protect and enhance the environment, promote energy conservation, and improve the quality of life	○	●	○	○	●
Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight	●	●	●	●	●
Promote efficient system management and operations	○	●	●	●	○
Emphasize the preservation of the existing transportation system	○	○	●	●	●
Improve the resiliency and reliability of the transportation system and reduce or mitigate stormwater impacts of surface transportation	○	○		○	●
Enhance travel and tourism	●	●	●	○	●

● Full ○ Partial

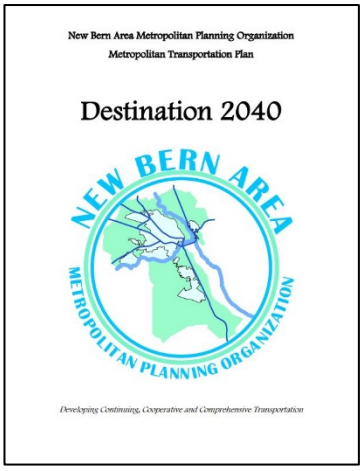
1.4.1 Other Studies

There have been other studies prepared over the years that were reviewed and incorporated as part of the development of the NBAMPO MTP, including:



- City of New Bern Urban Design Plan (2000)
- City of New Bern Comprehensive Plan (2003)
- City of New Bern Bike Plan (2006)
- City of New Bern Pedestrian Plan (2009)
- Draft - Coastal Carolina Regional Airport Master Plan Update (2020)
- Croatan Regional Bicycle Plan and Pedestrian Trails Plan (2013)
- Trent Woods Comprehensive Pedestrian Plan (2014)
- Town of Bridgeton Bicycle and Pedestrian Plan (2019)
- Town of River Bend Bicycle and Pedestrian Plan (2019)

City of New Bern Plans can be viewed on their website at https://www.newbernnc.gov/departments/development_services/plans_and_projects.php. Coastal Carolina Regional Airport Master Plan Updated can be viewed at https://www.newbernairport.com/master-plan-update/. Both the Croatan Regional Bicycle Plan and Pedestrian Trails Plan and Trent Woods Comprehensive Pedestrian Plan can be viewed on NCDOT's municipalities website at https://connect.ncdot.gov/municipalities/PlanningGrants/Documents/Forms/AllItems.aspx. The Bicycle and Pedestrian Plan for Town of Bridgeton and Town of River Bend can be viewed on NBAMPO's website at http://www.nbampo.org/documents.



The NBAMPO **Envision 2045** MTP incorporates and builds upon the concepts and recommendations from previous efforts including Destination 2040 adopted in May 2016. Comprehensive land use plans address all aspects of a community's future, from land use patterns to sewer and water infrastructure, from parks to open space. Comprehensive planning aids public policy in terms of transportation, utilities, land use, recreation and housing, and typically encompasses large geographical areas covering a long-term time frame, in the same way transportation planning is done on a long-term basis.

1.5 Financial Plan

Federal regulations state that an estimate of available revenues for implementation of transportation improvements over the life of the MTP must be developed through a cooperative effort between the MPO, State, and transit operators. The cost estimates for the projects, strategies, and other transportation improvements contained in the MTP have therefore been constrained to the forecasts of reasonably foreseeable revenues. See Chapter 4 for additional details.

1.6 Public Participation

The MTP recognizes several emerging trends that will impact travel patterns and mode choice through the year 2045. Through the community involvement process, many concerns, desires, ideas, and issues were brought forth for consideration in the planning process including:

- Creating a bike-friendly city by increasing bicycle travel opportunities through the construction of bike lanes, shared use paths, and signed bicycle routing, as well as providing missing connections in the bikeway network;

- Providing a pedestrian-friendly community by constructing missing segments in the sidewalk network, increasing pedestrian safety at crosswalks and intersections, and implementing amenities and facilities in activity areas consistent with Complete Streets objectives;

- Constructing sensible and effective roadway improvements that consider vulnerable populations, provide for multimodal travel, and are environmentally sensitive;

- Balancing land use, transportation, and environmental needs to enhance quality of life and promote economic competitiveness of the region for ALL citizens;

- Enhancing transit options through expanded services that reflect the needs of the local user with a focus on reducing traffic congestion and emissions.

Refer to Appendix F for details of public involvement process.

2 About the New Bern Region

New Bern is a city in Craven County, North Carolina, United States. As of the 2010 census it had a population of 29,524, which had risen to an estimated 29,994 as of 2019.[4] It is the county seat of Craven County and the principal city of the New Bern Metropolitan Statistical Area.

New Bern, NC, where "Everything comes together here" is a true "Southern Surprise" located only 30 miles from the Atlantic Ocean at the confluence of two majestic rivers, the Neuse and the Trent rivers, near the North Carolina coast. It lies 112 miles (180 km) east of Raleigh, 80 miles northeast of Wilmington, and 162 miles (261 km) south of Norfolk. New Bern is the birthplace of Pepsi.

The historic districts provide much of New Bern's unique charm, appeal to retirees and heritage tourism, and contribute to the city's economic success. The Local Historic Districts, while vitally important to New Bern, comprise only 2.43% of New Bern's 27-square-mile area. There is considerable area available for new development.

2.1 Historical Perspective

Founded in 1710 at the confluence of the Trent and Neuse rivers, New Bern was settled by Swiss and German immigrants. New Bern is the second oldest established town in the state of North Carolina and served as the colonial capitol under Royal Governor William Tryon beginning in 1765 through 1792, when the capital was moved to Raleigh. His residence, Tryon Palace, was built in 1770.

After the American Revolution, New Bern became wealthy and quickly developed a rich cultural life and by 1800 New Bern was the largest town in North Carolina, being dubbed "the Athens of the South". Because of this, New Bern served as a major port and trading center in the 1800's, and subsequently was the target of a Civil War battle in March 1862, when it was captured and occupied by the Union Army.

New Bern has a rich religious background as well, and boasts a number of historical churches, including the oldest Catholic Church in North Carolina; St. Paul's Catholic Church, dating back to 1840. Christ Church parish was established in 1715 and the first and oldest church building in New Bern was built in 1750. First Presbyterian Church was established in 1817 and was used as a hospital and lookout during the Civil War.

Historical Cedar Grove Cemetery has the graves of Confederates who died in the Battle of New Bern, and the National Cemetery holds the remains of Union soldiers and veterans of later wars.

The New Bern Academy is the oldest chartered school in the state, established by law in 1766. The original building was destroyed by fire in 1795. The current school building was built circa 1806. During the Civil War it served as a hospital.

With such rich history, New Bern has three historic districts with homes, stores and churches dating as far back as the early 18th century. There are more than 150 sites included in the National Register of Historic Places.[5]

2.2 MPO and MPO Committees Structures

Transportation planning is a complex process conducted by numerous stakeholders for the purpose of fulfilling the need to move people and goods in accordance with the vision of the community. To reach transportation goals and objectives, planners along with agents of the North Carolina Department of Transportation and the Federal Highway Administration work together in an on-going planning process to meet the travel needs of the community. The planning work of the Metropolitan Planning Organization is developed by the Technical Coordinating Committee (TCC) and is overseen by the Transportation Advisory Committee (TAC).[6]

2.2.1 Technical Coordinating Committee (TCC)

The New Bern Area MPO TCC is a support board that reports to the TAC. As shown in Table 2-1, it is comprised of voting members from local planning organizations, local transit organizations, and the North Carolina Department of Transportation. Non-voting members include representation from the Federal Highway Administration as well as the local Rural Planning Organization.

Table 2-1: TCC Members

Voting Members	
Director - Development Services Division, City of New Bern	Director - Craven County Operations
Director - Craven County Planning Department	Director - Coastal Carolina Regional Airport
Director - Craven Area Rural Transit Service	Manager - Town of Bridgeton
Manager - Town of River Bend	Manager - Town of Trent Woods
City Engineer - City of New Bern	NCDOT Eastern Region FOE
NCDOT Division 2 Traffic Engineer	NCDOT Division 2 Planning Engineer
NCDOT New Bern MPO Coordinator	NCDOT Division 2 Engineer
Non-Voting Members	
Federal Highway Administration Planner	Down East RPO
New Bern Area MPO Administrator	New Bern Area MPO Planner

2.2.2 Transportation Advisory Committee (TAC)

The New Bern Area MPO TAC is the decision-making board responsible for a continuous, comprehensive and cooperative transportation planning process. It is comprised of elected officials, portrayed below in Table 2-2, serving as voting members from each jurisdiction within the MPO and a North Carolina Department of Transportation Board member. Non-voting members include representation from the Federal Highway Administration, and local transit organization.

Table 2-2: TAC Members

Voting Members	
Craven County Board of Commissioners (1 member)	New Bern Board of Aldermen (1 member)
River Bend Board of Commissioners (1 member)	Trent Woods Board of Commissioners (1 member)
Bridgeton Board of Commissioners (1 member)	NCDOT Board of Transportation Member
Non-Voting Members	
Federal Highway Administration Planner	Craven Area Rural Transit System Director

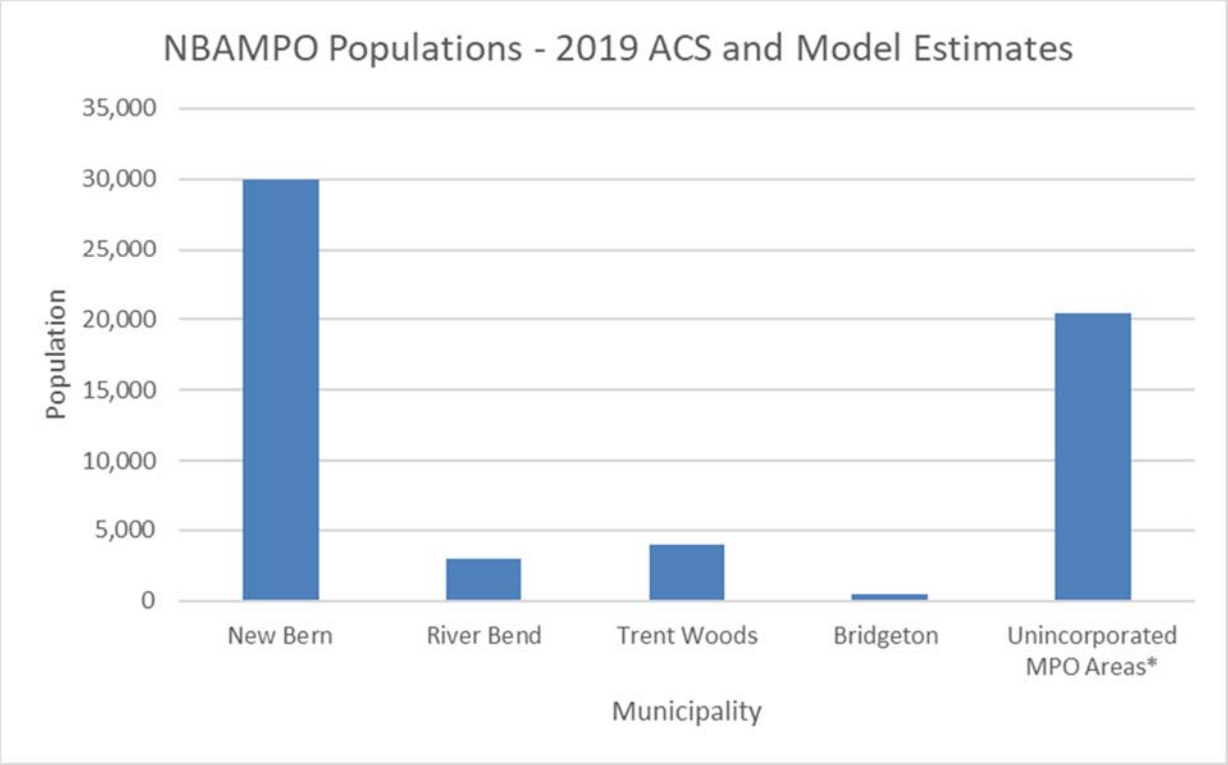
2.3 Region Overview and Economic Development Factors

2.3.1 Population

The area has seen slow growth in the past decade but expected to trend upwards in future years. In 2015, New Bern, NC had a population of 29,994 people. According to the most recent demographics data available from the Census Bureau released in December of 2019, Figure 2-1 indicates New Bern has a 29,994 population, which is the highest of all the places within the MPO study area. The area with the second highest population after New Bern is Trent Woods with a population less than 4,021. Annual rate of population increase for New Bern is 1 percent per year.

Comparing population change to the United States average of 6.2%, New Bern is approximately a quarter the size. Also, versus the state of North Carolina, population change of 6.5%, New Bern is approximately a quarter the size. Recent growth has been strong, and indications are that the New Bern area will experience moderate but sustained growth in the coming years. To accommodate future growth, transportation services, policies, programs and infrastructure are developed and implemented through the regional transportation planning process carried out by NBAMPO.

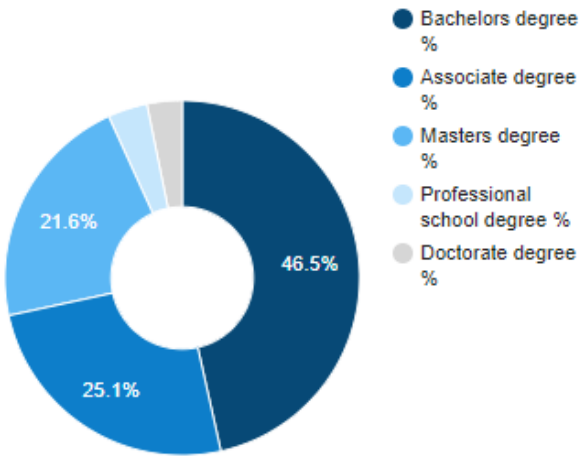
Figure 2-1: New Bern and Surrounding Area 2019 Population Data



2.3.2 Education

New Bern has a school dropout rate of 14% which is the highest of all the places in the area. New Bern has the highest percent of people with less than a high school education, at 13% of the total, ranking it as number 1. In terms of advanced education, Figure 2-2 shows the percentage breakdown of all people who have received a post-secondary education, and the percent breakout of level of post-secondary education. New Bern has the highest proportion of people with a master's degree at 22% of the total, ranking it as number 1 post-secondary level of education.

Figure 2-2: Percent breakdown by Highest Level of Education



Source: https://www.towncharts.com/North-Carolina/Demographics/New-Bern-city-NC-Demographics-data.html

2.3.3 Economy and Employment

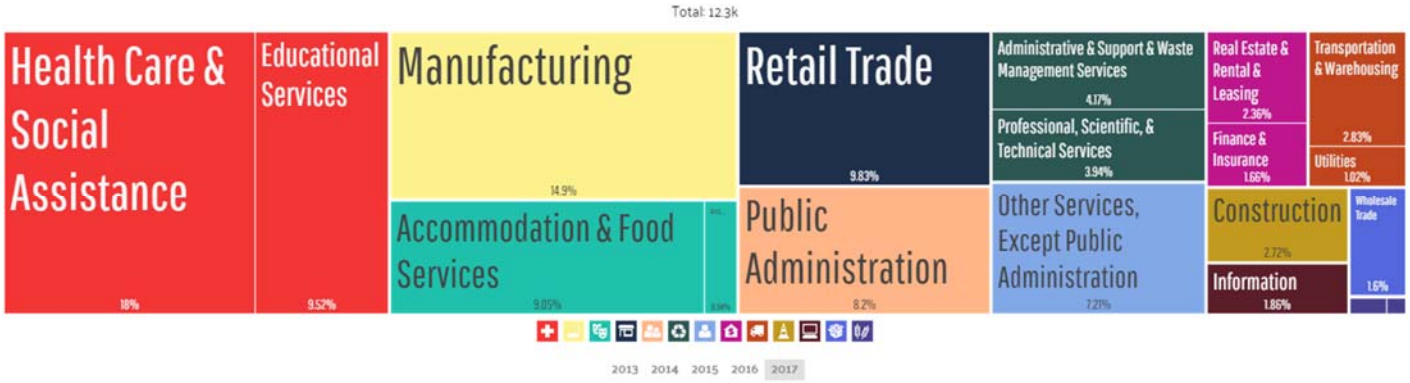
Based on the data from the Census Bureau ACS 5-year Estimate, there were 12,300 people employed in New Bern, NC.[7] The largest industries in New Bern, NC are Health Care & Social Assistance (2,219 people), Manufacturing (1,834 people), and Retail Trade (1,214 people). The highest paying industries are Transportation & Warehousing ($50,795), Public Administration ($49,464), and Professional, Scientific, & Technical Services ($48,017). Median household income in New Bern, NC is $41,807. Males in New Bern, NC have an average income that is 1.34 times higher than the average income of females, which is $44,729. The income inequality in New Bern, NC (measured using the Gini index) is 0.473, which is lower than the national average.

From 2016 to 2017, employment in New Bern, NC grew at a rate of 2.27%, from 12,100 employees to 12,300 employees. The most common job groups, by number of people living in New Bern, NC, are Office & Administrative Support Occupations (1,614 people), Management Occupations (1,093 people), and Food Preparation & Serving Related Occupations (1,021 people). Figure 2-3 illustrates the share breakdown of the primary jobs held by residents of New Bern, NC.

Figure 2-3: Employment by Occupation in New Bern

The most common employment sectors for those who live in New Bern, NC, are Health Care & Social Assistance (2,219 people), Manufacturing (1,834 people), and Retail Trade (1,214 people). Figure 2-4 shows the share breakdown of the primary industries for residents of New Bern, NC, though some of these residents may live in New Bern, NC and work somewhere else. Census data is tagged to a residential address, not a work address.

Figure 2-4: Employment by Industry in New Bern



The NBAMPO MTP: Envision 2045 represents a collaborative effort with surrounding areas, including cooperative and comprehensive planning with the Marine Corps Air Station Cherry Point. Ensuring transportation investments support economic vitality in the New Bern area is critical. Positive transportation investments address industry needs, encourages economic growth, and improves access to regional assets such as MCAS Cherry Point. With approximately 14,000 active military personnel residing on base annually, effective planning is vital to the continued support and growth of our area. While outside of the NBAMPO boundary, the NBAMPO maintains an active focus on military transportation needs of MCAS Cherry Point and recognize the importance of partnership and effective planning to support the ongoing efforts of the military presence in our area.

While there is likely to be a slowdown in economic development due to COVID-19 related social distancing measures and higher unemployment rates across a variety of industries, having a diverse economic base means that the region will likely be well-positioned for recovery and return to a growth trajectory in the near future.

2.4 Plan Approval Process

The 2045 Plan update was developed through an open and deliberative planning process, complying with all appropriate government regulations and closely following the MPO's approved Public Participation Plan. The approval and adoption process for the MTP included a public participation program, review by all three MPO boards and state and federal agencies, and a 30-day public review period. During the 30-day public review period, the MPO provided an opportunity for public input at a Virtual Open House meeting. Upon completion of these efforts, the document was presented to the New Bern Area MPO boards for approval and was adopted on March 11, 2021 by the TCC and March 25, 2021 by the TAC.

3 Transportation System

To many, the transportation system is viewed as a network of streets and highways that allow automobiles and trucks to travel within, to and through the region. In reality, roads make up only one component of the transportation system, although a very important one. Transit service and bicycle/pedestrian facilities are essential to a well-balanced, multi-modal transportation system.

3.1 Roadway

3.1.1 Existing Conditions

One of the first steps in developing the NBAMPO MTP: Envision 2045 was to understand the state of existing land use, transportation, and economic conditions of the region. Understanding the trends and changes that made the region what it is today is essential before developing forecasts of future conditions.

3.1.1.1 Travel Demand Model Forecast and Methodology

This MTP was developed using an analysis of roadway system deficiencies and potential alternative solutions to address those deficiencies. That analysis relied on estimates of future travel demand that was forecasted using the regional travel demand model. The model process used estimates of household and employment data combined with information about the existing roadway network and other network scenarios as inputs. This model used the regionally significant roadways in the NBAMPO for its network and used areas called Traffic Analysis Zones (TAZ's) for loading socioeconomic data into the model. A TAZ is the unit of geography most used in conventional transportation planning models. The spatial extent of zones typically varies in models, ranging from very large areas in the exurb to as small as city blocks or buildings in central business districts. Zones are decided by using by census block information. Typically, these blocks are used in transportation models for providing socio-economic data.

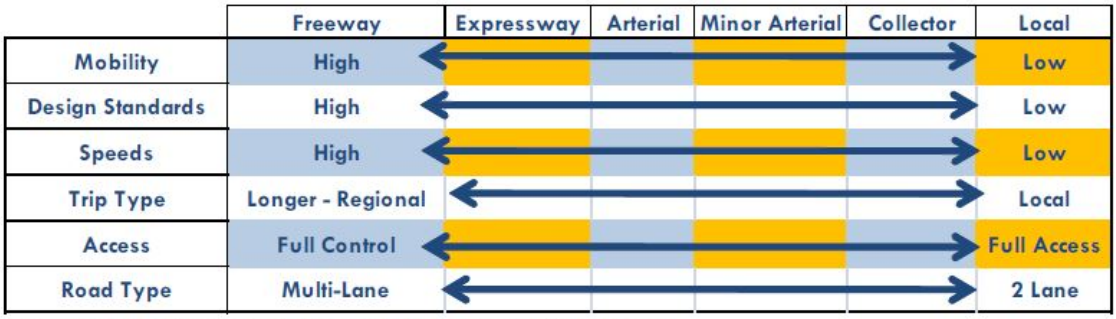
The trip generation part of the model calculates the amount of trip-making that takes place based on household and employment data. The trip distribution part of the model then determines the origin and destination of each trip. In the traffic assignment part, the specific route each trip will take is computed through consideration of travel time, distance, and congestion. The intent is to produce estimates of average weekday traffic volumes for each roadway segment in the network. These are converted to peak hour traffic volumes for level of service analysis. In this manner, roadway corridors with capacity deficiencies can be identified and potential alternative solutions can be discussed and evaluated.

The methodology used county-wide and region-wide control totals in coordination with land use to allocate the future growth into TAZ's. The New Bern Travel Demand Model contains urban areas surrounding New Bern and Havelock, and includes Bridgeton, Trent Woods, River Bend and MCAS Cherry Point. A small portion of the New Bern Area MPO is not included in the travel demand model as it lies within the Croatan National Forest. Also, a small portion of Jones County, which is not within the New Bern Area MPO, was included in the model for road network continuity in the model area.

3.1.1.2 Functional Classification of Streets

Functional classification is the process by which streets and highways are grouped into classes according to the characteristics of the vehicular traffic they are intended to serve. Shown in Figure 3-1, all streets and highways are grouped into one of the following classes, depending on the character of the traffic (i.e., local or long distance) and the degree of land access that they are designed to accommodate.

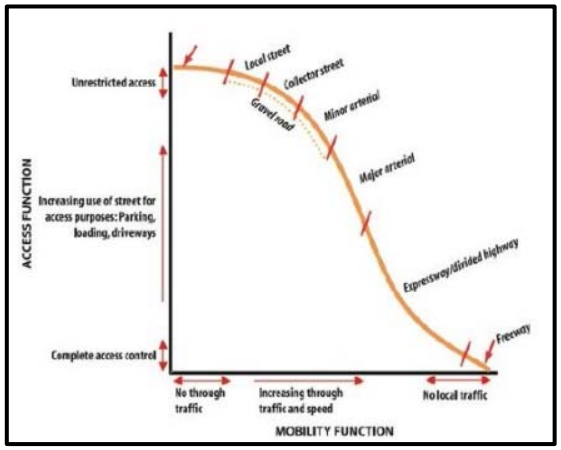
Figure 3-1: Functional Classification



Roadway characteristics vary by function and desired levels of mobility and access.

The roadway network is based on a range of different types of facilities with varying characteristics that when combined, make up the roadway system. The facilities range from freeways, which service high-speed, longer distance trips, to local streets that are designed for lower speeds and shorter trip lengths. Two important variables defining roadway function are mobility and access. Freeways have full access control that allows vehicles to enter and exit only at interchange ramps since mobility is the primary function of the freeway. Local streets have numerous driveways and connections because their primary function is to provide local access to businesses and residences.

Often, when congestion occurs on a minor thoroughfare, it is due to an imbalance between the street's intended function and the amount of access that exists along the corridor. In these cases, access is not well controlled with the results being numerous opportunities for vehicles to turn in and out of driveways to access local land uses. The movements conflict with and impede the flow of traffic, creating additional points of congestion.



Freeway: A freeway is a multi-lane, divided arterial roadway with access only at interchanges with major roads. No direct access to adjacent land is permitted. The primary purpose of a freeway is mobility, moving traffic at high speed on long local or regional trips. Examples of a freeway are US Highway 70 (Future I-42) and NC Highway 43.

Interstate: An interstate is extremely similar in design and function to the freeway. The main difference is an interstate is officially designated as such by the United States by the Secretary of Transportation. All routes with this designation make up the Dwight D. Eisenhower National System of Interstate and Defense Highways. Examples of an interstate are Future I-42 (currently US Highway 70).

Expressway: An expressway is usually a multi-lane, divided arterial roadway with access at some at-grade intersections and some interchanges. The primary purpose of an expressway is mobility, with little or no direct access to adjacent land. Examples of an expressway are portions of US Business 17, NC Highway 43, and NC Business 55.

Major Thoroughfare: Principal arterials are streets and highways that serve major activity centers, typically carry the highest traffic volumes, and provide for long-length trips. These roads often define the edges of neighborhoods. They are also often the major roads serving large employment and/or commercial land use clusters. Examples of principle arterials are Martin Luther King, Jr. Boulevard, Glenburnie Road and Neuse Boulevard/NC Business 55.

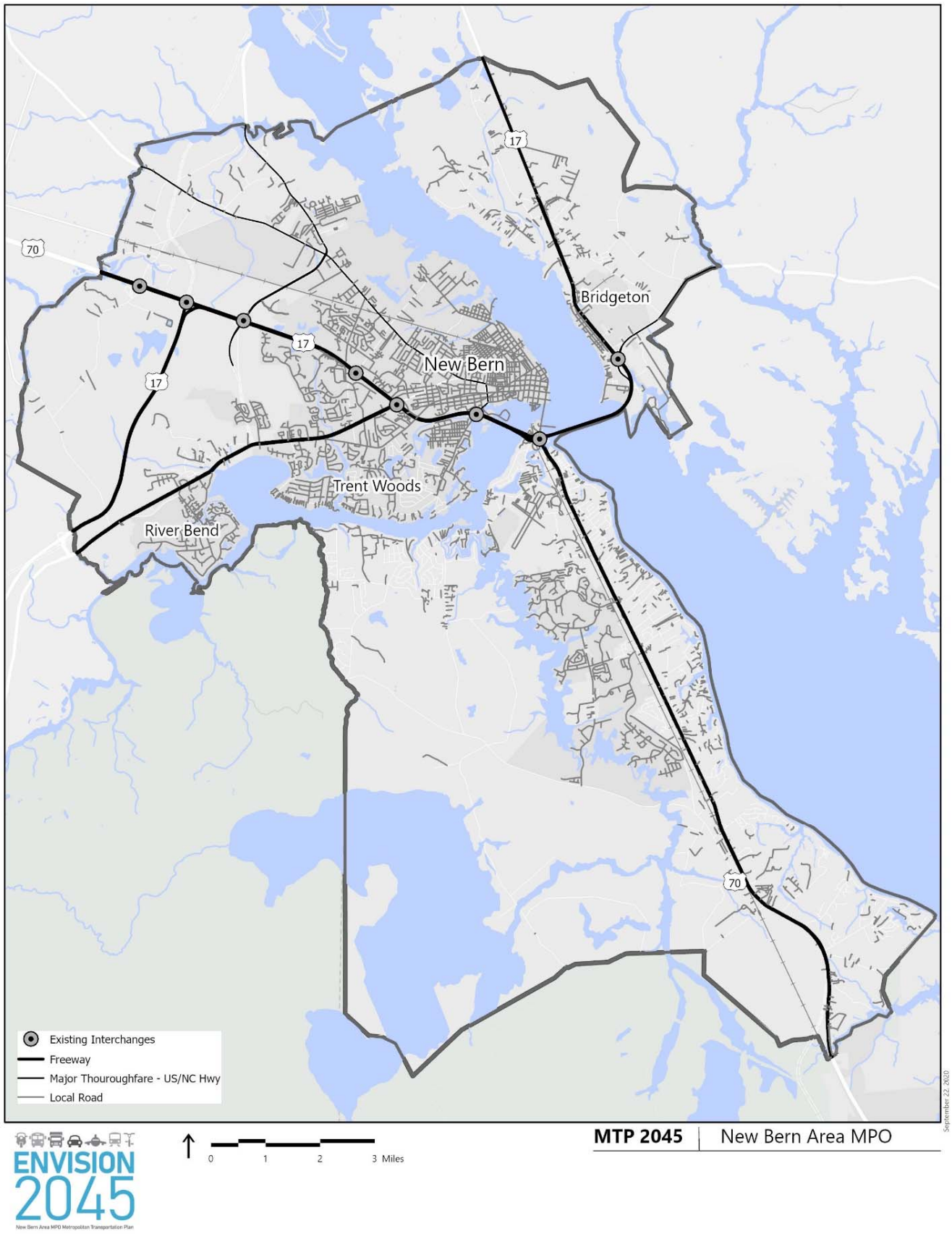
Minor Thoroughfare: Minor arterials such as Trent Road serve to interconnect with the principal arterial system to provide trips of moderate length and to carry lower traffic volumes. These roads may run through neighborhoods or define neighborhood boundaries, and they may connect major activity centers in neighborhoods (e.g., schools, small commercial centers) to the principal arterial network.

Collector: Collector streets provide the connection between local roads and the arterial road system. They are the roads that have about half mobility function and about half property access function. These roads may look similar to some minor arterial streets, but collectors usually have more direct access points to adjoining properties. These roads in other cases may look similar to local roads, but collectors often have much higher traffic volumes than nearby local roads. Collectors are divided into two classes (Major and Minor) for Functional classification purposes.

Local Road: Local roads provide direct access to adjacent property. Through traffic is discouraged. The overwhelming function of this type of road is property access, and many residential and commercial driveways connect to this class of roadway. Frequent long-distance trips made on this road class and/or high-speed travel on these roads often indicates that there is a problem with the network, especially nearby collector and arterial streets.

Figure 3-2 shows the existing roadway network and corresponding roadway classifications in the NBAMPO study area. Using this functional classification plan works well if each road segment performs its intended function in the network, but if the role of a segment is altered or confused then problems often occur. For example, when a road that is designed as an arterial to move traffic across town becomes too congested with driveways because it is now charged with performing local street functions for property access, the network develops a host of operational problems (congestion, delays for thru traffic, accidents, cut-thru traffic in adjoining neighborhoods, etc.). The functional classification map is a planning tool that shows the intended purpose of each road. However, in reality the situation is usually more complex, and it is sometimes difficult to see on the ground which roads are in which classification. Standards for road access and design are needed so that the planned function and operational integrity of each road remains intact and serious network problems are avoided.

Figure 3-2: Existing Roadway Classification Map



3.1.1.3 Roadway Level of Service and Congested Corridors

A common measurement of traffic operational performance or of congestion on a road corridor is "Level of Service" (LOS). In its simplest form, roadway Level of Service can be compared to a grading scale from "A" to "F", where "A" represents excellent performance and "F" indicates failure.

3.1.1.3.1 Roadway Level of Service

Level of Service can be explained in terms of vehicular traffic flow, maneuverability, driver comfort, average speed, and the ratio of traffic volume to a roadway's maximum traffic capacity as shown below in Figure 3-3:. It is typically reported for the peak traffic hour (rush hour) of a typical weekday.

Figure 3-3: Level of Service

Level of Service	A	B	C	D	E	F
Traffic Flow	Free-flow Conditions	Reasonably Free-Flow	Influence of Traffic Density is Noticeable	Influence of Traffic Density is Severe	Unstable	Forced or Breakdown
Maneuverability	Almost Completely Unimpeded	Slightly Restricted	Noticeably Restricted	Severely Restricted	Extremely Unstable	Almost None
Drive Comfort	High	High	Some Tension	Poor	Extremely Poor	Extremely Poor
Average Speed	Speed Limit	Clost to Speed Limit	Close To	Some Slowing	Significantly Slower than Speed Limit	Significantly Slower than Speed Limit
Volume to Capacity Ratio	<0.40	0.40 - 0.59	0.60 - 0.79	0.80 - 0.89	0.90 - 0.99	≥ 1.00

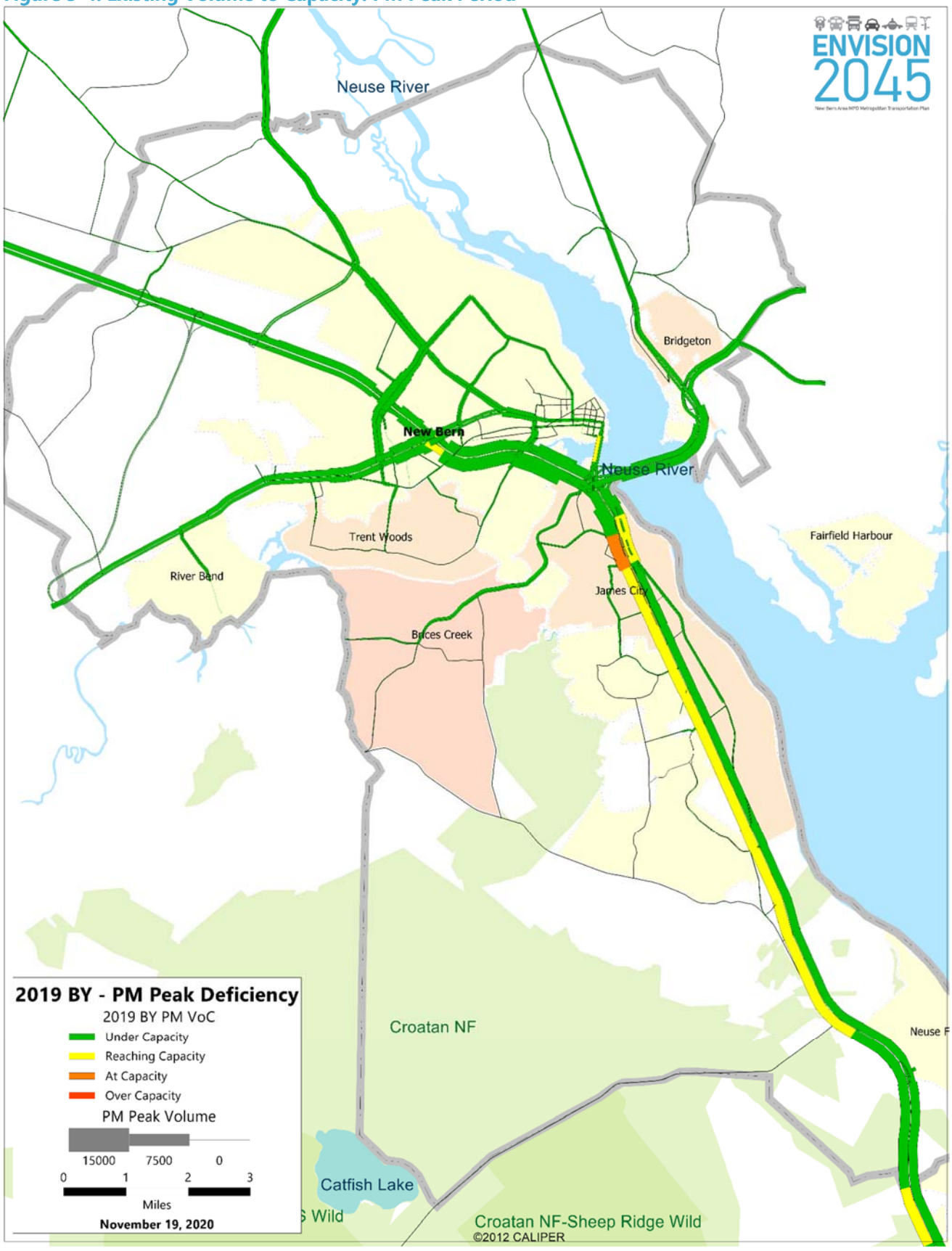
The region's Travel Demand Model provides the Level of Service for major streets, roads, and highways within the NBAMPO boundaries. Many communities around the country try to maintain LOS C or D, or better for their roadway systems, although it is acceptable with some locations, such as a busy downtown area, to operate at an even lower Level of Service during peak times. Many communities also use their Level of Service standard to develop and prioritize projects to improve transportation facilities and services as well as to regulate growth and development.

3.1.1.3.2 Current Deficiencies

The Trent and Neuse Rivers form barriers to development in certain portions of the Urbanized Area, and provide limited access reaching portions of the City of New Bern as well as the Town of Bridgeton. US Highway 70 (Future I-42), a major facility, bisects the unincorporated James City. The Neuse River also forms a barrier on the east side of James City, portions of Craven County and the north side of New Bern.

Figure 3-4 shows the level of existing congestion in the New Bern MPO area in the PM peak period based on the travel demand model. Not many roadways except US 70 and spot locations near interchanges in the NBAMPO are currently experiencing significant congestions during peak periods. These correspond to LOS D, E & F, which means the vehicular demand is near or greater than the estimated carrying capacity for these facilities. Other facilities have a LOS of C or better.

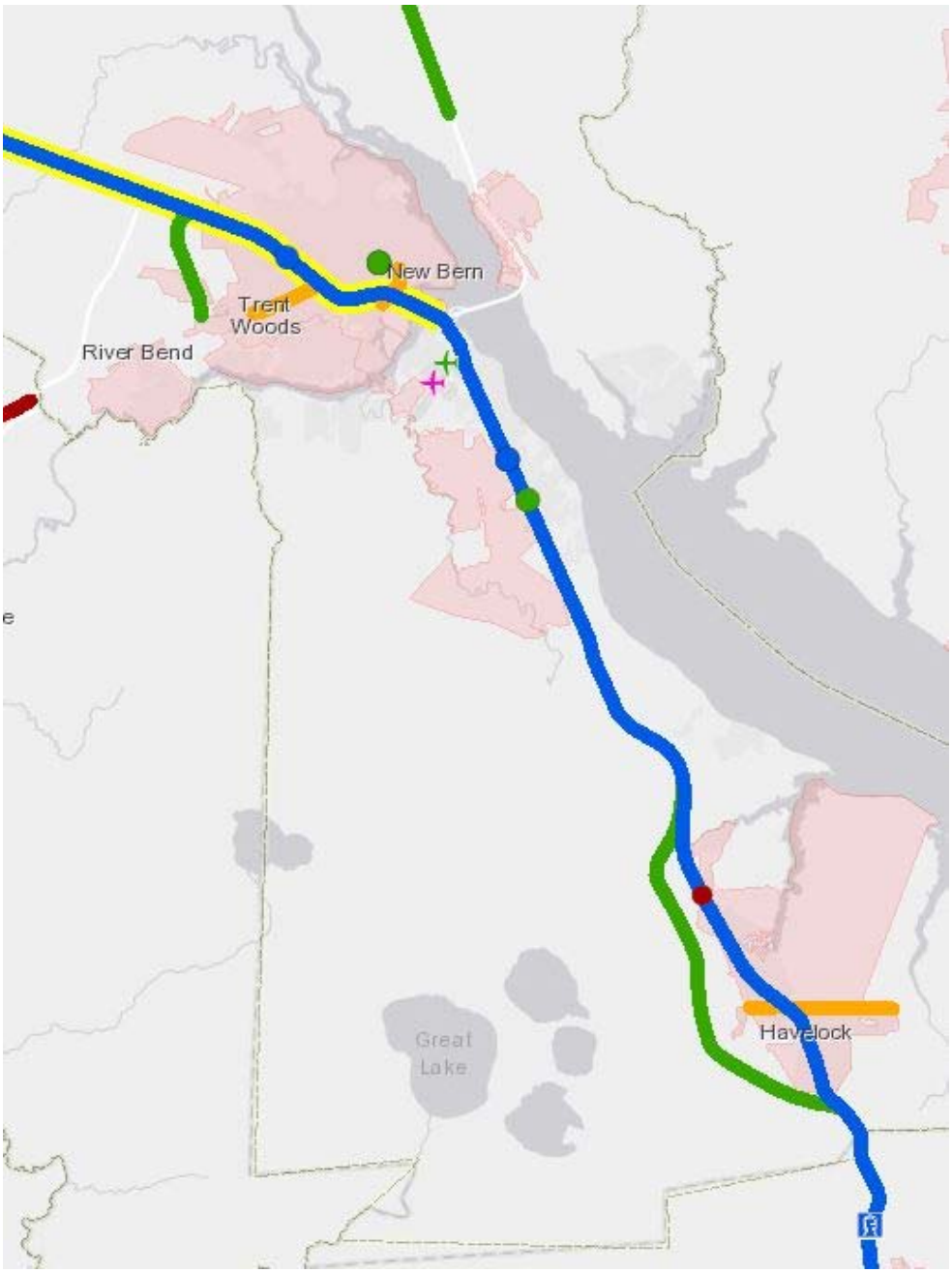
Figure 3-4: Existing Volume to Capacity: PM Peak Period



3.1.1.4 Projects Funded in the STIP

A variety of interstate, other roadway, aviation, bicycle, pedestrian, transit, and passenger rail improvements in the NBAMPO region are included for funding in the 2020-2029 State Transportation Improvement Program (STIP). As a result of the latest two-year prioritization process, P5.0, thirteen new projects have been added to the final 2020-2029 STIP, including, a superstreet upgrade and a variety of public transit projects. Refer to Figure 3-5 and Table 3-1 for the location and list of projects included in NCDOT 2020-2029 STIP.[8]

Figure 3-5: NBAMPO NCDOT 2020-2029 STIP Projects*



*Source: NCDOT 2020-2029 STIP Map. *Disclaimer: All projects shown are NOT part of NBAMPO*

Table 3-1: 2020-2029 STIP Project List

STIP	DESCRIPTION	PROJECT DESCRIPTION
AV-5808	Coastal Carolina Regional Airport	Design and construction of taxiways, taxi lanes, and apron areas
AV-5891	Coastal Carolina Regional Airport	Runway extension
I-6002	US 70 (Future I-42)	Dover in Jones County to Neuse River Bridge in New Bern. Pavement rehabilitation
R-2301	US 17 (New Bern Bypass)	US 17 South of New Bern to US 17 North of New Bern. Four lane divided freeway on new location
R-3403	US 17	Mills Street in Bridgeton to NC 43. Widen to multi-lanes
R-2513	US 17	NC 43 to SR 1438 (Spruill Town Road). Widen to multi-lanes
R-4463A	NC 43 Connector	NC 43/NC 55 to US 17 in New Bern. Construct on new location with interchange at US 70.
R-5777	US 70	SR 1124 (Grantham Road) to the proposed US 70 Havelock Bypass. Upgrade roadway to freeway
R-1015	US 70 (Havelock Bypass)	North of Pine Grove to north of Carteret County Line. Construct new multi-lane facility on new location
U-5713	US 70	SR 1124 (Grantham Road) to Neuse River Bridge. Upgrade roadway to freeway
U-6102	US 70	SR 1309 (Glenburnie Road). Improve interchange
U-6198	US 17 Alternate (MLK Jr Blvd)	US 70 to SR 1278 (Trent Road). Upgrade to superstreet
U-5993	NC 55 (Neuse Boulevard)	US 17 Business (MLK Boulevard). Construct roundabout

3.1.2 Future System

3.1.2.1 Access Management

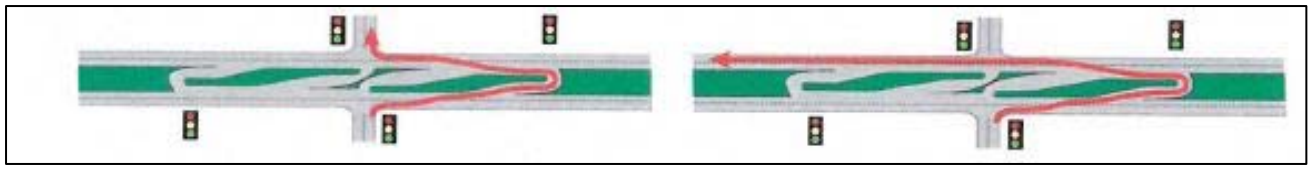
Access management is the process of improving the overall traffic flow of the street system without having to make any major roadway widening or other physical capacity improvements. Arterial and collector streets with good control of access points can accommodate significantly more traffic than a roadway that does not have good access control. Access management encompasses a wide range of transportation system elements to minimize vehicle conflicts and improve safety. Potential elements include consolidation and control of access points, center medians, turn restrictions, strategic signal locations, and other things.

It is always easier to develop a sound access control plan for an arterial while it is being designed, with strategic locations for access defined prior to development, than it is to retrofit a corridor that has been developed without strict access control.

As new facilities are built, locations for future access points and the type of access should be determined in order to promote safe, smooth traffic flow and minimize conflicts. Setting the expectations for where the adjoining landowners can gain access to the public road and where access will not be granted early in the process is vital and helps both the design of the road and the design of the adjoining development parcels. Access management techniques are not just an option for better transportation planning. They are major tools for protecting the public investment in the roadway system and for keeping major roadway corridors safe and operating efficiently. Small,

incremental changes to the access plan for a corridor can have large, cumulative effects over time. Those small changes if granted can cause operational problems that impact a wide area of the roadway network and can have detrimental environmental and economic impacts. One such corridor is U.S. Highway17 Business (Martin Luther King Jr., Boulevard) with a proposed Synchronized Street (Superstreet) design treatment. (Refer to Figure 3-6)

Figure 3-6: Synchronized Street Diagram



The Synchronized Street concept refers to a reconfiguration of a traditional intersection. It is a method to safely and efficiently manage high traffic volumes at intersections with multiple approaches along a divided highway. The Superstreet concept functions by redirecting thru and left turning traffic from the side street approach to turn right, proceed to a nearby U-turn and then return to its original course. At first, this may seem to be a complex solution to a very simple objective – to cross the intersection or to make a left turn. However, when designed correctly, it is a simple and safe solution to the problems caused by congestion.

In developed areas where minimal access control and related traffic conflicts already exist, a systematic block-by-block improvement strategy for arterials and major collectors should be developed and implemented to reduce traffic conflicts and increase capacity of the roadways so they can perform more like they were intended to do – that is to be more than a slow congested local street connecting directly with too many driveways.

3.1.2.2 Traffic Impact Study

Traffic Impact Studies (TIS) are sometimes required for new land development projects in the region. When requested, these studies are prepared by the applicant's consultant to address the proposed development's impacts on the roadway network, particularly the nearby arterial and collector streets. Typically, these studies predict the expected growth in traffic resulting from the development, define what impacts might result if the project is built, and recommends mitigation actions to offset the development's traffic impacts. As is true of most communities, the New Bern traffic impact study ordinance focuses on automobile travel and does not address transit, bicycle, or pedestrian travel impacts on the transportation system. However, if in the applicant's interest, the alternative mode of travel is sometimes discussed in the TIS report so that the vehicular traffic impacts can be decreased.

3.1.2.3 Congestion Management and Roadway Capacity Improvements

One of the focuses of the MTP is to respond to the community's desires to implement more alternative mode services and infrastructure within the NBAMPO. However, even very substantial investments in alternative modes and high usage of these non-automobile options will not eliminate the need for additional roadway capacity improvements in the foreseeable future.

Congestion management strategies can offer lower-cost solutions to some operational issues, and congestion problems, and ease some localized congestion to make the driving experience a bit more bearable at rush hour. However, these strategies often do not eliminate all congestion. The use of congestion management techniques

should be reviewed on a case-by-case basis in lieu of capital-intensive capacity improvements. While congestion management techniques may not eliminate the need for capacity improvements, they can often delay the immediate need for expensive capital improvements by implementing more cost-efficient improvements. At the same time the congestion management techniques can improve traffic flow which lessens air pollution and they can help improve safety along busy corridors.

When it comes to new or widened roadway improvements, needs almost always exceed available funding. In most cases widening a roadway is controversial considering the projects are along crowded corridors with limited right of way expansion opportunities. As a result, any methods that can keep the traffic flowing through congested areas without taking land away from businesses and homes and tearing up roads for long periods of time need to be considered before roadway lane additions are designed.

3.1.2.4 Balanced, Multimodal Street and Highway System

Developing and maintaining a comprehensive network of streets and highways that support safe automobile, transit, bicycle, and pedestrian traffic is critical to improving mobility with the NBAMPO region. Of particular concern is the development of performance standards for pedestrian, bicycle and transit rider mobility that can be used in combination with vehicular traffic standards to evaluate and develop transportation facilities. These alternative mode standards should be coupled with an ongoing program of constructing new bikeways, sidewalks and transit amenities in order to create a truly multimodal street and highway environment. Related to that vision of creating multimodal street corridors is the issue of roadway etiquette and the respect by all roadway users for all other roadway users. In particular, the motorists using public roads need to understand and appreciate that (with a few exceptions like interstate highways) bicyclists are legitimate users of roads and both cyclist and motorists need to follow all applicable traffic laws. Motorists and Bicyclists can and should view each other with mutual respect as legitimate users of roadways. Without that respect it will be very difficult to have the NBAMPO and the rest of the region grow with multimodal travel corridors that are safe and convenient as part of the region's future.

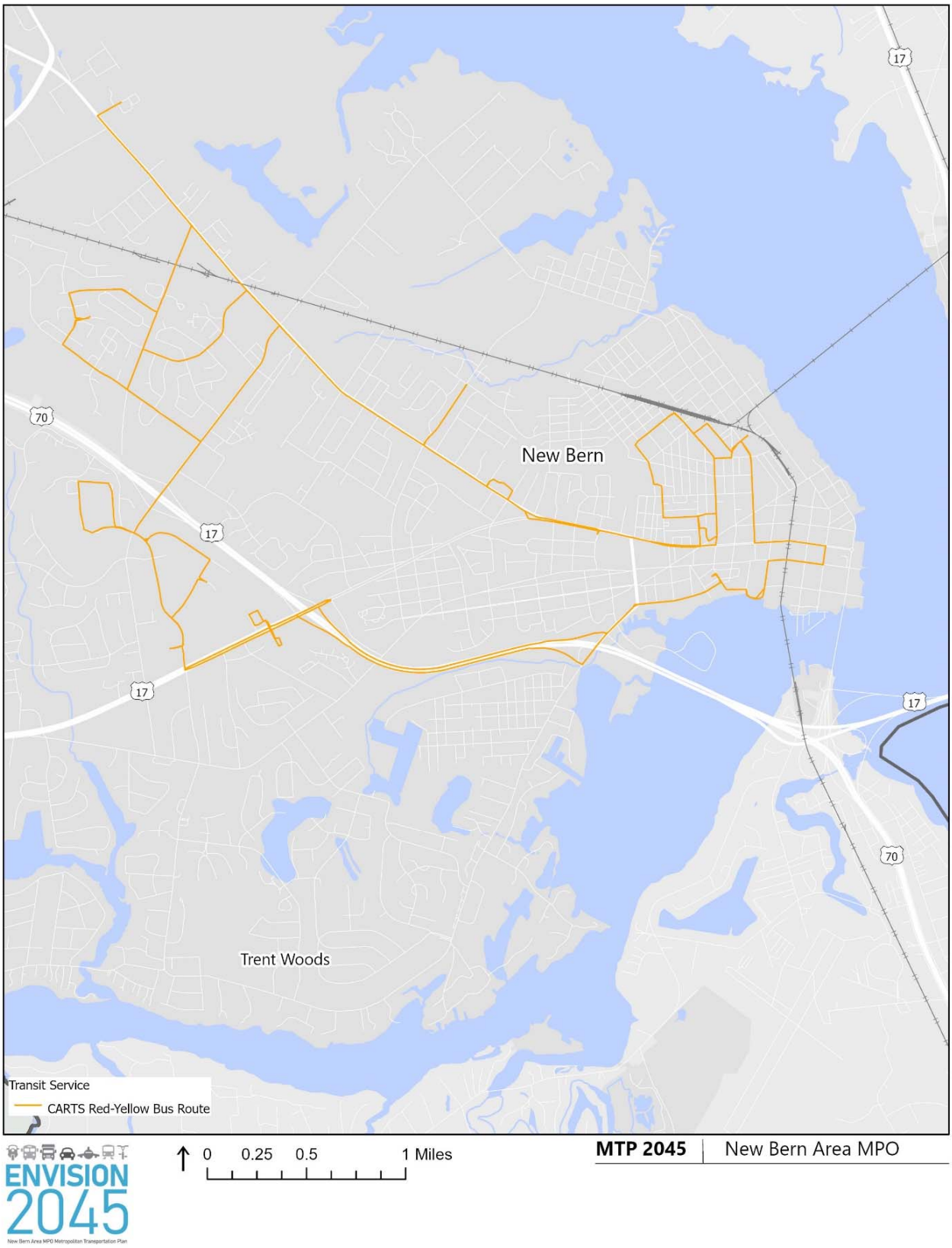
3.2 Public Transportation

3.2.1 Existing Transit

Public transportation plays a vitally important role of the multimodal transportation network in the MPO's planning area. Public transportation expands travel and mobility options for all populations, particularly: senior citizens, students and individuals without vehicles.

The Craven Area Rural Transit System (CARTS) serves the area within the NBAMPO, rural portions of Craven County as well as two additional surrounding counties. Currently CARTS offers two fixed routes, shown in Figure 3-7, providing easy access to shopping, medical destinations, local college, downtown New Bern and municipal buildings. CARTS runs six trips on each route from 8:00 am to 4:46 pm Monday-Friday. [9]

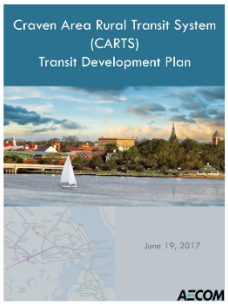
Figure 3-7: Current Transit Route



CARTS also offer a demand response service that provides access to transportation based on a schedule requiring advanced notice for pick-ups. CARTS is an urban system direct recipient of Federal Transit Administration funding, as well as maintaining the rural system.

3.2.2 Future of Transit

The future of public transportation within the MPO region is much clearer now than in the past, and it will be important to maintain and improve existing services and service levels as demand for this mobility option increases. In addition to providing services for transit dependent patrons, CARTS also offers services as an alternative to the automobile for choice riders who are not transit-dependent. These transit services may require local funding and need to be supported similar to other public services into the future. To achieve viable long-range transit service for the area to the year 2045 and beyond, a number of policies and actions are needed to guide successful implementation, maintenance,
and improvement of public transportation.



In 2017 CARTS prepared a Transit Development Plan (TDP) (http://files.www.nbampo.org/current-efforts/CARTS_TDP_Final_Report_Print.1-1.pdf) to assess existing operations and provide recommendations for the following five years. A public transit system of a size and quality commensurate with the future needs of the region is an important element of the region's transportation system. Within the Transit Plan, considerations were taken to encourage local commitments for transit service as well as maximizing all federal resources and grant opportunities to improve service and amenities of the system.

The recommendations in the CARTS TDP encompass the entire entity from administration, marketing, and education to operations, amenities, technology, and vehicles. Shown in Table 3-2, the recommendations were made to produce these seven outcomes over a five-year period:

1. Expanded services to address unmet needs
2. Increased fixed-route service coverage
3. Reduced trip durations
4. Enhanced safety and security
5. Reliable and modern vehicle fleet
6. New amenities for rider safety and comfort
7. Increased CARTS efficiency and effectiveness

For more information on CARTS, visit their website at https://www.cravencountync.gov/165/Transportation-CARTS

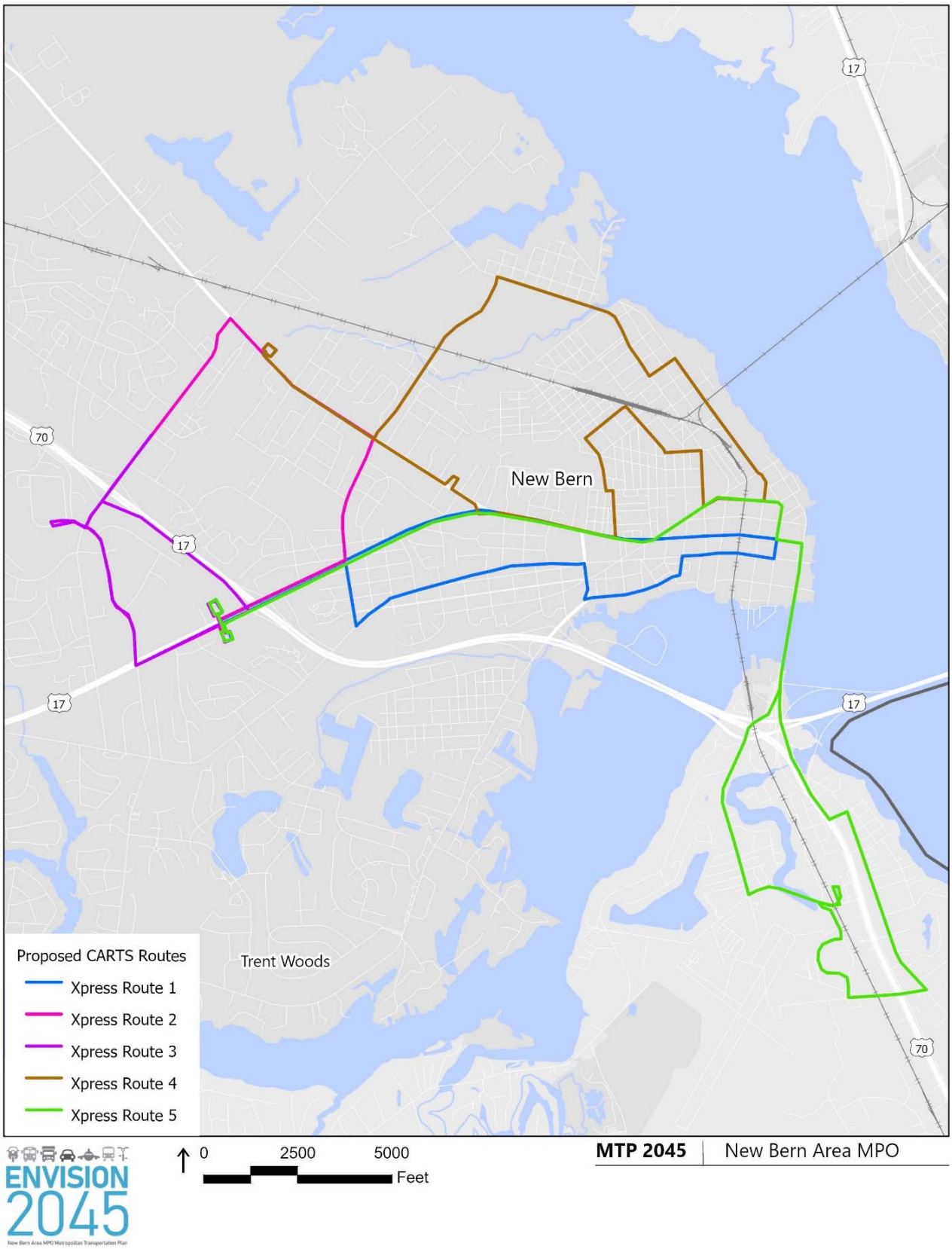
Table 3-2 CARTS Transit Development Plan Recommendations

Administration	
Update fare collection policies	Institute system to sell advance bus fares
Increase advertising	Hire mobility manager
Coordinate with NBAMPO on MTP	
Marketing and Education	
Rebrand CARTS	Update rider guide and produce schedule
Rebrand fixed route service and signage	Enhance CARTS website
Safety and Security	
Install security cameras on vehicles	Become National Safe Place partner
Conduct feasibility study for future transit facility	Institute regional ridesharing program
Xpress Routes	
Implement 5 express routes as shown in Figure 3-8	
Transit Amenities	
Develop transit stop amenity policy	Add amenities to fixed route transit stops
Provide bike racks on fixed-route vehicles	NBAMPO coordination on bike/ped improvements
Install electronic signboards with "talking bus" features	Replace buses when existing vehicle life is reached

With the implementation of the Transportation Development Plan, the future of public transportation within the NBAMPO is much clearer than in the past, and it will be important to maintain and improve existing services and service levels as demand for this mobility option increases.

Investing in infrastructure and technology will assist in making fixed route transit services more attractive for riders. The goals established within this plan are all steps to improve transit and the region's multimodal transportation system.

Figure 3-8: Proposed CARTS Routes



3.3 Bicycle & Pedestrian

3.3.1 Existing Bicycle and Pedestrian Plans and Facilities

Bicycling and walking are not merely a health or recreational activity, but rather a lifestyle choice. Bicycling and walking are self-powered options that provide a viable alternative to vehicular transportation needs. Although current transportation planning tends to focus primarily on commercial and personal-use motor vehicles, bicycling is fast becoming a preferred mode of transportation for many. Incorporating alternative means of transportation, particularly bicycling and pedestrian traffic, has the potential to improve the region's transportation system for all users. The US Department of Transportation Policy Statement on Bicycle and Pedestrian Accommodation Regulations and Recommendations states, "Walking and bicycling foster safer, more livable, family-friendly communities; promote physical activity and health; and reduce vehicle emissions and fuel use."[10]

Planning must consider all transportation uses, not just motorized vehicles. Individuals who cannot or prefer not to drive should have the same safe and efficient transportation choices as those offered to drivers. Pedestrian and bicycle facilities should meet accessibility requirements and provide safe, convenient, and interconnected transportation networks. Care must be taken in rehabilitating existing motor routes and future roadway improvements, to consider how these routes, particularly major arterial routes, have in the past created barriers for both bicyclists and pedestrians.

3.3.1.1 Types of Bicycle & Pedestrian Facilities

When considering bicyclists, it is important to remember different types of cyclists may have a preference on different types of facilities. These facilities include:

Bikeway: A generic term for any road, street, path or way in which some manner is specifically designated for bicycle travel, regardless of whether such facilities are designated for the exclusive use of bicycles or are to be shared with other transportation modes.

Shared Use Path (SUP): Typically, a 10' wide facility physically separated from motorized vehicular traffic by an open space or barrier and either within the highway right-of-way or within an independent right-of-way. Shared use paths may also be used by pedestrians, skaters, wheelchair uses, joggers and other non-motorized users.

Bicycle Lane: A portion or a roadway which has been designated by pavement markings, striping, and if used signing for the preferential or exclusive use of bicycles.

Bike Route: A roadway or bikeway which has been designated by signing as a preferred route for bicycle use. This can be done with signs and pavement markings.

Shared Lane Marking 'Sharrow': A pavement marking used to indicate in appropriate bicycle positioning in a lane of travel used by both bicyclists and motor vehicles.

Sidewalk: A portion of a street or highway right-of-way, beyond the curb or edge of the roadway pavement which is indented for use by pedestrians. In New Bern, it is legal for bicyclists to ride on the sidewalk except Downtown.

Path or Trail: Off road path not surfaced with a hard material (concrete or asphalt) and often built for recreation and not built to any particular standard.

The NBAMPO has completed numerous improvements to bicycle and pedestrian infrastructure in recent years that include:

- Sidewalk system along Neuse Boulevard from US 17 Business (Martin Luther King Jr. Blvd.) to Glenburnie Road
- Boardwalk along the Trent River
- Road diet with bicycle lanes and sidewalks on either side of traffic along First Street
- Road diet with bicycle lanes on either side of traffic along Trent Road, shown below in Figure 3-9: Trent Road Diet.

Figure 3-9: Trent Road Diet

Before After

Refer to Figure 3-10 and Figure 3-11 for existing Pedestrian and Bicycle facilities.

Figure 3-10: Existing Bicycle and Pedestrian Facilities

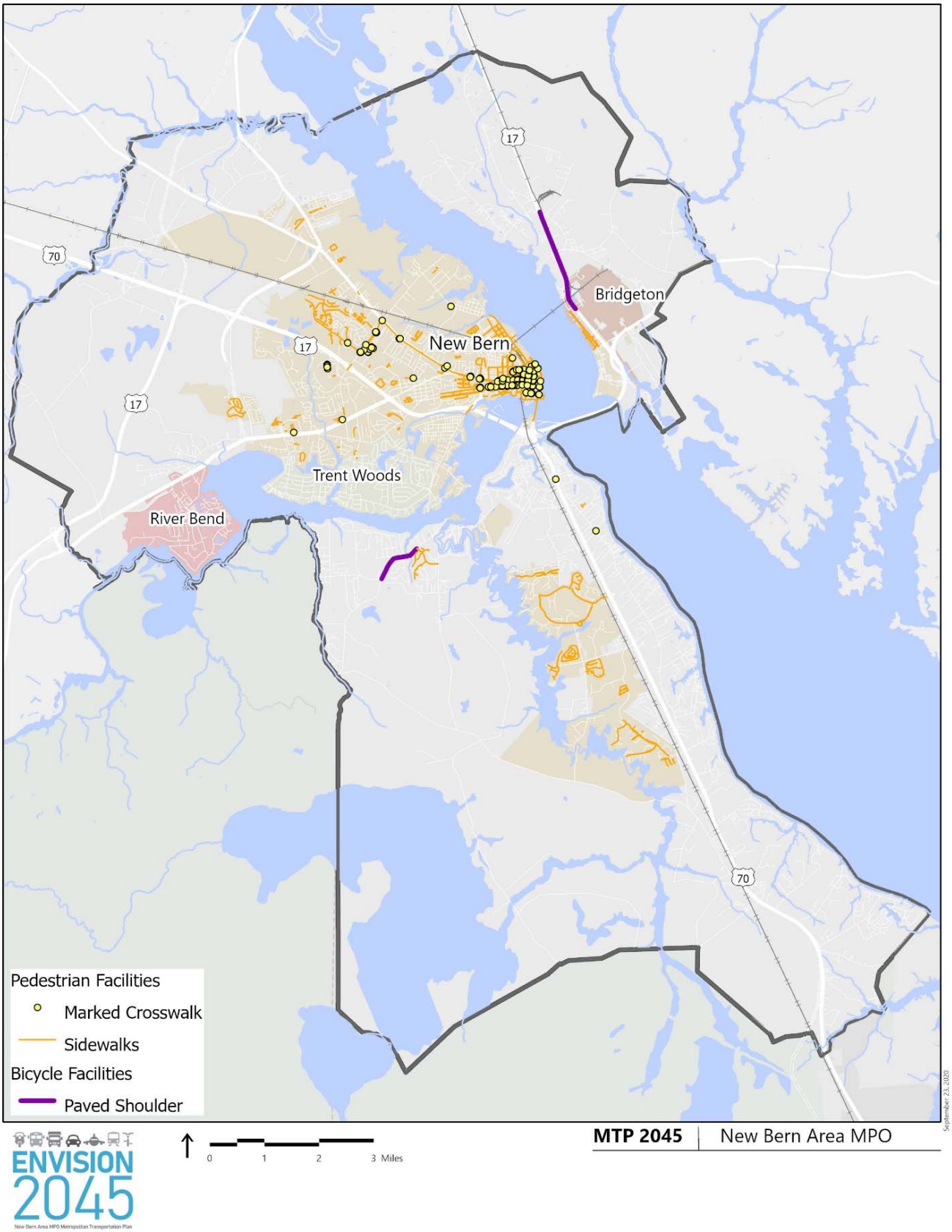
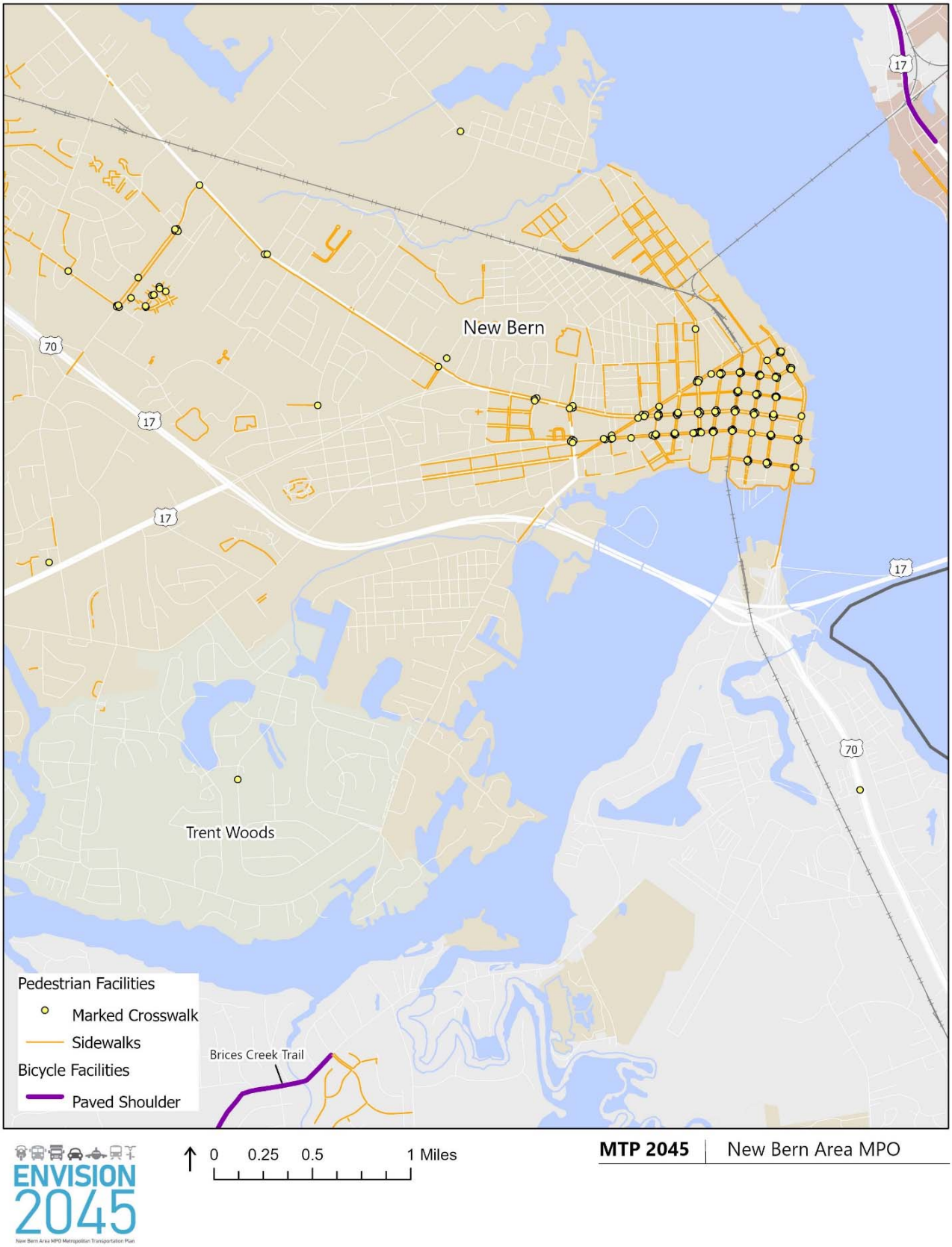


Figure 3-11: Existing Bicycle and Pedestrian Facilities (Downtown inset)



3.3.2 Future Bicycle and Pedestrian Plans and Facilities

3.3.2.1 Local and State Guidance

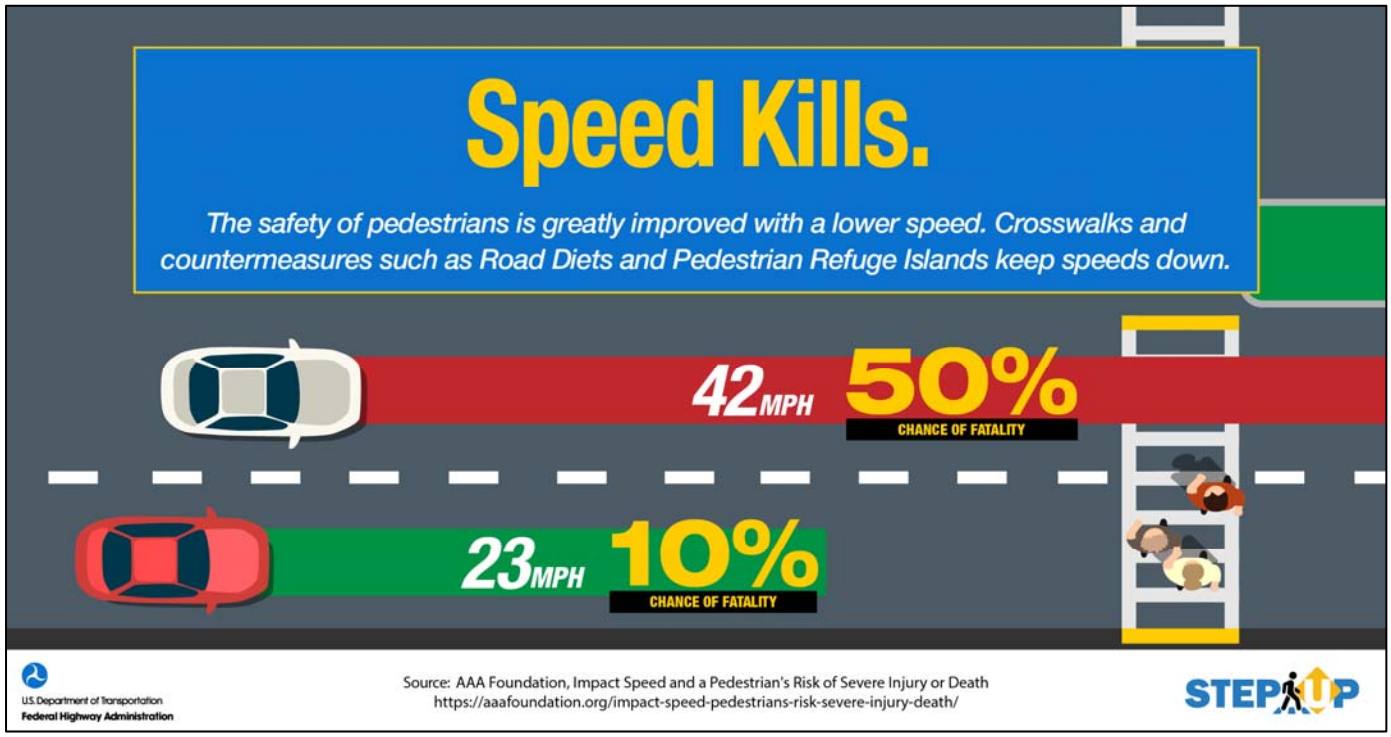
The City of New Bern's Land Use Plan requires both new construction and commercial improvements to incorporate pedestrian facilities into the design. At the state level, the STIP projects are developed through a prioritization process and during this all bicycle and pedestrian facilities are considered.

3.3.2.2 Street Crossings

Street crossings may be the "Achilles Heel" of the pedestrian system. Street crossings place the pedestrian in the middle of the street and expose them to potential conflicts with automobiles. The measurement of pedestrian level of service (LOS) for a street crossing becomes very complex and the achievement of a high LOS requires significant investment. There are some key elements that need to be examined when measuring a street crossing's level of service.

Figure 3-12 shows the probability of a fatal crash with various speed categories. A 23mph roadway has a 10% chance of a fatality whereas the percentage increases to 50% for 43mph. the number of lanes a pedestrian has to cross also increases the time it takes for them to cross the street which increases if they have a stroller or in a wheelchair. For an average pedestrian walking at 3 miles per hour (4.4 feet per second), it takes approximately 3 seconds to cross one 12' traffic lane. If bike lanes are present, an additional 2 seconds is needed. On-street parking on both sides of the street adds another 4 seconds. When determining the total time necessary for a walk signal phase, an additional 3 second cushion of safety is recommended. Older adults, children, areas of high pedestrian density and mobility impaired pedestrians take longer to cross.

Figure 3-12: Ped Crossing Facts



3.3.2.3 Visual Interest and Amenity

To promote pedestrian activity in a public area, the pedestrian system needs to be aesthetically appealing. The attractiveness of the pedestrian network can range from visually attractive, with enhancements like street lighting, fountains, and benches to an experience of discomfort and intimidation associated with the absence of amenities. Areas to examine regarding visual interest and amenity include the following elements.

Constraints to biking and walking within the NBAMPO include:

- **Safety –** Quantity, high speed and distracted vehicular traffic, especially on major roads and during certain times of the day and year, can threaten the safety of bicyclists (and car drivers) and be a prohibitive factor in citizens choosing bicycling as a viable means of transportation; personal safety of bicyclists (or perceived safety) is also a factor, particularly for children, elderly people, and women (e.g., isolated areas depending on time of day). Real or perceived threat from other people or in certain areas is a factor in whether people ride on or off road.
- **Sharing the Road Etiquette –** Bicyclists on public roadways assume the same rights and responsibilities as automobile drivers and are subject to the same state laws and local ordinances. Cyclists who take care to display correct bicycle etiquette will do much to increase the respect that motorists have of them on the road. They will also be much safer on the roads if they do all they can to obey the road traffic laws and let motorists know of their intentions. Bicyclists and motorists should view each other with mutual respect as legitimate users of roadways.
- **Existing Bicycle System –** While the existing bicycle network is an opportunity, it is also a constraint to cycling in many areas. Many routes do not provide a direct, convenient or safe means across busy streets. Some routes do not have sufficient signage. Other routes have conflicts with multiple users, or they may not provide complete linkages to desired destinations.
- **Existing Sidewalk Network –** While this network of sidewalks is an opportunity, it is also a constraint to pedestrians in many areas. Many routes do not provide a direct, convenient, or safe means across busy streets. Gaps in the existing sidewalk network also create barriers for usage and create safety issues. Some routes do not have sufficient signage. Other routes have conflicts with multiple users or they may not provide complete linkages to desired destinations.
- **Barriers –** Barriers may be manmade or natural. Topographic constraints are considered a barrier. Barriers include but are not limited to major arterials (e.g., Martin Luther King, Jr. Blvd., Glenburnie Rd., Neuse Blvd.), railroad tracks and the Trent and Neuse Rivers.
- **Signage –** Signage is an important tool not only in alerting motorists to the presence of cyclists, but also conveying the legitimacy of cyclists' rights to be on and use the roadway and paths and assisting the cyclist in choosing the most appropriate route for their skill level and trip purpose.

3.3.2.4 Bikeway System

There are numerous actions that can be taken by the residents of the NBAMPO area to improve the multi-modal function of the region's transportation system and to better incorporate non-motorized travel into that mobility network. Some of those actions involve changing physical infrastructure while other actions involve changing attitudes and perspectives on how our region's mobility system is to function and who is to use it. All actions to make the transportation system safe, more efficient and more equitable for all users are welcomed. However, certain key steps need to be taken in order to advance our region to a

higher level of truly having a multimodal transportation system which works well for everyone. Some of these key steps include:

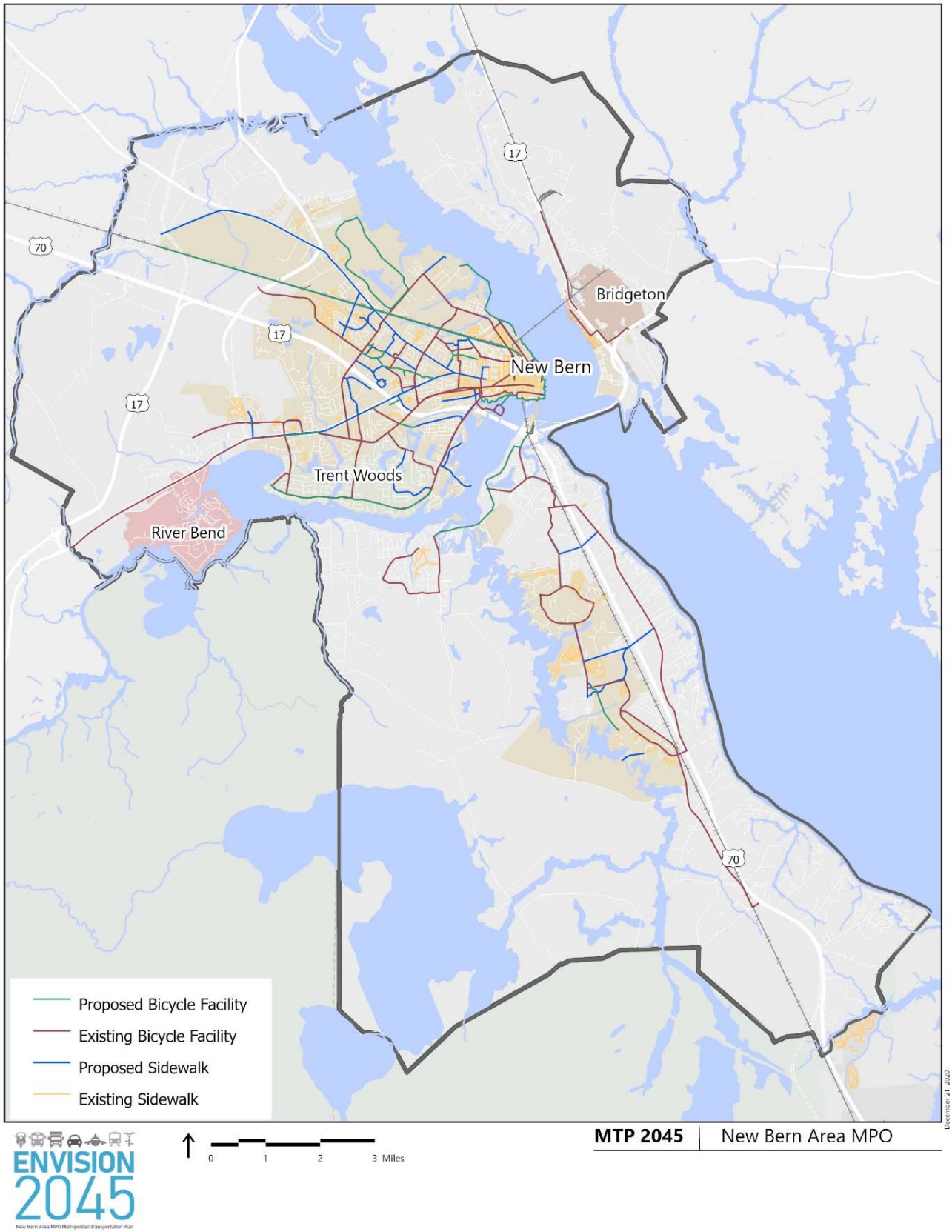
- Focus on connections to specific key destinations and the ease and safety of transportation to those areas. The typical cyclist in the NBAMPO requires safe and convenient access to connect their residence with school, employment, entertainment and shopping destinations. These linkages must provide safe access across and along high-volume arterial streets.
- Routes well suited for the commuter, multiuse rider, or fitness rider, should provide a medium-to long-range round trip, safe access, and variety. Routes that parallel main arterials are ideal, particularly for business, employment and basic shopping destinations, and such routes may encourage novice cyclists that do not like to ride on arterials with motor vehicle traffic to use cycling for more utilitarian trips.
- Treat cyclists with the same respect and legitimacy as other uses of roadways through separate signage reflecting their right to be on the roadways and duties to follow the laws.
- Expand the existing bikeway plan to provide effective access by bicycles to all areas.
- Educate the public using a variety of media outlets and community outreach about the bike plan, local and state bicycle regulations and guidelines for safe cycling. New Bern was a partner in the 2015 "Watch for Me NC" campaign. http://watchformenc.org/
- Provide alternative parallel routes for bike traffic where integration of bicyclists with motorists is unlawful (e.g., on interstate highways) or undesirable (e.g., highly congested high-speed roads with numerous driveways and sight distance problems). Where existing motorized traffic routes create barriers for non-motorized travel, provide effective accessible crossings at regular intervals.
- Continuously measure bicycle and pedestrian usage to understand traffic patterns of non-motorists and adjust planning accordingly.
- Prioritize the bicycle system plan to connect neighborhoods and large complexes to each other and with school and major shopping areas.
- Work with the school districts to encourage and educate the proportionately higher percentage of non-motorists in their populations about the bicycle system, and to better integrate the bicycle system into school campuses. The NBAMPO partnered with the Active Routes to School campaign through "Walk to School" and "Bike to School" days.
- Encourage local businesses and organizations to participate by encouraging their employees, customers and clients to choose bicycling and by providing bicycle parking and/or bike racks.

3.3.2.5 Pedestrian System

Walking is an essential part of our daily activities, whether it is trips to work, shop, school or play; after getting out of the car, off the bus or bike we walk to our final destination. Typically, pedestrian facilities are overlooked or merely added onto street improvement projects because they are required but without an extensive review of how they fit into the overall transportation system. The pedestrian part of a road project may not get the same level of design scrutiny as the vehicular part does, and the roadway improvements are not always designed as a multimodal facility but instead as a road for cars with sidewalks added as needed. However, to continue to preserve and enhance the quality of life in the region's urbanized area, an overarching pedestrian facility plan for new and improved facilities that is woven into roadway design and road network planning along with a consistent maintenance process for existing pedestrian infrastructure is needed. Development of a continuous, efficient pedestrian system in the NBAMPO is dependent on many factors, some of which include:

- Location of existing and anticipated activity areas and districts;
- Programs to retrofit established sections of town with pedestrian-oriented activities;
- Design standards and requirements for new development;
- Desired pedestrian levels of service;
- Funding for pedestrian improvements; and,
- Americans with Disabilities Act (ADA) requirements.

Figure 3-13: Proposed Ped and Bike Facilities



3.4 Freight

Freight is an important component of all communities but has taken on a changing nature in recent years. Nationally, intermodality and on-demand shipments are more important than ever, with many if not most consumer products traveling via more than one mode to get to the final destination. Truck and rail volumes are at all-time highs nationally on interstates and major Class I rail lines. Growth in e-commerce has also increased the importance of single-unit delivery trucks, yielding an increase in volumes that is especially noticeable on residential streets.

For the New Bern Area MPO, important regional connections drive much of the freight traffic. The majority of freight corridors and movements are north-south through the study area, with many trips connecting to the nearby Port of Morehead City. US Highway 70 (Future I-42) and US Highway 17 are the key truck freight routes and there are two rail lines in the study area, one of which is a part of North Carolina's main rail line owned by the North Carolina Railroad Corporation and operated by Norfolk Southern.

3.4.1 Ports

There are no major ports in the study area, but the Port of Morehead City is a little south of the study area and much of the freight traffic, particularly truck traffic, in the study area is connected with the Port of Morehead City. The Port of Morehead City is a bulk and breakbulk port, which does not currently have container operations. Because the Port of Morehead City is one of the deepest ports on the east coast has one of the shortest channels to the open Ocean, some plans consider the opportunity for the addition of container operations at this port, but significant on-land improvements would need to be made, possibly rendering this option unfeasible (see the Governor's Logistics Task Force Final Report). The Port of Morehead City saw roughly 269,000 tons of breakbulk and almost 40,000 and 1.3 million tons of bulk flow through the port in fiscal year 2018. The top commodities are phosphate fertilizers, forest products, metal products, and machinery and project cargo.[11]

3.4.2 Freight Rail

There are two Class I railroad lines in the study area, both running north south, but joining together in New Bern to form a Y-shaped rail network in the study area, shown in Figure 3-14. The western fork of the rail system, named Corridor 17, enters downtown New Bern from the Northwest, and is owned by North Carolina Railroad Corporation (NCRR) and leased to Norfolk Southern (NS). Corridor 17 connects the port of Morehead City with the major NCRR line running through Goldsboro, Raleigh, Durham, Greensboro, Winston-Salem, and Charlotte. There are an estimated 8-12 trains per day on Corridor 17 in the study area. Corridor 17 carries an estimated 2.6 to 6.0 gross million tons of freight annually.

The eastern fork of the rail system, named Corridor 41, runs along the eastern side of the Neuse River, through Bridgeton, then crossing the Neuse River to join with the aforementioned western fork. Corridor 41 is owned by Norfolk Southern and connects several smaller cities and towns in eastern North Carolina with the Port of Morehead City. Corridor 41 carries an estimated 4 trains per day, and up to 2.5 gross million tons of freight annually.

The two corridors converge and join in downtown New Bern, around Crescent Street and Guion Street. The joint corridor, now also named Corridor 17, runs through downtown New Bern, including about one-half mile of track that runs down the center of Hancock Street. The rail crossings along this section do not have gate arms, but trains move slowly in this stretch. South of downtown New Bern, Corridor 17 crosses the Trent River then runs roughly parallel to US Highway 70 (Future I-42) to the Port of Morehead City. This section of rail line carries about ten trains per day and an estimated 0 to 2.5 gross million tons of freight annually.

Corridor 17 carries a low volume of freight traffic between New Bern and Morehead City and services two large grain elevators that support the agricultural industry, a major contributor to the local economy. Additionally, this route connects to Corridor 41 in New Bern to serve a large paper mill north of the city.

The corridor between Selma and Morehead City was prioritized as an Investment Tier level corridor by the *North Carolina Comprehensive State Rail Plan* (NCDOT, 2015). An update to the State Rail Plans is currently underway and is in the final stages of approval. Future plans propose siting a new intermodal facility to serve North Carolina and the Triangle Region somewhere in the eastern part of the state, which could be a valuable connection to Morehead City. Additionally, NCDOT is currently evaluating the feasibility of realigning the freight corridor from New Bern to the proposed Havelock Bypass. This project would potentially relocate part of the NCRR/NS line (Corridor 17) from downtown New Bern to south of the City. A new alignment would avoid commercial, residential, and light industrial development along US Highway 70 (Future I-42) but cross US Highway 17.

The Port of Morehead City could possibly be a major freight rail connection in the future. Currently, only 0.3 percent of goods by weight that are being exported at North Carolina Ports (Port of Morehead City and Port of Wilmington) are being moved by rail only. For imports, only 4.6 percent of imports to North Carolina Ports are being moved by rail only. Much of the freight moving in and out of these ports is currently being carried by trucks. NCRR and NCDOT are currently evaluating the feasibility of realigning the rail corridor going through downtown New Bern from New Bern to the proposed Havelock bypass. This project would potentially relocate part of the NCRR/NS line (Corridor 17) from downtown New Bern to south of the city. A new alignment would avoid commercial, residential, and light industrial development along US Highway 70 (Future I-42) but cross US Highway 17.

As shown in Table 3-3 and Table 3-4, the MTP study area has 42 at-grade rail crossings, including six in Bridgeton, 11 in James City, and 16 in New Bern. Of these 42 crossings, 22 have gates and flashing lights, four have flashing lights only, eight have crossings only, and eight have no control devices. Most of the at-grade crossings outside of downtown New Bern, for both corridors, have gates and flashing lights. The crossings in downtown New Bern typically only have crossings or flashing lights, lacking gates. The at grade railroad crossings and various control device types are shown on Figure 3-15.

Table 3-3: At-Grade Rail Crossing Locations

Location	Count
New Bern	16
James City	11
Bridgeton	6
Other	9
Total	42

Table 3-4: At-Grade Rail Crossing Control Devices

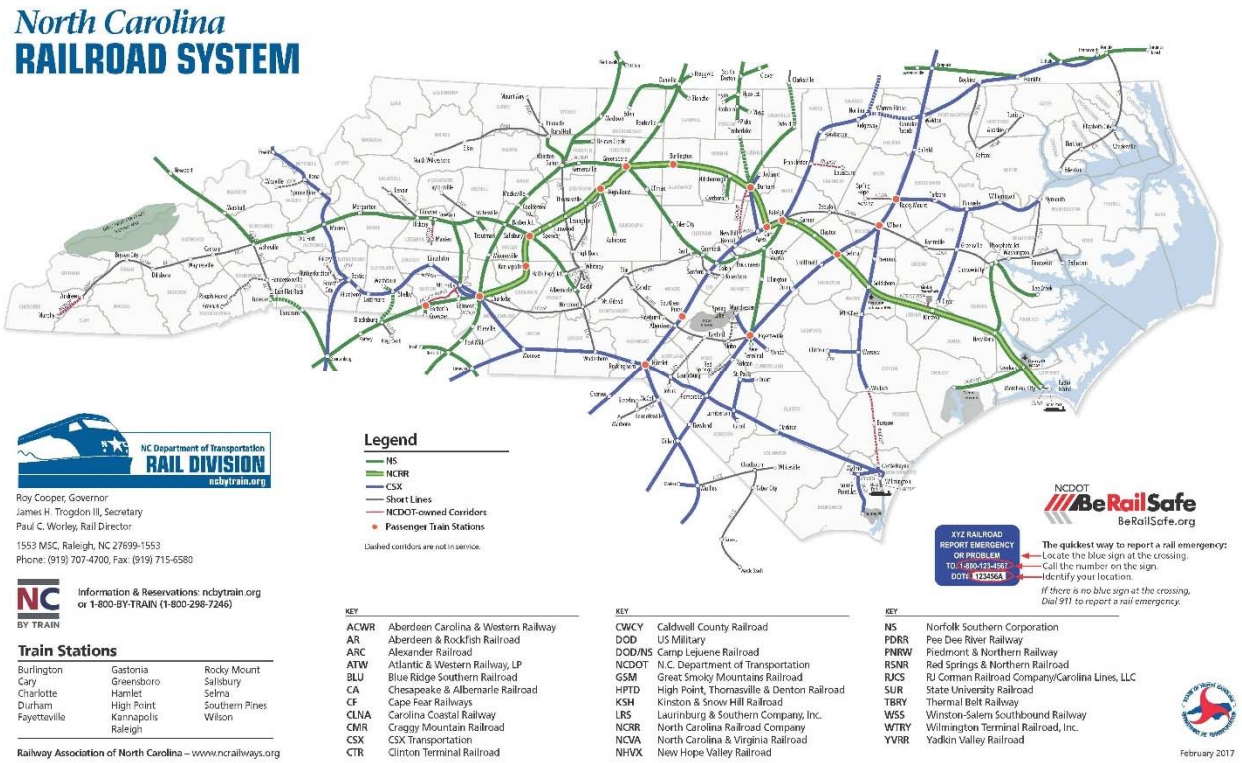
Control Device	Count
Gates and Flashing Lights	22
Flashing Lights Only	4
Crossbucks Only	8
No Control Device or No Data	8
Total	42

Craven County has 75 rail crossings. Over the last ten years, there have been eight crashes between trains and vehicles at at-grade rail crossings, as shown in Table 3-5. There were no fatalities and four with injuries. All eight crashes were at public crossings. The eight crashes in Craven County over the last ten years places Craven County tied with two other counties for the 6th most crashes in North Carolina. The eight crashes represent 1.7% of all crashes in North Carolina. The four injuries represent 3.2% of the total injuries in North Carolina over the last ten years.[12] Four of these accidents were with Norfolk Southern trains (the only company operating on the two corridors passing through the area).

Table 3-5: Ten Year Craven County At-Grade Rail Crossing Crash Data per FRA

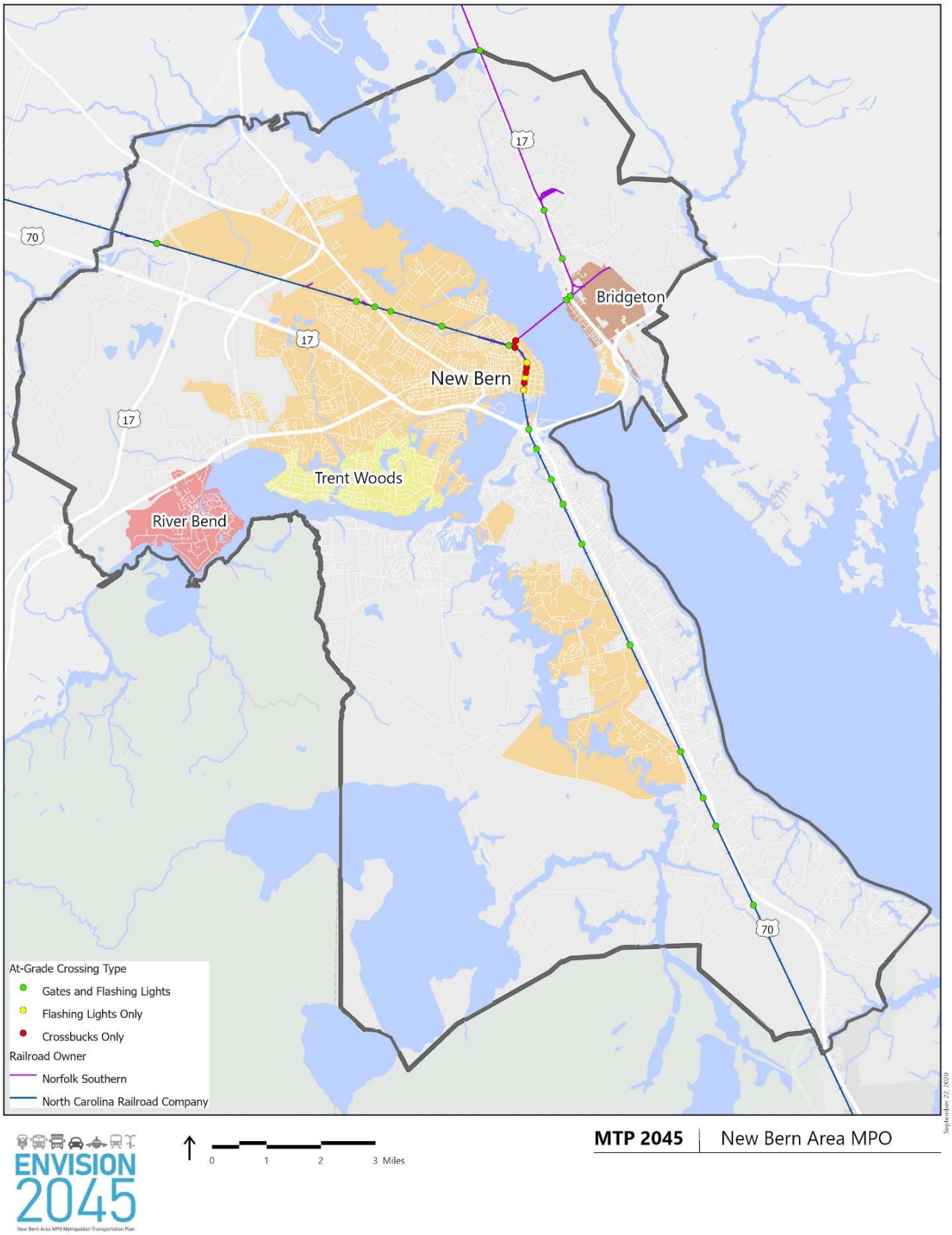
	Ten-Year Craven County Count	Percent of NC Total
Crashes	8	1.7%
Injuries	8	3.2%

Figure 3-14: NC Rail Network



Source: https://www.ncrailways.org/images/M_images/NCRailMap_Directory_February-2017.pdf

Figure 3-15: NCDOT Railroad Corridors and Crossing types



3.4.3 Trucking

There are routes in the study area designated on the North Carolina Truck Network – US Highway 70 (Future I-42) and US Highway 17. Neither route has trucking restrictions. US Highway 70 (Future I-42) runs through the study area from the northwest to the south, running just south of downtown New Bern. It is the primary east-west route, providing connections to the Port of Morehead City, I-95, I-795, I-40, the North Carolina Global TransPark, and several cities and regions including Goldsboro, the Triangle, and the Triad.

US Highway 17 runs southwest to northeast through the study area, joining with US Highway 70 (Future I-42) for a portion in New Bern. It then splits off and crosses the Neuse River heading north through Bridgeton. US Highway 17 runs roughly along the North Carolina coast, connecting the Port of Wilmington, Jacksonville, Camp Lejeune, New Bern, Washington, and Elizabeth City. It is not as important a route as US Highway 70 (Future I-42) for freight in the study area.

Table 3-6 shows Average Annual Daily Traffic (AADT) counts, single-unit truck (SU) counts and percentages, and multiple-unit truck (MU) counts and percentages for US Highway 70 (Future I-42) and US Highway 17 in the study area. In 2017, US 70 had an Average Annual Daily Traffic (AADT) between 13,000 and 54,000 in the study area. Single-unit (SU) truck counts were between 540 and 1,720 per day or roughly 3-4 percent of the AADT on that corridor. Multiple-unit truck counts were between 800 and 1,390 per day or roughly 3-6 percent of the AADT on that corridor. Figure 3-16 shows the truck volumes, both single-unit and multiple-unit, on roads in the study area. There are no posted bridges (bridges with restrictions on heavy vehicle use) in the study area.

Table 3-6: Truck Volumes on Truck Network Roads

	AADT Range	SU Count	SU Percent	MU Count	MU Percent
US 70	13,000 - 5,000	520 – 1,720	3% - 4%	800 – 1,390	3% - 6%
US 17	7,700 – 29,000	210-1,070	3% - 4%	260-600	2%-3%

Figure 3-16: Truck Volume Map

3.4.4 Freight Priorities

The US Highway 70 (Future I-42) corridor is a major freight route, providing connections between the Port of Morehead City and the population centers in the state, as well as key interstate routes. In the previous statewide transportation plan, US Highway 70 (Future I-42) between the Global TransPark and the Port of Morehead City (which includes all of US Highway 70 (Future I-42) in the study area) was designated as a high priority freight corridor with a focus on improvements and operations. NC Moves 2050, www.ncmoves.gov, is the updated statewide plan adopted February 2021. .

Safety is always a big concern in freight. A major concern in the study area is at-grade rail crossings and proper signage and gates, since many of the crossings in the study area do not have gates. Another concern is the portion of rail track that runs down the center of Hancock Street in New Bern. This alignment has the possibility of increased conflicts between trains and vehicles, pedestrians, and bicyclists.

Congestion impacts, particularly at at-grade crossings, are another concern. The rail corridors can cut off access to neighborhoods when trains are passing, which is a concern for emergency response and traffic congestion. These effects are more acute in downtown New Bern where there are many at-grade crossings. The trains are traveling very slowly because the tracks are in the road and there are no gates at the at-grade crossings.

3.5 Intermodal Facilities

The economic success of a region depends to a large degree on its connections to the rest of the world and its ability to facilitate the movement of people and goods across and within its boundaries. Increased competition in today's global economy rewards those regions that actively plan for and pursue seamless transportation systems, which depend on efficient connections between all modes of travel including modes designed specifically for freight movements. The availability of certain needed transportation facilities and the overall transportation system service levels are important elements that companies consider when locating their business sites and employees to a new area. The people they employ and the goods they process or sell need to move around efficiently for the company to remain competitive. Fortunately for the NBAMPO region, major truck and rail routes traverse the area and make connections to other markets possible. The close proximity of the Port of Morehead City and the Global TransPark in Kinston also help freight move into and out of Craven County. These connections are important nationally and they are just an hour or less away from the NBAMPO region.

Intermodal Facilities refer to facilities where people or goods transfer between modes (e.g., combined commuter rail and bus stations, rail/truck freight transfer facilities, etc.). Intermodalism is the concept that binds the modes together so that people and freight movements can be made in the most efficient manner possible.

Although none currently exist in the local area, intermodal freight and rail facilities in Morehead City and Kinston provide the NBAMPO area with those connections to the outside world. Craven County may not have an intermodal center to handle rail-truck transfers, but large amounts of cargo and goods do travel through the region.

Truck and rail movements are essential components in the local economy and play a fundamental role in the transportation system. Truck movements serve every store in the region's commercial zones and ever major employment site with goods they need and goods they sell. The rail facilities in the area allow connection to national rail networks providing important access for local businesses to ship via rail. The railroads in the area also interact with the road system through both at-grade and grade separated railroad crossings in the region.

3.6 Aviation

The Coastal Carolina Airport (EWN) is a growing facility providing approximately 47,500 landings and takeoffs per year. Included in this is regional jet service and two major airlines, American and Delta, serving approximately 250,000 passengers annually. With connections less than an hour's flight to major hubs like Charlotte and Atlanta, growth is expected to continue. Air Cargo is processed by FedEx with a large facility located on airport grounds. UPS also utilizes the airport with daily cargo flights.

In addition to commercial flight services, the airport is also the home to Tidewater Air Services Fixed Base Operation with 83 aircraft currently based here. The airport has two runways and a 32,000 square foot commercial air carrier terminal, as well as rental car facilities. The main runway is rated at 123,000 lb. Dual Wheel strength, which is appropriate for regular usage by the commercial regional airline fleet. The main runway is also utilized for transient military training operations by Marine Corps aircraft from the two closest Marine Corps Air Stations.

The airport is poised for growth with approximately two hundred (200) acres designated and ready for new commercial development. The majority of the land has convenient runway access for aeronautical enterprises. However, some of the property will be developed for non-aeronautical businesses looking to locate warehouse and light manufacturing facilities in Craven County. There are also parcels near the commercial terminal available for gas stations, quick service restaurants and a hotel.

A runway extension is needed in order accommodate the industries trend toward larger planes and in order to maintain the 1,000' clear runway safety zones, Williams Road will need to be realigned to accommodate this requirement. Two projects for EWN are included in the Final 2020-2029 STIP. The first is AV-5891, a runway extension. The second, AV-5808, includes design and construction of taxiways, taxi lanes, and apron areas.

The information provided below was taken from the Coastal Carolina Regional Airport Master Plan dated 2012. An update to the Master Plan is currently underway and more information can be found at: https://www.flyewn.com/.

3.6.1 Airspace/Air Traffic Control/Obstructions

The Coastal Carolina Regional Airport is a controlled airport and maintains Class "D" Airspace (surface to 2,500' msl). Air Traffic Control is provided by a Federal Contract Tower, operating under an FAA contract with the facilities belonging to the airport. Traffic circulation patterns to both Runways are left hand patterns and approach and departure control is handled by MCAS Cherry Point Approach Control.

The principal close-in obstructions are found at the following locations:

Distance from Airport	Height above Mean Sea Level
5 statue miles NW from the airport	547′
5 ½ statue miles NNW from the airport	730′
4 ½ statue miles ENE from the airport	265′ & 287′
5 ½ statue miles SSE from the airport	343′ & 344′
10 statue miles NE from the airport	1,044′

Given the distances involved and the obstruction heights, no serious operational problems occur due to these obstructions.

3.6.2 Socioeconomic General Comparisons

The principal counties that are serviced by the Coastal Carolina Regional Airport are Craven, Carteret, Jones and Pamlico Counties. The population of these counties totals approximately 193,757 persons based on census data dated July 2019. These persons exclude owners of second homes that primarily live in other areas.

3.6.3 Historical Air Traffic Activity

3.6.3.1 FAA 5010 Data

Based aircraft have been increasing recently and the airport has been developing additional hangar facilities to keep pace with the demand. There are currently 83 based aircraft reported on the latest FAA report. Operations counts from the FAA-5010 forms indicate a steady 10%-15% per year increase in takeoffs and landings over the last several years. Much of the increase can be attributed to robust flight school training operations and more recently the increase in military transient aircraft utilizing the airport for a fuel stop to support local training operations.

3.6.3.2 Tower Counts

Local General Aviation operations appear to have dropped with Itinerate General Aviation operations holding strong. The Local General Aviation operations are tied to flight training, which is being revived by the Tradewinds Flight School. The Air Taxi category represents predominately commercial air carrier activity of commuter aircraft. It is assumed that the tower counts are more accurate than the FAA-5010 form counts once they are taken from daily estimates of air traffic.

3.6.3.3 Air Carrier Passenger Data

Historic air passenger enplanement counts are taken directly from monthly statistics supplied by the airlines. According to faa.gov data, commercial enplanements in 2019 were 114,123 compared to 111,172 in 2018. While there will be an expected decrease in 2020 due to the pandemic, charter activity is strong at the Coastal Carolina Regional Airport particularly in the spring with a peaking associated with camp activities.

3.6.3.4 Air Carrier Aircraft Data

All American Airlines flights go through Charlotte a primary American Airlines hub. Delta Air Lines serves the Coastal Carolina market with up to 3 flights daily to Atlanta, which is their main hub. A permanent change to regional jets occurred in 2018 and now the industry as a whole is focusing on transitioning to larger regional jets that can carry more than 50 passengers.

3.6.3.5 Williams Road Traffic Counts

Preliminary traffic counts were taken on Williams Road at the railroad crossing location in 2015. These counts indicate substantial vehicle movements particularly at peak rush hours with between 8,000 and 10,800 vehicles travelling on Williams Road in the vicinity of Airline Drive and U.S. 70. These counts could have a variety of implications if Runway/safety zone requirements dictate a relocation of this roadway.

3.7 Passenger Rail

Passenger rail is not yet available along these corridors. Amtrak runs thruway bus service from Morehead City to the Amtrak station in Wilson, NC. Additional stops include Greenville, New Bern and Havelock. Annual ridership in 2019 was approximately 2,063 rides per railpassengers.org data. Once in Wilson, passengers have access to passenger rail services via the *Carolinian* (with services from Charlotte to New York) and the *Palmetto* (with services from Miami to New York).

The *North Carolina Comprehensive State Rail Plan* (NCDOT, 2015) prioritized Corridor 17 as a Stewardship Program. The corridor was identified for future planning studies for potential thruway bus service extension and as a potential passenger rail corridor. Passenger rail service would connect Selma, Goldsboro, Kinston, Morehead City and New Bern and allow passengers to connect with the future Southeast Corridor trains as well as the existing *Carolinian* and *Palmetto*.

3.8 Waterway

The NBAMPO is surrounded by the Neuse and Trent Rivers. The waterways within the MPO area serve no freight service, rather are used for commercial and residential fishing, as well as recreation, offering wonderful boating and sailing opportunities and attracting knowledgeable anglers.

The Neuse River, six miles across at its widest point, is the widest river in America. It averages over three miles in width from the Intercoastal Waterway (ICW) to New Bern. It is also believed to be one of the

oldest rivers in the US at nearly 2 million years old. Archeological evidence indicates that early Native Americans settled near the Neuse as early as 14,000 years ago.[13]

The Trent and Neuse Rivers have had a major role in regional growth and development, serving as the primary means of transportation for area people, supplies and crops until the late 1800's.

The Neuse River flows about 275 miles southeast and is the longest river contained entirely within North Carolina. From New Bern, it is a mere 35 miles to the Atlantic Ocean. Its waters provide 2,750 acres of prime fish nursery habitat and 1,250 acres of secondary fish nursery habitats. The Trent River is approximately 100 miles long and joins the Neuse River at Union Point Park in downtown New Bern.

3.9 Safety

Safety and security planning are similar in that both focus on the safety of transportation systems and individuals who use them. Safety planning is primarily focused on internal (transport-related) events impacting the transportation system; security planning focuses on preventing or mitigating impacts from external forces such as natural disasters or man-made threats.

Traffic safety is a result of roadway characteristics, including maintenance, design, and operations. Drivers' behavioral choices also impact safety. North Carolina crash statistics from 2018 ranked Craven County 59 out of 100 North Carolina counties for crashes (NCDMV, 2018). There were 1,533 crashes on the NBAMPO roads in 2016, resulting in 887 injuries and 10 fatalities. Contributing factors like narrow road segments, periodic congestion, curves, or access management issues may decrease perceived or real safety of the NBAMPO roads.

North Carolina is working at a statewide level to address highway safety. North Carolina is a Vision Zero State and guidance towards that goal comes from North Carolina Strategic Highway Safety Plan (SHSP) which was updated in 2019 (NCDOT, VHB, UNC HSRC, 2019).[14] The goal of SHSP is to reduce the number of fatalities and serious injuries from highway related crashes and identifies nine emphasis areas that address safety issues specific to the state:

- Demographic Considerations (older drivers and young drivers)
- Driving While Impaired
- Emerging Issues and Data
- Intersection Safety
- Keeping Drivers Alert
- Lane Departure
- Occupant Protection/Motorcycles
- Pedestrians and Bicyclists
- Speed

High frequency crash locations in NBAMPO, as seen in Figure 3-17 and Figure 3-18, typically occur at congested intersections and corridors. As projects are developed, NBAMPO will determine what safety countermeasures can be implemented concurrently.

3.9.1 Intersection Safety

Figure 3-18 illustrates the top 10 high frequency crash intersections within NBAMPO. The intersections with the ten highest crash rates include:

- US Highway 17 at South Glenburnie Road (108 crashes)
- NC Highway 55 at South Glenburnie Road (91 crashes)
- US Highway 70 southbound and Williams Road (89 crashes)
- Dr. Martin Luther King Jr Blvd at McCarthy Blvd (79 crashes)
- NC Highway 55 at Simmons Street (64 crashes)
- US 70 at Thurman Road (62 crashes)
- US 17BUS at South Glenburnie Road (60 crashes)
- US 70 at Airport Road (58 crashes)
- Martin Luther King Jr Blvd at Hotel Drive (54 crashes)
- US 17 Bus at Lowe's Blvd (52 crashes)

3.9.2 Corridors

There are several corridors in NBAMPO with a higher frequency of crash rates:

- US 17/NC 55 bridge (41 crashes)
- NC 43 (from Batchelor Creek Lane to Spring Garden Road) (11 crashes)
- Martin Luther King Boulevard from Trent Road to US 17 (33 crashes)
- Neuse Boulevard at RaceTrack Road (17 crashes)

The SHSP does not include corridors as an emphasis area. However, NBAMPO will examine the crash data to determine the most frequently occurring crash type along these high-risk corridors (i.e., lane departure, speed-related) and implement the appropriate SHSP recommendations.

Figure 3-17: High Frequency Crash Locations

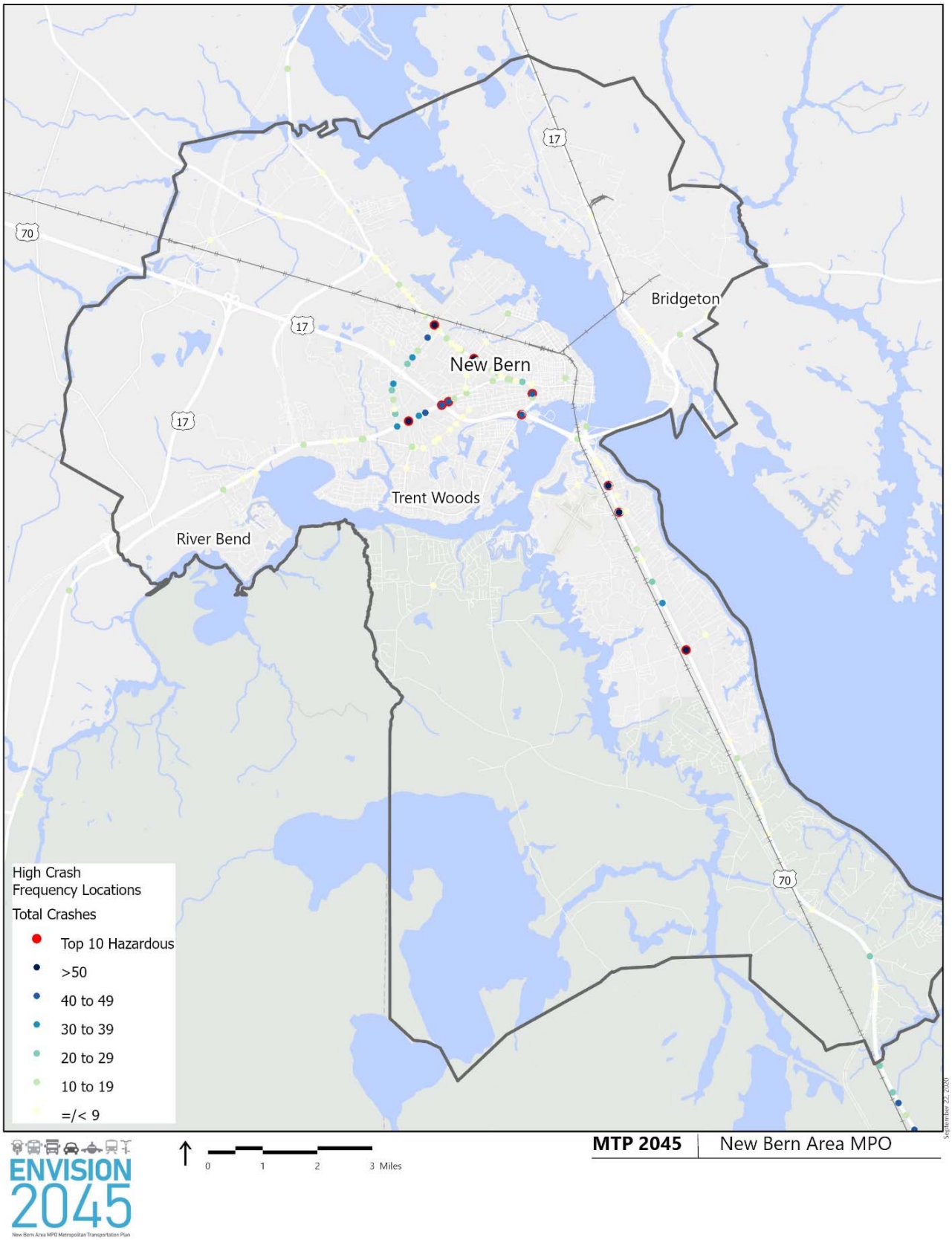
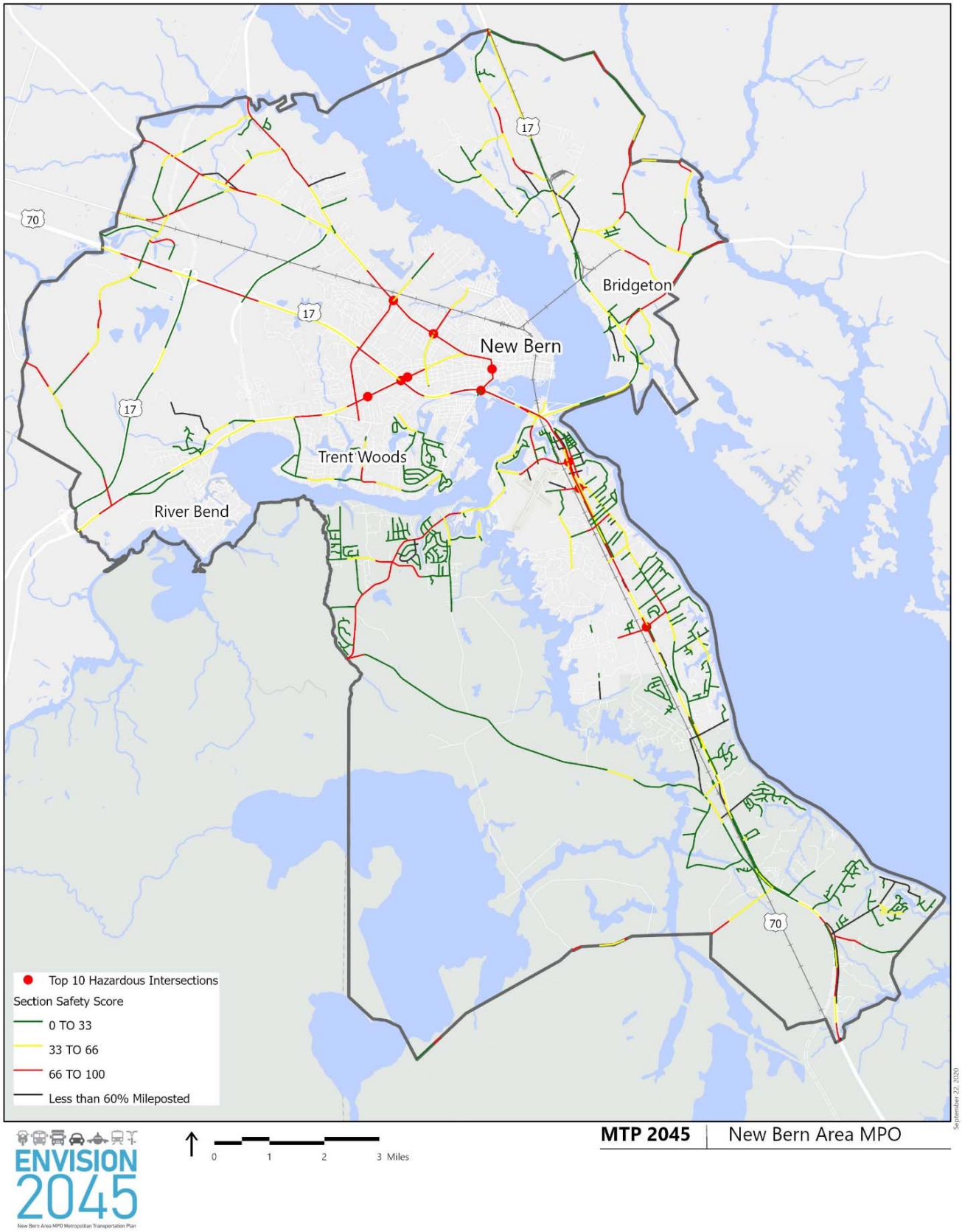


Figure 3-18: High Frequency Crash Location Top 10 Hazardous Section Safety Score



3.9.3 Pedestrian and Bicycle Safety

Bicycle and pedestrian crashes in NBAMPO frequently occur in downtown New Bern, along busy corridors, and at intersections (Figure 3-19 and Figure 3-20). Reports indicate there were 12 pedestrian or bicycle crash-related deaths between 2009 and 2018 (NCDOT, 2018). The SHSP includes specific strategies for improving bicycles and pedestrian safety (NCDOT, VHB, UNC HSRC 2019):

- Consideration of emerging topics and trends such as technologies and travel mode options.
- Revised number and focus of Emphasis Areas from 9 Emphasis Areas in the 2014 Plan to 11 in this 2019 Plan.
- Addition of five Focus Areas to group Emphasis Areas by topic to facilitate collaborative approaches for implementation.
- Expanded stakeholder engagement to include regional perspectives and more representation from all 4 Es — Engineering, Education, Enforcement, and Emergency Services.
- Build on strong bicycle and pedestrian data and evaluation programs, including targeting high-frequency crash locations for improvements and using counting techniques and surveys to understand pedestrian and bicycle movement and demand.

The *City of New Bern Pedestrian Plan* (NCDOT, 2009) proposed several improvements at pedestrian crossings to enhance pedestrian safety.

- Pedestrian signals
- Crosswalks
- Curb cuts
- Neckdowns/medians
- School crossing signage
- Yield to pedestrian signage
- At-grade improvements
- High-visibility crosswalks;
- Road diets
- Curb ramps

Additionally, several communities within the NBAMPO have bicycle and pedestrian master plans laying the groundwork for future enhancements for their residents and visitors. The projects proposed in these master plans include the addition of greenways, multiuse paths, as well as the extension of existing trails.

3.9.4 Safety Policy and Planning Recommendations

While a small number of improvements can be funded in the Transportation Improvement Program with safety-specific federal and state dollars, a comprehensive approach to safety in transportation project planning and design could have a much more significant impact. North Carolina's Strategic Highway Safety Plan highlights pedestrians and bicyclists as an emphasis area. Many of the following policy and planning recommendations for the region align with strategies found in the Statewide Plan.

- Ensure NCDOT Complete Streets policy is being followed to as part of roadway project implementation and safe pedestrian crossing facilities are included in addition to linear pedestrian and bicycle facilities- especially along corridors with transit service.
- Select several corridors with top safety concerns for a roadway safety audit (RSA) to be performed with a stakeholder group representing various agencies and backgrounds; such an RSA could be done on a relatively quick timeframe and identify both relatively quick and easy solutions as well as those requiring additional study and funding for implementation.
- Consider road diets and conversion of 5-lane TWLTL facilities to 4-lane median-divided facilities. This can reduce the number of conflicts and to decrease the frequency of crashes on major arterials.
- Within municipalities and activity centers with a mix of uses, consider implementing a lower speed limit and adopting traffic calming measures as appropriate
- When planning for new or expanded transit routes, consider pedestrian facilities and mid-block pedestrian crossings where needed.
- Consider adding more lighting in dense, mixed-use activity centers and around commercial centers served by transit, making pedestrians crossing major arterials more visible to drivers at night.

Figure 3-19: Bicycle Crashes

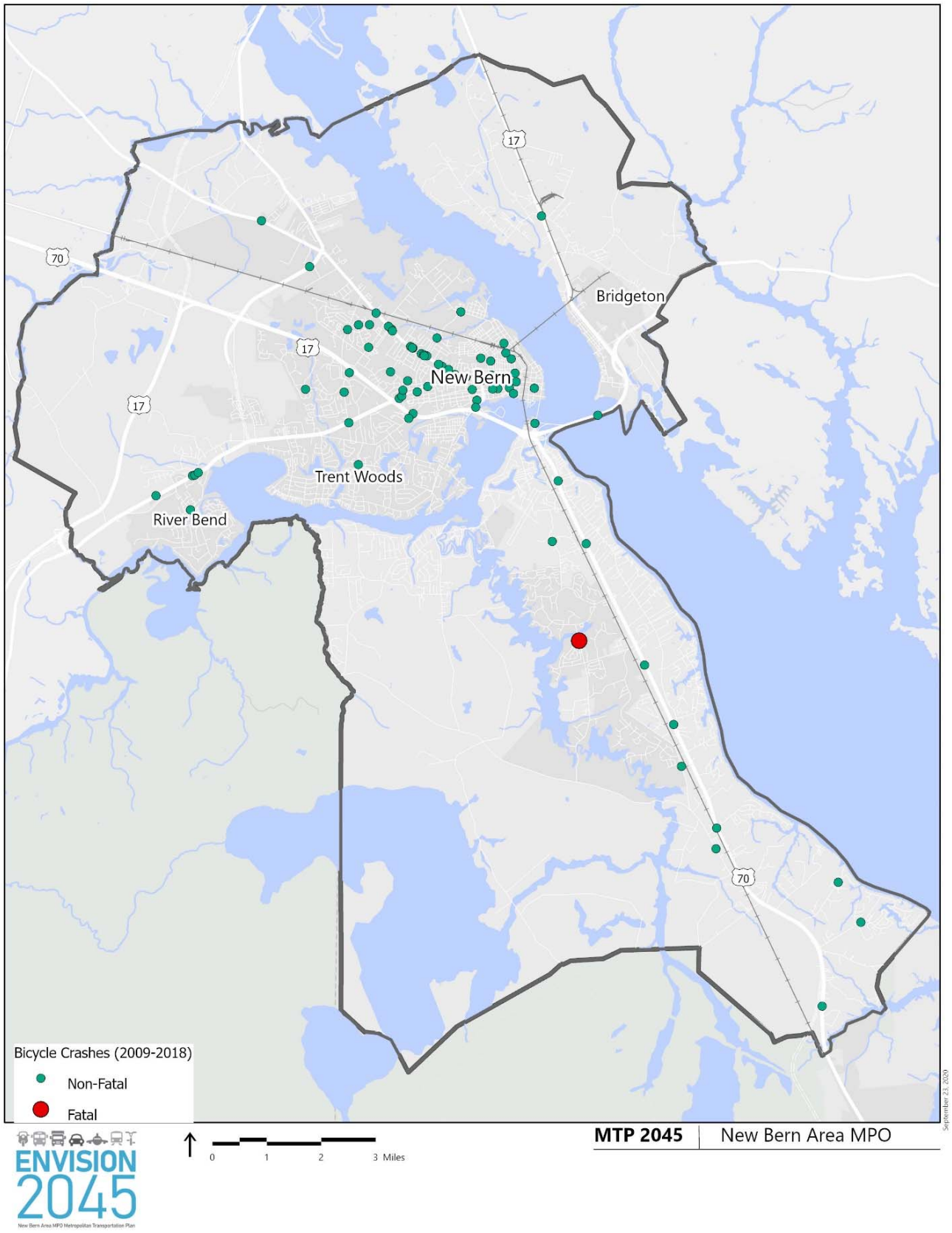
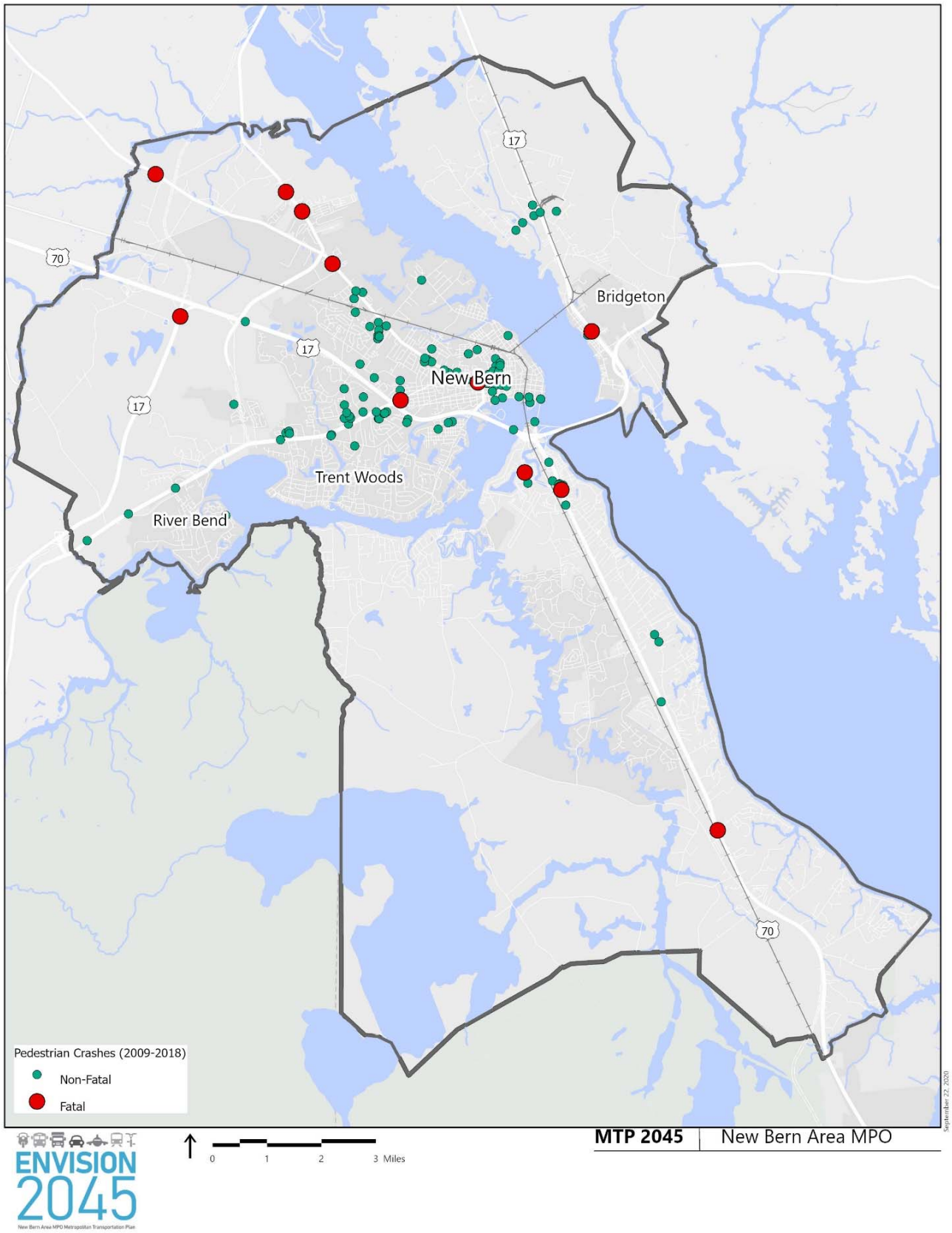


Figure 3-20: Pedestrian Crashes



3.10 Resiliency

Resiliency is defined as "the ability of communities to rebound, positively adapt to, or thrive amidst changing conditions or challenges – including disasters and climate change – and maintain quality of life, healthy growth, durable systems, and conservation of resources for present and future generations." Planning for resiliency empowers diverse stakeholders to evaluate plans, set strategic policies, and implement projects that will enable communities to adapt and thrive when faced with challenges. Natural and human-caused hazards constitute some of the acute "shocks" to which a community can be vulnerable. Other disruptive threats include longer-term societal "stresses," such as unemployment, poor access or barriers to education, crime, or homelessness. Resiliency planning can include updating land use codes, zoning, development standards, incentive programs, and other plans or policies to better prepare for likely shocks and stresses while also developing measures that allow for action in the face of uncertainty or unexpected events.

3.11 Security

Security planning is similar to safety planning as it also focuses on the safety of transportation systems and individuals who use them. Planning in support of transportation security involves issues of system resiliency under severe stress, such as natural disasters and man-made emergencies. Such incidents threaten the integrity of the transportation system, while at the same time often depending on road networks for evacuation and/or disaster relief. Within the boundaries of the NBAMPO, hurricanes and flooding are the greatest natural threats. Man-made dangers include chemical spills, fires and explosions. Terrorist threats are also of growing concern. While crime falls under the security umbrella as well, especially related to transit and pedestrian modes, these do not appear to be significant issues within the MPA boundaries. Airport security is not addressed in the context of this planning process.

The NBAMPO MTP addresses security issues by considering redundancy in major travel corridors and providing adequate capacity on alternate routes in case of incidents that close major facilities. Similarly, such routes and the capacity they provide are critical to evacuation planning, and to disaster recovery and re-supply. By emphasizing safety improvements, especially related to freight, rail and rail crossings, the MTP can reduce the potential for crashes that could result in major chemical spills, explosions or fires.

3.11.1 Strategic Highway Network (STRAHNET)

Just as New Bern's transportation system serves travel beyond the region, security issues also extend beyond the MPO boundary. The Federal Highway Administration and the Department of Defense have identified a 62,791-mile system of public roadways to be used by U.S. military personnel during emergency situations. The Strategic Highway Network (STRAHNET) is composed of interstates, non-interstates, and connectors providing mobility to and from military installations and ports.[15] There are two non-interstate STRAHNET routes, one other NHS route, and one unbuilt NHS route (FHWA, 2015) in the NBAMPO area. The STRAHNET routes are US Highway 17 Business, US Highway 17, and US Highway 70 (Future I-42). Additionally, US Highway 70 (Future I-42) is an important non-interstate connection to two locations: Marine Corp Air Station in Cherry Point and the Port of Morehead City (Military Surface Deployment and Distribution Command, 2012).

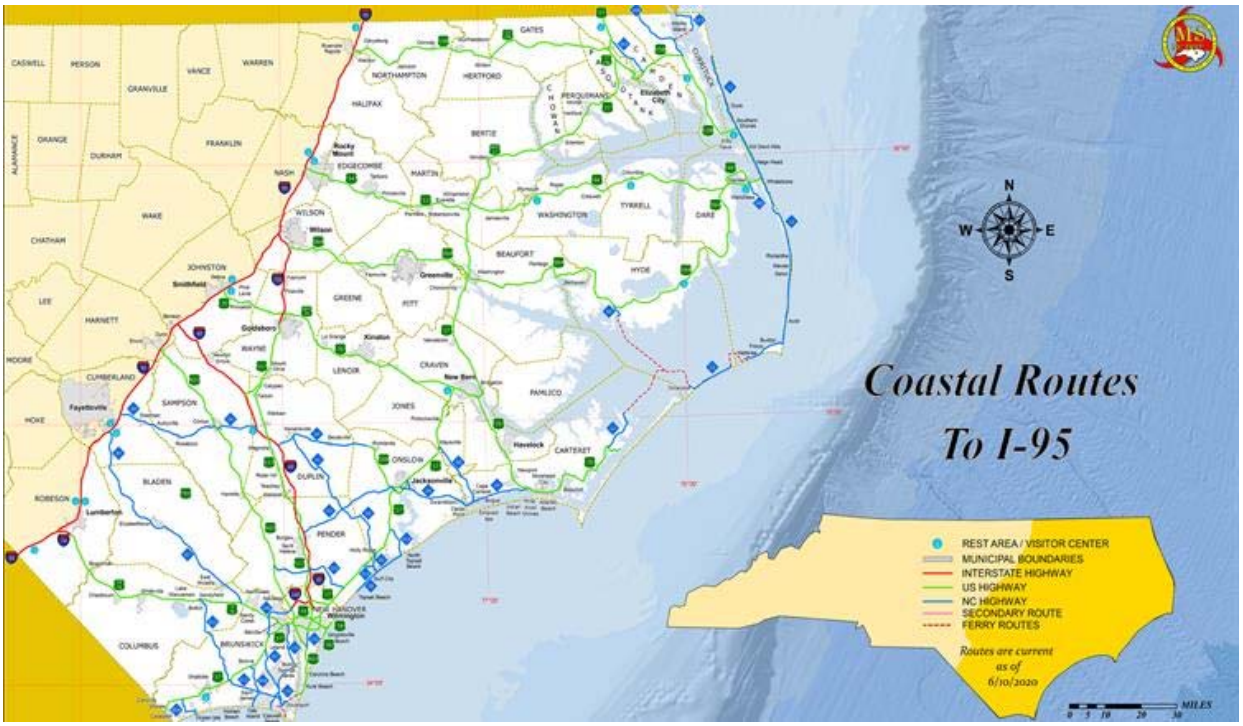
3.11.2 Craven County

The *Craven County Emergency Operations Plan* (Craven County, 2010) details the coordination and actions required by county and municipality staff.[16] The plan identifies the existing public infrastructure in the county and municipalities and determines the parties responsible for management. This includes water and sewer systems, electric distribution systems, health and medical facilities, public buildings, transportation resources and facilities, emergency services facilities, landfill and debris sites, fuel depots, and public/private supply centers. New Bern houses the Communications Center, which is operated by the Craven County Emergency Services Department and provides countywide warning systems.

3.11.3 Evacuation Routes

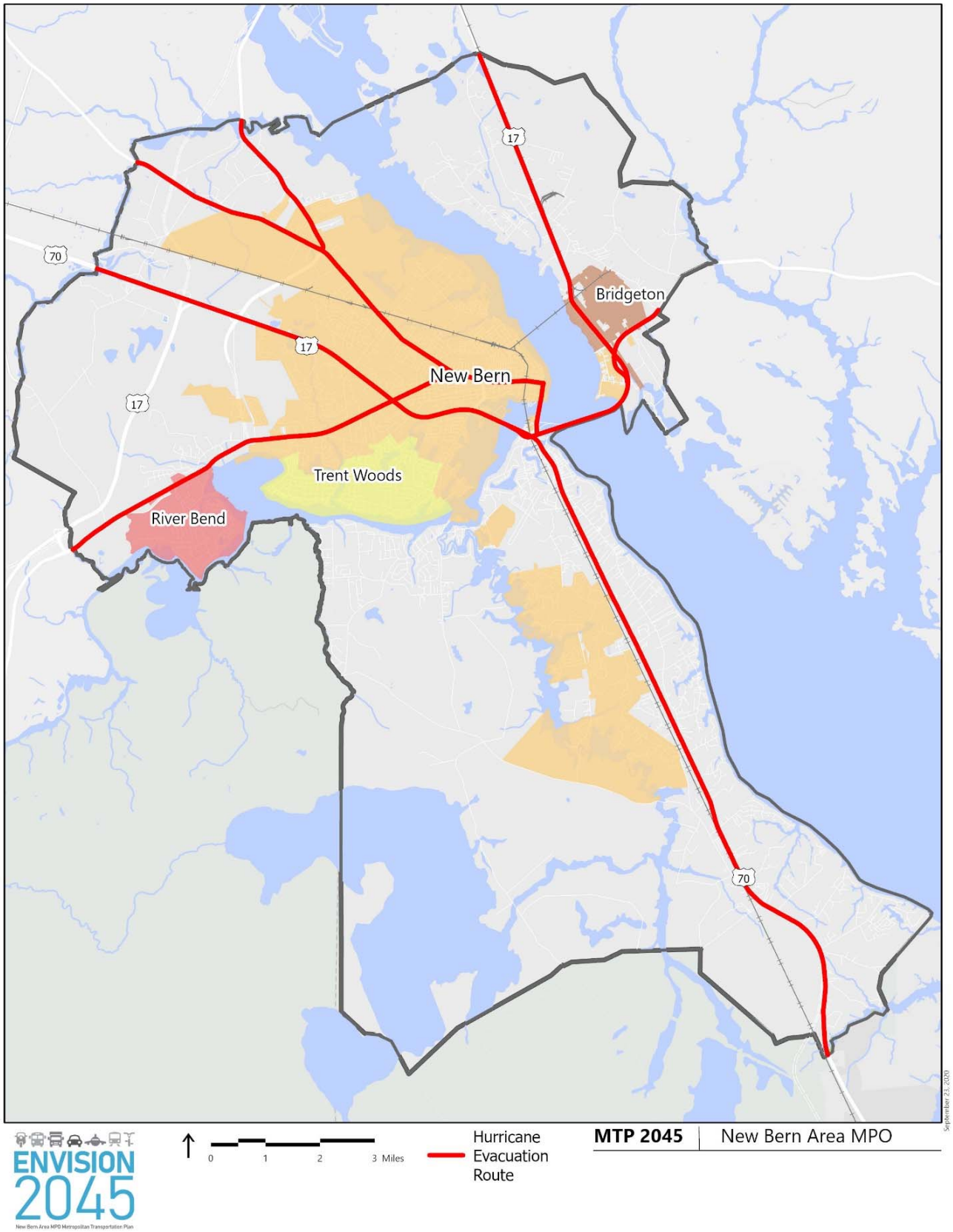
The *North Carolina State Highway Patrol Coastal Evacuation Plan* (NCDPS, 2015) details evacuation routes for North Carolina's coastal counties, as shown in Figure 3-21.[17] Details in the plan include key county contacts, local law enforcement agencies, military contacts, hospital information, and NCDOT information. Additionally, four evacuation routes are identified in Craven County: US Highway 70 (Future I-42), US Highway17, NC Highway 101, and NC Highway 43 (Figure 3-22). Primary concerns and challenges relevant to NBAMPO are the traffic flow where US Highway 17 and US Highway 70 (Future I-42) merge, and concerns regarding the Neuse River or Trent River bridges becoming impassable.

Figure 3-21: North Carolina Hurricane Evacuation Routes



https://www.ncdot.gov/travel-maps/maps/Documents/coastal-evacuation-routes.pdf

Figure 3-22: NBMAPO Hurricane Evacuation Routes



3.11.4 Strategic Rail Corridor Network (STRACNET)

One public railroad serves Craven County. Norfolk Southern Railway runs from New Bern to Washington and covers approximately 70 miles in Craven County. The Camp Lejeune Railroad traverses Craven County from MCAS Cherry Point to Stella. This corridor is part of the Strategic Rail Corridor Network (STRACNET) and is an essential rail line for supporting the movement of heavy or oversized equipment. This serves as an important line to and from MCAS Cherry Point and 170 other defense installations (NCDOT, 2015).

3.11.5 Disaster Recovery

The North Carolina Governor may declare a disaster when lives and property are threatened. In order to be eligible for FEMA Public Assistance Grants, the event must cause at least $13,254,321 in damages and have a Presidential Disaster Declaration. Roads on the Federal-Aid system must have at least $700,000 in damages to qualify for FHWA's Emergency Relief funding (*Hurricane Evacuation Peer Exchange Report).*

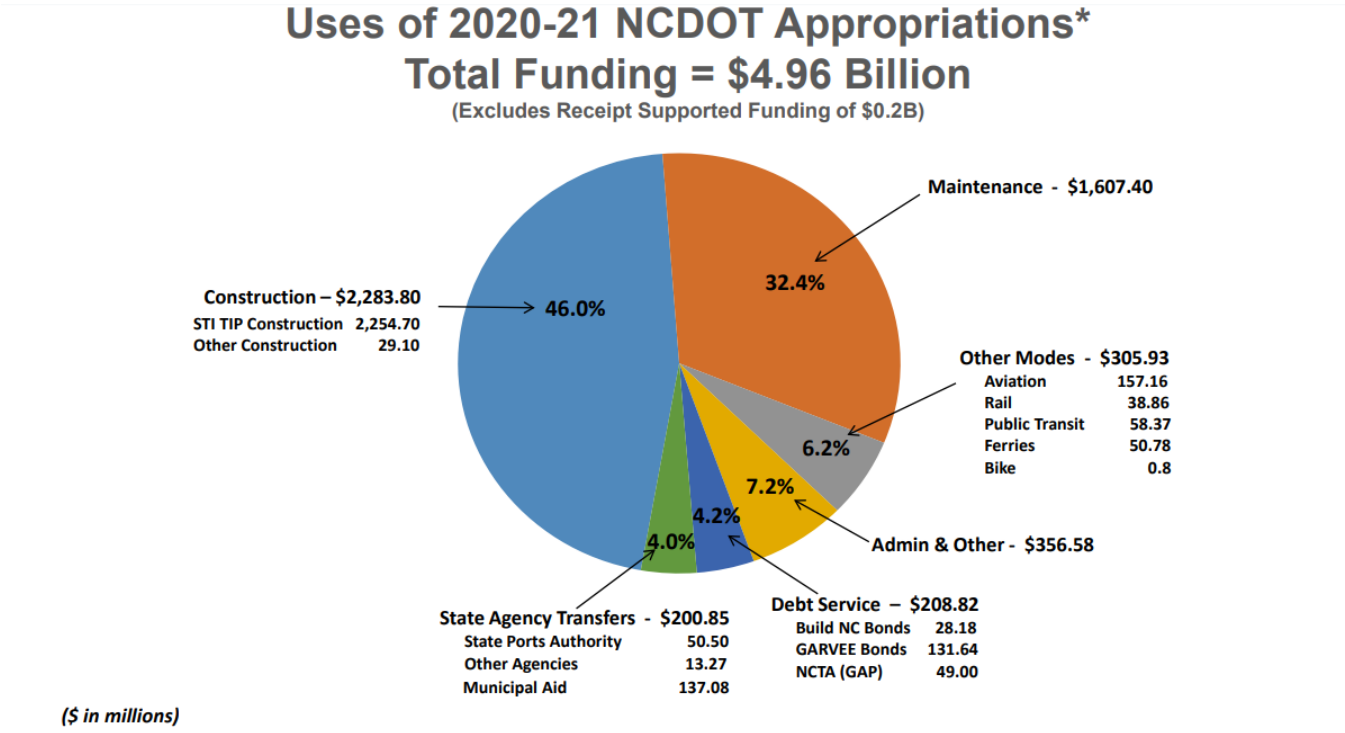
NCDOT Disaster Recovery Section is a liaison between NCDOT and members of the State Emergency Response Team. Under this partnership, local governments can participate in NCDOT's Memorandum of Agreement (MOA) that is activated during Stafford Act (FEMA) events (http://www.fema.gov/robert-t-stafford-disaster-relief-and-emergency-assistance-act-public-law-93-288-amended). Under the MOA, local governments can request authority over NCDOT-maintained roads to pick up and dispose of storm-related debris. Debris removal costs are submitted directly to FEMA for reimbursement. Within Craven County, the Town of Dover is the only municipality to have the MOA (NCDOT).

4 Financial Plan

4.1 Financial Plan and Performance-Based Planning and Programming in North Carolina

North Carolina is a state where state transportation funding plays a particularly important role. County funding for transportation is largely non-existent outside of limited public transportation programs, economic development-related roadway improvements, and greenway and sidewalk projects. State taxes and fees from the Motor Fuel Tax, Department of Motor Vehicles (DMV) Fees and Highway Use Tax are appropriated into the Highway Fund (primarily designated for maintenance purposes) and Highway Trust Fund (Figure 4-1). These source the bulk of funding for new transportation improvements. The graphic below illustrates the importance of Highway Trust Fund in terms of both providing a local match for federal transportation dollars coming into the state, as well as providing additional funding for needed transportation investments. The Financial Plan describes the anticipated funding sources, project timelines, and project costs for all MTP projects.

Figure 4-1: 2020-21 NCDOT Appropriations



4.2 Revenue Estimates

Revenue estimates were developed in consultation with the MPO, NCDOT, the NBAMPO 2045 Steering Committee, public transportation agencies, and participating communities. These parties submitted historical and anticipated funding sources and levels. The fiscal forecast was reviewed and approved by the parties noted above

and discussed during the public engagement process. The revenue estimates include committed and reasonably anticipated funding from municipal (i.e. local match), state, and federal sources to support the implementation of the projects within the Financial Plan. These include the Strategic Prioritization Improvement Program (STIP), Federal Aid including the Highway Safety Improvement Program (HSIP) and the Urban Area Formula Program (Section 5307), and other maintenance programs. Table 4-1 below summarizes the fiscal forecast by Horizon Year (i.e. 2025, 2035, and 2045) and category. All amounts are shown in constant 2020 $USD. Inflationary effects are described in the section below. NBAMPO and its member municipalities could pursue additional revenue sources to supplement those sources identified in the Financial Plan. However, innovative and new funding sources were not estimated for the purposes of the 2045 MTP update.

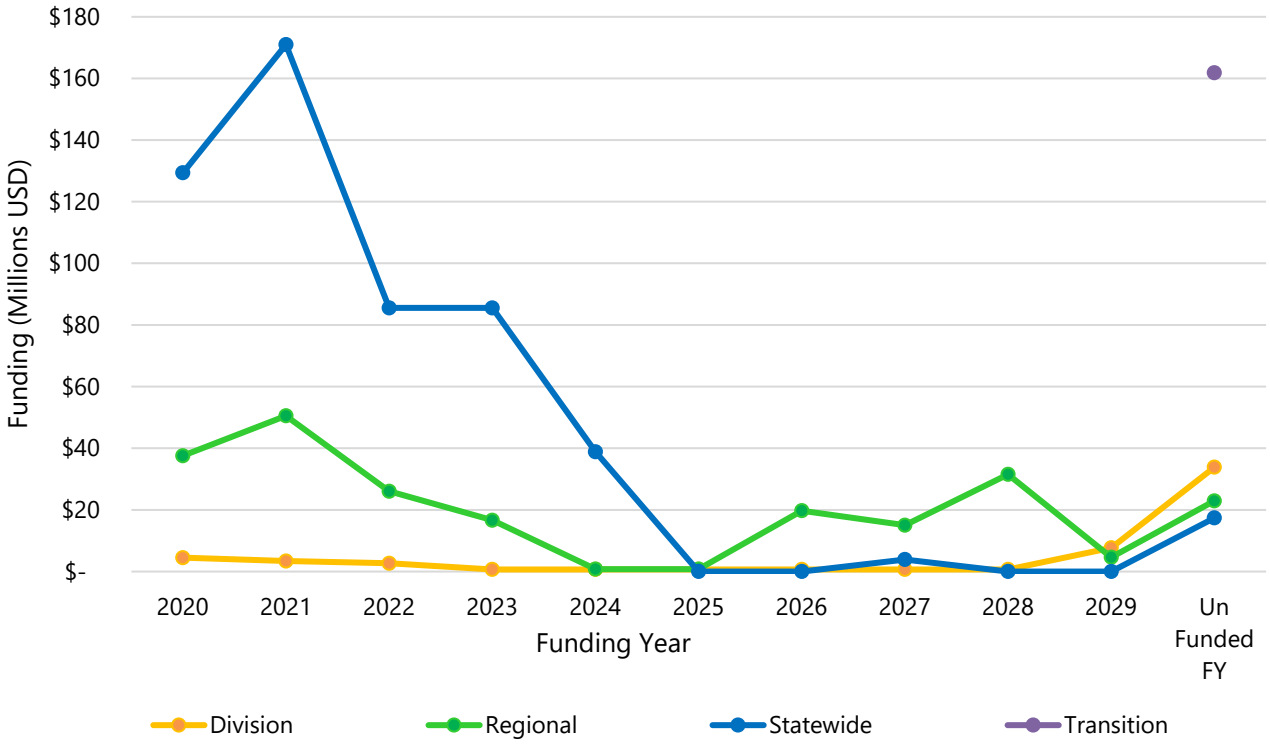
Table 4-1: NBAMPO Fiscal Forecast Estimates by Horizon Year (2020 USD)

	Plan Years			
Revenue Source	**2021-2025**	**2026-2035**	**2036-2045**	**Total**
STIP - Statewide Mobility	$380.9	$33.5	$64.6	$479.0
STIP - Combined Regional and Division	$103.0	$122.7	$106.2	$331.9
Highway Safety Improvement Program (HSIP)	$2.9	$6.3	$7.0	$16.1
Maintenance				
State Bridge Program & Preservation	$4.4	$9.1	$60.2	$73.7
Federal Interstate Maintenance* **	NA	NA	NA	NA
State Roadway Maintenance	$40.8	$92.9	$103.9	$237.5
State Street Aid Allocations (Powell Bill)	$4.7	$7.9	$6.4	$19.0
Urbanized Area Transit (5307)	$4.5	$7.2	$8.1	$19.8
Capital	*$0.9*	*$1.4*	*$1.6*	*$4.0*
Operating	*$3.6*	*$5.8*	*$6.5*	*$15.9*
Total	**$541.1**	**$279.7**	**$356.3**	**$1,177.1**
*USD in $Millions				
2020-2029 STIP programmable amounts taken from 2020-2029 STIP. All values in 2020 (USD) and adjusted for inflation. * No Interstate designated roadway at the time of preparing the MTP				

The NBAMPO has several large programmed roadway projects that represent funding levels higher than expected for the MPO's population relative to other MPOs, NCDOT Regions, and NCDOT Divisions. As shown in Figure 4-2 below, the 2020-2029 STIP funding levels for the NBAMPO range from total $224 million in FY 2021 to $1.5 million in FY 2025. The average annual funding level over this 10-year cycle (excluding the Unfunded Future Year Projects)

is approximately $74 million. However, this annual average represents an unlikely sustained funding level due to the lack of similar anticipated large scale Statewide and Regional projects like the US-70 Corridor Project.

Figure 4-2: NBAMPO 2020-2029 STIP Funding



The Financial Plan's STIP-related revenue estimates were modified to reflect the committed outlays for large projects, past funding levels, and anticipated STIP funding relative to the NBAMPO's population in Region B, Division 2, and statewide. Funding levels are highest during the 2025 Horizon Year and then decrease after the completion of several programmed large projects. Average annual NBAMPO STIP funding by category per year is shown in Table 4-2,

Table 4-2: Anticipated Average Annual STIP Levels by Category and Horizon Years (Millions 2020 USD)

	Plan Years		
STIP Category	**2021-2025**	**2026-2035**	**2036-2045**
Statewide	$76.17	$3.35	$6.46
Regional Impact	$18.97	$8.64	$4.09
Division Needs	$1.63	$3.63	$6.52
Average Annual Total STIP Funding	**$96.77**	**$15.62**	**$17.08**

4.3 Maintenance Estimates

The Financial Plan also includes estimates for roadway system maintenance to 2045. This includes both maintenance for roadways, interstates, and bridges; roadway and bridge maintenance estimates were reached through a historical review and forecast of State Street Aid Allocations (Table 4-3) and NCDOT Division 2 state-funded maintenance (Table 4-4), while interstate maintenance estimates were determined through a similar review of historical funding. Historical roadway and bridge maintenance levels are shown below. These past funding levels were forecasted based on population, anticipated state funding, and adjusted for inflation based upon their estimated project or horizon year.

Table 4-3: NBAMPO Historical Powell Bill Funding, 2011-2020

Year	Bridgeton	New Bern	River Bend	Trent Woods	NBAMPO Municipal Annual Total	Inflation Adjusted (2020 USD)
2011	$ 15,138	$ 834,142	$ 89,167	$ 107,104	$ 1,045,551	$ 1,249,530
2012	$ 15,872	$ 862,542	$ 91,451	$ 109,774	$ 1,079,639	$ 1,264,969
2013	$ 16,047	$ 871,985	$ 91,876	$ 109,717	$ 1,089,625	$ 1,251,637
2014	$ 16,055	$ 869,925	$ 91,518	$ 109,034	$ 1,086,532	$ 1,223,612
2015	$ 15,956	$ 867,643	$ 90,501	$ 107,860	$ 1,081,960	$ 1,194,571
2016	$ 15,675	$ 872,681	$ 88,747	$ 105,102	$ 1,082,205	$ 1,171,414
2017	$ 15,641	$ 874,381	$ 88,049	$ 104,034	$ 1,082,105	$ 1,148,338
2018	$ 15,385	$ 865,707	$ 86,040	$ 101,112	$ 1,068,243	$ 1,111,400
2019	$ 15,291	$ 863,078	$ 84,892	$ 99,655	$ 1,062,917	$ 1,084,175
2020	$ 14,229	$ 812,944	$ 79,957	$ 93,930	$ 1,001,060	$ 1,001,060

Table 4-4: NBAMPO Historical Division 2 Roadway and Bridge Maintenance, 2017-2020 (Current USD)

	Roadway Maintenance		Bridge Maintenance	
Year	Contract Resurfacing	Pavement Preservation	Bridge Preservation	Bridge Program
2017	$ 4,248,560.24	$ 592,476.22	$ -	$ 997,541.57
2018	$ 5,465,159.89	$ 807,872.81	$ 288,021.65	$ 1,057,324.57
2019	$ 4,332,407.72	$ 649,698.96	$ 286,016.73	$ 792,224.11
2020	$ 4,937,352.75	$ 499,499.16	$ 265,688.71	$ 545,688.22

4.4 Cost Estimation

Each project in the 2045 MTP has a base cost estimate in 2020 dollars that is then adjusted for inflation. Project cost estimates were created utilizing accepted project development tools from NCDOT and historical sources. Roadway project cost estimates were either derived from published costs from those within the 2020-2029 STIP or developed through the NCDOT Planning Level Per-Mile Cost Estimation Tool (this tool does not include ROW costs). New bicycle and pedestrian project costs were developed with the NCDOT Bicycle & Pedestrian Cost Estimation Tool. Transit project cost estimates were reached through a review of comparable CARTS procurement costs for rolling stock, service expansions, facility expansion and siting, and published CARTS estimates. Costs estimates were reviewed by the MTP Steering Committee, NBAMPO member communities, and the public during formal outreach events and during the draft report review period.

4.5 Inflation Effects

Projects costs and revenues beyond 2020 are both escalated by an annual two (2) percent rate of inflation as shown in the Financial Plan. This rate was reached through a 20-year review of the Consumer Price Index (CPI-U) for urban consumers in the South Area (inclusive of North Carolina) from 1999 through 2019. The current low interest-rate environment and recession spurred by the COVID-19 public health crisis are also anticipated to apply downward inflationary pressure. Project costs and associated revenues are shown with their Year of Expenditure (YOE). Projects within the first 10 years of the MTP display the specific YOE (or mid-point YOE for complex multi-year projects), and projects from 2031 through 2035, and 2036 through 2045, are banded as 2035 and 2045 Horizon Years, respectively. MTP projects that are within the first 10 years and have YOE's between 2026 and 2035 are shown within the 2035 Horizon Year. Projects in the 2035 Horizon Year without a specific YOE have an average inflation rate of 29.4 percent, whereas 2045 Horizon Year projects have an average inflation rate of 50.3 percent.

5 Future Highway Plan

5.1 Roadway Projects

The New Bern Area MPO region is dependent on roadway infrastructure and the vehicular transportation system to support the region's economic activities, enhance residents' quality of life, and promote successful business operations. An efficient, safe, and dependable roadway infrastructure is critical for commuters traveling to and from surrounding metro areas, as well for workers and residents traveling for work, school, shopping, and other activities within the MPO area. The roadway network also serves as the foundation for the region's freight, transit, pedestrian, and bicycle travel.

5.1.1 Travel Demand Model

As part of Envision 2045, an evaluation of existing and likely future roadway deficiencies was performed. Utilizing the New Bern Area MPO Travel Model, a list of committed projects funded for construction in the 2020-2029 State Transportation Improvement Program by 2026, and socioeconomic data (population and employment projections) for 2045, the study team identified and addressed anticipated roadway network deficiencies in the region.

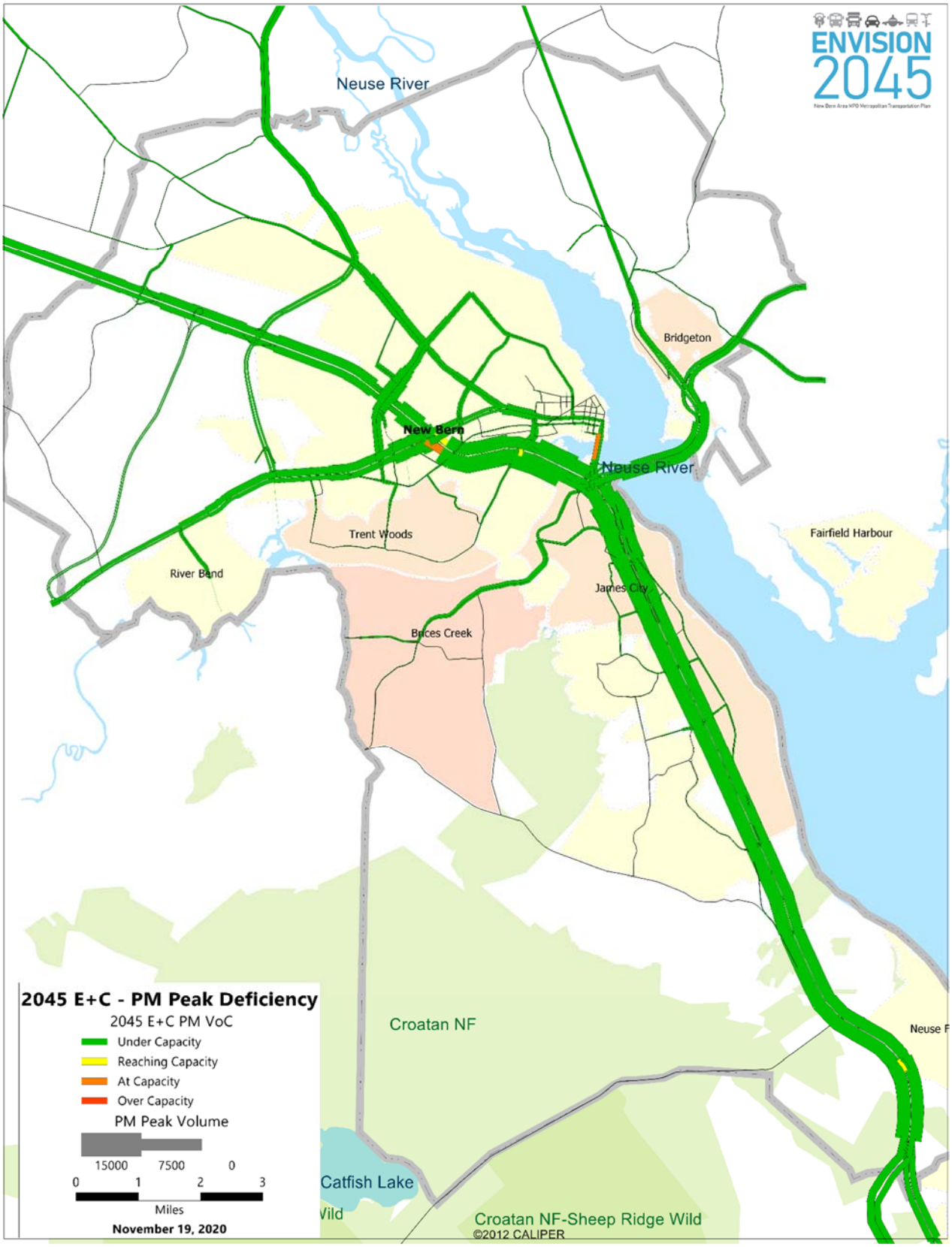
A travel demand model is a standard tool used in long-range transportation planning to review existing and future expected deficiencies of the transportation system. The travel demand model is used in transportation planning to project the number of trips that will be generated within the region based on population and economic projections. By considering the overall highway network, the model helps determine which roads will sustain future needs and which roads will require improvements or justify new construction to provide adequate highway access throughout the region.

The latest version of the travel model was developed by the NCDOT in cooperation with the New Bern Area MPOs. The latest version of the regional model was released in October 2015 for the 2040 MTP. As part of the regional travel demand model update, the socio-economic data forecasts (population, housing, and employment) were updated for years 2019, 2025, 2035, and 2045. The travel model estimates values like traffic volumes, congestion, and travel time for the base year and future horizon years of 2025, 2035, and 2045.

The travel model is based on the four-step modeling process: trip generation, trip distribution, mode choice, and trip assignment. The model area is made up of the entire Craven County. A brief overview of the model update is available in Appendix A.

When the project team analyzed the MPO's Existing plus Committed (E+C) projects with 2045 population and employment forecasts, the model highlighted congestion problems in the region particularly along Alfred Cunningham Bridge leading to US 70 and US 17 interchange (Figure 5-1). Another interchange with congestion in the Existing plus Committed scenario is on US 17 at Martin Luther King Jr. Boulevard. While the travel demand model can estimate delay along roadways, it is not well suited to forecast congestion or delay especially at signalized intersections. Other factors, such as public comments and safety data, can assist in identifying poorly performing intersections.

Figure 5-1: 2045 E+C PM Peak Deficiency



5.2 Project Selection Methodology

The Study Team worked closely with the NBAMPO to craft a Vision for the MTP process, supported by an integrated, comprehensive set of Goals and Objectives that informed the project selection methodology.

- Congestion - A combination of congestion parameters was considered to identify corridors and intersections/ interchanges that are a priority to address, based on Travel Demand Model, to arrive at the combination of metrics that is most sensitive to variations in combinations of projects. Possibly to include average travel speed during peak period, VMT, trip length, VHT, delay, annual delay/person or per HHLD, lane-miles
- Economic Development - Roadway projects connecting to or crossing a TAZ that is in the top tier for expected employment growth numbers out to 2045
- Accessibility and Mobility - Prioritizing roadway improvements that are located near areas with anticipated population growth relative to the region
- Safety - Prioritizing roadway projects that address known high-risk intersections and roadway segments

In addition to the criteria methodology referenced above, the projects selected for the NBAMPO Envision 2045 addressed the following target areas:

1. Incorporate public feedback and preference for operational improvements with projects like targeted roadway widenings, modernization, intersection upgrades to improve travel conditions, safety, and multi-modal use instead of new roadway construction
2. Modernize the region's roadways to improve traffic flow and update roadways to modern standards, including complete streets elements, and provide a safer experience for all modes
3. Support implementation of projects recommended in corridor studies and recently-adopted plans
4. Consider geographic equity
5. Consider feasibility of funding over the next twenty-five years under performance-based programming approach utilized in North Carolina

5.3 Financial Plan Roadway Project List

When creating future scenarios, the current network and existing committed projects are included. By running different scenarios, the model accurately depicts what additional projects will be required to provide an adequate system through 2045. The roadway projects selected for the MTP were organized into 2025, 2035, and 2045 horizon year groupings (Table 5-1: Envision 2045 (2025 Horizon Year Roadway Projects)Table 5-1, Table 5-2 and Table 5-3). Some projects within the 2025 horizon are already under construction. Within the 2035 horizon year, some projects were considered committed if funded in the 2020-2029 TIP for construction by 2026 or sooner. Other projects were not yet committed, although included in developmental section of the STIP. All the selected roadway projects in the Preferred Financial Plan Scenario are shown by horizon year in Figure 5-2.

Based on findings, the project candidate list was narrowed down to 15 road projects, 6 interchange improvements, and 1 airport project. Road deficiency considerations in historic downtown New Bern, including improvements and/or widenings, are not a viable solution due to the current infrastructure. Therefore, these concerns will have to be addressed through other multi-modal strategies.

Table 5-1: Envision 2045 (2025 Horizon Year Roadway Projects)

STIP OR MTP ID	ROUTE	DESCRIPTION	ESTIMATED COST (MILLION USD)
R-1015*	US 70 (Havelock Bypass)	North of Piney Grove to north of Carteret County line. Construct multi-lane facility on new location. 15% of project within NBAMPO	$ 15.05
R-4463A	NC 43 Connector	NC 43/NC 55 to US 17 in New Bern. Construct route on new location with interchange at US 70.	$ 16.63
R-5777B	US 70	Intersection upgrades at Thurman as part of Grantham Rd. to Havelock bypass to be upgraded from arterial to freeway standards	$ 71.33
R-5777A	US 70	Intersection upgrades at Taberna Way as part of Grantham Rd. to Havelock bypass to be upgraded from arterial to freeway standards	$ 71.22
R-5777C	US 70	Grantham Rd. to Havelock bypass to be upgraded from arterial to freeway standards	$ 106.88
U-5713	US 70	Neuse River Bridge to Grantham Rd. Upgrade existing facility to freeway standards.	$ 202.76
2025 Horizon Year Estimated Roadway Project Cost		**Total**	**$ 483.87**

Table 5-2: Envision 2045 (2035 Horizon Year Roadway Projects)

STIP OR MTP ID	ROUTE	DESCRIPTION	ESTIMATED COST (MILLION USD)
U-5993	NC 55 (Neuse Boulevard)	Roundabout at NC 55 and US 17 BUS	$ 2.45
R-1015*	US 70 (Havelock Bypass)	North of Piney Grove to north of Carteret County line. Construct multi-lane facility on new location. 15% of project within NBAMPO	$ 43.09
R-3403B	SR 1433 to NC 43	North of SR 1433 (Antioch Rd.) to NC 43. Upgrade two-lane to four-lane highway	$ 68.96
U-6198	US 17/MLK Blvd.	US 70 interchange to west of Trent Creek Rd/Future 43. Recommended Superstreet design/access control strategies	$ 39.00
AV-5891	Airport Improvement	Coastal Carolina Regional Airport Runway Extension	$ 0.30
2035 Horizon Year Estimated Roadway Project Cost		**Total**	**$ 153.80**

Note: ***R-1015 spans two horizon year periods because project funding extends past FY 2029. The estimated costs reflect the approximately 15% of the project that is within the NBAMPO boundaries, not the entire project cost***

Table 5-3: Envision 2045 (2045 Horizon Year Roadway Projects)

STIP OR MTP ID	ROUTE	DESCRIPTION	ESTIMATED COST (MILLION USD)

NB-Rdwy-04	SR 1402 Glenburnie Rd.	Widen to six lanes from Elizabeth to Craven Community College	$ 4.08
NB-Rdwy-05	Elizabeth Avenue	Upgrade to a two-lane facility with TWLTL	$ 3.72
NB-Rdwy-08	US 70	Upgrade interchange at DMLK Jr. Blvd.	$ 18.72
U-6102	US 70	Upgrade interchange at Glenburnie Rd.	$ 21.30
NB-Rdwy-02	Brices Creek Road	Brices Creek Road widening	$ 27.84
NB-Rdwy-03	NC 43/Washington Post Road	Upgrade Washington Post Rd. to Boulevard standards from Neuse Blvd to MPO Boundary	$ 30.47
NB-Rdwy-07	Simmons Street	Road diet on Simmons from Trent Blvd. to Neuse Blvd. The facility will have two lanes, one TWLTL and two bicycle lanes and pedestrian facilities	$ 5.25
NB-Rdwy-09	US 70	Upgrade interchange at US 17 at Country Club Rd.	$ 18.72
U-3448	Trent Road (SR 1278)	SR 1278 (Trent Rd.), US 17 (MLK Jr., Blvd.) to SR 1215 (Simmons St.) Widen to multi-lane facility that includes bicycle and pedestrian facilities	$ 26.30
2045 Horizon Year Estimated Roadway Project Cost		**Total**	**$ 156.40**

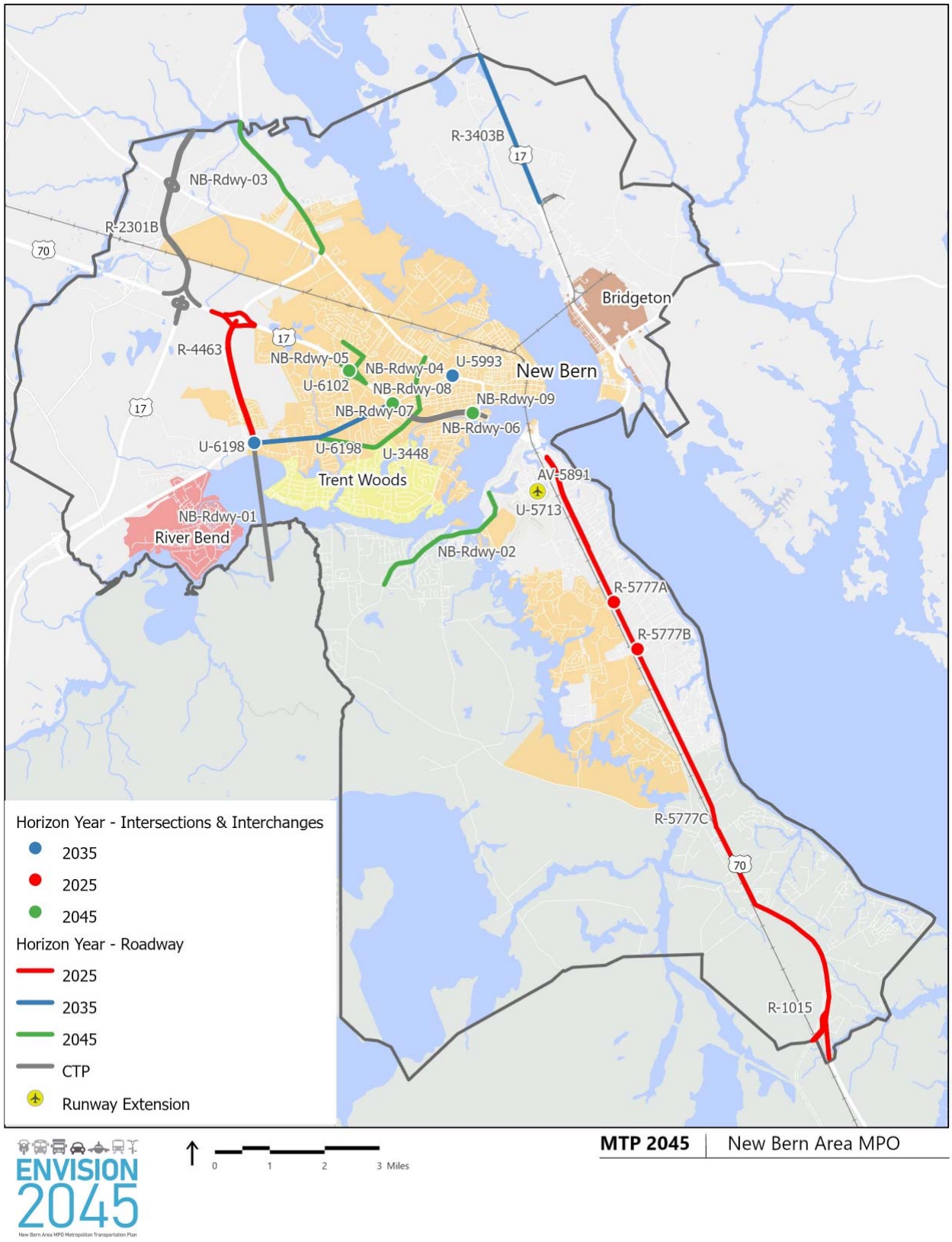
Project R-1015, R-5777B, R-5777A and R-5777C provide alternative transportation option to built resiliency in the transportation system.

Table 5-4 lists projects in the Highway Projects list that represents the plan financial shortfall or projects that could not be completed by the Horizon Year of 2045 and may be included in the upcoming Comprehensive Transportation Plan for Craven County which is not required to be fiscally constrained. Should additional funds become available, the earlier scheduling of projects would benefit the area by reducing the amortized costs and allowing for additional improvements to take place.

Table 5-4: Highway Projects with Financial Shortfall beyond 2045

STIP OR MTP ID	ROUTE	DESCRIPTION	ESTIMATED COST (MILLION USD)
NB-Rdwy-01	Brices Creek Road Connector	US 17 to Brices Creek Rd. in New Bern. Construct route on a new location with a bridge across Trent River. Alternative A - CAMA Costs	$ 20.00
NB-Rdwy-06	US 70/US 17	Widen to six lanes from MLK Blvd. to Country Club Rd./First St.	$ 17.63
R-2301B	US 17 New Bern Bypass & US 70/US 17 Bypass Interchange	US 70 in New Bern to SR 1400 River Road. Construct four-lane divided on new location. Upgrade interchange to accommodate two-lane ramps	$ 161.80
Beyond 2045 Horizon Year Estimated Roadway Project Cost		**Total**	**$ 199.43**

Figure 5-2: Proposed Roadway Projects by Horizon Year



The New Bern Area Travel Model was utilized to test and develop project alternatives for the final list of fiscally constrained preferred recommendations. The scenario model runs used the updated model, adopted 2020-2029 State Transportation Improvement Program list, and the regionally adopted socioeconomic forecasts for the years 2019, 2025, 2035, and 2045. The MTP model network and associated outputs were provided to NBAMPO upon conclusion of the 2045 MTP development process.

The financial plan preferred recommendations are included in Horizon Years that reflect their anticipated year of opening. These bands include the following years - 2025 Horizon Year (2020-2025), 2035 Horizon Year (2026-2035), and 2045 Horizon Year (2036-2045). The year 2019 is shown as a baseline, and the 2045 Existing plus Committed ("E+C") reflects the existing roadway projects as of 2020 and those considered as Committed in the STIP (or through local authority) combined with socioeconomic levels for the year 2045.

Figure 5-3, Figure 5-4, and Figure 5-5 below displays total daily volume, daily vehicles miles traveled (VMT) and daily vehicle hours traveled (VHT) comparison for all No-Build, 2045 E+C and all MTP scenarios. The performance measures for freeway increases significantly in E+C and MTP scenario after the completion of US 70 upgrade sot freeway and Urban Arterial volumes decreases. Increase in daily VHT for 2045 No-Build condition is higher compared to increase in VMT on Urban arterial because trips are traveling in congested condition taking them longer to reach the destinations. Table 5-5, Table 5-6 and Table 5-7 shows congested conditions in PM when Volume over Capacity (VoC) is estimated to exceed 0.90 (referred to as congested conditions). Congestion on local roads increase in 2045 horizon year due to trips using these facilities to access the freeway.

Figure 5-3: Daily Volume for all Scenarios (In Thousands)

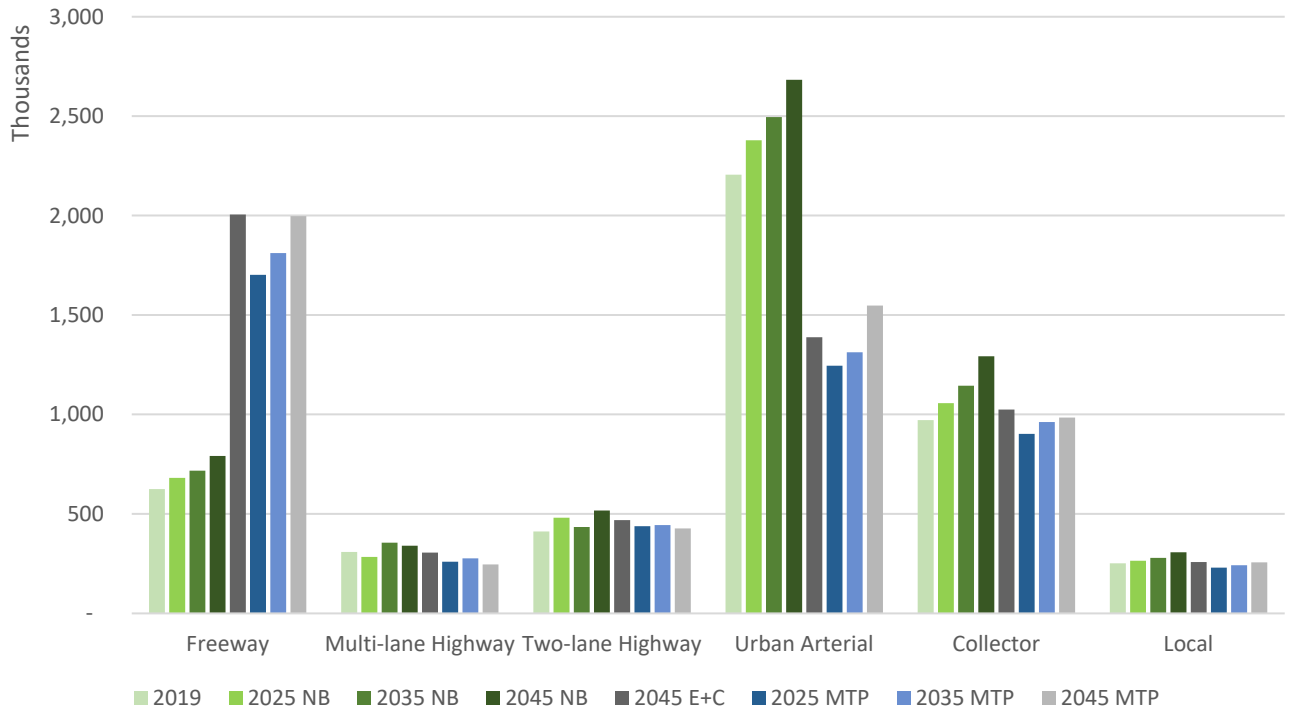


Figure 5-4: Daily VMT for all Scenarios (In Thousands)

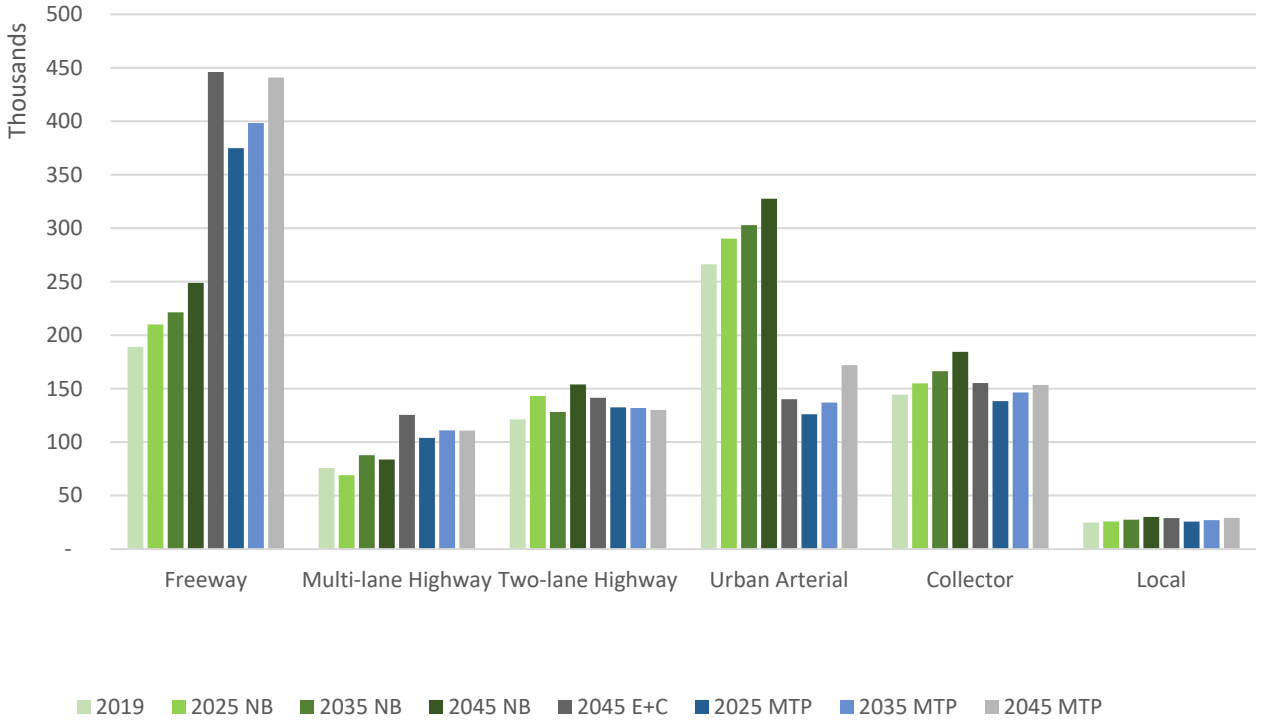


Figure 5-5: Daily VHT for all Scenarios (In Thousands)

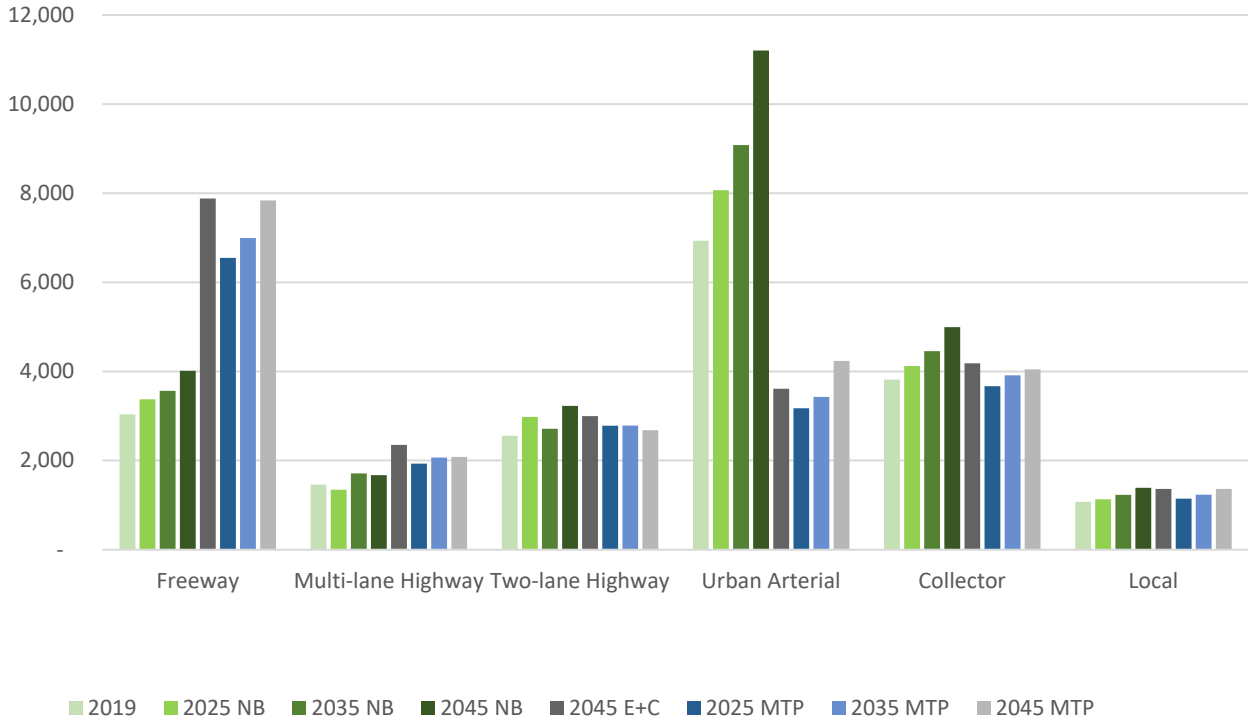


Table 5-5: Congested Daily Volume

Facility Type	2019	2025 NB	2035 NB	2045 NB	2045 E+C	2025 MTP	2035 MTP	2045 MTP
Freeway								
Ramps		4,680	9,509	13,036	10,026	4,821	9,567	4,972
Multi-lane Highway								
Two-lane Highway								
Urban Arterial	127,028	333,105	699,898	1,056,560	11,555	10,747	11,252	10,862
Collector								
Local		2,428	2,618	10,488	7,865	-	2,619	7,843

Table 5-6: Congested VMT

Facility Type	2019	2025 NB	2035 NB	2045 NB	2045 E+C	2025 MTP	2035 MTP	2045 MTP
Freeway								
Ramps		1,495	1,641	2,070	1,693	1,540	1,669	75
Multi-lane Highway								
Two-lane Highway								
Urban Arterial	11,014	40,759	92,386	143,268	1,232	1,145	1,199	1,158
Collector								
Local		25	33	428	920		33	919

Table 5-7: Congested VHT

Facility Type	2019	2025 NB	2035 NB	2045 NB	2045 E+C	2025 MTP	2035 MTP	2045 MTP
Freeway								
Ramps		57	70	92	78	63	74	3
Multi-lane Highway								
Two-lane Highway								
Urban Arterial	544	1,579	3,569	6,223	78	68	75	70
Collector								
Local		1	4	51	116		4	116

Figure 5-6, Figure 5-7, Figure 5-8, Figure 5-9, Figure 5-10 and Figure 5-11 display modeled roadway volumes and PM Peak Volume over Capacity (VoC) for each of the Horizon Years, for the No-Build and Build conditions. PM Peak flows are estimated to represent 10 percent of total average daily flows. Refer to Figure 5-1 for E+C PM Peak deficiencies.

Appendix B shows detailed cutsheets of future year projects that have not gone through NEPA process.

Figure 5-6: 2025 No-Build PM Peak Deficiencies

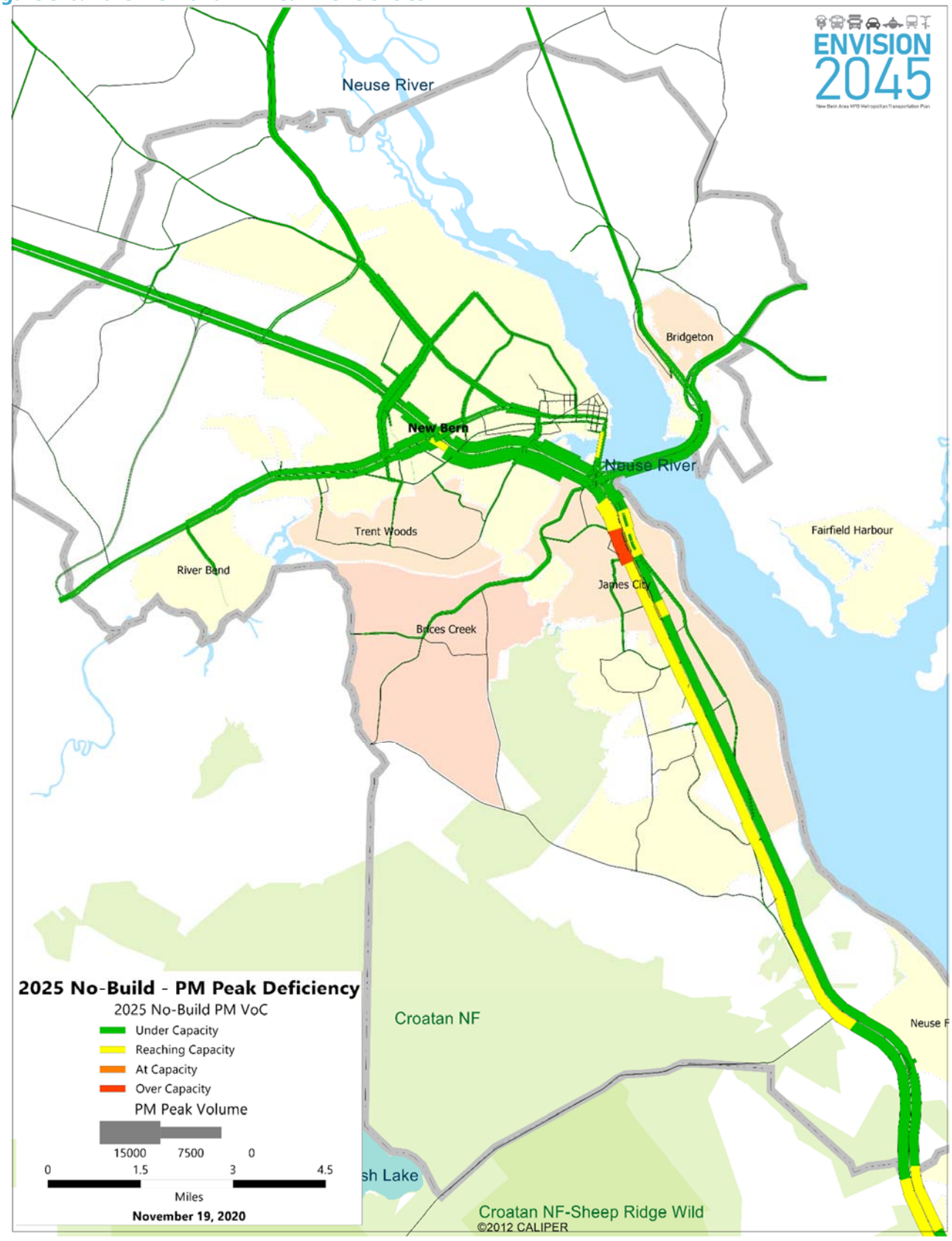


Figure 5-7: 2035 No-Build PM Peak Deficiencies

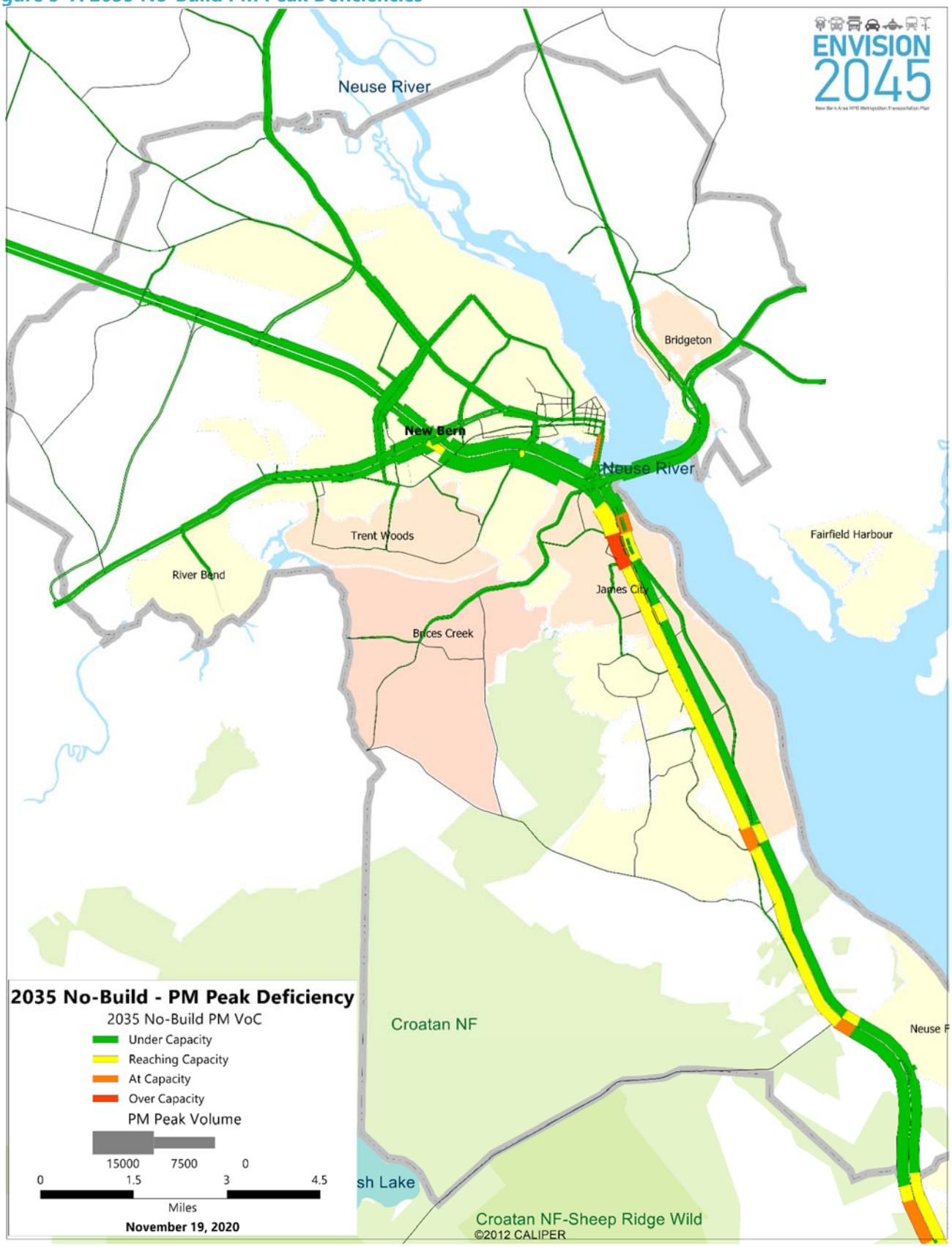


Figure 5-8: 2045 No-Build PM Peak Deficiencies

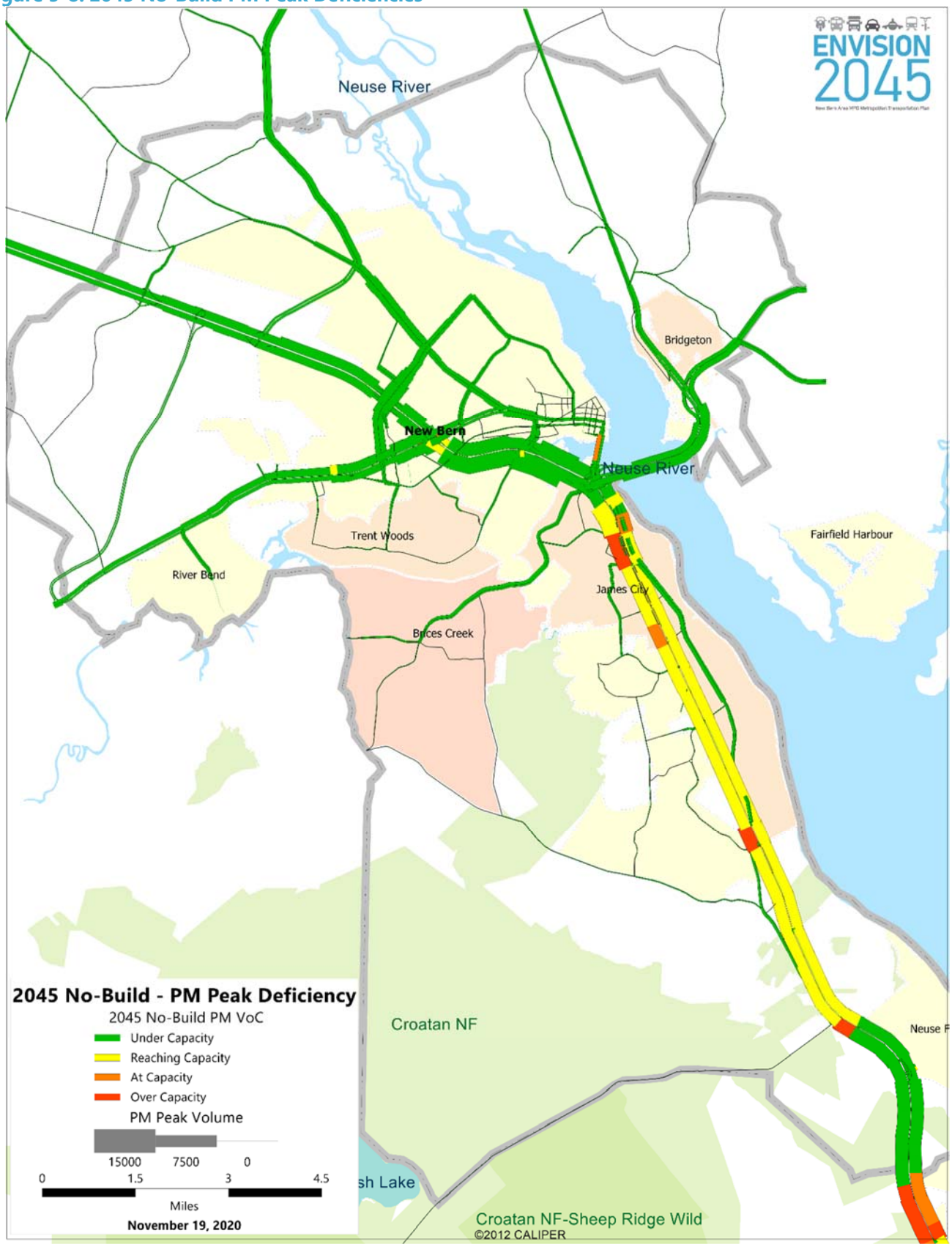


Figure 5-9: 2025 MTP PM Peak VoC

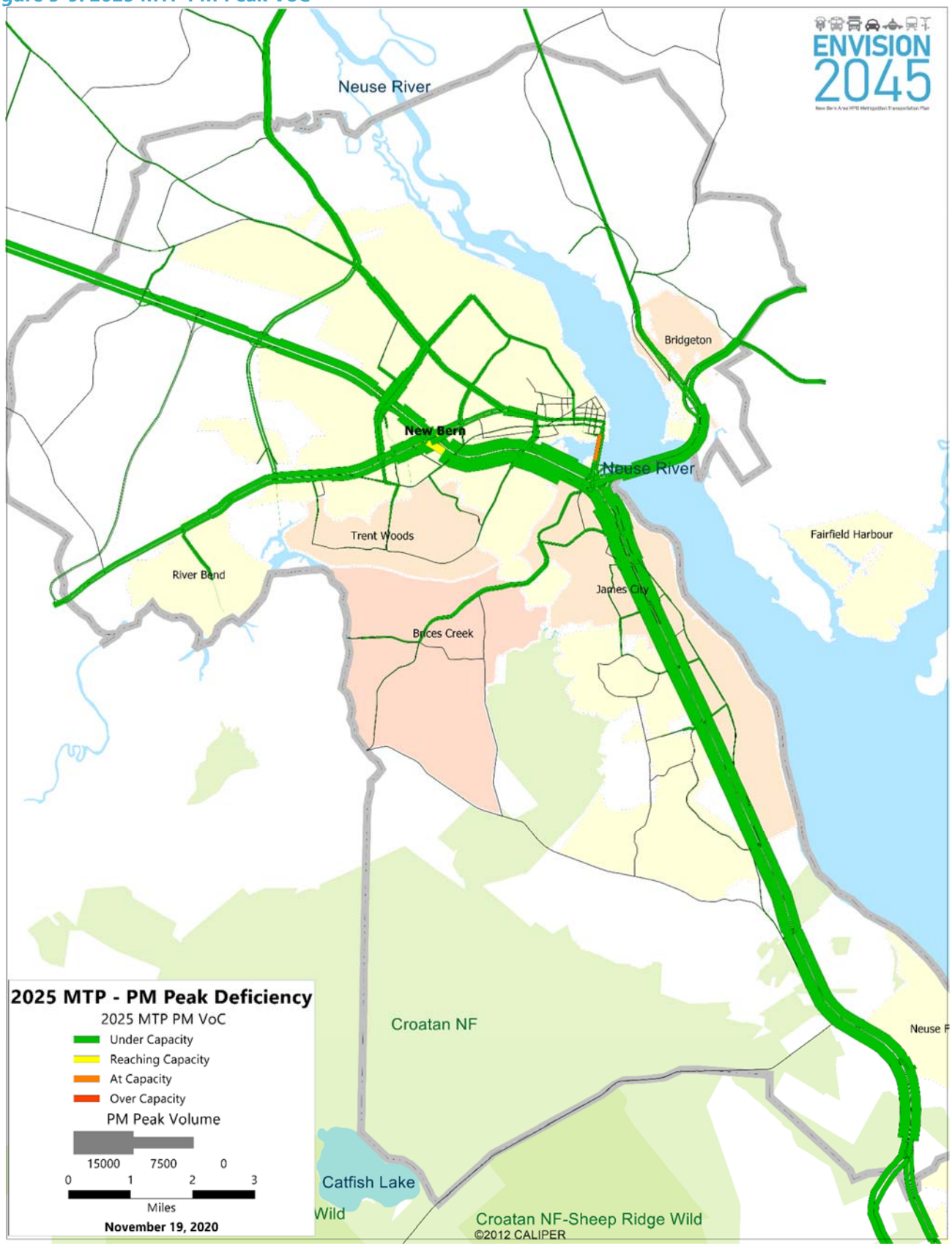


Figure 5-10: 2035 MTP PM Peak VoC

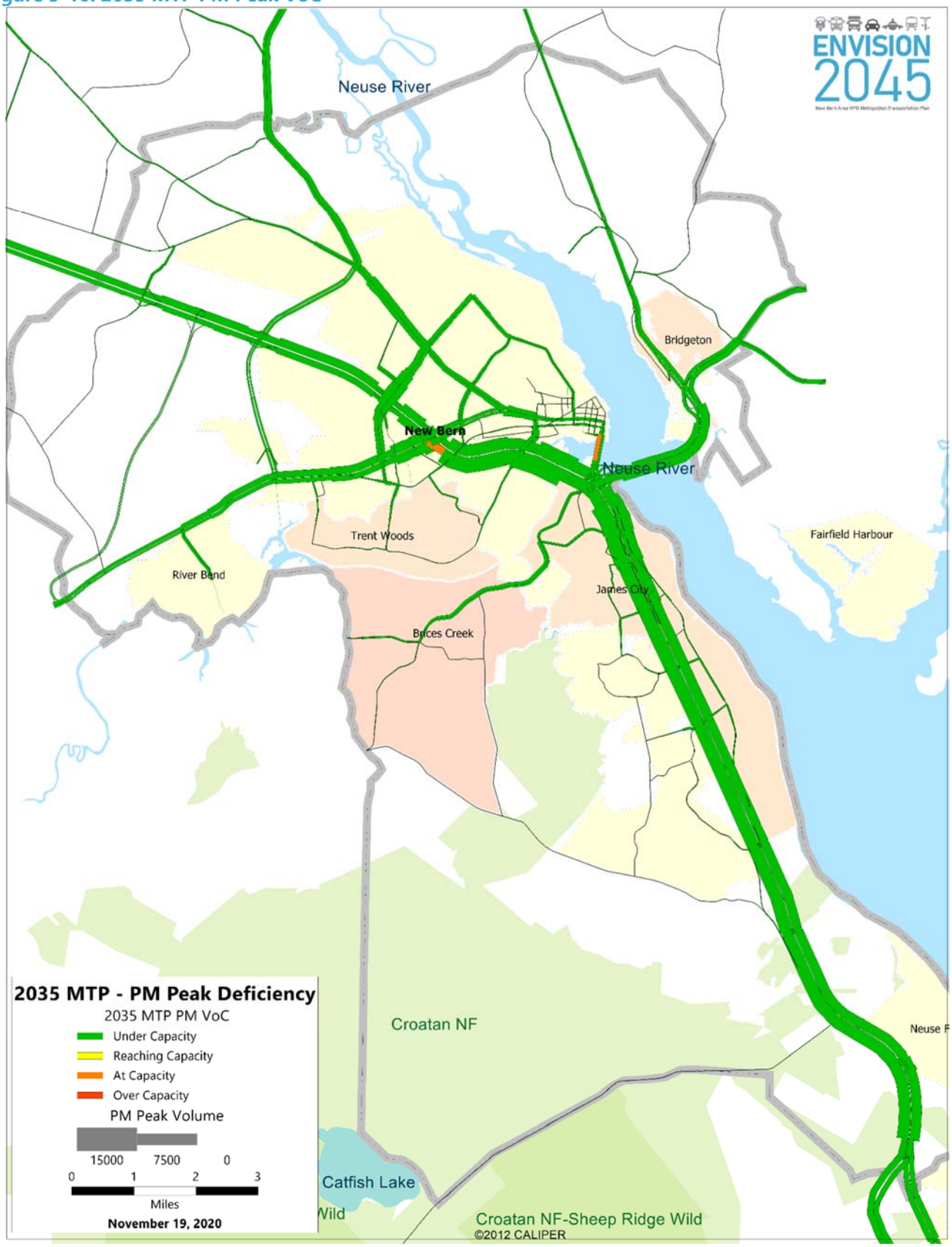
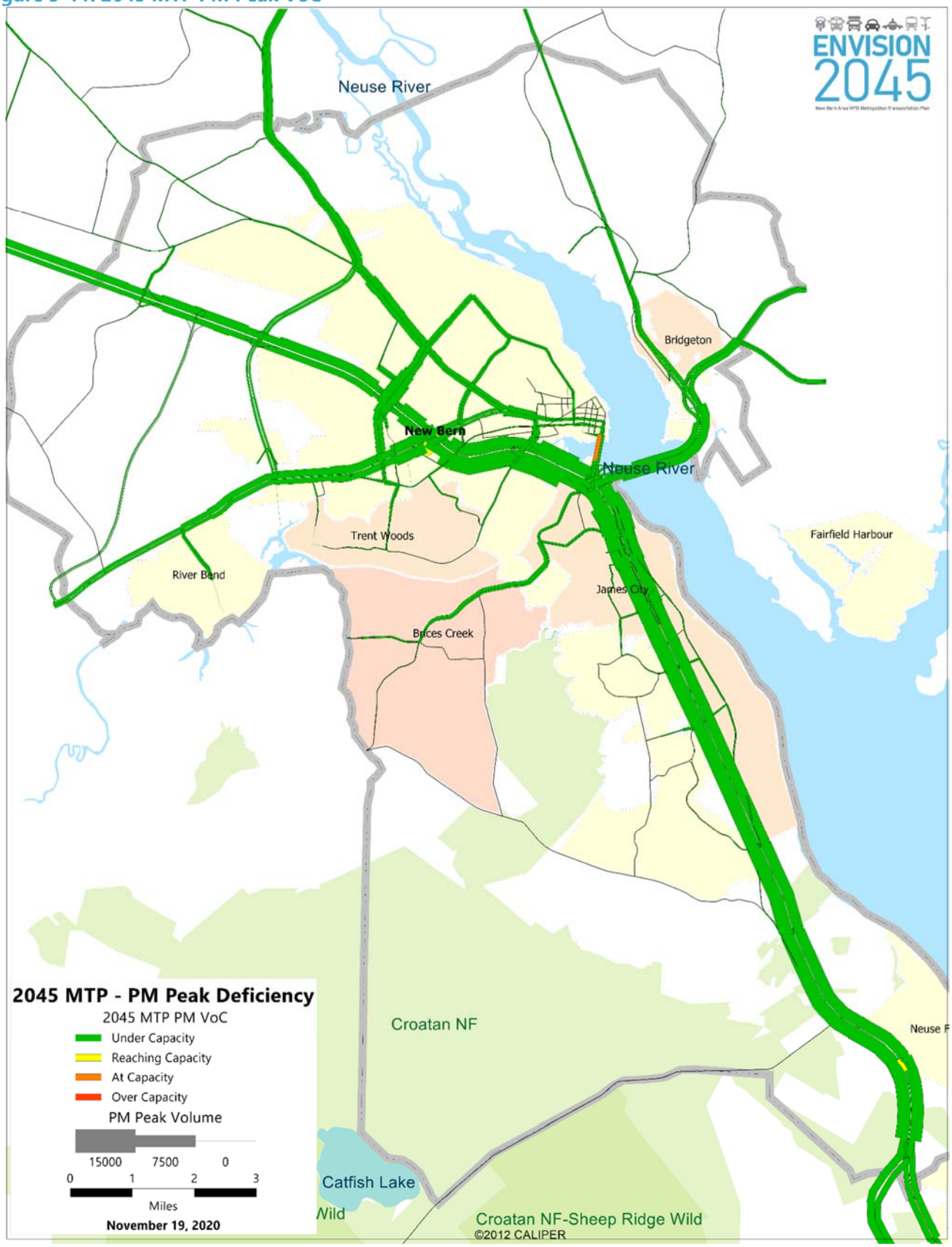


Figure 5-11: 2045 MTP PM Peak VoC



6 Environmental Justice

6.1 Background

Transportation improvements can have a significant negative effect on some local communities, even as the benefits are shared by the larger region. In the history of interstate highway system construction, too often low income and African-American neighborhoods bore the brunt of interstate construction, decimating and dividing successful, vibrant communities[10]. A 1994 Presidential Executive Order (Executive Order 12898 of February 11, 1994, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations) directed federal agencies to incorporate environmental justice into their mission, and to identify and address the effects of their policies and activities on minority and low-income communities.

Environmental Justice (EJ), in the Federal Highway Administration definition, means "identifying and addressing disproportionately high and adverse effects of the agency's programs, policies, and activities on minority populations and low-income populations to achieve an equitable distribution of benefits and burdens[10]".

The US Department of Transportation (USDOT) promotes environmental justice as an integral part of various transportation planning stages—from the long-range planning and MTP update process through individual project development.

Getting There 2045 incorporates environmental justice by adhering to the following fundamental principles developed by USDOT:

- To avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority and low-income populations;
- To ensure the full and fair participation by all potentially affected communities in the transportation decision-making process; and
- To prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority and low-income populations.

6.2 Environmental Screening

Environmental Justice (EJ) relates to preventing the use of Federal funding for projects, programs or other activities that have the potential to generate a disproportionate or discriminatory adverse impact on low income or minority populations.

A system level screening of appropriate environmentally sensitive resources within the MPO has been performed. Recognizing potential "fatal flaws" early in the process will help reduce the possibility that subsequent, more detailed analyses of individual projects may uncover an unexpected environmental impact. This approach helps reduce the inherent risk and uncertainty of the planning process performed at the MPO-scale. The output from this process allows for a relative ranking.

This environmental screening process and its results reflect that nearly all potential environmental impacts are associated with roadway projects. Once a few design decisions have been made, constraints on roadway cross-sections and alignments (due to engineering safety factors and design criteria) limit the opportunities to avoid, minimize, or mitigate these potential negative environmental impacts.

The following discussion of the environmental screening process is divided into two parts. The first focuses on overall impacts to hydrological, environmental, and historic/cultural factors. The second section addresses socio-economic factors that relate specifically to Environmental Justice. Refer to

Appendix C for mapping of hydrological, environmental, historic/cultural and social factors overlaid on recommended projects.

6.3 Environmental Sensitivity

A qualitative screening was performed to assess the potential environmental impacts of the projects recommended for inclusion in the MTP. This analysis consisted of overlaying project alignments onto a series of GIS data resources depicting sensitive natural and community resources (see Appendix C). Any proposed project identified to encroach on a sensitive area was identified, however the nature and degree of conflict determines the level of impact assessed. For example, a roadway alignment across a stream is generally considered to have more severe impacts than one running parallel to the stream. Other relevant factors include the number of crossings, amount of traffic, roadway cross-section, and stream size and quality. As another example, a road widening is typically assumed to be less disruptive to the natural environment than a comparable project on new alignment. On the other hand, widening may be more disruptive than a new facility in terms of community impacts, depending on available right-of-way, alignment, type of development, and other factors.

By far the greatest potential environmental impact for transportation projects being constructed in North Carolina's coastal plain are on wetlands, floodplains, and other hydrological factors. Other common potential environmental impacts include habitat fragmentation and loss of forest land.

6.4 Consultation Process

Development of the MTP allows the New Bern Area MPO an opportunity to consult with environmental agencies and review environmental impacts resulting from project recommendations. The Plan is an initial step in identifying impacted areas and adjusting project alignments to avoid or minimize impacts to natural resources. It also allows the MPO, as the project sponsor, to make informed decisions when setting project priorities for the urban area. The result is a transportation plan that minimizes negative impacts on the natural environment.

Since this is a system-wide, planning-level screening, no formal field investigation was conducted, and screening could only be performed on those features for which GIS resources were publicly available. As project plans are further refined, more precise environmental assessments may be necessary. Utilizing publicly available GIS resources a system-level screening analysis was performed that included the factors listed in Table 6-1.

Table 6-1: Project Screening Analysis Factors

Hydrologic Factors	
Floodplain	Waterbodies
High Quality / Outstanding Resource Waters	Water Supply Watersheds
Impaired streams (303(d) list)	Wetlands (Division of Coastal Management)
Environmental Factors	
Conservation Tax Credit Properties	Managed Natural Areas
Dedicated Nature Preserves	National Pollution Discharge Elimination System Sites (NPDES)
Hazardous Substance Disposal Site	Natural Heritage Element Occurrences
Land Trust Conservation Properties	Natural Heritage Planning Areas
Historic, Cultural, Agricultural Factors	
Airport	National Register of Historic Places
Colleges/Universities	Schools
Federally owned Lands	State-owned Lands
Hospitals	Voluntary Agricultural Districts

6.5 Socio-Economic Factors

For the purposes of this study, American Community Survey 2013-2017 5-year estimates were used and analyzed at the block group level. The American Community Survey (ACS) 5-year estimates was chosen because it accurately reflects the change in the area that is happening during time, basing its population and demographic data off of the 2010 Census while also updating to reflect current changes in the areas demography. If the total minority population comprised more than 50% of the population in a particular block group, that block group was flagged for analysis as minority. Similarly, this applies to block groups with 5% of the population having Limited English Proficiency, 25% of the population falling below the poverty line, 50% being over the age of 65, and 25% not having a vehicle.

Thematic maps were prepared to visualize the concentrations of low-income and minority (African American, American Indian, Asian, Hispanic and Other). Block groups were shaded to represent concentrations of populations of interest. When overlaid with proposed roadway projects, these maps provided a useful tool for analyzing and communicating impacts (Appendix C).

Table 6-2: Proposed Projects Socio-Economic Impacts

Fiscally Constrained MTP Projects by Type				
Environmental Justice Level	**All Block Groups**	**Block Groups in Low Impact Areas (0-1)**	**Block Groups in Moderate Impact Areas (2-3)**	**Block Groups in High Impact Areas (4-5)**
Block Group Count, NBAMPO Planning Area	41	31	8	2
Roadway Projects	28	21	5	2
Intersection/Interchange Projects	10	7	2	1

The environmental justice and social factors screening conducted for this study is not intended to quantify specific impacts. It is intended to guide the development of a plan that is equitable in terms of both costs and benefits. In addition, a critical purpose of this screening is the identification of projects in the transportation plan that, due to proximity, have the potential to affect communities of special interest. When individual studies are begun as part of project implementation, more detailed analyses, including field surveys, will be needed to identify and minimize specific community impacts on a project-by-project basis.

Potential project impacts, if any, are classified on a scale from "No Impact" to "Major Impact" for each of the above categories. This determination is based on a combination of objective and subjective criteria. Results from this system-level analysis are summarized in Table 6-3.

No Impact	When no feature in that category was near the roadway project or less than 25% population was impacted
Minor	Minor Impact was determined when one feature in that category was near the roadway project or less than 50% population was impacted
Moderate	Moderate Impact was determined when more than one feature in that category was near the roadway project or part of the roadway project was passing through the feature or 50% to 75% population was impacted
Major	Major Impact was determined when multiple features in that category were next to the roadway project or the entire roadway project was passing through the feature or > 75% population was impacted

Table 6-3: Project Impacts

Projects	Hydrologic & Environmental Factors	Community Features	African American	Native American	Asian American	Poverty	Other Race	Minority	Overall Impact
2025									
R-5777A									Minor
R-5777B									Moderate
R-5777C									Moderate
R-1015									Minor
R-4463A									Major
U-5713									Minor
2035									
R-3403B									Minor
U-5993									Major
U-6198									Major
2045									
NB-Rdwy-02									Moderate
NB-Rdwy-03									Moderate
NB-Rdwy-04									Moderate
NB-Rdwy-05									Minor
NB-Rdwy-07									Major
NB-Rdwy-08									Minor
NB-Rdwy-09									Moderate
U-6102									Minor
U-3448									Major
CTP									
NB-Rdwy-01									Moderate
NB-Rdwy-06									Major
R-2301									Minor

6.6 Environmental Mitigation

The NBAMPO is committed to minimizing and mitigating the negative effects of transportation projects on the natural and built environments in order to preserve the region's quality of life. In doing so, the MPO recognizes that not every project will require the same type or level of mitigation. Some projects, such as new roadways and roadway widening, involve major construction with considerable environmental disturbance. Others, like intersection improvements, street lighting, and resurfacing projects, involve minor construction and minimal, if any, environmental disturbance. The mitigation efforts used for a project should be dependent upon how severe the impacts on environmentally sensitive areas are expected to be. The following three-step process is used to determine the type of mitigation strategy to apply for any given project:

1. Identify and confirm environmentally sensitive areas throughout the project study area.
2. Determine how and to what extent the project may impact these sensitive areas.
3. Develop and review appropriate mitigation strategies to lessen the potential impact.

Transportation projects should minimize off-site disturbance in sensitive areas and develop strategies to preserve air and water quality, limit tree removal, minimize grading and other earth disturbance, provide erosion and sediment control, and limit noise and vibration. Where feasible, planners should develop alternative designs or alignments that would lessen the project's impact on environmentally sensitive areas. The three-step mitigation planning process is designed to solicit public input and offer alternative designs or alignments, as well as mitigation strategies, for comment by environmental review agencies, the MPO, and local governments.
Table 6-4 below details mitigation activities and measures that should be considered when dealing with environmental impacts. Many of the measures are considered by the NBAMPO during the project development phase. Measures considered include construction of sidewalks and bicycle lanes, design modifications to reduce community impacts, and noise barrier and landscaping requests to reduce audio and visual impacts.

Table 6-4: Mitigation Activities and Measures

Impact Mitigation Measure(s)	Impact Mitigation Measure(s)
Air Quality	Designate pedestrian/transit-oriented development areas
	Adopt local air quality mitigation fee program
	Develop energy efficient incentive programs
	Adopt air quality enhancing design guidelines
Archaeological	Archaeological excavation
	Design modifications to avoid area
	Educational activities
Community Impacts	Bridge community
	Sidewalks
	Bike lanes
	Develop recreational areas
	Traffic calming

	Oral history project
Endangered/Threatened Species	Preservation
	Enhancement or restoration of degraded habitat
	Creation of new habitats
	Establishment of buffer areas around existing habitats
	Modifications of land use practices
	Restrictions on land access
Farmland	Protect one to one farmland acre for every acre converted
	Agricultural conservation easement on farmland
	Compensation
Fragmented Animal Habitats	Construct overpasses with vegetation
	Construct underpasses, such as culverts and viaducts
	Other design measures to minimize potential fragmenting of
Historic Sites	Relocation of historical property
	Design modification
	Landscaping to reduce visual impacts
	Photo documentation
	Historic archival recording to present historic information to the public
Light Impacts	Lens color
	Direction of lighting
	Low level lighting
Noise	Depressed roads
	Noise barriers
	Planting trees
	Construct tunnels
Park Impacts	Construct bike/pedestrian pathways
	Dedicate land
	Compensation for park dedication fees
	Replace impaired functions
Viewshed Impacts	Vegetation and landscaping
	Screening
	Buffers
	Earth berms
	Camouflage
	Lighting
Wetlands	Compensation through NCDMS
	Wetland restoration possible through NCDMS
	Creation of new wetlands
	Strict erosion and sedimentation control measures

7 System Performance Target

7.1 Background

Pursuant to the Moving Ahead for Progress in the 21st Century Act (MAP-21) Act enacted in 2012 and the Fixing America's Surface Transportation Act (FAST Act) enacted in 2015, state Departments of Transportation (DOT), Metropolitan Planning Organizations (MPO), and public transportation providers must apply a transportation performance management approach in carrying out their federally-required transportation planning and programming activities. The process requires the establishment and use of a coordinated performance-based approach to transportation decision-making to support national goals for the federal-aid highway and public transportation programs.

On May 27, 2016, the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) issued the Statewide and Nonmetropolitan Transportation Planning; Metropolitan Transportation Planning Final Rule (The Planning Rule).[1] This regulation implements the transportation planning and transportation performance management provisions of MAP-21 and the FAST Act.

In accordance with 23 CFR 450.324(f)(3)-(4)(i)(ii) of the Planning Rule, and the North Carolina Performance Management Agreement between the North Carolina Department of Transportation (NCDOT), the NBAMPO, and public transportation providers, NCDOT and each North Carolina MPO must include a description of the applicable performance measures and targets and a System Performance Report for the performance measures in their respective statewide and metropolitan transportation plans. The System Performance Report presents the condition and performance of the transportation system with respect to required performance measures and approved performance targets, and reports on progress achieved in meeting the targets in comparison with previous reports and the baseline. The Planning Rule specifies the following timeframes for when a state or MPO must include the System Performance Report:

- Highway Safety/PM1 - In any statewide or metropolitan transportation plan amended or adopted on or after May 27, 2018;
- Pavement and Bridge Condition/PM2 - In any statewide or metropolitan transportation plan amended or adopted on or after May 20, 2019;
- System Performance, Freight, and Congestion Mitigation and Air Quality/PM3 - In any statewide or metropolitan transportation plan amended or adopted on or after May 20, 2019;
- Transit Assets - In any statewide or metropolitan transportation plan amended or adopted on or after October 1, 2018;
- Transit Safety Measures - In any statewide or metropolitan transportation plan amended or adopted on or after July 20, 2021.

[1] 23 CFR 450.314

The NBAMPO Envision 2045 Metropolitan Transportation Plan (MTP) was adopted on March 11, 2021 by the TCC and March 25, 2021 by the TAC. Per the Planning Rule and the North Carolina Performance Management Agreement, the System Performance Report for the NBAMPO MTP is included, herein, for the required performance Measures.

The NBAMPO recognizes the importance of linking goals, objectives, and investment priorities to stated performance objectives, and that establishing this link is critical to the achievement of national transportation goals and statewide and regional performance targets. As such, the Envision 2045 planning process directly reflects the goals, objectives, performance measures, and targets as they are available and described in other State and public transportation plans and processes; specifically, the North Carolina Strategic Highway Safety Plan, (SHSP), the HSIP, the Transportation Asset Management Plan (TAMP), the North Carolina Multimodal Statewide Freight Plan, the NCDOT Group Transit Asset Management Plan, and the current 2040 North Carolina Statewide Long Range Transportation Plan (SLRTP).

- The 2040 SLRTP provides a 30-year transportation blueprint for the state. The Plan summarizes the state's highest priorities for ensuring safety and preserving the existing transportation systems and focusing on services and facilities with statewide significance. Investment strategies identified in the 2040 SLRTP are intended to meet the mobility needs, ensuring safety and promote economic growth for the state, and reflect optimal performance impacts across each investment program given anticipated transportation revenues.
- The North Carolina SHSP is intended to articulate the way forward to achieve Vision Zero, where even one fatality is too many on North Carolina roads. The SHSP's vision, mission, and goals guide the development and implementation of strategies and actions to achieve Vision Zero for the MPOs and other safety partners in addressing safety and defines a framework for implementation activities to be carried out across North Carolina.
- The HSIP annual report provide for a continuous and systematic process that identifies and reviews traffic safety issues across the state to identify locations with potential for improvement. The goal of the HSIP process is to reduce the number of crashes, injuries and fatalities by eliminating certain predominant types of crashes through the implementation of engineering solutions.
- MAP-21 requires States to develop a TAMP for all NHS pavements and bridges within the state. North Carolina's TAMP includes investment strategies leading to a program of projects that would make progress toward achievement of a State's pavement and bridge condition targets.
- The North Carolina Multimodal Statewide Freight Plan defines the conditions and performance of the state freight system and identifies the policies and investments that will enhance highway freight mobility well into the future. The Plan identifies freight needs and the criteria used to determine investments in freight and prioritizes freight investments across modes.

The sections that follow provide detail regarding the performance measures and associated targets, as well as, information/discussion by NBAMPO regarding how projects programmed in their TIP are helping the NCDOT achieve their targets.

7.2 Highway Safety/PM1

Effective April 14, 2016, the FHWA established five highway safety performance measures[2] to carry out the Highway Safety Improvement Program (HSIP). The HSIP is a federal-aid funding program intended to achieve a significant reduction in traffic fatalities and serious injuries on all public roads. These performance measures are:

1. Number of fatalities
2. Rate of fatalities per 100 million vehicle miles traveled
3. Number of serious injuries
4. Rate of serious injuries per 100 million vehicle miles traveled and
5. Number of combined non-motorized fatalities and non-motorized serious injuries

Safety performance targets are established annually by the State DOTs for each safety performance measure and reported to FHWA in the HSIP Annual Report. MPOs then establish annual targets for each measure by either agreeing to program projects that will support the statewide targets or setting quantifiable targets for the metropolitan planning area.

Current statewide safety targets address calendar year 2021 and are based on a five-year rolling average of historical data and anticipated trends. North Carolina established statewide safety performance targets for 2021 in August 2020. The statewide targets for 2020 and 2021 are included in Table 7-1, along with statewide safety performance for the three most recent reporting periods (2013-2017, 2014-2018, and 2015-2019). The NBAMPO approved the 2020 North Carolina statewide safety performance targets on October 31, 2019. By February 27, 2021, NBAMPO must adopt 2021 safety targets for the MPO area or support the statewide targets.

Table 7-1: Highway Safety/PM1, Statewide Systems Conditions and Performance

Performance Measures	2017 (2013-2017 Avg.)	2018 (2014-2018 Avg.)	2019 (2015-2019 Avg.)	2020 (2016-2020 Avg.)	2021 (2017-2021 Avg.)
Number of Fatalities	1,359.0	1,392.4	1427.2	1,227.8	1,309.9
Rate of Fatalities per 100 Million Vehicle Miles Traveled	1.214	1.206	1.208	1.084	1.105
Number of Serious Injuries	2,860.8	3,537.6	3,905.0	2,812.8	3,656.1
Rate of Serious Injuries per 100 Million Vehicle Miles Traveled	2.524	3.028	3.281	2.462	3.065
Number of Combined Non-Motorized Fatalities and Non-Motorized Serious Injuries	431.4	473.6	543.4	426.6	504.4

As shown in above table, the five-year rolling average of four of the five measures, with the exception of fatality rate, increased between 2017 and 2019. The 2021 targets are based on a goal of reducing fatalities and serious injuries by a certain percentage by December 31, 2021.

In early 2020, FHWA completed an assessment of target achievement for NCDOT's 2018 safety targets, based on the 5-year averages for 2014-2018 for each measure. Per FHWA's PM1 rule, a state has met or made significant progress toward its safety targets when at least four of the targets have been met or the actual outcome is better than the baseline performance. Based on FHWA's review, North Carolina did not make significant progress toward achieving its safety targets. As a result, NCDOT must ensure that all HSIP safety funds are obligated and must develop an HSIP Implementation Plan that describes actions the State will take to meet or make significant progress toward achieving its targets.

The latest safety conditions will be updated annually on a rolling 5-year average basis and will be reflected within each subsequent System Performance Report, to track performance over time in relation to baseline conditions and established targets.

The Envision 2045 MTP will increase the safety of the transportation system for motorized and non-motorized users as required by the Planning Rule. Additionally, Envision 2045 lays out a framework for fulfilling NBAMPO's goals and objectives through a well-planned, effective transportation system that is effective, equitable, and accessible for while providing mobility choices for all its users.

7.3 Pavement and Bridge Condition/PM2

Effective May 20, 2017, FHWA established performance measures to assess pavement condition[3] and bridge condition[4] for the National Highway Performance Program. This second FHWA performance measure rule (PM2) established six performance measures:

1. Percent of Interstate pavements in good condition
2. Percent of Interstate pavements in poor condition
3. Percent of non-Interstate National Highway System (NHS) pavements in good condition
4. Percent of non-Interstate NHS pavements in poor condition
5. Percent of NHS bridges by deck area classified as in good condition and
6. Percent of NHS bridges by deck area classified as in poor condition

7.3.1 Pavement Condition Measures

The pavement condition measures represent the percentage of lane-miles on the Interstate or non-Interstate NHS that are in good condition or poor condition. FHWA established five metrics to assess pavement condition: International Roughness Index (IRI), applicable to asphalt and concrete pavements; cracking percent, applicable to asphalt and concrete pavements; rutting, applicable only to asphalt pavements; faulting applicable only to certain types of concrete pavements; and Present Serviceability Rating (PSR), applicable only to roads with lower posted speeds and used in lieu of the other metrics at the option of the state. For each metric, a threshold is used to establish good, fair, or poor condition.

Pavement condition is assessed using the applicable metrics and thresholds. A pavement section is rated in good condition if two or three of the applicable metric ratings are good, and in poor condition if two or more applicable metric ratings are poor. If a state reports PSR for any pavement segments, those segments are rated according to a single PSR scale. For all pavement types, sections that are not good or poor are rated as fair.

The pavement condition measures are expressed as a percentage of all applicable roads in good or poor condition. Pavement in good condition suggests that no major investment is needed. Pavement in poor condition suggests major reconstruction investment is needed due to either ride quality or a structural deficiency.

7.3.2 Bridge Condition Measures

The bridge condition measures represent the percentage of bridges, by deck area, on the NHS that are in good condition or poor condition. The condition of each bridge is evaluated by assessing four bridge components: deck, superstructure, substructure, and culverts. FHWA created a metric rating threshold for each component to establish good, fair, or poor condition. Every bridge on the NHS is evaluated using these component ratings. If the lowest rating of the four metrics is greater than or equal to seven, the structure is classified as good. If the lowest

[3] 23 CFR Part 490, Subpart C
[4] 23 CFR Part 490, Subpart D

rating is less than or equal to four, the structure is classified as poor. If the lowest rating is five or six, it is classified as fair.

To determine the percent of bridges in good or in poor condition, the sum of total deck area of good or poor NHS bridges is divided by the total deck area of bridges carrying the NHS. Deck area is computed using structure length and either deck width or approach roadway width. Good condition suggests that no major investment is needed. Bridges in poor condition are safe to drive on; however, they are nearing a point where substantial reconstruction or replacement is needed.

7.3.3 Pavement and Bridge Targets

Pavement and bridge condition performance is assessed and reported over a four-year performance period. The first performance period began on January 1, 2018 and runs through December 31, 2021. NCDOT reported baseline PM2 performance and targets to FHWA on October 1, 2018 and will report updated performance information at the midpoint and end of the performance period. The second four-year performance period will cover January 1, 2022, to December 31, 2025, with additional performance periods following every four years.

The PM2 rule requires states and MPOs to establish two-year and/or four-year performance targets for each PM2 measure. Current two-year targets represent expected pavement and bridge condition at the end of calendar year 2019, while the current four-year targets represent expected condition at the end of calendar year 2021.

States establish targets as follows:

1. Percent of Interstate pavements in good and poor condition – four-year targets
2. Percent of non-Interstate NHS pavements in good and poor condition – two-year and four- year targets; and
3. Percent of NHS bridges by deck area in good and poor condition – two-year and four-year targets

MPOs establish four-year targets for each measure by either agreeing to program projects that will support the statewide targets or setting quantifiable targets for the metropolitan planning area.

NCDOT established current statewide two-year and four-year PM2 targets on May 16, 2018. The NBAMPO approved the statewide PM2 targets on October 31, 2019. Table 7-2 presents statewide baseline and 2019 performance for each PM2 measure as well as the current two-year and four-year statewide targets established by NCDOT.

Table 7-2: Statewide Pavement and Bridge Conditions/PM2 Performance Targets

Performance Measures	Statewide Performance		2-year Target (2019)	4-year Target (2021)
	2017 Baseline	2019 Actual		
Percent of Interstate pavements in good condition	63.6%	70.3%	Not required	37.0%
Percent of Interstate pavements in poor condition	0.15%	0.1%	Not required	2.2%
Percent of non-Interstate NHS pavements in good condition	36.1%	36.6%	27.0%	21.0%
Percent of non-Interstate NHS pavements in poor condition	1.2%	1.0%	4.2%	4.7%
Percent of NHS bridges (by deck area) in good condition	38.2%	41.0%	33.0%	30.0%
Percent of NHS bridges (by deck area) in poor condition	6.6%	4.2%	8.0%	9.0%

The NBAMPO 2045 MTP addresses infrastructure preservation and identifies pavement and bridge infrastructure needs within the metropolitan planning area and allocates funding for targeted infrastructure improvements. MTP financial plan recommended projects list includes ongoing maintenance funding for bridge maintenance, and general roadway maintenance; this funding is expected to contribute to achieving and maintaining a required percentage of pavement on the region's roadways in good condition.

The NBAMPO recognizes the importance of linking goals, objectives, and investment priorities to stated performance objectives, and that establishing this link is critical to the achievement of national transportation goals and statewide and regional performance targets. As such, the Envision 2045 planning process directly reflects the goals, objectives, performance measures, and targets as they are available and described in other State and public transportation plans and processes; specifically, the Transportation Asset Management Plan (TAMP) and the current 2040 Statewide Long Range Transportation Plan.

- MAP-21 requires States to develop a TAMP for all NHS pavements and bridges within the state. North Carolina's TAMP includes investment strategies leading to a program of projects that would make progress toward achievement of a State's pavement and bridge condition targets.
- The 2040 North Carolina Statewide Long-Range Transportation Plan (SLRTP) summarizes transportation deficiencies across the state and defines an investment portfolio across all modes, highway preservation, highway safety, and highway operations over the 30-year plan horizon. Investment priorities reflect optimal performance impacts across each investment program given anticipated transportation revenues.

7.4 System Performance, Freight, Congestion Mitigation & Air Quality Improvement Program

Effective May 20, 2017, FHWA established measures to assess performance of the National Highway System[5], freight movement on the Interstate system[6], and the Congestion Mitigation and Air Quality Improvement (CMAQ) Program[7]. This third FHWA performance measure rule (PM3) established six performance measures, described below.

National Highway System Performance:

1. Percent of person-miles on the Interstate system that are reliable
2. Percent of person-miles on the non-Interstate NHS that are reliable

Freight Movement on the Interstate:

3. Truck Travel Time Reliability Index (TTTR)

Congestion Mitigation and Air Quality Improvement (CMAQ) Program:

4. Annual hours of peak hour excessive delay per capita (PHED)
5. Percent of non-single occupant vehicle travel (Non-SOV) and
6. Cumulative two-year and four-year reduction of on-road mobile source emissions for CMAQ funded projects (CMAQ Emission Reduction)

The CMAQ performance measures apply to states and MPOs with projects financed with CMAQ funds whose boundary contains any part of a nonattainment or maintenance area for ozone, carbon monoxide or particulate matter.

The NBAMPO meets air quality standards, therefore, the CMAQ measures do not apply and are not reflected in the System Performance Report.

7.4.1 System Performance Measures

The two System Performance measures assess the reliability of travel times on the Interstate or non-Interstate NHS system. The performance metric used to calculate reliability is the Level of Travel Time Reliability (LOTTR). LOTTR is defined as the ratio of longer travel times (80th percentile) to a normal travel time (50th percentile) over all applicable roads during four time periods (AM peak, Mid-day, PM peak, and weekends) that cover the hours of 6 AM to 8 PM each day.

The LOTTR ratio is calculated for each segment of applicable roadway, essentially comparing the segment with itself. A segment is deemed to be reliable if its LOTTR is less than 1.5 during all four time periods. If one or more

[5] 23 CFR Part 490, Subpart E
[6] 23 CFR Part 490, Subpart F
[7] 23 CFR Part 490, Subparts G and H

time periods has a LOTTR of 1.5 or above, that segment is unreliable. The measures are expressed as the percent of person-miles traveled on the Interstate or non- Interstate NHS system that are reliable. Person-miles consider the number of people traveling in buses, cars, and trucks over these roadway segments. To determine total person miles traveled, the vehicle miles traveled (VMT) on each segment is multiplied by average vehicle occupancy. To calculate the percent of person miles traveled that are reliable, the sum of the number of reliable person miles traveled is divided by the sum of total person miles traveled.

7.4.2 Freight Movement Performance Measures

The Freight Movement performance measure assesses reliability for trucks traveling on the Interstate. A TTTR ratio is generated by dividing the 95th percentile truck travel time by a normal travel time (50th percentile) for each segment of the Interstate system over five time periods throughout weekdays and weekends (AM peak, Mid-day, PM peak, weekend, and overnight) that cover all hours of the day. For each segment, the highest TTTR value among the five time periods is multiplied by the length of the segment. The sum of all length-weighted segments is then divided by the total length of Interstate to generate the TTTR Index.

7.4.3 PM3 Performance Targets

Performance for the PM3 measures is assessed and reported over a four-year performance period. For all PM3 measures, the first performance period began on January 1, 2018, and will end on December 31, 2021. North Carolina reported baseline PM3 performance and targets to FHWA on October 1, 2018 and will report updated performance information at the midpoint (October 1, 2020) and end of the performance period. The second four-year performance period will cover January 1, 2022, to December 31, 2025, with additional performance periods following every four years.

The PM3 rule requires state DOTs and MPOs to establish two-year and/or four-year performance targets for each PM3 measure. The current two-year and four-year targets represent expected performance at the end of calendar years 2019 and 2021, respectively.

States establish targets as follows:

- Percent of person-miles on the Interstate system that are reliable – two-year and four-year targets
- Percent of person-miles on the non-Interstate NHS that are reliable – four-year targets
- Truck Travel Time Reliability – two-year and four-year targets

MPOs establish four-year targets for the System Performance and Freight Movement measures. MPOs establish targets by either agreeing to program projects that will support the statewide targets or setting quantifiable targets for the MPO's planning area that differ from the state targets.

NCDOT established statewide PM3 targets on May 16, 2018. The NBAMPO approved the statewide PM3 targets on October 31, 2019. Table 6 presents statewide baseline and 2019 performance for each PM3 measure as well as the current two-year (2019) and four-year (2021) statewide targets established by NCDOT. As shown in Table 7-3, all 2-year (2019) targets have been achieved.

Table 7-3: System Performance/Freight Movement/CMAQ (PM3) Performance and Targets

Performance Measures	Statewide Performance		2-year Target (2019)	4-year Target (2021)
	2017 Baseline	2019 Actual		
Percent of person-miles on the Interstate system that are reliable	88.1%	88.7%	80.0%	75.0%
Percent of person-miles on the non-Interstate NHS that are reliable	88.4%	91.8%	Not Required	70.0%
Truck Travel Time Reliability Index	1.39	1.43	1.65	1.70

The NBAMPO Envision 2045 MTP addresses reliability, freight movement, congestion, [and emissions] and identifies needs for each of these issues within the metropolitan planning area and allocates funding for targeted improvements. Interstate and other roadway widening, interchange improvements, new roadway alignment and operations improvements projects throughout the region that are expected to reduce future congestion.

The NBAMPO recognizes the importance of linking goals, objectives, and investment priorities to stated performance objectives, and that establishing this link is critical to the achievement of national transportation goals and statewide and regional performance targets. As such, the NBAMPO planning process directly reflects the goals, objectives, performance measures, and targets as they are available and described in other State and public transportation plans and processes; specifically, the North Carolina Multimodal Statewide Freight Plan and the current SLRTP.

- The North Carolina Multimodal Statewide Freight Plan defines the conditions and performance of the state freight system and identifies the policies and investments that will enhance highway freight mobility well into the future. The Plan identifies freight needs and the criteria used to determine investments in freight and prioritizes freight investments across modes.
- The SLRTP summarizes transportation deficiencies across the state and defines an investment portfolio across highway and transit capacity, highway preservation, highway safety, and highway operations over the 25-year plan horizon. Investment priorities reflect optimal performance impacts across each investment program given anticipated transportation revenues.

7.5 Transit Asset Management Performance

On July 26, 2016, FTA published the final Transit Asset Management rule. This rule applies to all recipients and subrecipients of Federal transit funding that own, operate, or manage public transportation capital assets. The rule defines the term "state of good repair," requires that public transportation providers develop and implement transit asset management (TAM) plans, and establishes state of good repair standards and performance measures for four asset categories: transit equipment, rolling stock, transit infrastructure, and facilities. The rule became effective on October 1, 2018. Table 7-4 below identifies performance measures outlined in the final rule for transit asset management.

Table 7-4: FTA TAM Performance Measures

Asset Category	Performance Measure and Asset Class
1. **Equipment**	Percentage of non-revenue, support-service and maintenance vehicles that have met or exceeded their useful life benchmark
2. **Rolling Stock**	Percentage of revenue vehicles within a particular asset class that have either met or exceeded their useful life benchmark
3. **Infrastructure**	Percentage of track segments with performance restrictions
4. **Facilities**	Percentage of facilities within an asset class rated below condition 3 on the TERM scale

For equipment and rolling stock asset categories, useful life benchmark (ULB) is defined as the expected lifecycle of a capital asset, or the acceptable period of use in service, for a particular transit provider's operating environment. ULB considers a provider's unique operating environment such as geography and service frequency and is not the same as an asset's useful life.

7.6 Public Transportation Provider Coordination with States and MPOs for TAM Targets

Following are key TAM considerations for NCDOT, MPOs, and transit providers:

- Public transportation providers are required to establish and report transit asset management targets annually for the following fiscal year
- To the maximum extent practicable, transit providers, states, and MPOs must coordinate with each other in the selection of performance targets
- Each provider or its sponsors must share its targets, TAM plan, and asset condition information with each MPO in which the provider's projects and services are programmed in the MPO's TIP
- MPOs are required to establish initial transit asset management targets within 180 days of the date that public transportation providers establish initial targets. However, MPOs are not required to establish transit asset management targets annually each time the transit provider establishes targets. Instead, subsequent MPO targets must be established when the MPO updates the TIP or MTP
- When establishing transit asset management targets, the MPO can either agree to program projects that will support the provider targets or establish its own regional transit asset management targets for the MPO planning area
- In cases where two or more providers operate in an MPO planning area and the providers establish different targets for the same measure and asset class, the MPO has the option of coordinating with the providers to establish a single asset class target for the MPO planning area, or establishing a set of targets for the MPO planning area that reflects the differing transit provider targets
- MPOs and states must reference the transit asset targets in their long-range transportation plans, and describe the anticipated effect of their respective transportation improvement programs toward achieving their targets

The NBAMPO planning area is served by Craven Area Rural Transit System (CARTS) which is a Tier III transit service provider and is included in NCDOT's Group TAM Plan.

8 Indirect and Cumulative Effects

8.1 Executive Summary

The North Carolina Department of Transportation's (NCDOT's) Transportation Planning Branch (TPB), in partnership with the New Bern Area Metropolitan Planning Organization (NBAMPO), completed an Indirect and Cumulative Effects (ICE) Assessment as part of the NBAMPO's 2045 Metropolitan Transportation Plan (MTP) development process. This ICE Assessment represents an update of the assessment that was prepared with the 2040 MTP. Four primary products were prepared as part of the ICE Assessment, with each product building off of one another, as follows:

- Product 1: Existing Conditions Assessment
- Product 2: Future Growth Potential Assessment
- Product 3: Indirect and Cumulative Effects (ICE) Screening
- Product 4: Best Management Practices Recommendations

These products were prepared based on the guidance included in NCDOT's draft *CTP-ICE Procedures and Tools*, revised July 2014, and coordination with regulatory and jurisdictional agencies. This effort is one part of a larger NCDOT initiative to integrate the long-range planning process with the environmental review process (i.e., National Environmental Policy Act [NEPA]/State Environmental Policy Act [SEPA]). As the MTP development process provides a comprehensive and integrated plan for an area's future transportation needs, incorporating the evaluation of potential indirect and cumulative effects (i.e., impacts caused by a plan or project which occur later, or are removed in distance, but reasonably foreseeable; and incremental impacts of a proposed action added to other past, present and future actions) at this stage provides value to, and consistency between, long-range planning and project development.

8.2 NBAMPO 2045 Metropolitan Transportation Plan (MTP)

The NBAMPO MTP Study Area evaluated in the ICE Assessment was approximately 98,324 acres and included the City of New Bern, Town of River Bend, Town of Trent Woods, Town of Bridgeton, and unincorporated land in a portion of Craven County. The MTP identifies future transportation deficiencies and investments and system improvement recommendations for all modes of transportation necessary to meet the transportation needs of the region through the design year of 2045. The projects proposed in the MTP are varied in scope, purpose and need, and location. The majority of the projects are related to existing location roadway improvements and those on new location. In addition, the MTP includes projects related to other modes of transportation such as public transit, rail, bike and pedestrian. The projects proposed in the 2045 MTP are similar to those from the 2040 MTP with a few projects identified as "unfunded" in the 2045 MTP.

8.3 ICE Assessment

8.3.1 Product 1 – Existing Conditions Assessment

The MTP-ICE Plan-Level Existing Conditions Assessment (Product 1) documented a preliminary screening of seven human and environmental factors at the MTP Study Area geography, including forecasted population and employment growth, available land, water and sewer availability, market for development, public policy, and notable environmental features. Each of the variables received a qualitative rating, varying from "lesser likelihood" to "greater likelihood", relative to anticipated indirect effects resulting from the human and environmental factors. After compiling the ratings from each of the factors, the cumulative result was determined to be "possible" indirect effects, similar to the assessment associated with the 2040 MTP. The great amount of notable environmental features in the MTP Study Area weighed heavily in this result, as did the amount of land available for development and the availability of water and sewer services, each representing a higher likelihood for indirect effects. However, the forecasted medium-low population and employment growth, along with the more stringent local growth management policies (rating at a lesser likelihood) offset categories of higher likelihood.

8.3.2 Product 2 – Future Growth Potential Assessment

Product 2 is an assessment of the potential for growth in the MTP Study Area and could be used to inform the MTP planning process, including the development of land use scenarios and alternatives. Product 1 was used as a baseline, and the comprehensive and land use plans of the various jurisdictions within the MTP Study Area were evaluated to identify land use, zoning, water and sewer infrastructure, development limitations, and natural and cultural features. These factors, when assessed together, provided insight into future growth potential. Socioeconomic data from the New Bern MPO travel demand model for each of the Traffic Analysis Zones (TAZ) on forecasted population and employment growth was analyzed for the MTP Study Area to determine the areas of future growth potential.

Growth in the MTP Study Area was expected to continue at a medium-low rate based on the socio-economic data projections for the MPO travel demand model and local plans. Craven County and the City of New Bern are actively promoting economic development and growth, the cultural and natural resources continue to attract people to the area, and infrastructure capacity exists. Furthermore, the positive economic trends in the area, quality of life, employment opportunities, and air and rail access are important drivers in the projected growth. The numerous natural resources and conservation efforts, in combination with the presence of regulatory policies and growth management, are expected to focus development and growth into specific areas.

8.3.3 Product 3 – ICE Screening

The ICE Screening (Product 3), using the results of Products 1 and 2, is an assessment of the potential indirect and cumulative effects of the NBAMPO MTP (plan-level) scenario and three selected proposed projects. The plan-level of the MTP proposed projects resulted in a rating of "possible" indirect effects, slightly reduced from "likely" in the ICE Assessment for the 2040 MTP. This is primarily due to the reduced scope of the proposed projects. Sensitivity and abundance of notable environmental features were strong drivers for the indirect effects screening results.

The screening of cumulative effects for the overall MTP plan, when considered in the context of other past, present, and future actions resulted in a rating of "possible" cumulative effects to the area's community and

natural features, which is the same result as the ICE Assessment for the 2040 MTP. The potential direct natural environmental impacts by the proposed projects would require avoidance, minimization, and mitigation, consistent with prevailing regulations and coordination with environmental resource agencies. In addition, the MTP's proposed projects and future development would be required to follow federal, state and local regulations for protecting resources.

8.3.4 Product 4 – Best Management Practices Recommendations

Overall, the findings of the ICE Assessment indicated a rating of "possible" cumulative effects to notable community features and natural features in the MTP Study Area. Product 4 outlines planning guidance and tools that could be used by the local jurisdictions within the MTP Study Area to assist in minimizing potential indirect and cumulative effects from proposed projects in the 2045 NBAMPO MTP. Some examples of these tools include Smart Growth policies, zoning ordinance revisions, transfer of development rights (TDR) programs for farmland protection, and green infrastructure planning. An additional recommendation in Product 4 for the 2045 MTP is for the local jurisdictions to prioritize updating local land use plans that protect resources important to the community.

Implementing one or more of these strategies to protect important natural and community resources may assist in streamlining future transportation project delivery, as project permitting focuses on avoiding and minimizing effects to resources in the vicinity of proposed projects. Some resources provide not only planning guidance, but funding opportunities, and grant-writing assistance for local communities. Using these resources, which provide lessons learned and example documents from similar communities, would assist in reaching the goals in the MTP Study Area.

Refer to Appendix D for the detailed Community Understanding Report (CUR) and Appendix E for detailed ICE Assessment for each of the products.

References

1. [1] SAFETEA-LU. (2005). Retrieved October 28, 2020, from https://www.fhwa.dot.gov/safetealu/

2. [1] Moving Ahead for Progress in the 21st Century. (2012). Retrieved October 28, 2020, from https://www.fhwa.dot.gov/map21/

3. [1] The FAST Act. (2015). Retrieved October 28, 2020, from https://www.fhwa.dot.gov/fastact/

4. [1] New Bern city, North Carolina. (2020). Retrieved October 28, 2020, from https://data.census.gov/cedsci/profile?g=1600000US3746340

5. [1] New Bern, NC. (2018). Retrieved October 28, 2020, from https://www.newbernnc.gov/visitors/city_information/city_history.php

6. [1] Board and Committees. (2020). Retrieved October 28, 2020, from https://www.nbampo.org/about-us/board-and-committees

7. [1] 2017 ACS 5-Year Estimates Data Profiles. (2017). Retrieved October 29, 2020, from https://data.census.gov/cedsci/table?g=0400000US37_1600000US3746340

8. [1] NCDOT 2020-2029 Current STIP. (2020). Retrieved from https://connect.ncdot.gov/projects/planning/STIPDocuments1/NCDOT%20Current%20STIP.pdf

9. [1] The Loops: Craven County. (2020). Retrieved October 29, 2020, from https://www.cravencountync.gov/187/The-Loops

10. [1] United States Department of Transportation Policy Statement on Bicycle and Pedestrian Accommodation Regulations and Recommendations. (2010). Retrieved October 29, 2020, from https://www.fhwa.dot.gov/environment/bicycle_pedestrian/guidance/policy_accom.cfm

11. [1] Institute for Transportation Research and Education at North Carolina State University. (2018). North Carolina Ports 2018 Economic Contribution Study. https://ncports.com/wp-content/uploads/2019/01/2018-NC-Ports-Economic-Contribution-Study.pdf

12. [1] Highway/Rail Grade Crossing Incidents. (2020). Retrieved October 29, 2020, from https://railroads.dot.gov/accident-and-incident-reporting/highwayrail-grade-crossing-incidents/highwayrail-grade-crossing

13. [1] Neuse River. (2019, May 15). Retrieved October 29, 2020, from https://www.americanrivers.org/river/neuse-river/

14. [1] North Carolina Strategic Highway Safety Plan. (2019). Retrieved October 29, 2020, from https://spatial.vhb.com/ncdotshsp/

15. [1] FHWA 2004 Conditions and Performance, Chapter 18: Strategic Highway Network. (2004). Retrieved October 28, 2020, from https://www.fhwa.dot.gov/policy/2004cpr/chap18.cfm

16. [1] Craven County Emergency Operations Plan. (2010). Retrieved October 29, 2020, from https://www.cravencountync.gov/DocumentCenter/View/138/Craven-County-Emergency-Operations-Plan---2010-PDF

17. [1] North Carolina State Highway Patrol Coastal Evacuation Plan. (n.d.). Retrieved from https://files.nc.gov/ncdps/documents/files/18NCSHPCoastalTroopACravenCounty.pdf

Appendices

Appendix A: Travel Demand Modeling Memo

Memorandum

To: Behshad Norowzi, CPM
Coastal Planning Group Supervisor
Transportation Planning Division
North Carolina Department of Transportation

Date: June 24, 2020

Project #: 38933.00

From: VHB

Re: NBAMPO Model Future Year Update

This memo describes the methodology for updating the NBAMPO model from 2040 future year to 2045 future year and updating the 2019 and 2045 external trip tables.

VHB extrapolated the 2045 Base Year socioeconomic (SE) data set from the existing 2015 and 2040 SE New Bern Area Travel Demand Model files provided by NCDOT. This updated SE file is intended to advance the future year of the model closer and support creating a new 2045 horizon year. Each of the New Bern Model's Traffic Analysis Zone (TAZ) SE variables (population, households, employment categories) was extrapolated by applying the compound annualized growth rate between the respective known 2015 and 2040 data points.

Assumptions for creating the 2045 SE data set included the following:

- While the model files indicate a 0.71% and 0.50% model-area-wide compound annual growth rate for population and employment from 2015 to 2040, respectively, the North Carolina Office of State Budget and Management's (OSBM) county projections indicate only a 0.075% compound annual growth rate for population in Craven County between 2015 and 2039. The model's adopted SE estimates were selected over the NC OSBM projections.

2045 SE Data

Multiple data sources and methodologies were tested to develop the 2045 SE data. First, the values for major SE variables such as population, employment, and housing were compared in the context of the updated 2019 SE data set (see Figure 1 and Figure 2 below). Second, VHB reviewed TAZs with environmental and other constraints that limit or prohibit development—such as those in the Croatan National Forest—to ensure no population and other SE growth. Finally, VHB compared the 2045 SE data set with the projections from a similar analysis conducted by Clearbox Forecast Group in 2015 and found similar population estimates (Table 1 and Table 2).

Memorandum

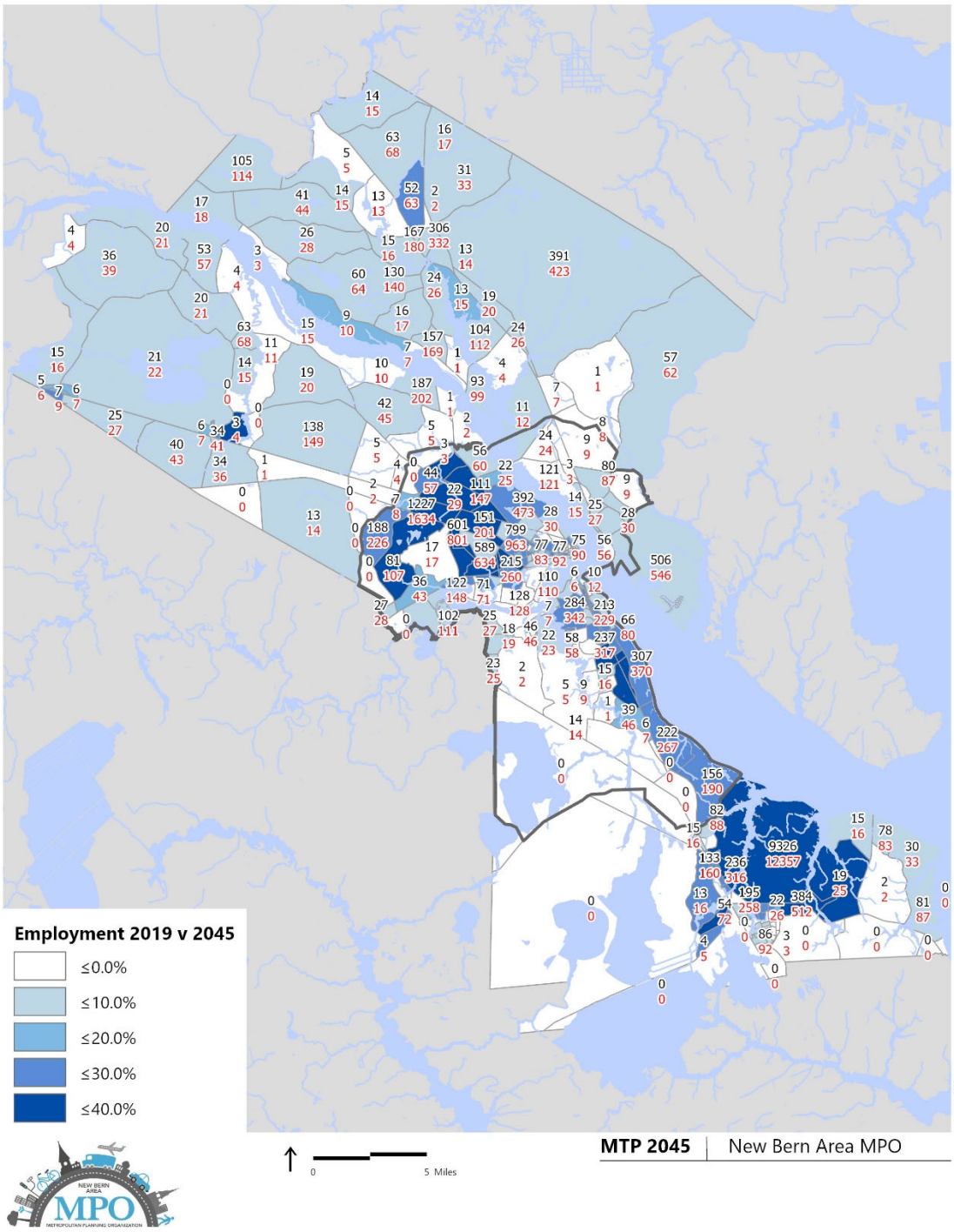


Figure 1 – Model Area Employment Changes 2019 to 2045

Memorandum

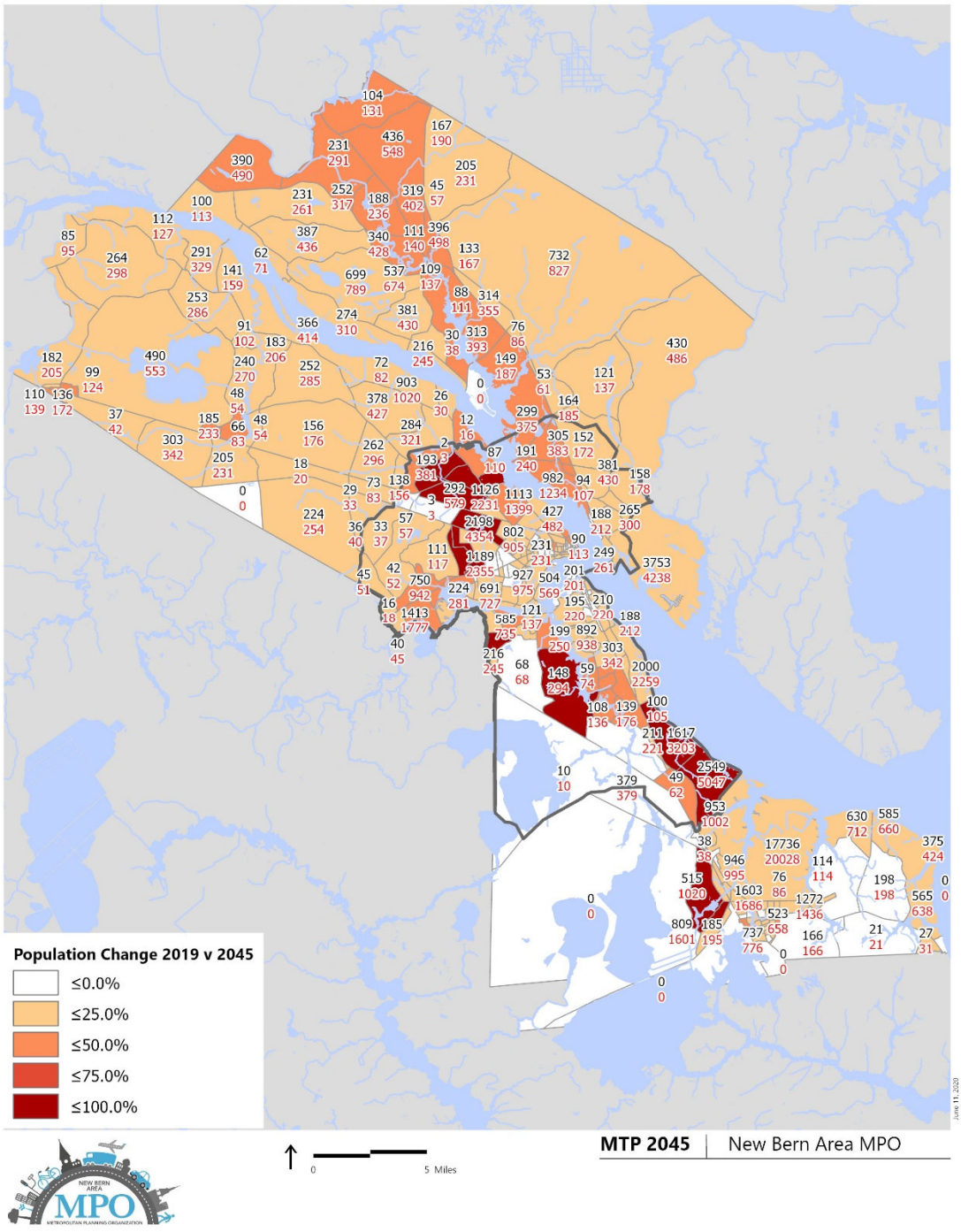


Figure 2 – Model Area Population Changes 2019 to 2045

Memorandum

The previous SE forecasting estimates from Clearbox are helpful—but not definitive—to validate the proposed 2045 SE data sets. First, the Clearbox estimates for Craven County population levels in 2040 and 2045 are similar to those from the model and developed for the 2045 MTP update (Table 1). The current New Bern model area and Craven County are essentially the same geography. However, the previous estimates for model area inputs like households and employment use a geography that is different from the current model area's boundaries. As shown in Figure 3, the previous model area geography (shaded orange) is significantly smaller than Craven County and the current model boundary and does not incorporate the populated areas north of the MPO's boundary. This reduced geography does not allow for a direct comparison of model area variables like population, households, and employment with previous estimates.

Table 1 - Comparison of Craven County Future Year Population Estimates

Year	New Bern Model	Previous Estimate
2040	137,177	136,729
2045	142,877*	143,291

**Note – This value was extrapolated based on the average annual growth rate from the 2015 and 2040 SE model files*

Memorandum

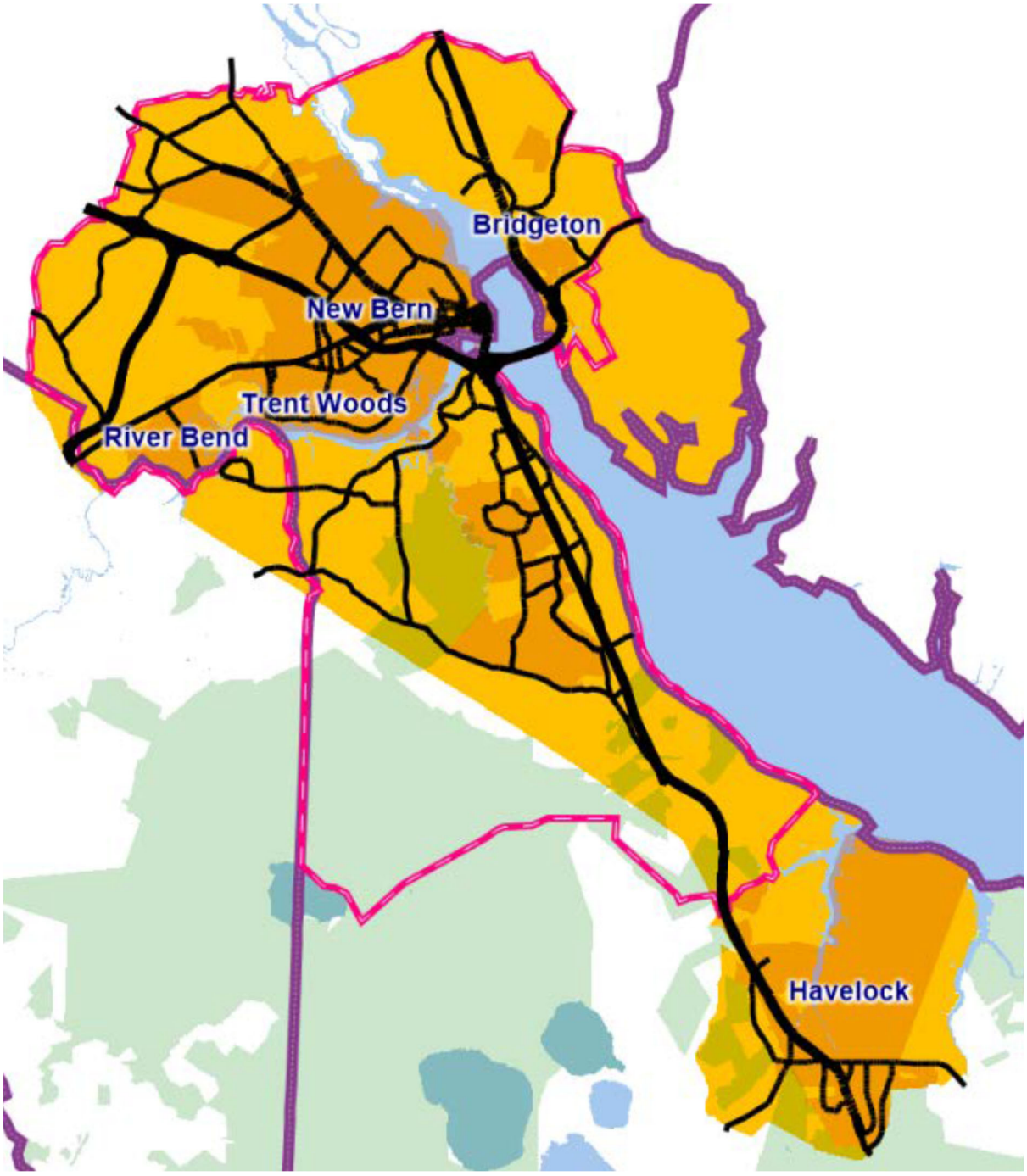


Figure 3 - Previous Model Area, 2015

Memorandum

Employment is anticipated to increase in the model area by 2045, continuing the trend from 2015 through 2040. However, employment growth is estimated to increase at a slower annual rate than population growth, 0.50% vs .72%, respectively. Additionally, military employment at Cherry Point is assumed at a constant 9,326, a value that remained constant in the 2015 and 2040 model files. The previous forecast also assumed a stable military employment level from 2010 through 2045, yet that value was higher at 14,227 employees. Table 2 below illustrates the comparison employment forecasts for 2040 and 2045, including military personnel. Aside from the difference in the military employment constant, there is a divergence in the non-military employment between the proposed 2045 SE model file and the previous forecast. This is due in part to the previous assumption that the employment-to-population ratio would increase through 2045, whereas VHB assumes a small decrease in the employment-to-population ratio that is consistent with the slower historical pace of employment versus population growth.

Table 2 - Employment Forecast Comparison

Year	Model Area Employment	Clearbox Employment	Model - Cherry Point	Clearbox - Cherry Point	Model Total	Clearbox Total
2040	43,323	42,659	9,326	14,227	52,649	56,886
2045	44,633	45,280	9,326	14,227	53,959	59,507

2019 and 2045 External Trip Tables

During the development of the 2045 SE data set, VHB learned that the provided 2040 external trip table assumed an unlikely reduction of trips from approximately 9,300 in 2015 to 700 in 2040. VHB contacted NCDOT Transportation Planning Division (TPD) with this concern and was directed to update the 2019 external trip table and then grow the table to 2045.

To update the 2019 external table and create the 2045 table, VHB first collected NCDOT historical count data at the external station locations from the year 2000 through 2018. VHB then calculated and compared the annual growth rates for the external station locations across two timeframes, 2009-2018 and 2014-2018, and selected the more conservative rate per location. Although some location exhibited significant historical reductions, VHB bounded the rates from -5% to +5% growth per year as a reasonableness check (Table 3). Next, the 2015 external trip table was grown to 2019 with the respective annual growth rate for each external station location. VHB then balanced the 2019 external trip table. To create the 2045 external trip table, VHB began with the 2019 table and grew the external station values to 2045 with the selected annual growth rates and balanced the table.

Memorandum

Table 3 – Selected Growth Rates for External Model Stations

NCDOT ID	County	Route	Location	External Station ID (Model)	Selected Annual Growth Rate
23940	LENOIR	NC 55	E OF SR 1806	1015	-0.09%
1973	BEAUFORT	US 17	S OF SR 1131	1002	1.20%
30459	PAMLICO	NC 55	W OF SR 1126	1004	-0.70%
20206	JONES	US 17	W OF SR 1330	1012	1.70%
20190	JONES	US 70	E OF SR 1313	1014	1.43%
32162	PITT	NC 118	E OF SR 1916	1016	0.09%
30290	PITT	NC 43	E OF SR 1800	1001	2.16%
3832	BEAUFORT	SR 1003	W OF SR 1932	1003	-2.17%
1823	CARTERET	SR 1125	N OF SR 1124	1008	-5.00%
8570	CRAVEN	US 70	E OF SR 1824	1007	-0.23%
16085	CARTERET	NC 101	N OF SR 1392	1006	2.05%
6087	CRAVEN	NC 306	N OF NC 101	1005	-2.75%
7299	CRAVEN	SR 1100	S OF SR 1101	1009	-5.00%
8561	CRAVEN	SR 1004	S OF SR 1144	1010	1.12%
5794	CRAVEN	SR 1144	W OF SR 1004	1011	2.60%
20338	JONES	NC 41	N OF SR 1002	1013	0.57%

Appendix B: Project Cut Sheets

Brices Creek Road (SR 1004) Widening

From Crump Farm Rd (SR 1144) to Kelso Rd (SR 1167)

Local ID: NB-Rdwy-02

Purpose: Mobility

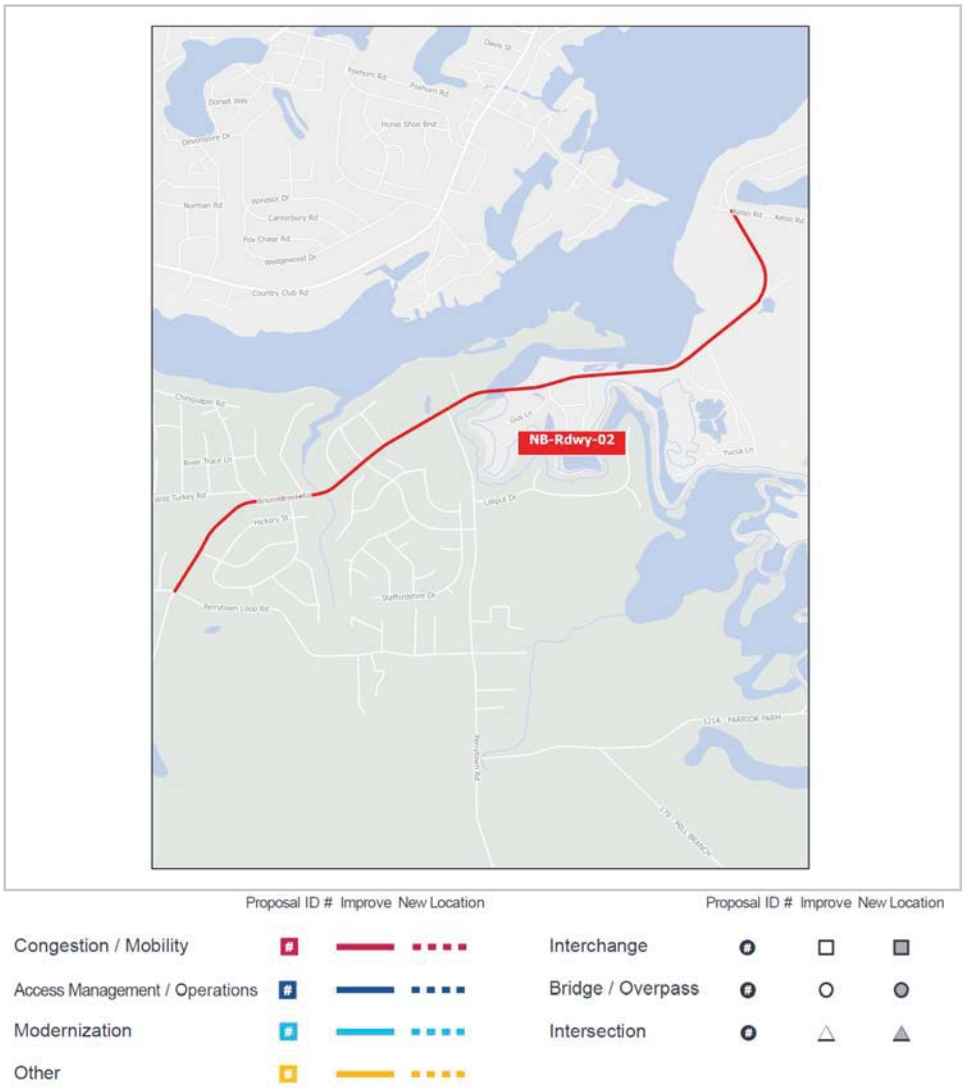
Improvement: Widening

Identified Need

There is a need to improve the mobility of vehicular travel along Brices Creek Road from Crump Farm Road to Kelso Road in order to better accommodate the through and turning movements along the corridor. The current two lane facility serves as a direct arterial from rural and residential areas to major routes and points of interest.

Recommendation

This project includes the widening of the current two lane Brices Creek Road to a four lane facility from Crump Farm Road to Kelso Road.



Proposal At A Glance

Highway Class	Congestion & Mobility
Facility Type	Minor Throughfare
Typical Section	04 F
Section Option	04 E, 04 G
Estimated Cost	$27,840,000
Length (miles)	2.54
Existing ROW (feet)	
Existing Crash Rate	

Capacity Data:	Year
Facility will be Approaching Capacity (>80%)	
Facility will be Over Capacity (≥100%)	

Proposal Data:	2018 Base Year	2045 Future Year	
Improve Existing	Existing	Without Proposal	With Proposal
Facility Type	Minor Throughfare	Minor Throughfa	Minor Throughfa
Travel Lanes	2	2	4
Volume (vpd)	5,000-9,000	5,000-10,000	5,000-10,000
Capacity (vpd)	33,000	33,000	65,000

	Existing	Without Proposal	With Proposal
Facility Type			
Travel Lanes			
Volume (vpd)			
Capacity (vpd)			

	Existing	Without Proposal	With Proposal
Facility Type			
Travel Lanes			
Volume (vpd)			
Capacity (vpd)			

Project History/ Linkage to Other Plans

This project was previously included in the NBAMPO 2040 MTP, additionally Brices Creek Road serves as a direct connector to rural areas ending in the direct vicinity of Coastal Carolina Regional Airport.

ICE / MTP Goal Analysis

This project widens an existing facility, aligning with NBAMPO'S Goal #3: seek to optimize the existing transportation system. Specifically, this project achieves Objective 3A: prioritize maintaining existing assets before exploring system expansion options. The metric for assessing the success of this is the number of deficient/posted bridges and any structures along this corridor would be improved during the implementation of this widening project.

Potential Impacts

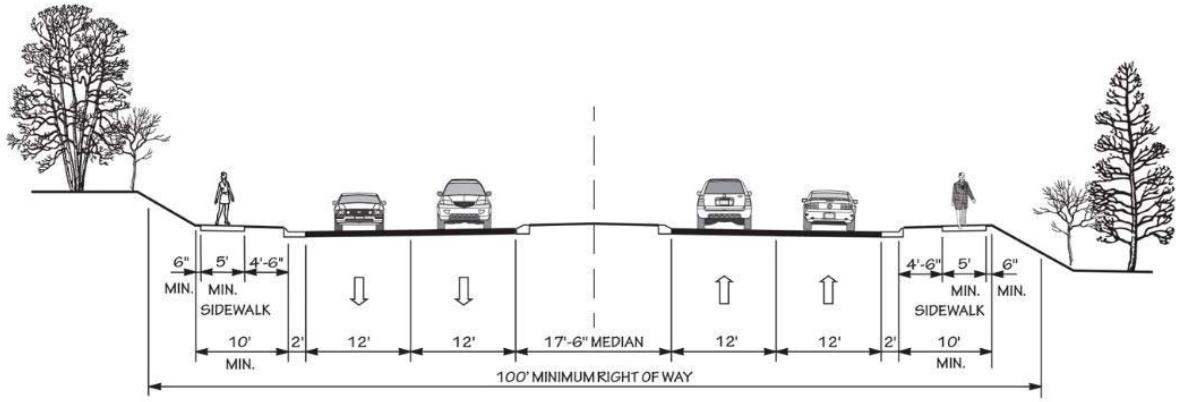
Natural Impacts:

This project has moderate natural impacts with multiple stream/floodway crossings. Additionally, this project is within a quarter mile radius of wetlands and natural heritage areas.

Other Information

TYPICAL SECTION No. 4F

4 LANE DIVIDED (17'-6" RAISED MEDIAN) WITH CURB & GUTTER, AND SIDEWALKS



POSTED SPEED 35-45 MPH

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To note which facilities are being evaluated as part of the project, check all proposed facilities that apply in the tables to the right.

Facilities to be Evaluated	
Bicycle, Pedestrian & Public Transit (*Subject to local municipal agreement)	Proposed
Sidewalk *	☑
Marked Crosswalks	☐
Bicycle Lane	☐
Bike Route	☐
Marked Shoulder	☐
Multi-use Path *	☐
Fixed Bus Corridor	☐
Pedestrian Crossing Treatments	☐
Bus on Shoulder System (BOSS)	☐
Dedicated Lanes / Bus Rapid Transit Facility	☐
Other Elements	☐

Facilities to be Evaluated	
Rail & Freight	Proposed
Amtrak/Freight Route	☐
Fixed Guideway	☐

Facilities will NOT be Evaluated

Bicycle, Pedestrian & Public Transit

Proposed

If facilities will NOT be evaluated, check the reasons and modes that apply:

Location is greater than one mile from any existing or planned pedestrian facility, residential or commercial land use, school, or public transit stop.	❑
Location is not served by any public transit routes and no new service is identified in any public transit agency plans.	❑
Pedestrian or Bicycle uses are prohibited.	
Pedestrian	❑
Bicycle	❑
Location has unique site constraints.	
Pedestrian	❑
Bicycle	❑
Public Transit	❑
Additional reason(s) or notes:	❑

EXCEPTIONS

If **no** facilities for pedestrian, bicycle, or public transportation will be evaluated, an exception to the Complete Streets Policy is required. Please provide detailed information to justify the exception to including any Complete Street elements in this project. **Note that Exceptions will be reviewed by the Complete Streets Review Team upon programming in the STIP of the project.**

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Signatures:

_____ _____

State Traffic Engineer or designee Date

_____ _____

Director of Bike Ped/Public Transportation Division or designee Date

_____ _____

Division Planning Engineer/Corridor Development Engineer or designee Date

NC 43 (Washington Post Rd.)

From Neuse Blvd (NC 55) to MPO Boundary

Local ID: NB-Rdwy-03

Purpose: Mobility

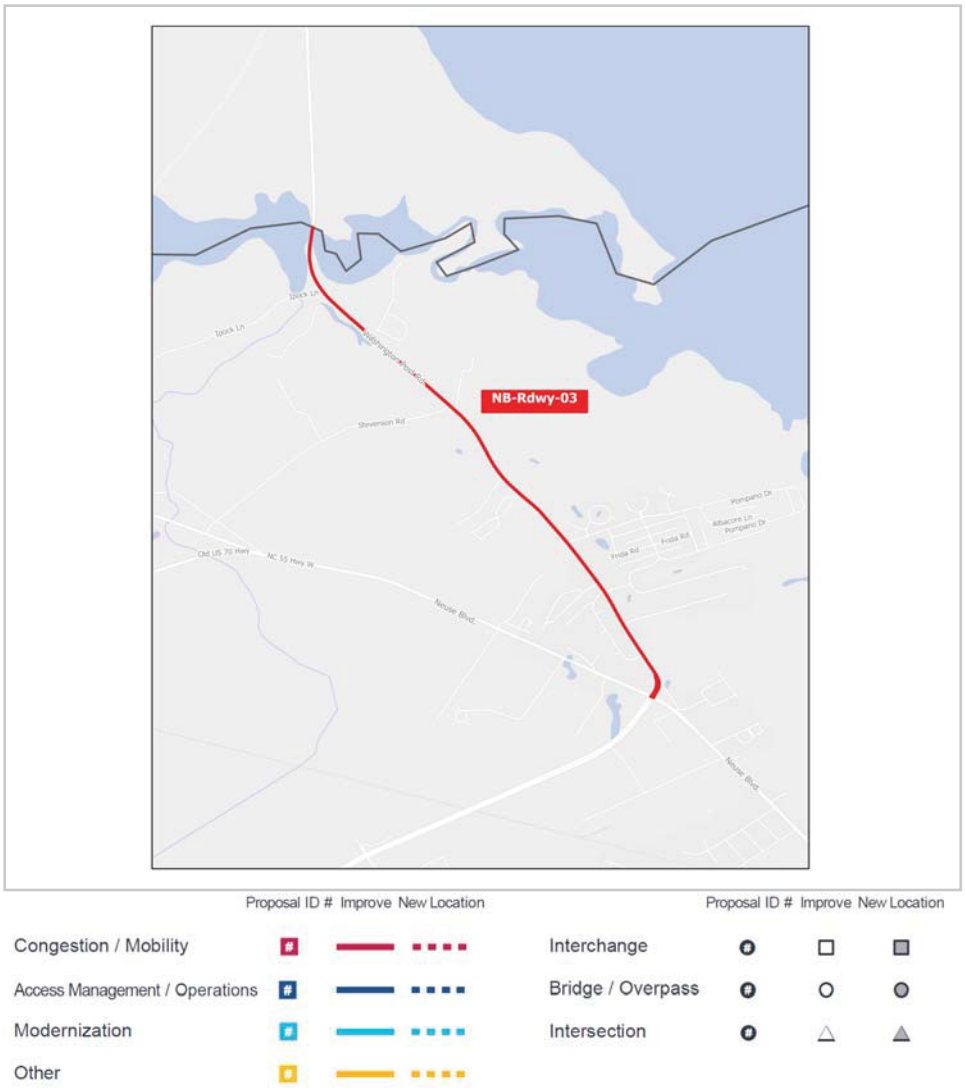
Improvement: Widening

Identified Need

There is a need to improve the mobility of vehicular travel along NC 43 (Washington Post Rd) from NC 55 (Neuse Blvd) to MPO Boundary in order to better accommodate the through movements along the corridor.

Recommendation

This project includes an upgrade to boulevard standards for Washington Post Road from Neuse Boulevard to the MPO Boundary.



Proposal At A Glance	
Highway Class	Congestion & Mobility
Facility Type	Boulevard
Typical Section	04 A
Section Option	
Estimated Cost	$30,470,000
Length (miles)	2.78
Existing ROW (feet)	
Existing Crash Rate	

Capacity Data:	Year
Facility will be Approaching Capacity (>80%)	Post-2045
Facility will be Over Capacity (≥100%)	

Proposal Data:	2018 Base Year	2045 Future Year	
	Existing	Without Proposal	With Proposal
Facility Type	Major Throughfare	Major Throughfa	Boulevard
Travel Lanes	2	2	4
Volume (vpd)	7,000-14,000	8,000-17,000	11,000-22,000
Capacity (vpd)	33,000	33,000	49,000-60,000

	Existing	Without Proposal	With Proposal
Facility Type			
Travel Lanes			
Volume (vpd)			
Capacity (vpd)			

	Existing	Without Proposal	With Proposal
Facility Type			
Travel Lanes			
Volume (vpd)			
Capacity (vpd)			

Project History/ Linkage to Other Plans

This project was previously included in NBAMPO's 2040 MTP.

ICE / MTP Goal Analysis

This project widens an existing facility, aligning with NBAMPO'S Goal #3: seek to optimize the existing transportation system. Specifically, this project achieves Objective 3A: prioritize maintaining existing assets before exploring system expansion options. The metric for assessing the success of this is the number of deficient/posted bridges and any structures along this corridor would be improved during the upgrade of this facility to boulevard standards.

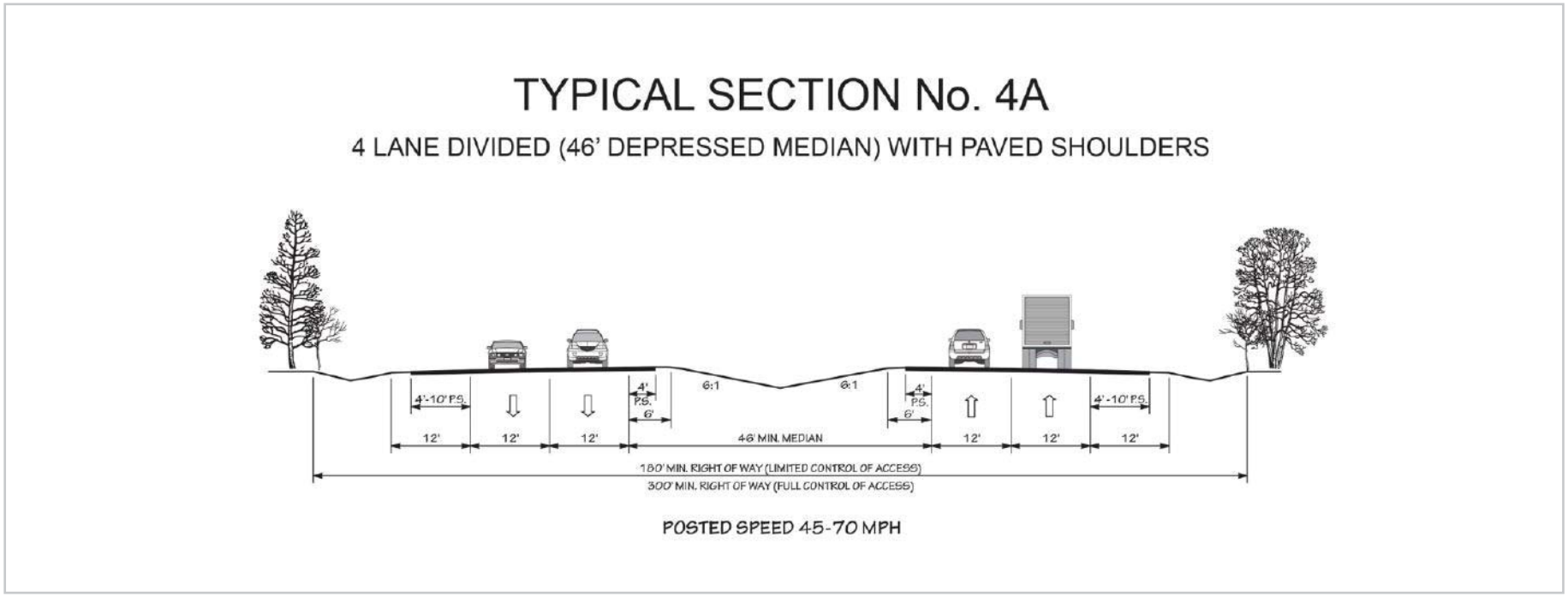
Potential Impacts

Natural Impacts:

This project has minor natural impacts being within one quarter mile radius of wetlands and underground storage tanks. Additionally, there is a small water crossing north of project.

Other Information

Typical Section Options:



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To note which facilities are being evaluated as part of the project, check all proposed facilities that apply in the tables to the right.

Facilities to be Evaluated	
Bicycle, Pedestrian & Public Transit (*Subject to local municipal agreement)	Proposed
Sidewalk *	❑
Marked Crosswalks	❑
Bicycle Lane	❑
Bike Route	❑
Marked Shoulder	❑
Multi-use Path *	❑
Fixed Bus Corridor	❑
Pedestrian Crossing Treatments	❑
Bus on Shoulder System (BOSS)	❑
Dedicated Lanes / Bus Rapid Transit Facility	❑
Other Elements	❑

Facilities to be Evaluated	
Rail & Freight	Proposed
Amtrak/Freight Route	❑
Fixed Guideway	❑

Facilities will NOT be Evaluated

Bicycle, Pedestrian & Public Transit

Proposed

If facilities will NOT be evaluated, check the reasons and modes that apply:

Location is greater than one mile from any existing or planned pedestrian facility, residential or commercial land use, school, or public transit stop.	❑
Location is not served by any public transit routes and no new service is identified in any public transit agency plans.	❑
Pedestrian or Bicycle uses are prohibited.	
Pedestrian	❑
Bicycle	❑
Location has unique site constraints.	
Pedestrian	❑
Bicycle	❑
Public Transit	❑
Additional reason(s) or notes:	❑

EXCEPTIONS

If **no** facilities for pedestrian, bicycle, or public transportation will be evaluated, an exception to the Complete Streets Policy is required. Please provide detailed information to justify the exception to including any Complete Street elements in this project. **Note that Exceptions will be reviewed by the Complete Streets Review Team upon programming in the STIP of the project.**

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Director of Bike Ped/Public Transportation Division or designee Date

_____ _____

Division Planning Engineer/Corridor Development Engineer or designee Date

Glenburnie Road (SR 1309)

From Elizabeth Ave to College Court

Local ID: NB-Rdwy-04

Purpose: Mobility

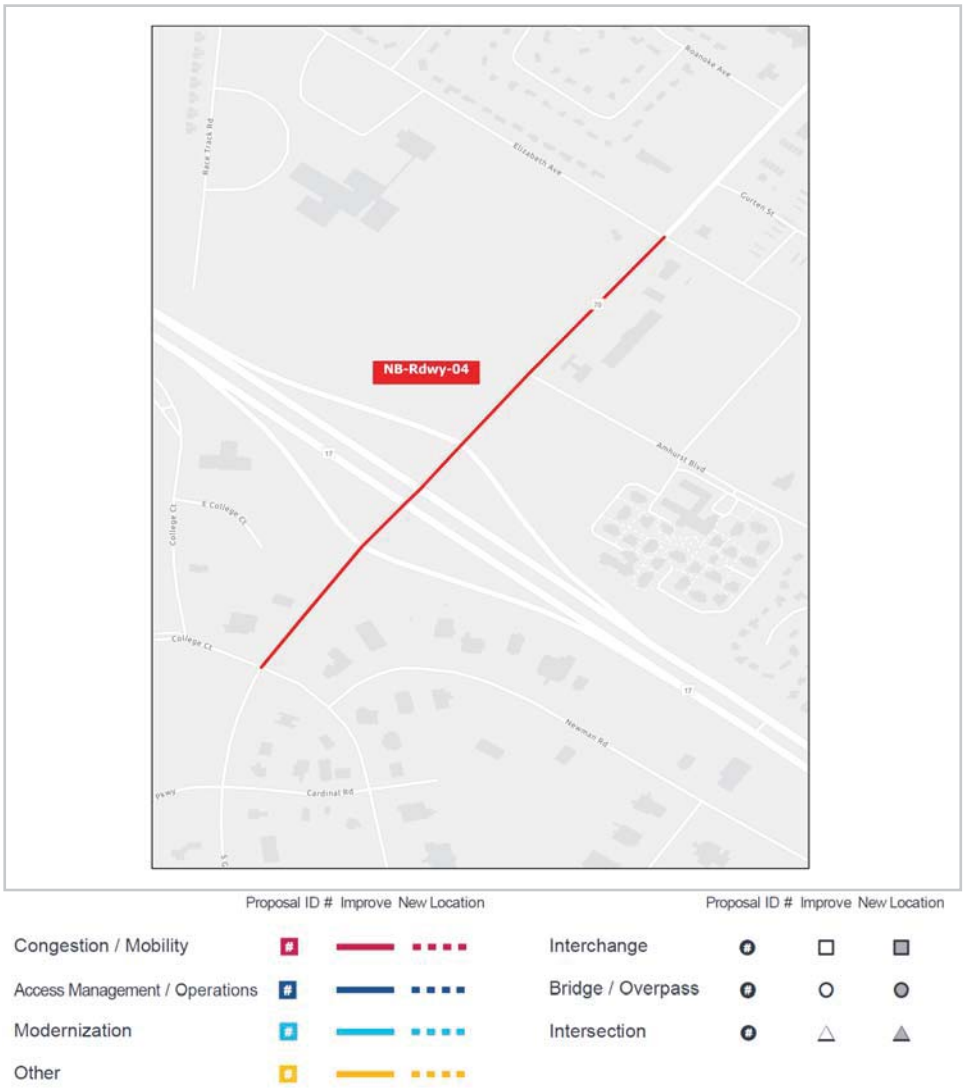
Improvement: Widening

Identified Need

This project area includes Craven Community College and an interchange with US 70 (Future I-42), and needs additional lanes to accommodate the variety of through and turning movements along the corridor.

Recommendation

The proposed project includes widening Glenburnie Road to six lanes from Elizabeth Avenue to College Court.



Proposal At A Glance

Highway Class	Congestion & Mobility
Facility Type	Major Throughfare Multilane
Typical Section	06 F
Section Option	06 A, 06 G, 06 H, 06 I
Estimated Cost	$4,080,000
Length (miles)	0.57
Existing ROW (feet)	
Existing Crash Rate	

Capacity Data:	Year
Facility will be Approaching Capacity (>80%)	Post-2045
Facility will be Over Capacity (≥100%)	

Proposal Data:	2018 Base Year	2045 Future Year	
Improve Existing	Existing	Without Proposal	With Proposal
Facility Type	Minor Throughfare	Minor Throughfa	Major Throughfa
Travel Lanes	4	4	6
Volume (vpd)	24,000-31,000	31,000-38,000	27,000-38,000
Capacity (vpd)	65,000	65,000	98,000

	Existing	Without Proposal	With Proposal
Facility Type			
Travel Lanes			
Volume (vpd)			
Capacity (vpd)			

	Existing	Without Proposal	With Proposal
Facility Type			
Travel Lanes			
Volume (vpd)			
Capacity (vpd)			

Project History/ Linkage to Other Plans

This project is at an interchange area of US 70 (Future I-42) which is undergoing a corridor improvement bringing it up to interstate standards. As a major link to/from rural areas of NC, US 70 is designated as a North Carolina Strategic Transportation Corridor.

ICE / MTP Goal Analysis

This project widens an existing facility, aligning with NBAMPO'S Goal #3: seek to optimize the existing transportation system. Specifically, this project achieves Objective 3A: prioritize maintaining existing assets before exploring system expansion options. The metric for assessing the success of this is the number of deficient/posted bridges and there will be no deficient structures on this corridor as a result of this widening project.

Potential Impacts

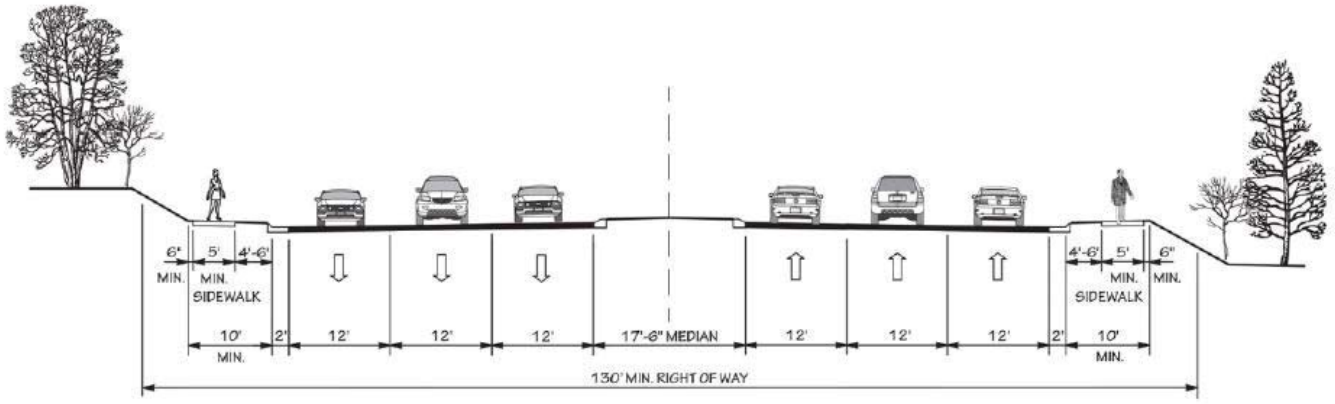
Natural Impact:

This project is within a quarter mile or greater from wetlands.

Other Information

TYPICAL SECTION No. 6F

6 LANE DIVIDED (17'-6" RAISED MEDIAN) WITH CURB & GUTTER, AND SIDEWALKS



POSTED SPEED 35-45 MPH

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To note which facilities are being evaluated as part of the project, check all proposed facilities that apply in the tables to the right.

Facilities to be Evaluated	
Bicycle, Pedestrian & Public Transit (*Subject to local municipal agreement)	Proposed
Sidewalk *	☑
Marked Crosswalks	☐
Bicycle Lane	☐
Bike Route	☐
Marked Shoulder	☐
Multi-use Path *	☐
Fixed Bus Corridor	☐
Pedestrian Crossing Treatments	☑
Bus on Shoulder System (BOSS)	☐
Dedicated Lanes / Bus Rapid Transit Facility	☐
Other Elements	☐

Facilities to be Evaluated	
Rail & Freight	Proposed
Amtrak/Freight Route	☐
Fixed Guideway	☐

Facilities will NOT be Evaluated

Bicycle, Pedestrian & Public Transit

Proposed

If facilities will NOT be evaluated, check the reasons and modes that apply:

Location is greater than one mile from any existing or planned pedestrian facility, residential or commercial land use, school, or public transit stop.	❑
Location is not served by any public transit routes and no new service is identified in any public transit agency plans.	❑
Pedestrian or Bicycle uses are prohibited.	
Pedestrian	❑
Bicycle	❑
Location has unique site constraints.	
Pedestrian	❑
Bicycle	❑
Public Transit	❑
Additional reason(s) or notes:	❑

EXCEPTIONS

If **no** facilities for pedestrian, bicycle, or public transportation will be evaluated, an exception to the Complete Streets Policy is required. Please provide detailed information to justify the exception to including any Complete Street elements in this project. **Note that Exceptions will be reviewed by the Complete Streets Review Team upon programming in the STIP of the project.**

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State Traffic Engineer or designee Date

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Director of Bike Ped/Public Transportation Division or designee Date

_____ _____

Division Planning Engineer/Corridor Development Engineer or designee Date

Elizabeth Ave.

From Race Track Rd to S. Glenburie Rd. (SR 1309)

Local ID: NB-Rdwy-05

Purpose: Facility Deficiencies

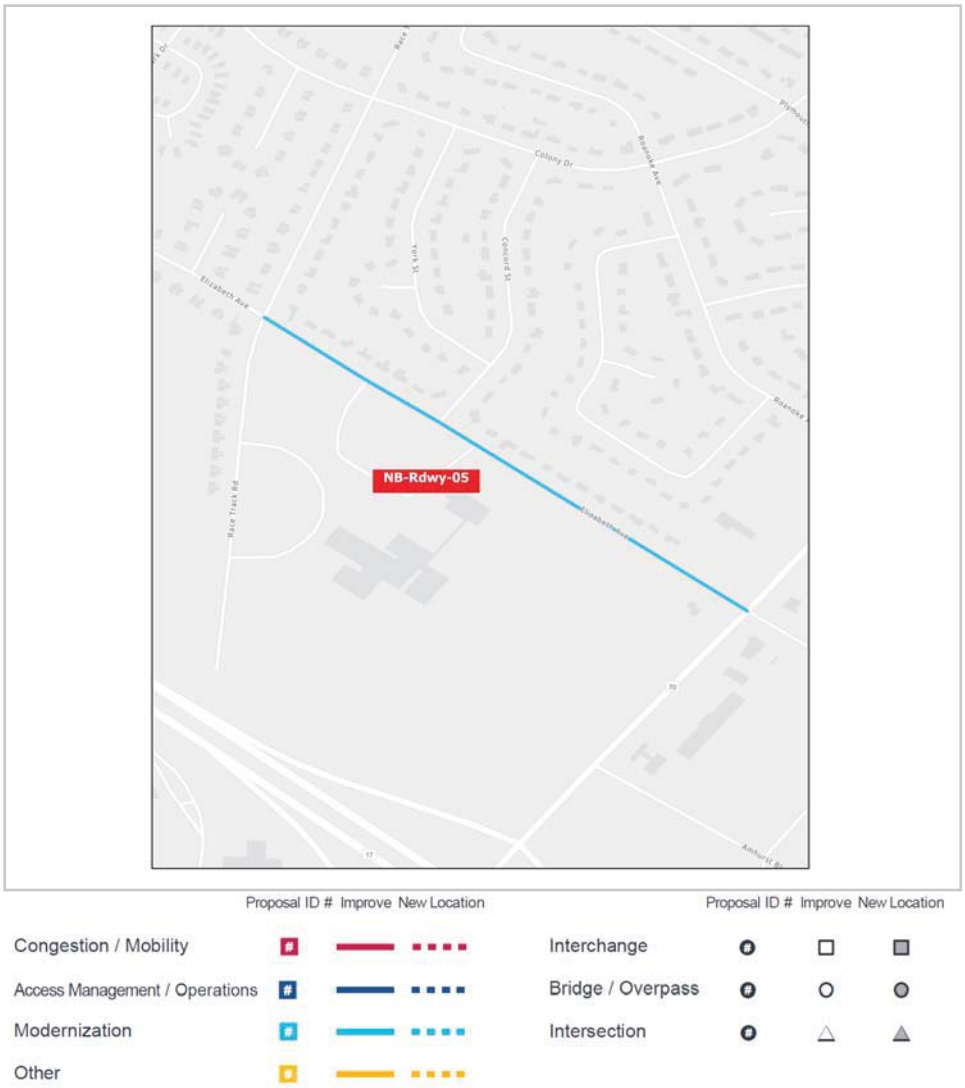
Improvement: Improve Existing

Identified Need

The area along this roadway is dense residential to the north with a school located to the south, an update to the function of this roadway is needed to maintain traffic flow and offer multi-modal choice.

Recommendation

This project includes an upgrade to the existing two-lane facility with the addition of a two way left turn lane.



Proposal At A Glance

Highway Class	Modernization
Facility Type	Minor Throughfare
Typical Section	03 B
Section Option	03C, 03D, 03E
Estimated Cost	$3,720,000
Length (miles)	0.66
Existing ROW (feet)	
Existing Crash Rate	

Capacity Data:	Year
Facility will be Approaching Capacity (>80%)	
Facility will be Over Capacity (≥100%)	

Proposal Data:	2018 Base Year	2045 Future Year	
Improve Existing	Existing	Without Proposal	With Proposal
Facility Type	New Bern, NC	Minor Throughfa	Minor Throughfa
Travel Lanes	2	2	2
Volume (vpd)	6,000	11,000	11,000
Capacity (vpd)	33,000	33,000	33,000

	Existing	Without Proposal	With Proposal
Facility Type			
Travel Lanes			
Volume (vpd)			
Capacity (vpd)			

	Existing	Without Proposal	With Proposal
Facility Type			
Travel Lanes			
Volume (vpd)			
Capacity (vpd)			

Project History/ Linkage to Other Plans

This project was previously recommended in NBAMPO MTP: Destination 2040.

ICE / MTP Goal Analysis

This project upgrades an existing facility with a turn lane and multi-modal facilities, aligning with NBAMPO'S Goal #2: provide a transportation system that enables mobility choices. Specifically, this project achieves Objective 2A: integrate walking and bicycling with vehicular travel and encourage the use of walking and bicycling. The metric for assessing the success, the miles of existing sidewalks, bike facilities, and greenways, will be satisfied by the addition of new multi-modal facilities along this roadway.

Potential Impacts

Environmental Impacts:

This project will have minor environmental impacts. There are wetlands within a quarter mile radius of the project.

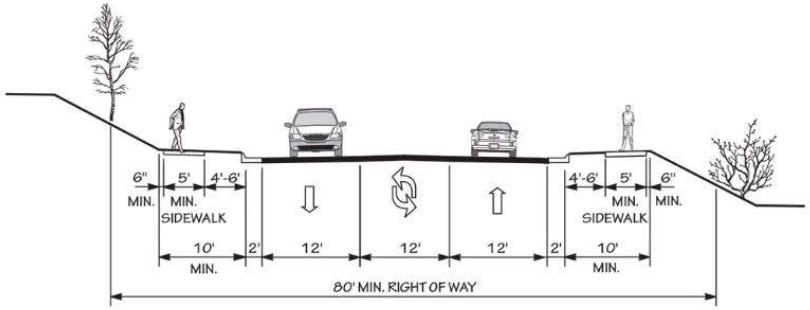
Human Impacts:

This project will have moderate impacts to environmental justice populations, such as low income and minority populations.

Other Information

TYPICAL SECTION No. 3B

2 LANE WITH TWO WAY LEFT TURN LANE, CURB & GUTTER, AND SIDEWALKS



POSTED SPEED 25-45 MPH

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To note which facilities are being evaluated as part of the project, check all proposed facilities that apply in the tables to the right.

Facilities to be Evaluated	
Bicycle, Pedestrian & Public Transit (*Subject to local municipal agreement)	Proposed
Sidewalk *	☑
Marked Crosswalks	☑
Bicycle Lane	☑
Bike Route	☐
Marked Shoulder	☐
Multi-use Path *	☑
Fixed Bus Corridor	☐
Pedestrian Crossing Treatments	☑
Bus on Shoulder System (BOSS)	☐
Dedicated Lanes / Bus Rapid Transit Facility	☐
Other Elements	☐

Facilities to be Evaluated	
Rail & Freight	Proposed
Amtrak/Freight Route	☐
Fixed Guideway	☐

Facilities will NOT be Evaluated

Bicycle, Pedestrian & Public Transit

Proposed

If facilities will NOT be evaluated, check the reasons and modes that apply:

Location is greater than one mile from any existing or planned pedestrian facility, residential or commercial land use, school, or public transit stop.	❑
Location is not served by any public transit routes and no new service is identified in any public transit agency plans.	❑
Pedestrian or Bicycle uses are prohibited.	
Pedestrian	❑
Bicycle	❑
Location has unique site constraints.	
Pedestrian	❑
Bicycle	❑
Public Transit	❑
Additional reason(s) or notes:	❑

EXCEPTIONS

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State Traffic Engineer or designee Date

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Director of Bike Ped/Public Transportation Division or designee Date

_____ _____

Division Planning Engineer/Corridor Development Engineer or designee Date

Simmons Street (SR 1215) Road Diet

From Trent Blvd (SR 1278) to Neuse Blvd

Local ID: NB-Rdwy-07

Purpose: Facility Deficiencies

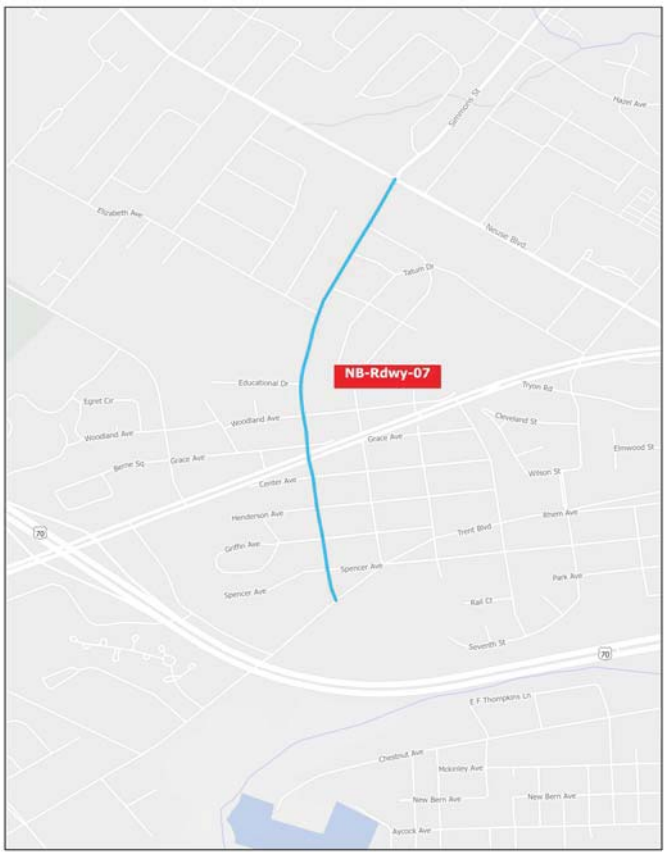
Improvement: Improve Existing

Identified Need

In order to safely accommodate all users of Simmons Street an improvement is needed to offer multi-modal choices in addition to vehicular access.

Recommendation

This project includes a road diet on Simmons Street from Trent Blvd. to Neuse Blvd. The upgraded facility will have two lanes, a two-way turn lane, bicycle lanes, and pedestrian facilities.



Proposal At A Glance

Highway Class	Modernization
Facility Type	Minor Throughfare
Typical Section	03 C
Section Option	03D, 03E
Estimated Cost	$5,250,000
Length (miles)	.93
Existing ROW (feet)	
Existing Crash Rate	

Capacity Data:	Year
Facility will be Approaching Capacity (>80%)	
Facility will be Over Capacity (≥100%)	

Proposal Data:	2018 Base Year	2045 Future Year	
Improve Existing	Existing	Without Proposal	With Proposal
Facility Type	Minor Throughfare	Minor Throughfa	Minor Throughfa
Travel Lanes	4	2	2
Volume (vpd)	3,000-9,000	3,000-10,000	3,000-10,000
Capacity (vpd)	33,000-65,000	65,000	33,000

	Existing	Without Proposal	With Proposal
Facility Type			
Travel Lanes			
Volume (vpd)			
Capacity (vpd)			

	Existing	Without Proposal	With Proposal
Facility Type			
Travel Lanes			
Volume (vpd)			
Capacity (vpd)			

Project History/ Linkage to Other Plans

City of New Bern Bike Plan recommended Simmons Street (SR 1215) as one leg of an ideal location for a Downtown Neighborhood Loop.

ICE / MTP Goal Analysis

This road diet project upgrades an existing facility with multi-modal facilities, aligning with NBAMPO'S Goal #2: provide a transportation system that enables mobility choices. Specifically, this project achieves Objective 2A: integrate walking and bicycling with vehicular travel and encourage the use of walking and bicycling. The metric for assessing the success, the miles of existing sidewalks, bike facilities, and greenways, will be satisfied by the addition of new multi-modal facilities along this roadway.

Potential Impacts

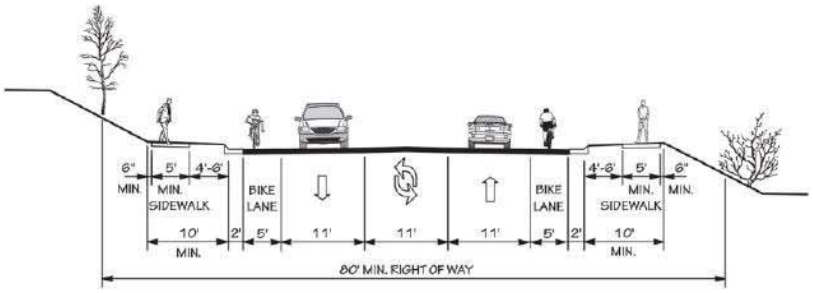
Natural:

This project has minor natural impacts being with one quarter mile radius of wetlands and a Municipal Park.

Other Information

TYPICAL SECTION No. 3C

2 LANE WITH TWO WAY LEFT TURN LANE, CURB & GUTTER, BIKE LANES, AND SIDEWALKS



POSTED SPEED 25-45 MPH

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Facilities to be Evaluated	
Bicycle, Pedestrian & Public Transit (*Subject to local municipal agreement)	Proposed
Sidewalk *	☑
Marked Crosswalks	☐
Bicycle Lane	☑
Bike Route	☐
Marked Shoulder	☐
Multi-use Path *	☐
Fixed Bus Corridor	☐
Pedestrian Crossing Treatments	☐
Bus on Shoulder System (BOSS)	☐
Dedicated Lanes / Bus Rapid Transit Facility	☐
Other Elements	☐

Facilities to be Evaluated	
Rail & Freight	Proposed
Amtrak/Freight Route	☐
Fixed Guideway	☐

Facilities will NOT be Evaluated

Bicycle, Pedestrian & Public Transit

Proposed

If facilities will NOT be evaluated, check the reasons and modes that apply:

Location is greater than one mile from any existing or planned pedestrian facility, residential or commercial land use, school, or public transit stop.	❑
Location is not served by any public transit routes and no new service is identified in any public transit agency plans.	❑
Pedestrian or Bicycle uses are prohibited.	
Pedestrian	❑
Bicycle	❑
Location has unique site constraints.	
Pedestrian	❑
Bicycle	❑
Public Transit	❑
Additional reason(s) or notes:	❑

EXCEPTIONS

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Director of Bike Ped/Public Transportation Division or designee Date

_____ _____

Division Planning Engineer/Corridor Development Engineer or designee Date

MLK Blvd. (SR 1395) and US 70

MLK Blvd. (SR 1395) and US 70 Interchange

Local ID: NB-Rdwy-08

Purpose: Access

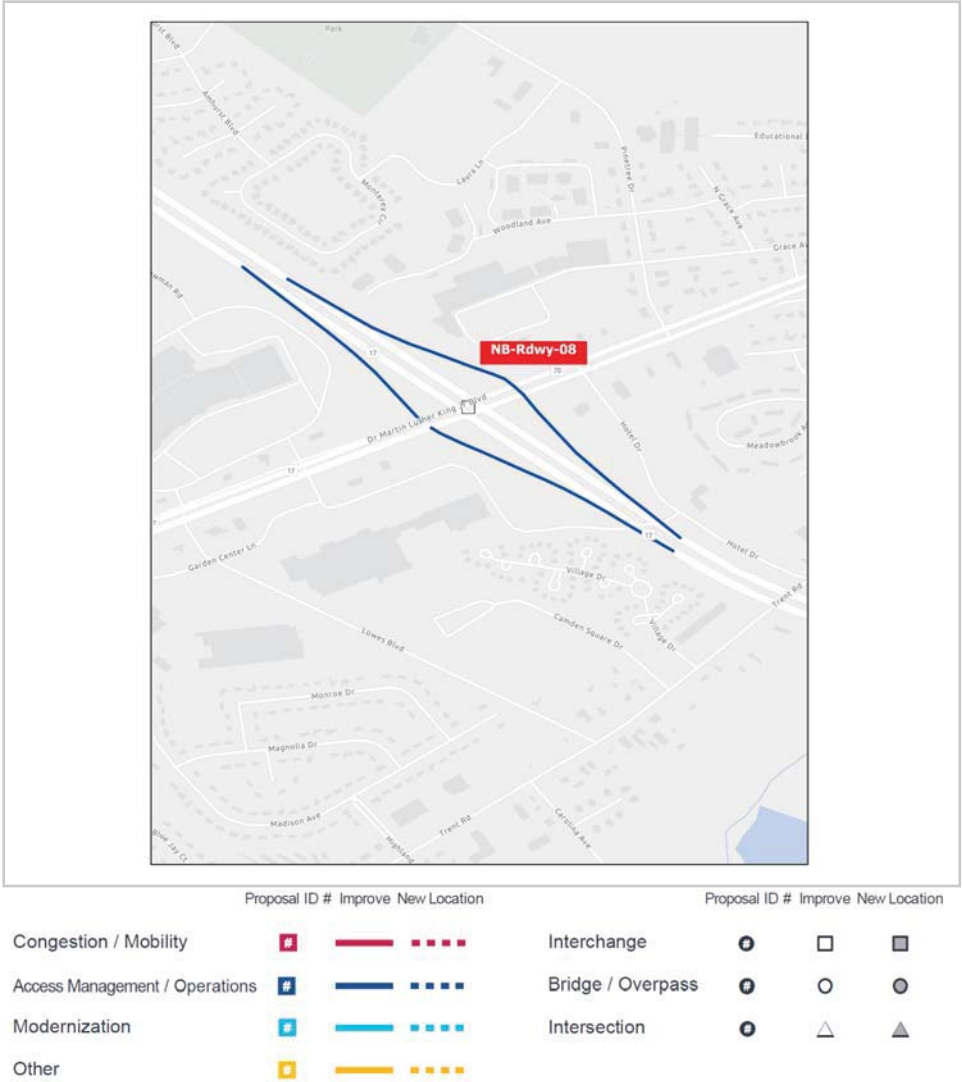
Improvement: Improve Existing

Identified Need

The interchanges along US 70 need to be upgraded as the regional corridor of US 70 (Future I-42) is brought up to interstate standards, including the US 70 at MLK Blvd interchange.

Recommendation

This project includes upgrading the interchange at Dr. MLK Jr. Blvd and US 70 through the widening of ramps.



Proposal At A Glance	
Highway Class	Access Management & Operations
Facility Type	Freeway
Typical Section	<Select Typical Section>
Section Option	
Estimated Cost	$18,720,000
Length (miles)	1
Existing ROW (feet)	
Existing Crash Rate	

Capacity Data:	Year
Facility will be Approaching Capacity (>80%)	2025
Facility will be Over Capacity (≥100%)	2045

Proposal Data:	2018 Base Year	2045 Future Year	
	Existing	Without Proposal	With Proposal
Facility Type	Freeway	Freeway	Freeway
Travel Lanes	1	1	2
Volume (vpd)	4,000-13,000	4,000-17,000	5,000-17,000
Capacity (vpd)	20,000-40,000	20,000-40,000	40,000-60,000

	Existing	Without Proposal	With Proposal
Facility Type			
Travel Lanes			
Volume (vpd)			
Capacity (vpd)			

	Existing	Without Proposal	With Proposal
Facility Type			
Travel Lanes			
Volume (vpd)			
Capacity (vpd)			

Project History/ Linkage to Other Plans

This project is part of the effort to bring US 70 up to interstate standards between Raleigh and Morehead City. It is located in the same proximity as U-6198, NB-Rdwy-06 and NB-Rdwy-07.

ICE / MTP Goal Analysis

This project is a piece of a regional upgrade to the US 70 corridor and satisfies NBAMPO'S Goal #1: provide a safe, secure, comprehensive, and effective transportation system for moving freight and people to bolster regional economic development. Specifically, this project achieves Objective 1A: enhance mobility and accessibility and manage congestion across the transportation system and across modes of transportation. The success of this can be assessed through the measure of travel time reliability along the corridor.

Potential Impacts

Environmental Impacts:

This project will have minor environmental impacts. There is a wetland and a Natural Heritage Element Occurance within a quarter mile radius.

Human Impacts:

This project will have significant impacts due to its intersection of environmental justice populations. These populations include: zero-car households, low income, aging (average age over 65), Limited English Proficiency and Minority.

Other Information

Typical Section Options:

The NCDOT Complete Streets Policy requires pedestrian, bicycle, and public transportation facilities to be evaluated for all transportation projects. Facility recommendations will vary depending on a project's context. Final determination of facilities to be included will be made in Project Development.

To note which facilities are being evaluated as part of the project, check all proposed facilities that apply in the tables to the right.

Facilities to be Evaluated	
Bicycle, Pedestrian & Public Transit (*Subject to local municipal agreement)	Proposed
Sidewalk *	❑
Marked Crosswalks	❑
Bicycle Lane	❑
Bike Route	❑
Marked Shoulder	❑
Multi-use Path *	❑
Fixed Bus Corridor	❑
Pedestrian Crossing Treatments	❑
Bus on Shoulder System (BOSS)	❑
Dedicated Lanes / Bus Rapid Transit Facility	❑
Other Elements	❑

Facilities to be Evaluated	
Rail & Freight	Proposed
Amtrak/Freight Route	❑
Fixed Guideway	❑

Facilities will NOT be Evaluated

Bicycle, Pedestrian & Public Transit

	Proposed
If facilities will NOT be evaluated, check the reasons and modes that apply:	
Location is greater than one mile from any existing or planned pedestrian facility, residential or commercial land use, school, or public transit stop.	❑
Location is not served by any public transit routes and no new service is identified in any public transit agency plans.	❑
Pedestrian or Bicycle uses are prohibited.	
Pedestrian	☑
Bicycle	☑
Location has unique site constraints.	
Pedestrian	❑
Bicycle	❑
Public Transit	❑
Additional reason(s) or notes:	❑

EXCEPTIONS

If **no** facilities for pedestrian, bicycle, or public transportation will be evaluated, an exception to the Complete Streets Policy is required. Please provide detailed information to justify the exception to including any Complete Street elements in this project. **Note that Exceptions will be reviewed by the Complete Streets Review Team upon programming in the STIP of the project.**

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Signatures:

_____ _____

State Traffic Engineer or designee Date

_____ _____

Director of Bike Ped/Public Transportation Division or designee Date

_____ _____

Division Planning Engineer/Corridor Development Engineer or designee Date

Trent Road (SR 1278)

From MLK Jr Blvd (US 17 Bus) to Simmons St (SR 1215)

Local ID: U-3448

Purpose: Mobility

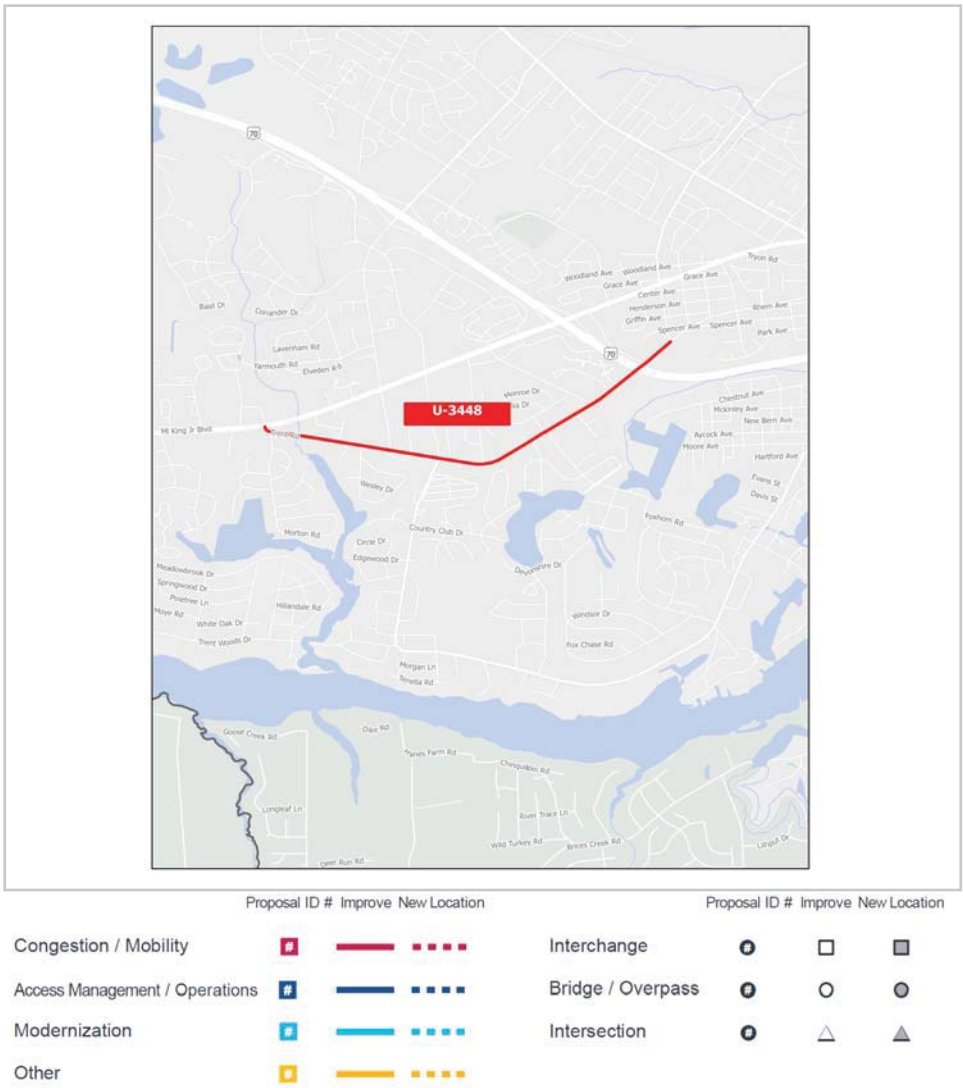
Improvement: Widening

Identified Need

This area is lacking proper facilities to provide mobility choice. Corridor improvements are needed to provide all transportation users safe travel through the corridor.

Recommendation

This project includes the widening of Trent Road from MLK Jr., Blvd. to Simmons St. to a multi-lane facility that includes bicycle and pedestrian facilities.



Proposal At A Glance

Highway Class	Congestion & Mobility
Facility Type	Minor Throughfare
Typical Section	04 D
Section Option	04 G, 04 H, 04 I, 04 J , 04 K, 04 L
Estimated Cost	$26,300,000
Length (miles)	2.4
Existing ROW (feet)	
Existing Crash Rate	

Capacity Data:	Year
Facility will be Approaching Capacity (>80%)	
Facility will be Over Capacity (≥100%)	

Proposal Data:	2018 Base Year	2045 Future Year	
Improve Existing	Existing	Without Proposal	With Proposal
Facility Type	Minor Throughfare	Minor Throughfa	Minor Throughfa
Travel Lanes	2	2	4
Volume (vpd)	2,000-7,000	2,000-9,000	2,000-9,000
Capacity (vpd)	33,000	33,000	41,000

	Existing	Without Proposal	With Proposal
Facility Type			
Travel Lanes			
Volume (vpd)			
Capacity (vpd)			

	Existing	Without Proposal	With Proposal
Facility Type			
Travel Lanes			
Volume (vpd)			
Capacity (vpd)			

Project History/ Linkage to Other Plans

A feasibility study for this project was completed: https://connect.ncdot.gov/projects/planning/FeasibilityStudiesDocuments/U-3448_Feasibility-Study_Report_1996.pdf

ICE / MTP Goal Analysis

This project achieves Goal 2: provide a transportation system that enables mobility choices. Specifically Objective 2A, integrate walking and bicycling with vehicular travel and encourage the use of walking and bicycling. This objective is measured by the miles of existing sidewalks, bike facilities, and greenways.

This project also realizes Goal 4: promote equity and accessibility in transportation options for transportation-disadvantaged populations. Specifically, Objective 4C: use inclusive design to make the system work for all users.

Potential Impacts

Environmental Impacts:

This project has one single stream crossing. There is also a flood way and an underground storage tank within a quarter mile radius of the project.

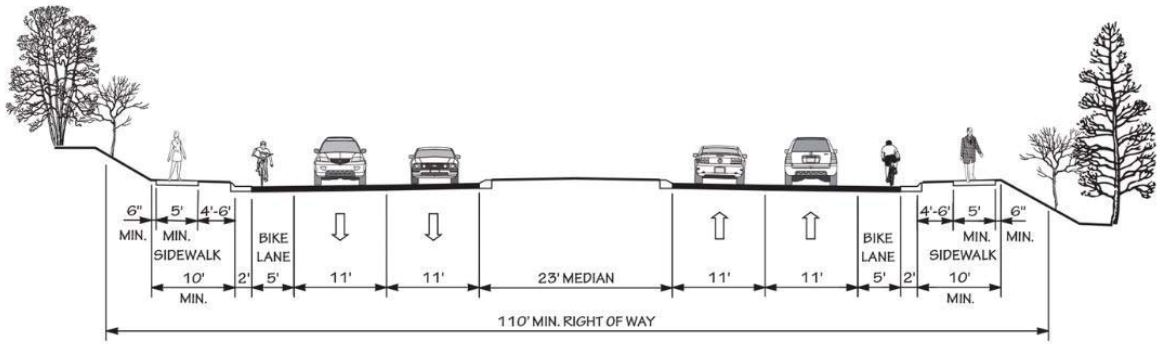
Human Impacts:

This project will have significant impacts to surrounding environmental justice populations. It will impact Zero-Car populations, Low Income populations, Limited English Proficiency populations as well as minority populations.

Other Information

TYPICAL SECTION No. 4D

4 LANE DIVIDED (23' RAISED MEDIAN) WITH CURB & GUTTER, BIKE LANES, AND SIDEWALKS



POSTED SPEED 35-45 MPH

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To note which facilities are being evaluated as part of the project, check all proposed facilities that apply in the tables to the right.

Facilities to be Evaluated	
Bicycle, Pedestrian & Public Transit (*Subject to local municipal agreement)	Proposed
Sidewalk *	☑
Marked Crosswalks	☐
Bicycle Lane	☑
Bike Route	☑
Marked Shoulder	☐
Multi-use Path *	☑
Fixed Bus Corridor	☐
Pedestrian Crossing Treatments	☑
Bus on Shoulder System (BOSS)	☐
Dedicated Lanes / Bus Rapid Transit Facility	☐
Other Elements	☐

Facilities to be Evaluated	
Rail & Freight	Proposed
Amtrak/Freight Route	☐
Fixed Guideway	☐

Facilities will NOT be Evaluated

Bicycle, Pedestrian & Public Transit

Proposed

If facilities will NOT be evaluated, check the reasons and modes that apply:

Location is greater than one mile from any existing or planned pedestrian facility, residential or commercial land use, school, or public transit stop.	❑
Location is not served by any public transit routes and no new service is identified in any public transit agency plans.	❑
Pedestrian or Bicycle uses are prohibited.	
Pedestrian	❑
Bicycle	❑
Location has unique site constraints.	
Pedestrian	❑
Bicycle	❑
Public Transit	❑
Additional reason(s) or notes:	❑

EXCEPTIONS

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Director of Bike Ped/Public Transportation Division or designee Date

_____ _____

Division Planning Engineer/Corridor Development Engineer or designee Date

Coastal Carolina Regional Airport (EWN) Runway Extension

Local ID: AV-5891

Purpose: Growth / Economic Development

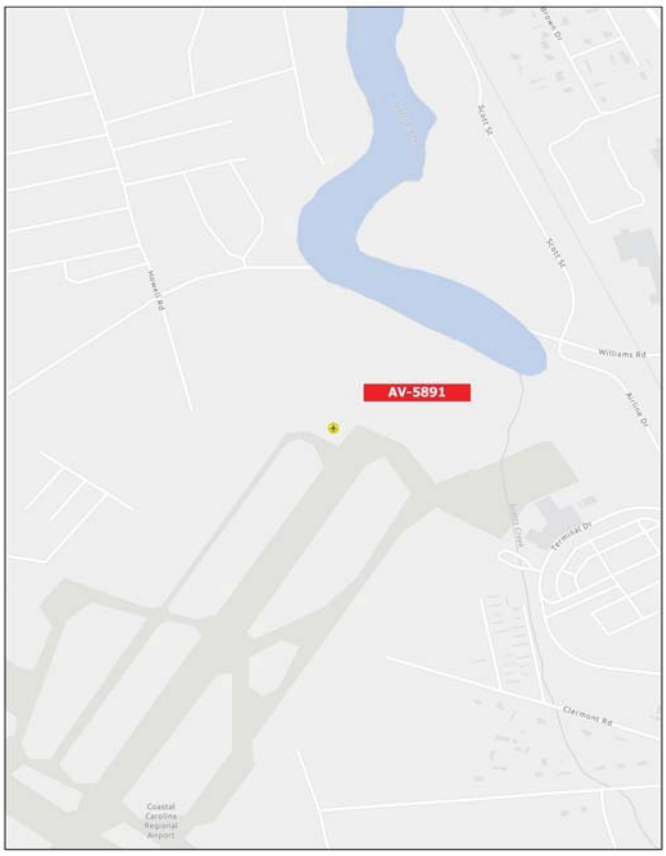
Improvement: Improve Existing

Identified Need

The Coastal Carolina Regional Airport needs its facilities to be appropriately sized in order to bolster growth and economic development throughout the region.

Recommendation

This project recommends extending the runway by 500' at Coastal Carolina Regional Airport (EWN).



Proposal At A Glance	
Highway Class	<Select Highway Class>
Facility Type	<Select Facility Type>
Typical Section	<Select Typical Section>
Section Option	
Estimated Cost	$300,000
Length (miles)	
Existing ROW (feet)	
Existing Crash Rate	

Capacity Data:	Year
Facility will be Approaching Capacity (>80%)	
Facility will be Over Capacity (≥100%)	

Proposal Data:	2018 Base Year	2045 Future Year	
Improve Existing	Existing	Without Proposal	With Proposal
Facility Type			
Travel Lanes			
Volume (vpd)			
Capacity (vpd)			
	Existing	Without Proposal	With Proposal
Facility Type			
Travel Lanes			
Volume (vpd)			
Capacity (vpd)			
	Existing	Without Proposal	With Proposal
Facility Type			
Travel Lanes			
Volume (vpd)			
Capacity (vpd)			

Project History/ Linkage to Other Plans

This runway extension is included in Coastal Carolina Regional Airport's 20-year Master Plan that also includes additional facilities, jet bridges, a larger holding area, potential for more commercial vendors, an expanded terminal and aerospace development.

This project was submitted in both SPOT 5 and SPOT 6.

ICE / MTP Goal Analysis

This airport runway extension aligns with NBAMPO's Goal #2: provide a transportation system that enables mobility choices. Specifically, Objective 2B: maximize rail and air transportation opportunities.

Potential Impacts

Natural Impacts

This project is within 1/4 mile of wetlands, floodway, and a natural heritage element occurrence.

Other Information

Typical Section Options:

The NCDOT Complete Streets Policy requires pedestrian, bicycle, and public transportation facilities to be evaluated for all transportation projects. Facility recommendations will vary depending on a project's context. Final determination of facilities to be included will be made in Project Development.

To note which facilities are being evaluated as part of the project, check all proposed facilities that apply in the tables to the right.

Facilities to be Evaluated	
Bicycle, Pedestrian & Public Transit (*Subject to local municipal agreement)	Proposed
Sidewalk *	❑
Marked Crosswalks	❑
Bicycle Lane	❑
Bike Route	❑
Marked Shoulder	❑
Multi-use Path *	❑
Fixed Bus Corridor	❑
Pedestrian Crossing Treatments	❑
Bus on Shoulder System (BOSS)	❑
Dedicated Lanes / Bus Rapid Transit Facility	❑
Other Elements	❑

Facilities to be Evaluated	
Rail & Freight	Proposed
Amtrak/Freight Route	❑
Fixed Guideway	❑

Facilities will NOT be Evaluated

Bicycle, Pedestrian & Public Transit

Proposed

If facilities will NOT be evaluated, check the reasons and modes that apply:

Location is greater than one mile from any existing or planned pedestrian facility, residential or commercial land use, school, or public transit stop.	❑
Location is not served by any public transit routes and no new service is identified in any public transit agency plans.	❑
Pedestrian or Bicycle uses are prohibited.	
Pedestrian	❑
Bicycle	❑
Location has unique site constraints.	
Pedestrian	❑
Bicycle	❑
Public Transit	❑
Additional reason(s) or notes:	❑

EXCEPTIONS

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Director of Bike Ped/Public Transportation Division or designee Date

_____ _____

Division Planning Engineer/Corridor Development Engineer or designee Date

U.S. 70

From Thurman Rd (SR 1116) to Havelock Bypass

Local ID: R-5777C

Purpose: Congestion

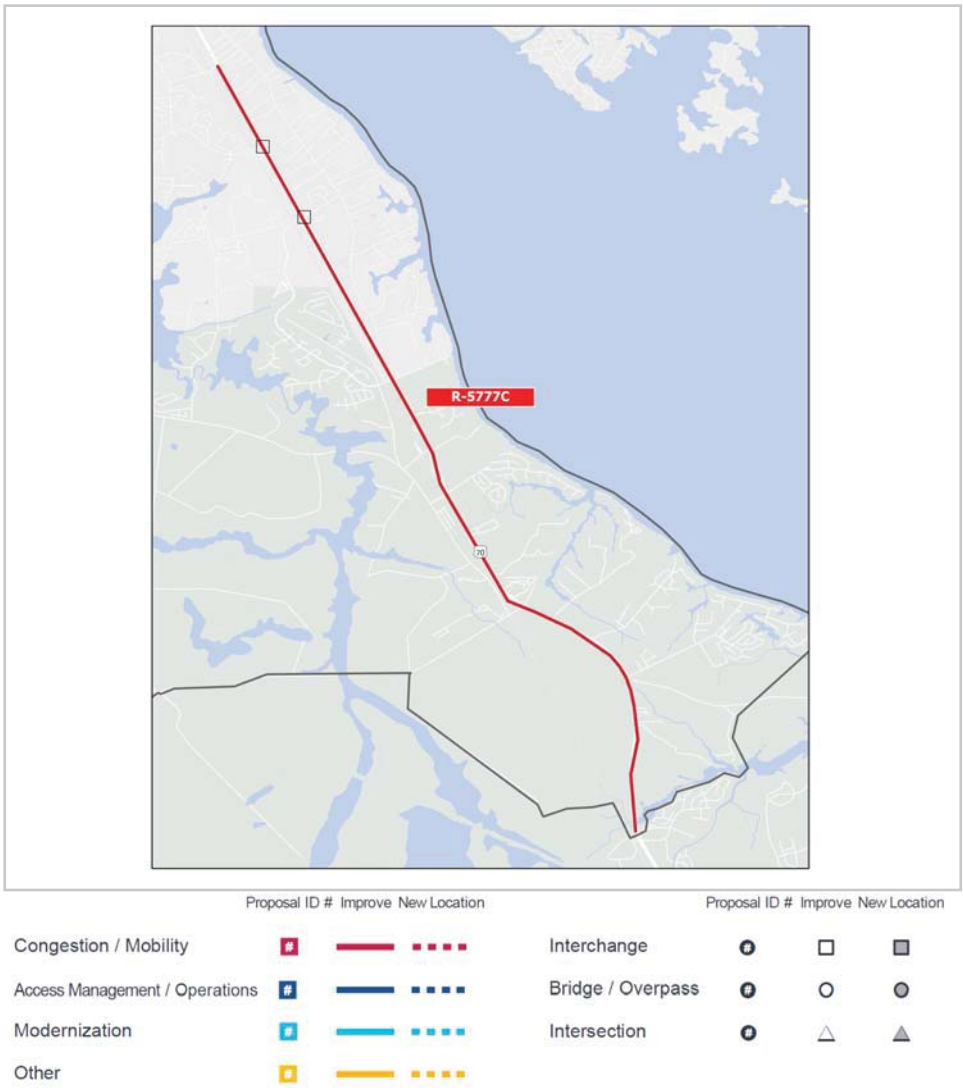
Improvement: Widening

Identified Need

As the regional corridor of US 70 (Future I-42) is brought up to interstate standards through various efforts, the portion of US 70 from Thurman Road to Havelock Bypass also needs to be upgraded to maintain consistent mobility throughout the regional US 70 corridor.

Recommendation

Upgrade US-70 to freeway standards and modify at grade crossings to access controlled locations.



Proposal At A Glance

Highway Class	Congestion & Mobility
Facility Type	Freeway
Typical Section	04 A
Section Option	
Estimated Cost	$131,900,000
Length (miles)	6.5
Existing ROW (feet)	
Existing Crash Rate	

Capacity Data:	Year
Facility will be Approaching Capacity (>80%)	2025
Facility will be Over Capacity (≥100%)	2035

Proposal Data:	2018 Base Year	2045 Future Year	
Improve Location	Existing	Without Proposal	With Proposal
Facility Type	Expressway	Expressway	Freeway
Travel Lanes	4	4	4
Volume (vpd)	40,000	50,000	52,000
Capacity (vpd)	42,000-98,000	42,000-98,000	52,000-104,000

	Existing	Without Proposal	With Proposal
Facility Type			
Travel Lanes			
Volume (vpd)			
Capacity (vpd)			

	Existing	Without Proposal	With Proposal
Facility Type			
Travel Lanes			
Volume (vpd)			
Capacity (vpd)			

Project History/ Linkage to Other Plans

This project is intended to improve regional mobility, assist economic development in rural areas of eastern North Carolina, provide a closer interstate connection to the Port of Morehead City, benefit military interconnectivity and make the corridor safer by reducing intersections.

This project is also linked to R-5777A, R-5777B and U-5713.

ICE / MTP Goal Analysis

The project realizes Goal 1:provide a safe, secure, comprehensive and effective transportation system for moving freight and people to bolster regional economic development. Specifically, this project satisfies Objective 1A: enhance mobility and accessibility and manage congestion across the transportation system and across modes of transportation. This project's success of achieving this objective is measured through assessing travel time reliability.

Potential Impacts

Environmental Impacts:

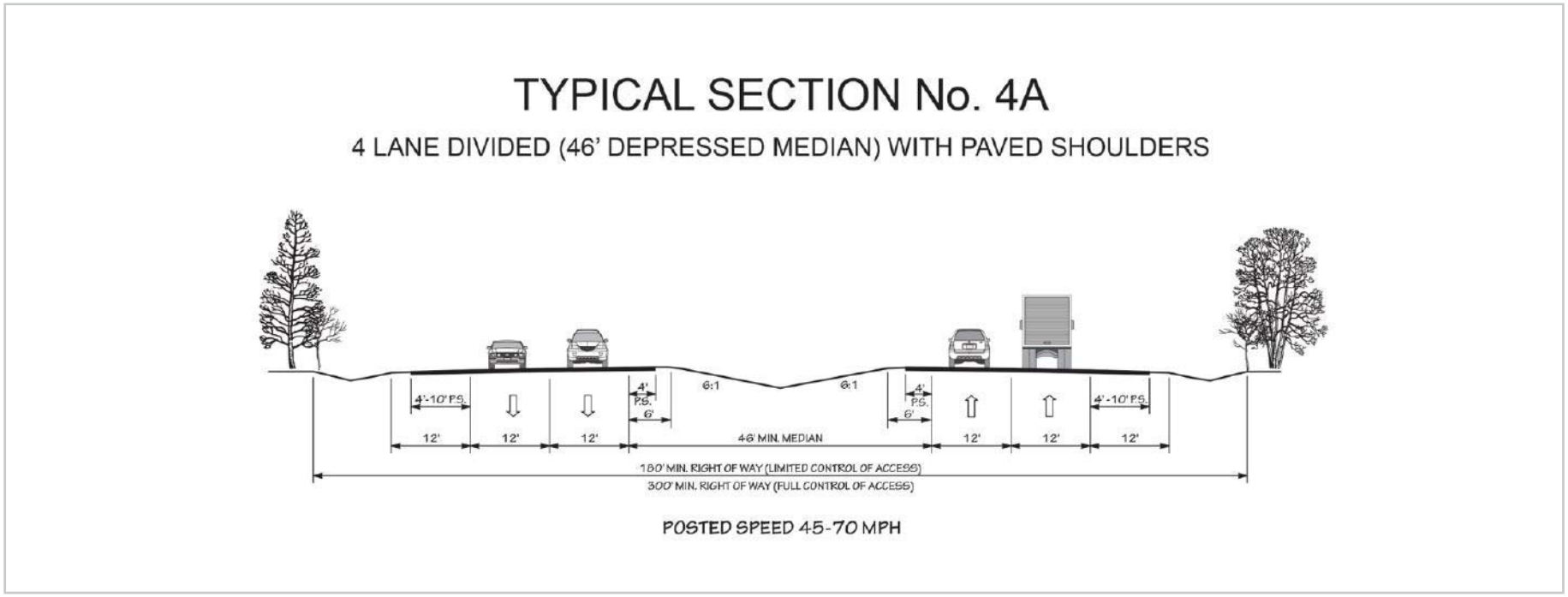
This project is located near wetlands and flood ways. It runs through conservation lands and natural heritage lands.

Human Impacts:

The project will have moderate impacts to environmental justice communities, such as Low Income populations and Limited English Proficiency populations.

Other Information

Typical Section Options:



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To note which facilities are being evaluated as part of the project, check all proposed facilities that apply in the tables to the right.

Facilities to be Evaluated	
Bicycle, Pedestrian & Public Transit (*Subject to local municipal agreement)	Proposed
Sidewalk *	❑
Marked Crosswalks	❑
Bicycle Lane	❑
Bike Route	❑
Marked Shoulder	❑
Multi-use Path *	❑
Fixed Bus Corridor	❑
Pedestrian Crossing Treatments	❑
Bus on Shoulder System (BOSS)	❑
Dedicated Lanes / Bus Rapid Transit Facility	❑
Other Elements	❑

Facilities to be Evaluated	
Rail & Freight	Proposed
Amtrak/Freight Route	❑
Fixed Guideway	❑

Facilities will NOT be Evaluated

Bicycle, Pedestrian & Public Transit

Proposed

If facilities will NOT be evaluated, check the reasons and modes that apply:

Location is greater than one mile from any existing or planned pedestrian facility, residential or commercial land use, school, or public transit stop.	❑
Location is not served by any public transit routes and no new service is identified in any public transit agency plans.	❑
Pedestrian or Bicycle uses are prohibited.	
Pedestrian	❑
Bicycle	❑
Location has unique site constraints.	
Pedestrian	❑
Bicycle	❑
Public Transit	❑
Additional reason(s) or notes:	❑

EXCEPTIONS

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Director of Bike Ped/Public Transportation Division or designee Date

_____ _____

Division Planning Engineer/Corridor Development Engineer or designee Date

Trent Road (SR 1278)

From MLK Jr Blvd (US 17 Bus) to Simmons St (SR 1215)

Local ID: U-3448

Purpose: Mobility

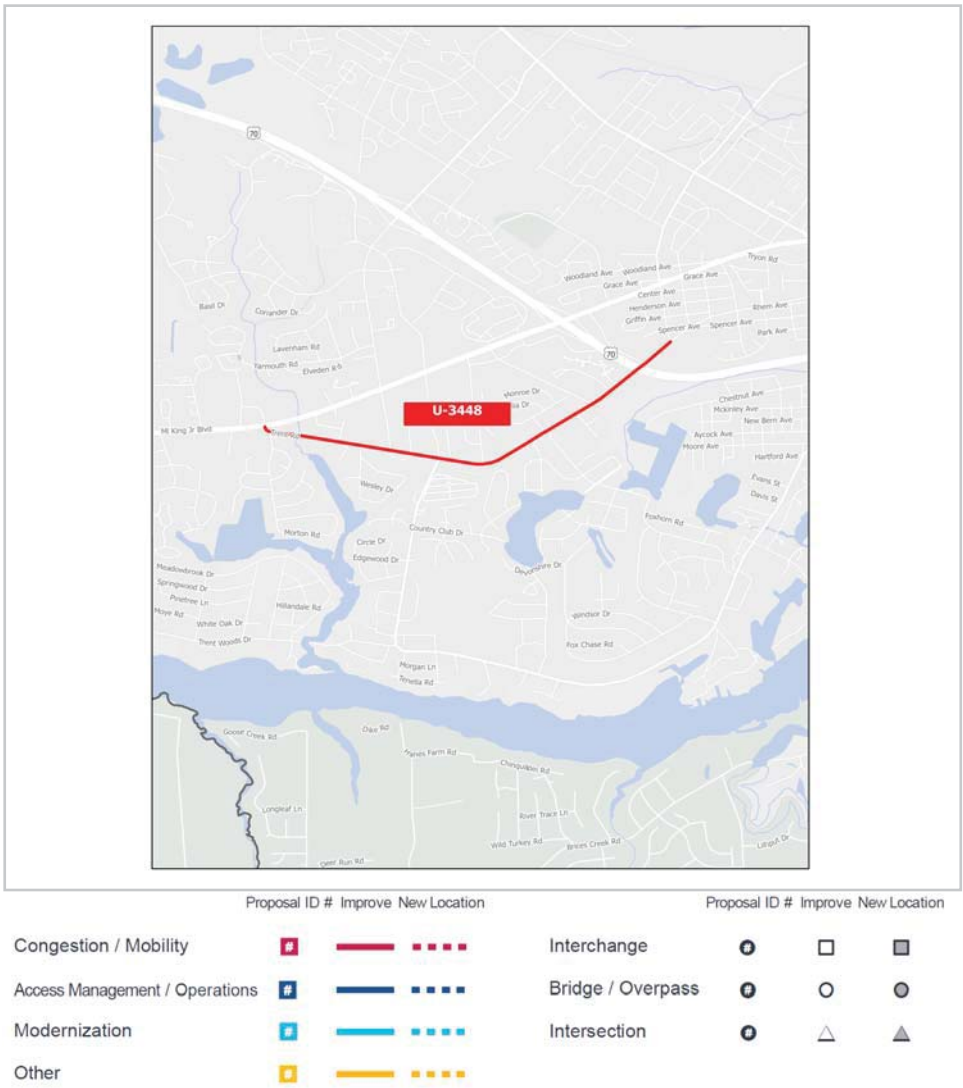
Improvement: Widening

Identified Need

This area is lacking proper facilities to provide mobility choice. Corridor improvements are needed to provide all transportation users safe travel through the corridor.

Recommendation

This project includes the widening of Trent Road from MLK Jr., Blvd. to Simmons St. to a multi-lane facility that includes bicycle and pedestrian facilities.



Proposal At A Glance

Highway Class	Congestion & Mobility
Facility Type	Minor Throughfare
Typical Section	04 D
Section Option	04 G, 04 H, 04 I, 04 J , 04 K, 04 L
Estimated Cost	$26,300,000
Length (miles)	2.4
Existing ROW (feet)	
Existing Crash Rate	

Capacity Data:	Year
Facility will be Approaching Capacity (>80%)	
Facility will be Over Capacity (≥100%)	

Proposal Data:	2018 Base Year	2045 Future Year	
Improve Existing	Existing	Without Proposal	With Proposal
Facility Type	Minor Throughfare	Minor Throughfa	Minor Throughfa
Travel Lanes	2	2	4
Volume (vpd)	2,000-7,000	2,000-9,000	2,000-9,000
Capacity (vpd)	33,000	33,000	41,000

	Existing	Without Proposal	With Proposal
Facility Type			
Travel Lanes			
Volume (vpd)			
Capacity (vpd)			

	Existing	Without Proposal	With Proposal
Facility Type			
Travel Lanes			
Volume (vpd)			
Capacity (vpd)			

Project History/ Linkage to Other Plans

A feasibility study for this project was completed: https://connect.ncdot.gov/projects/planning/FeasibilityStudiesDocuments/U-3448_Feasibility-Study_Report_1996.pdf

ICE / MTP Goal Analysis

This project achieves Goal 2: provide a transportation system that enables mobility choices. Specifically Objective 2A, integrate walking and bicycling with vehicular travel and encourage the use of walking and bicycling. This objective is measured by the miles of existing sidewalks, bike facilities, and greenways.

This project also realizes Goal 4: promote equity and accessibility in transportation options for transportation-disadvantaged populations. Specifically, Objective 4C: use inclusive design to make the system work for all users.

Potential Impacts

Environmental Impacts:

This project has one single stream crossing. There is also a flood way and an underground storage tank within a quarter mile radius of the project.

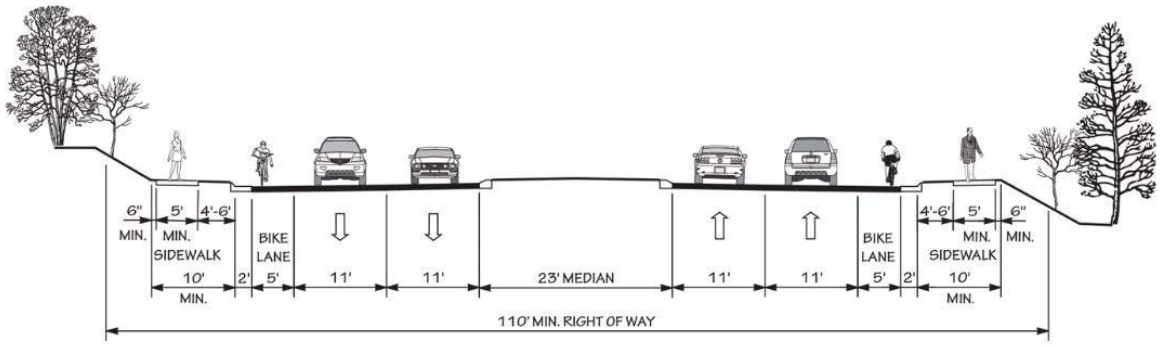
Human Impacts:

This project will have significant impacts to surrounding environmental justice populations. It will impact Zero-Car populations, Low Income populations, Limited English Proficiency populations as well as minority populations.

Other Information

TYPICAL SECTION No. 4D

4 LANE DIVIDED (23' RAISED MEDIAN) WITH CURB & GUTTER, BIKE LANES, AND SIDEWALKS



POSTED SPEED 35-45 MPH

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To note which facilities are being evaluated as part of the project, check all proposed facilities that apply in the tables to the right.

Facilities to be Evaluated	
Bicycle, Pedestrian & Public Transit (*Subject to local municipal agreement)	Proposed
Sidewalk *	☑
Marked Crosswalks	☐
Bicycle Lane	☑
Bike Route	☑
Marked Shoulder	☐
Multi-use Path *	☑
Fixed Bus Corridor	☐
Pedestrian Crossing Treatments	☑
Bus on Shoulder System (BOSS)	☐
Dedicated Lanes / Bus Rapid Transit Facility	☐
Other Elements	☐

Facilities to be Evaluated	
Rail & Freight	Proposed
Amtrak/Freight Route	☐
Fixed Guideway	☐

Facilities will NOT be Evaluated

Bicycle, Pedestrian & Public Transit

Proposed

If facilities will NOT be evaluated, check the reasons and modes that apply:

Location is greater than one mile from any existing or planned pedestrian facility, residential or commercial land use, school, or public transit stop.	❑
Location is not served by any public transit routes and no new service is identified in any public transit agency plans.	❑
Pedestrian or Bicycle uses are prohibited.	
Pedestrian	❑
Bicycle	❑
Location has unique site constraints.	
Pedestrian	❑
Bicycle	❑
Public Transit	❑
Additional reason(s) or notes:	❑

EXCEPTIONS

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State Traffic Engineer or designee Date

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Director of Bike Ped/Public Transportation Division or designee Date

_____ _____

Division Planning Engineer/Corridor Development Engineer or designee Date

NC 55 (Neuse Blvd.) Roundabout

NC 55 (Neuse Blvd) at US 17 Business (Dr ML King Jr Blvd)

Local ID: U-5993

Purpose: Access

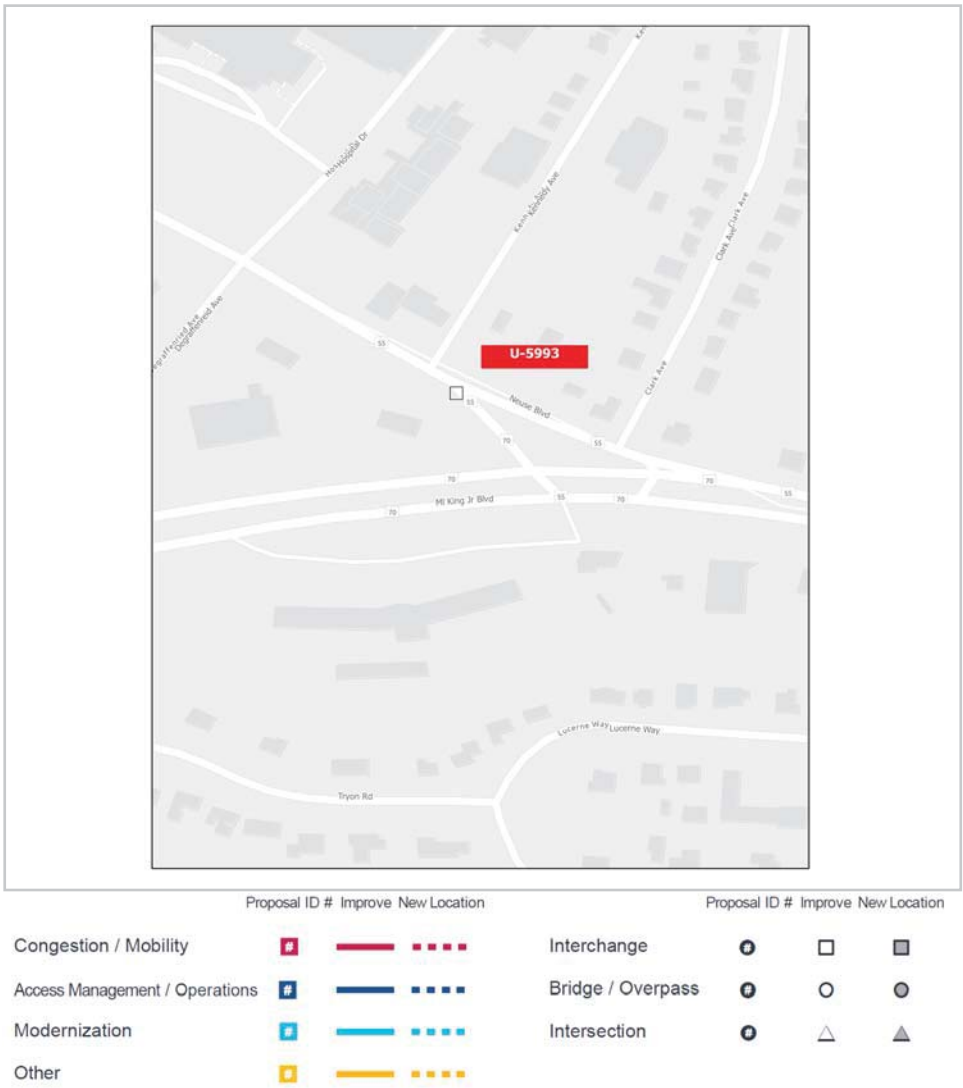
Improvement: Improve Existing

Identified Need

The existing intersection at NC 55 (Neuse Blvd) and US 17 Bus (MLK JR Blvd) needs design revisions in order to function more appropriately for its users.

Recommendation

Roundabout at NC 55 and US 17 Business.



Proposal At A Glance

Highway Class	Access Management & Operations
Facility Type	Major Throughfare Multilane
Typical Section	<Select Typical Section>
Section Option	
Estimated Cost	$2,450,000
Length (miles)	
Existing ROW (feet)	
Existing Crash Rate	

Capacity Data:	Year
Facility will be Approaching Capacity (>80%)	
Facility will be Over Capacity (≥100%)	

Proposal Data:	2018 Base Year	2045 Future Year	
Improve Existing	Existing	Without Proposal	With Proposal
Facility Type	Major Throughfare	Major Throughfa	Major Throughfa
Travel Lanes	4	4	4
Volume (vpd)	6,000-13,000	8,000-16,000	8,000-16,000
Capacity (vpd)	30,000-51,000	30,000-51,000	30,000-51,000

	Existing	Without Proposal	With Proposal
Facility Type			
Travel Lanes			
Volume (vpd)			
Capacity (vpd)			

	Existing	Without Proposal	With Proposal
Facility Type			
Travel Lanes			
Volume (vpd)			
Capacity (vpd)			

Project History/ Linkage to Other Plans

Funding for preliminary engineering was requested for this project in 2017.

A public meeting for this project was held in January 2018.

Additional funds were requested in September 2019.

ICE / MTP Goal Analysis

This project aligns with NBAMPO'S Goal #3: seek to optimize the existing transportation system. Specifically, this project achieves Objective 3A: prioritize maintaining existing assets before exploring system expansion options. The metric for assessing the success of this is the number of deficient/posted bridges and there will be no deficient structures at this intersection as a result of this improvement.

Potential Impacts

Natural Impacts

This project is located within 1/4 of a mile of a floodway.

Other Information

Typical Section Options:

The NCDOT Complete Streets Policy requires pedestrian, bicycle, and public transportation facilities to be evaluated for all transportation projects. Facility recommendations will vary depending on a project's context. Final determination of facilities to be included will be made in Project Development.

To note which facilities are being evaluated as part of the project, check all proposed facilities that apply in the tables to the right.

Facilities to be Evaluated	
Bicycle, Pedestrian & Public Transit (*Subject to local municipal agreement)	Proposed
Sidewalk *	❑
Marked Crosswalks	❑
Bicycle Lane	❑
Bike Route	❑
Marked Shoulder	❑
Multi-use Path *	❑
Fixed Bus Corridor	❑
Pedestrian Crossing Treatments	❑
Bus on Shoulder System (BOSS)	❑
Dedicated Lanes / Bus Rapid Transit Facility	❑
Other Elements	❑

Facilities to be Evaluated	
Rail & Freight	Proposed
Amtrak/Freight Route	❑
Fixed Guideway	❑

Facilities will NOT be Evaluated

Bicycle, Pedestrian & Public Transit

Proposed

If facilities will NOT be evaluated, check the reasons and modes that apply:

Location is greater than one mile from any existing or planned pedestrian facility, residential or commercial land use, school, or public transit stop.	❑
Location is not served by any public transit routes and no new service is identified in any public transit agency plans.	❑
Pedestrian or Bicycle uses are prohibited.	
Pedestrian	❑
Bicycle	❑
Location has unique site constraints.	
Pedestrian	❑
Bicycle	❑
Public Transit	❑
Additional reason(s) or notes:	❑

EXCEPTIONS

If **no** facilities for pedestrian, bicycle, or public transportation will be evaluated, an exception to the Complete Streets Policy is required. Please provide detailed information to justify the exception to including any Complete Street elements in this project. **Note that Exceptions will be reviewed by the Complete Streets Review Team upon programming in the STIP of the project.**

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❑ Exception has been reviewed and approved by the Complete Streets Review Team.

❑ Exception has not been reviewed and NOT approved by the Complete Streets Review Team.

Signatures:

_____ _____

State Traffic Engineer or designee Date

_____ _____

Director of Bike Ped/Public Transportation Division or designee Date

_____ _____

Division Planning Engineer/Corridor Development Engineer or designee Date

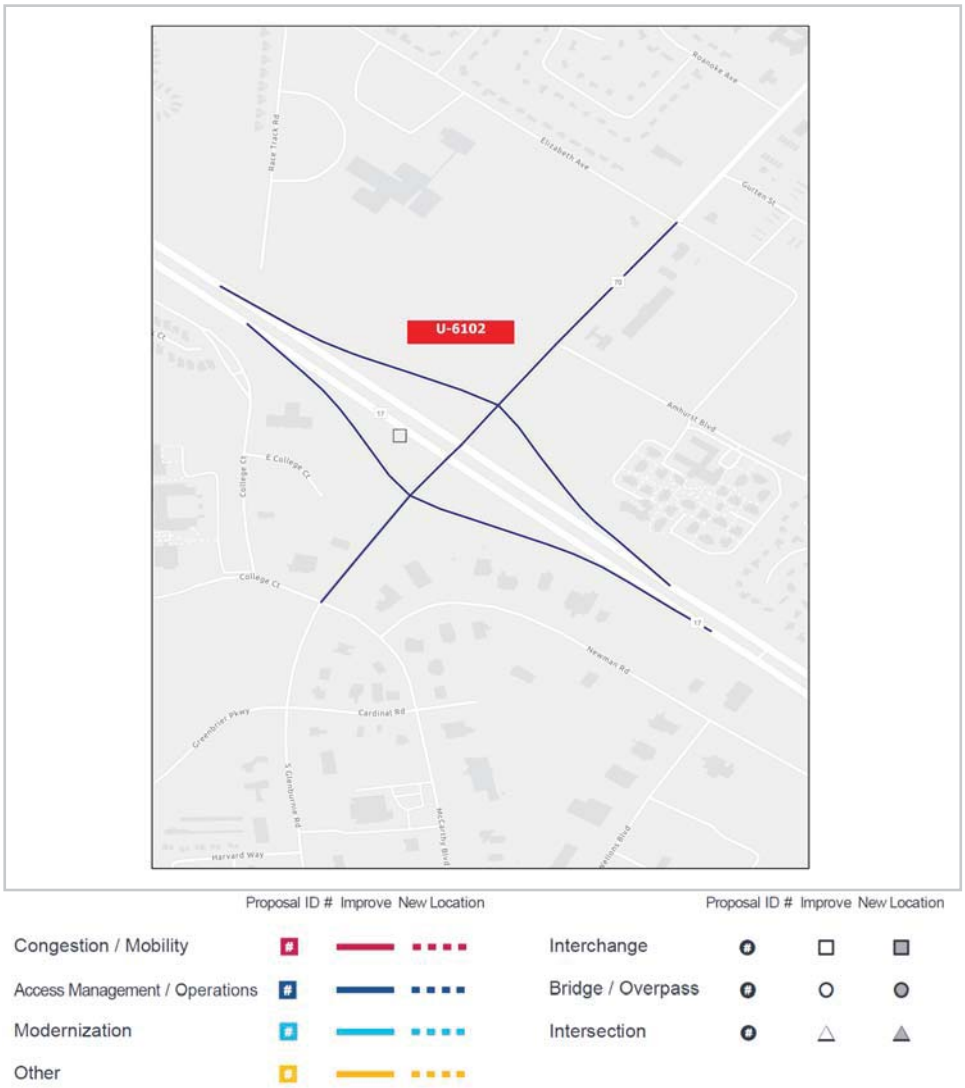
Glenburnie Road Interchange

US 70 and Glenburnie Road (SR 1309)

Local ID: U-6102

Purpose: Access

Improvement: Improve Existing



Identified Need

The interchanges along US 70 need to be upgraded as the regional corridor of US 70 (Future I-42) is brought up to interstate standards, including the Glenburnie Road interchange.

Recommendation

This project includes upgrading the interchange at Glenburnie Road and US 70 through the widening of ramps and upgrade of Glenburnie Road itself.

Proposal At A Glance

Highway Class	Access Management & Operations
Facility Type	Freeway
Typical Section	<Select Typical Section>
Section Option	
Estimated Cost	$21,300,000
Length (miles)	1
Existing ROW (feet)	
Existing Crash Rate	

Capacity Data:	Year
Facility will be Approaching Capacity (>80%)	
Facility will be Over Capacity (≥100%)	

Proposal Data:	2018 Base Year	2045 Future Year	
Improve Existing	Existing	Without Proposal	With Proposal
Facility Type	Freeway	Freeway	Freeway
Travel Lanes	1	1	2
Volume (vpd)	4,000-8,000	5,000-8,000	5,000-9,000
Capacity (vpd)	20,000	20,000	40,000

	Existing	Without Proposal	With Proposal
Facility Type			
Travel Lanes			
Volume (vpd)			
Capacity (vpd)			

	Existing	Without Proposal	With Proposal
Facility Type			
Travel Lanes			
Volume (vpd)			
Capacity (vpd)			

Project History/ Linkage to Other Plans

This project is at an interchange area of US 70 (Future I-42) which is undergoing a corridor improvement bringing it up to interstate standards. Link for STIP numbers associated with this corridor improvement: https://www.ncdot.gov/projects/us-70-corridor/Documents/US70Corridor_Map.pdf

As a major link to/from rural areas of NC, US 70 is designated as a North Carolina Strategic Transportation Corridor.

ICE / MTP Goal Analysis

This project is a piece of a regional upgrade to the US 70 corridor and satisfies NBAMPO'S Goal #1: provide a safe, secure, comprehensive, and effective transportation system for moving freight and people to bolster regional economic development. Specifically, this project achieves Objective 1A: enhance mobility and accessibility and manage congestion across the transportation system and across modes of transportation. The success of this can be assessed through the measure of travel time reliability along the corridor.

Potential Impacts

Environmental Impacts:

This project will have minor environmental impacts, wetlands are located within a quarter mile radius of the project.

Human Impacts:

This project will have moderate impacts to environmental justice communities. It will impact an elderly population as well as a Limited English Proficiency population.

Other Information

Typical Section Options:

The NCDOT Complete Streets Policy requires pedestrian, bicycle, and public transportation facilities to be evaluated for all transportation projects. Facility recommendations will vary depending on a project's context. Final determination of facilities to be included will be made in Project Development.

To note which facilities are being evaluated as part of the project, check all proposed facilities that apply in the tables to the right.

Facilities to be Evaluated	
Bicycle, Pedestrian & Public Transit (*Subject to local municipal agreement)	Proposed
Sidewalk *	❑
Marked Crosswalks	❑
Bicycle Lane	❑
Bike Route	❑
Marked Shoulder	❑
Multi-use Path *	❑
Fixed Bus Corridor	❑
Pedestrian Crossing Treatments	❑
Bus on Shoulder System (BOSS)	❑
Dedicated Lanes / Bus Rapid Transit Facility	❑
Other Elements	❑

Facilities to be Evaluated	
Rail & Freight	Proposed
Amtrak/Freight Route	❑
Fixed Guideway	❑

Facilities will NOT be Evaluated

Bicycle, Pedestrian & Public Transit

	Proposed
If facilities will NOT be evaluated, check the reasons and modes that apply:	
Location is greater than one mile from any existing or planned pedestrian facility, residential or commercial land use, school, or public transit stop.	❑
Location is not served by any public transit routes and no new service is identified in any public transit agency plans.	❑
Pedestrian or Bicycle uses are prohibited.	
Pedestrian	☑
Bicycle	☑
Location has unique site constraints.	
Pedestrian	❑
Bicycle	❑
Public Transit	❑
Additional reason(s) or notes:	❑

EXCEPTIONS

If **no** facilities for pedestrian, bicycle, or public transportation will be evaluated, an exception to the Complete Streets Policy is required. Please provide detailed information to justify the exception to including any Complete Street elements in this project. **Note that Exceptions will be reviewed by the Complete Streets Review Team upon programming in the STIP of the project.**

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Signatures:

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State Traffic Engineer or designee Date

_____ _____

Director of Bike Ped/Public Transportation Division or designee Date

_____ _____

Division Planning Engineer/Corridor Development Engineer or designee Date

US 17 (Martin Luther King Jr. Boulevard)

From US 70 to Trent Creek Rd

Local ID: U-6198

Purpose: Access

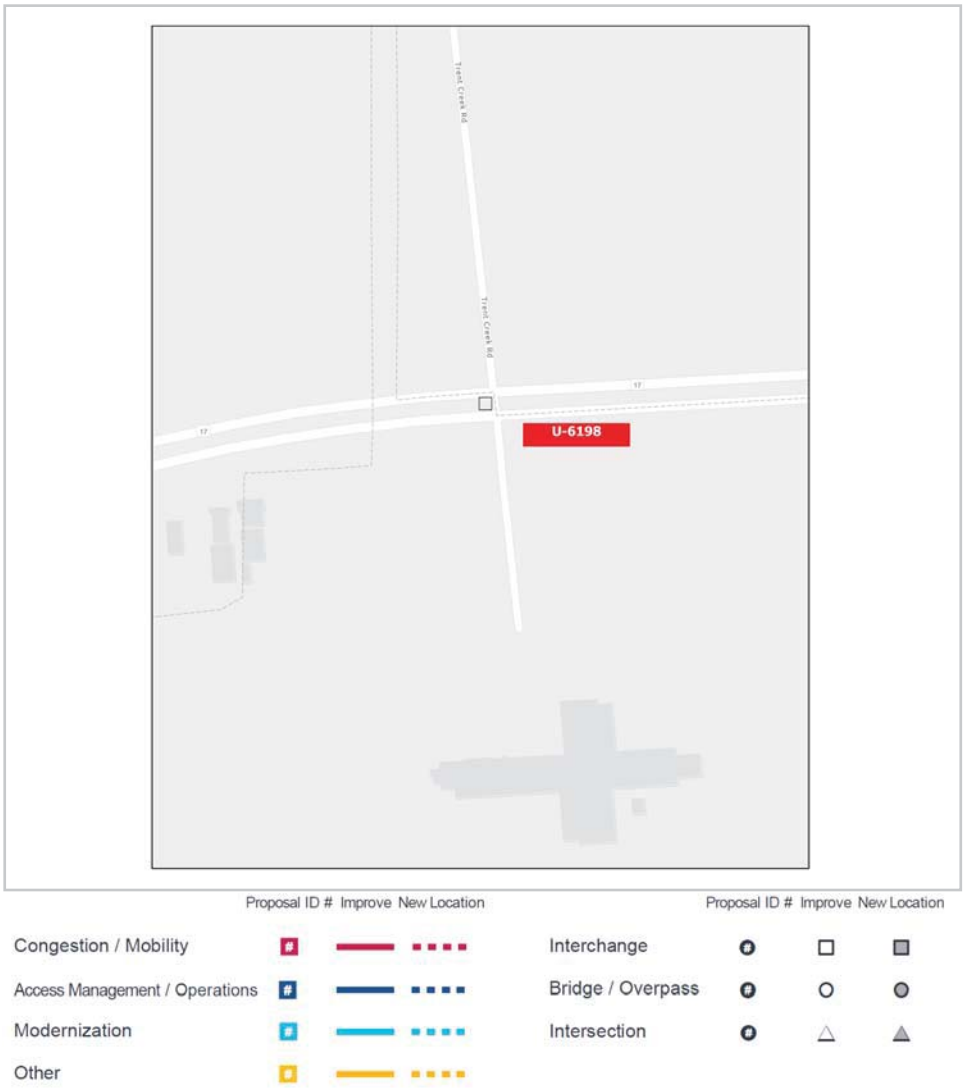
Improvement: Improve Existing

Identified Need

US 17 (MLK Jr Blvd) from US 70 to Trent Creek Road is a highly dense commercial corridor that needs a reduction of conflict points and increased traffic flow.

Recommendation

The proposed project includes an upgrade to a superstreet from US 70 to west of Trent Creek Rd on US 17 Alt (Dr Martin Luther King Jr Blvd).



Proposal At A Glance	
Highway Class	Access Management & Operations
Facility Type	Boulevard
Typical Section	06 F
Section Option	
Estimated Cost	$39,000,000
Length (miles)	2.65
Existing ROW (feet)	
Existing Crash Rate	

Capacity Data:	Year
Facility will be Approaching Capacity (>80%)	
Facility will be Over Capacity (≥100%)	

Proposal Data:	2018 Base Year	2045 Future Year	
Improve Existing	Existing	Without Proposal	With Proposal
Facility Type	Boulevard	Boulevard	Boulevard
Travel Lanes	6	6	6
Volume (vpd)	43,000	50,000	50,000
Capacity (vpd)	86,000	86,000	86,000

	Existing	Without Proposal	With Proposal
Facility Type			
Travel Lanes			
Volume (vpd)			
Capacity (vpd)			

	Existing	Without Proposal	With Proposal
Facility Type			
Travel Lanes			
Volume (vpd)			
Capacity (vpd)			

Project History/ Linkage to Other Plans

This project is near US 70 (Future I-42) which is undergoing a corridor improvement bringing it up to interstate standards. As a major link to/from rural areas of NC, US 70 is designated as a North Carolina Strategic Transportation Corridor.

ICE / MTP Goal Analysis

This project satisfies NBAMPO'S Goal #1: provide a safe, secure, comprehensive, and effective transportation system for moving freight and people to bolster regional economic development. Specifically, this project achieves Objective 1A: enhance mobility and accessibility and manage congestion across the transportation system and across modes of transportation. The success of this can be assessed through the measure of travel time reliability along the corridor.

Potential Impacts

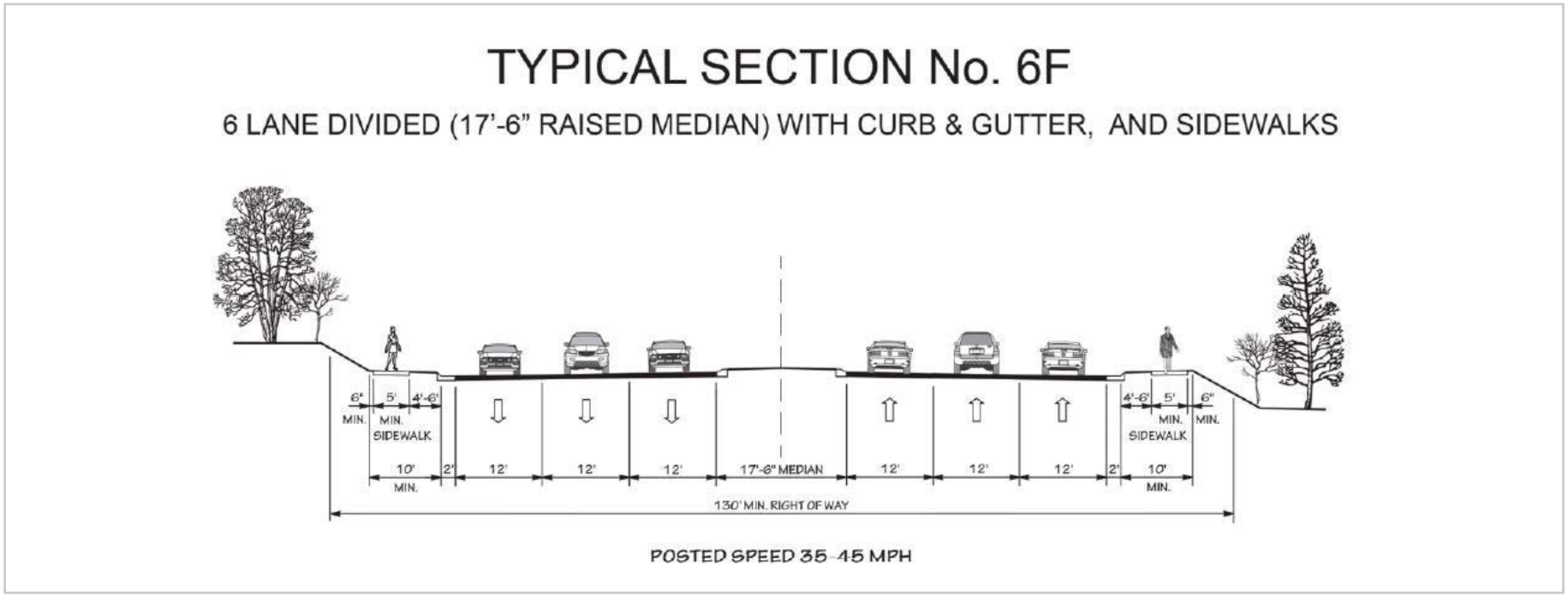
Natural Impacts:

This project will have minor environmental impacts coming within a quarter mile of wetlands and one stream crossing/floodway.

This project is also within a quarter mile of a hazardous waste site.

Other Information

Typical Section Options:



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To note which facilities are being evaluated as part of the project, check all proposed facilities that apply in the tables to the right.

Facilities to be Evaluated	
Bicycle, Pedestrian & Public Transit (*Subject to local municipal agreement)	Proposed
Sidewalk *	❑
Marked Crosswalks	❑
Bicycle Lane	❑
Bike Route	❑
Marked Shoulder	❑
Multi-use Path *	❑
Fixed Bus Corridor	❑
Pedestrian Crossing Treatments	❑
Bus on Shoulder System (BOSS)	❑
Dedicated Lanes / Bus Rapid Transit Facility	❑
Other Elements	❑

Facilities to be Evaluated	
Rail & Freight	Proposed
Amtrak/Freight Route	❑
Fixed Guideway	❑

Facilities will NOT be Evaluated

Bicycle, Pedestrian & Public Transit

Proposed

If facilities will NOT be evaluated, check the reasons and modes that apply:

Location is greater than one mile from any existing or planned pedestrian facility, residential or commercial land use, school, or public transit stop.	❑
Location is not served by any public transit routes and no new service is identified in any public transit agency plans.	❑
Pedestrian or Bicycle uses are prohibited.	
Pedestrian	❑
Bicycle	❑
Location has unique site constraints.	
Pedestrian	❑
Bicycle	❑
Public Transit	❑
Additional reason(s) or notes:	❑

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State Traffic Engineer or designee Date

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Director of Bike Ped/Public Transportation Division or designee Date

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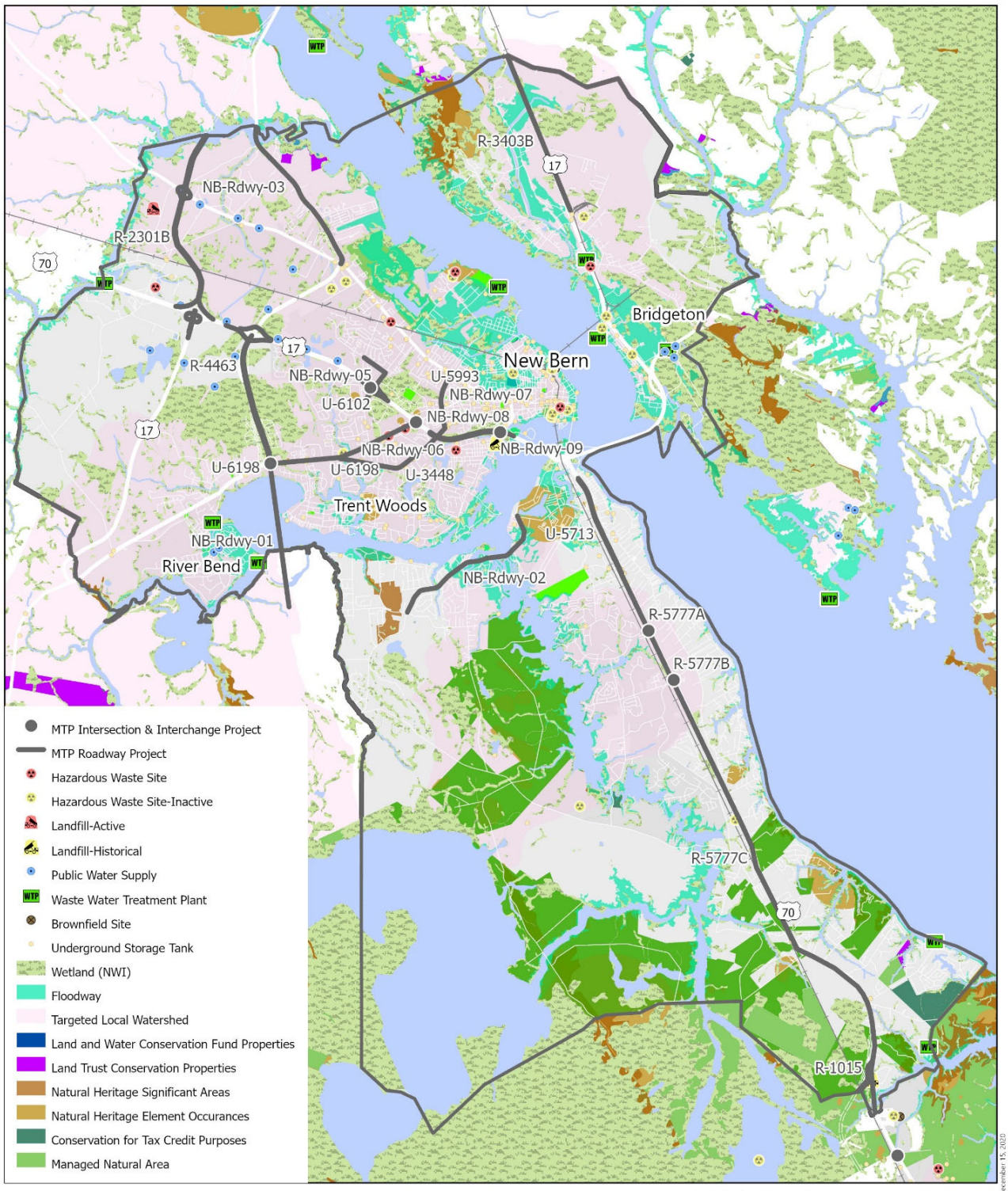
Appendix C: Environmental Screening

Hydrologic and Environmental Factors



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New Bern Area MPO Metropolitan Transportation Plan

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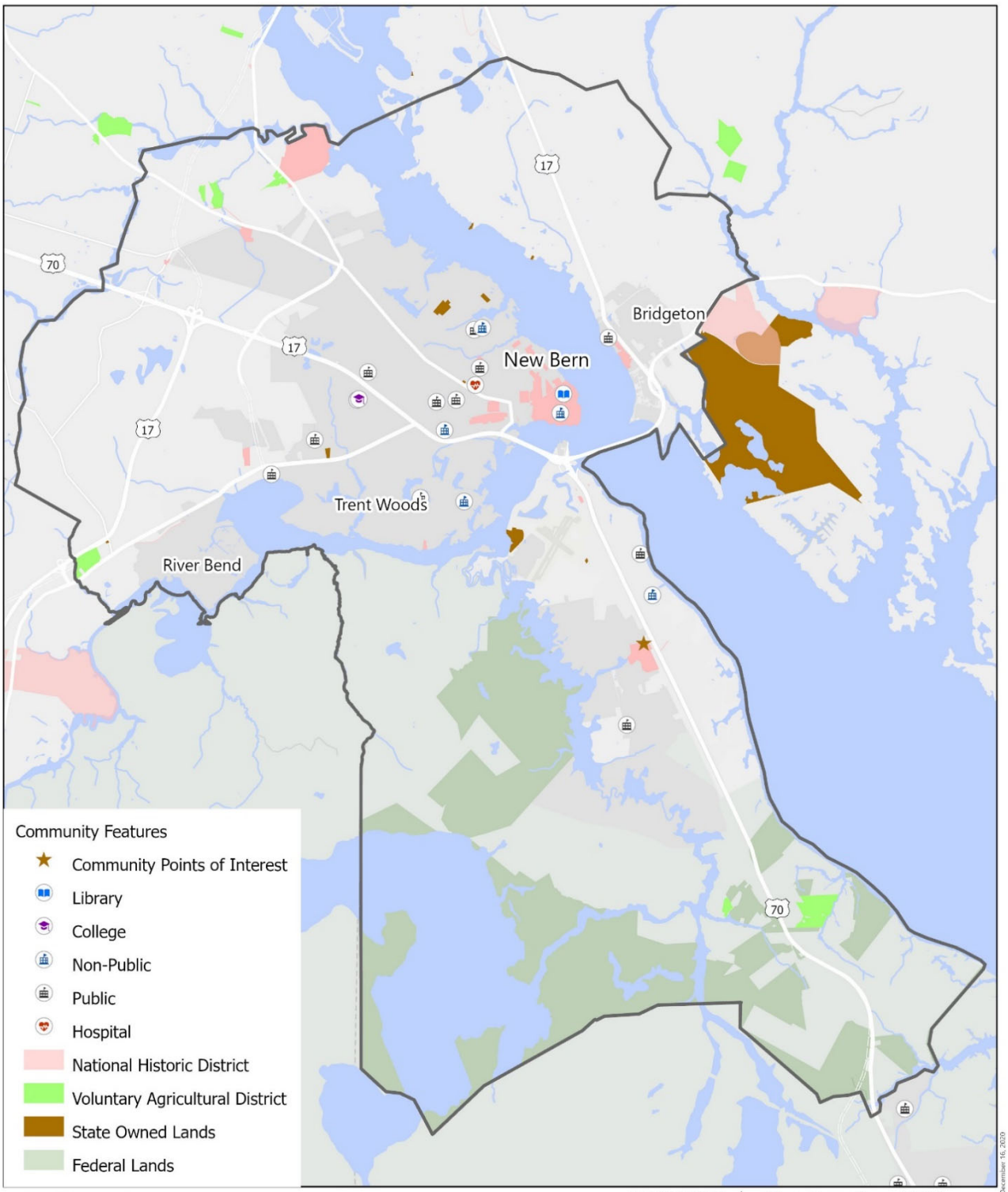
Historic, Cultural, and Agricultural Factors



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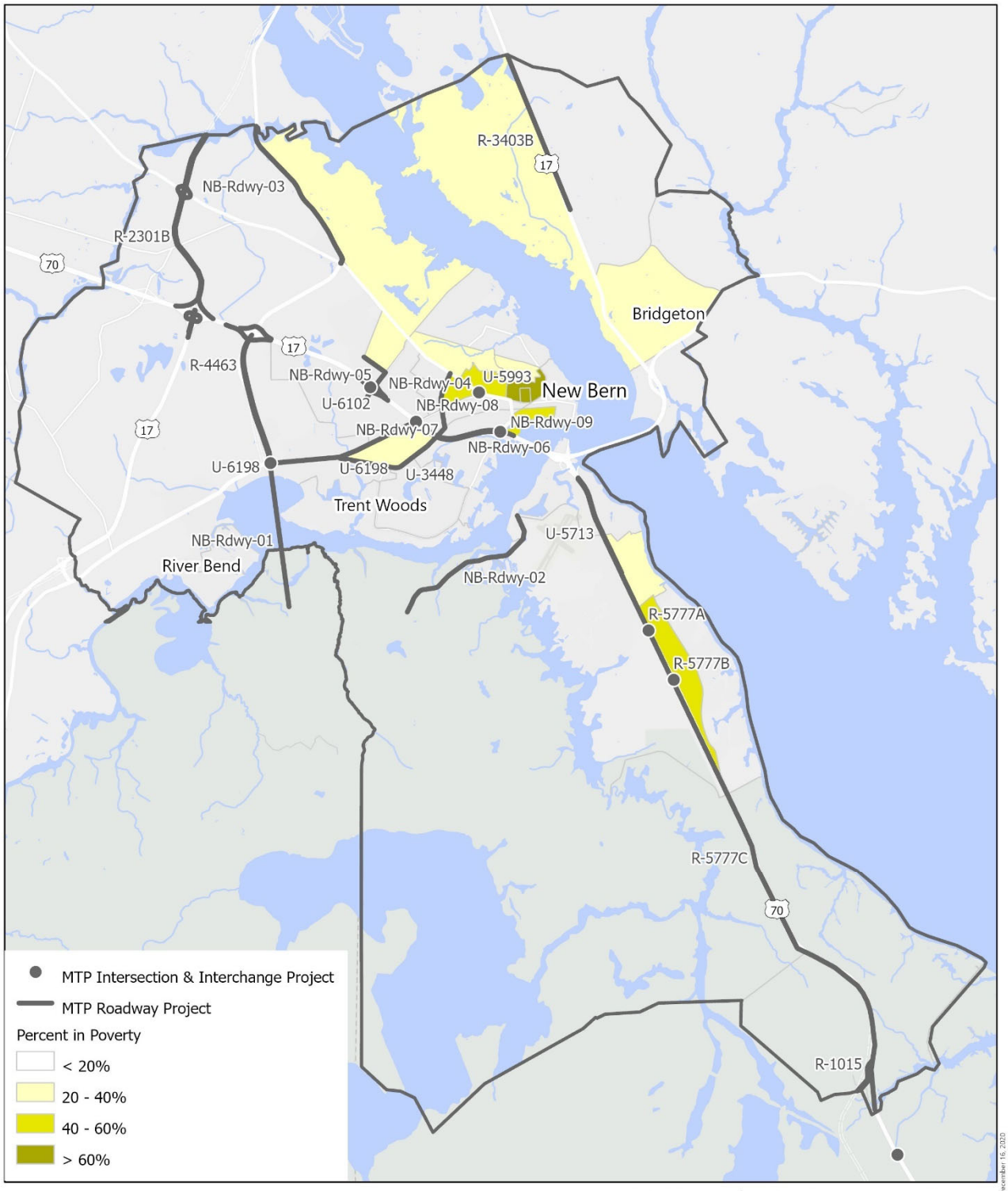
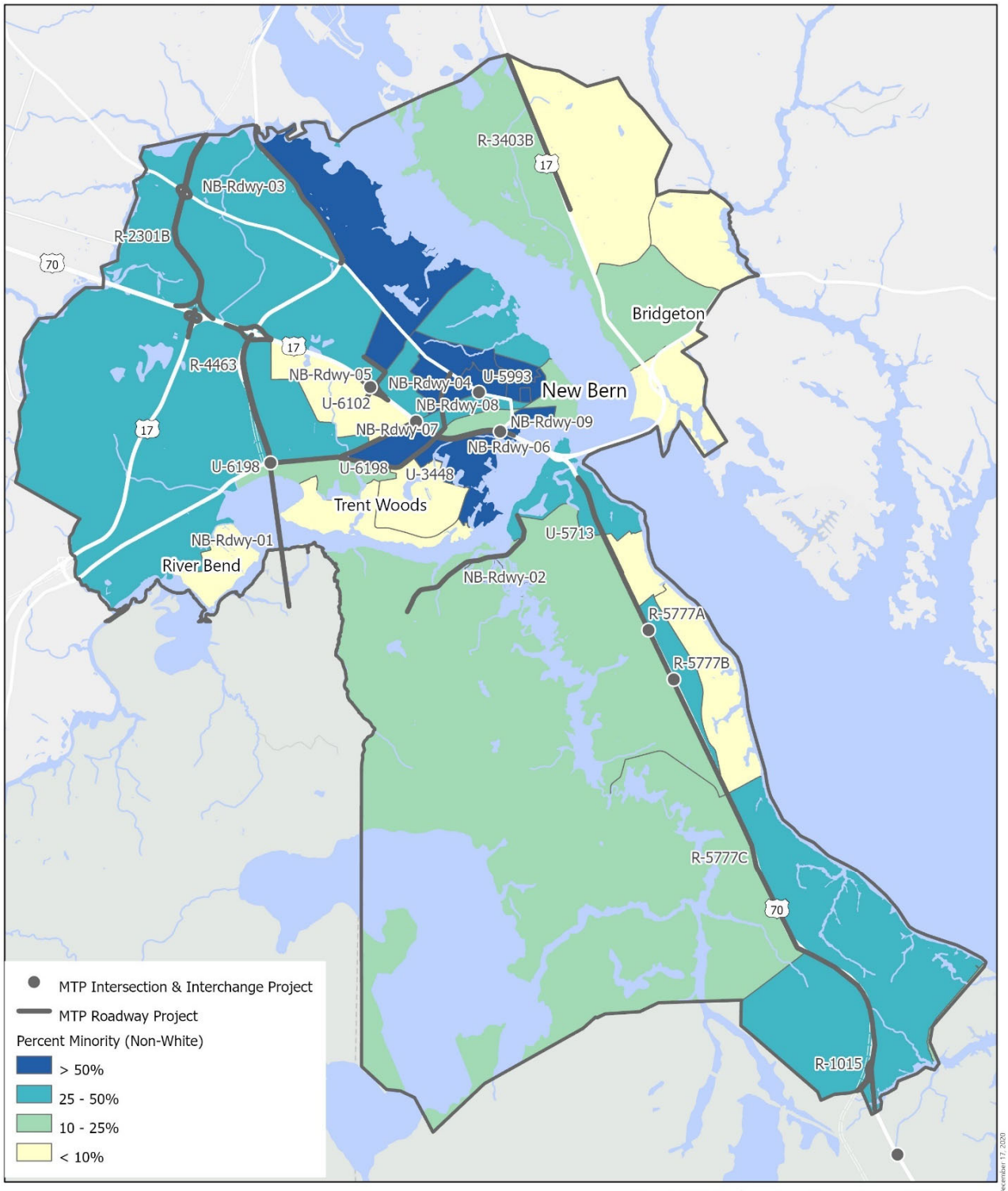
Percent Population in Poverty



Percent Population in Minority



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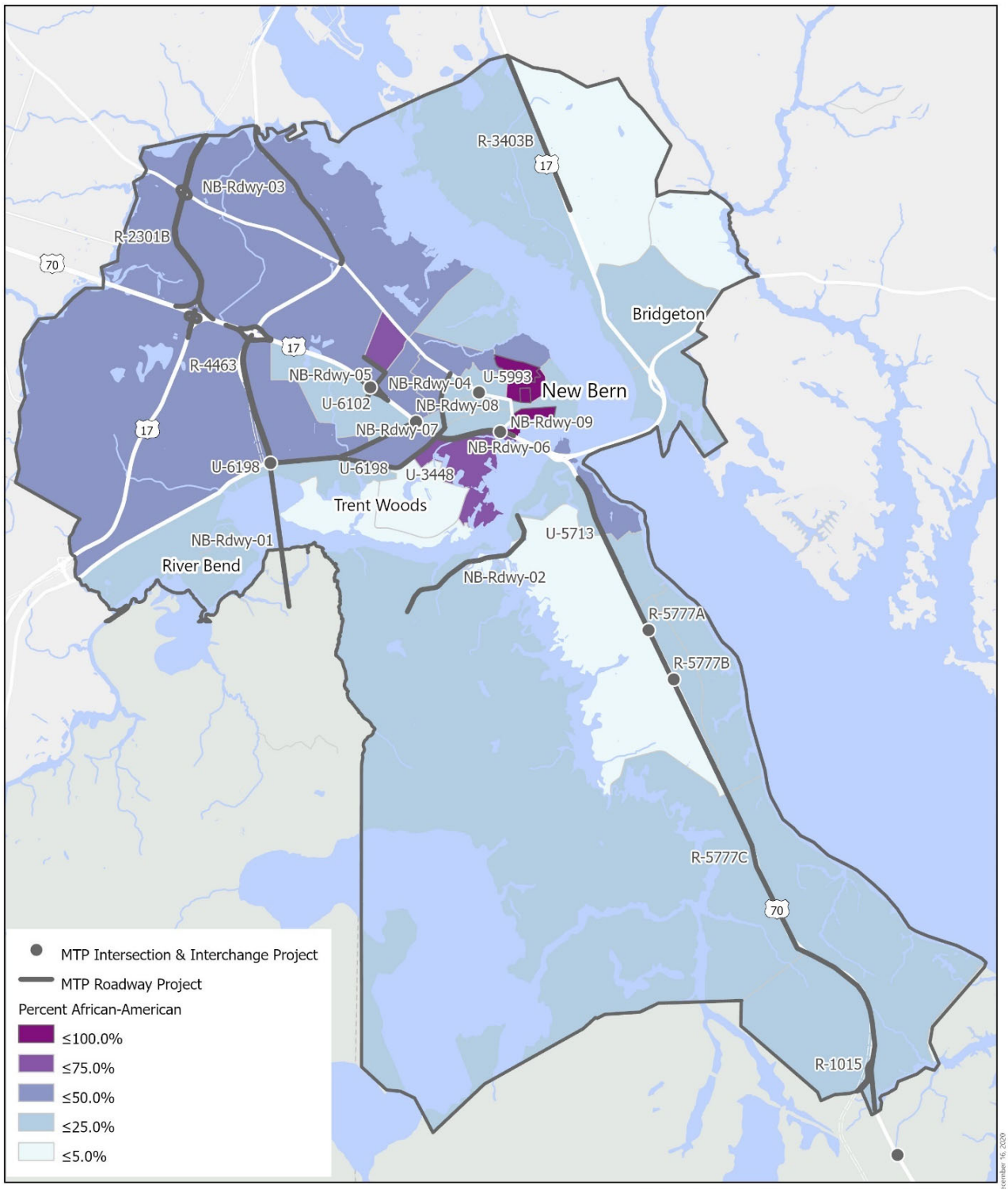
Percent Population in Minority - African American



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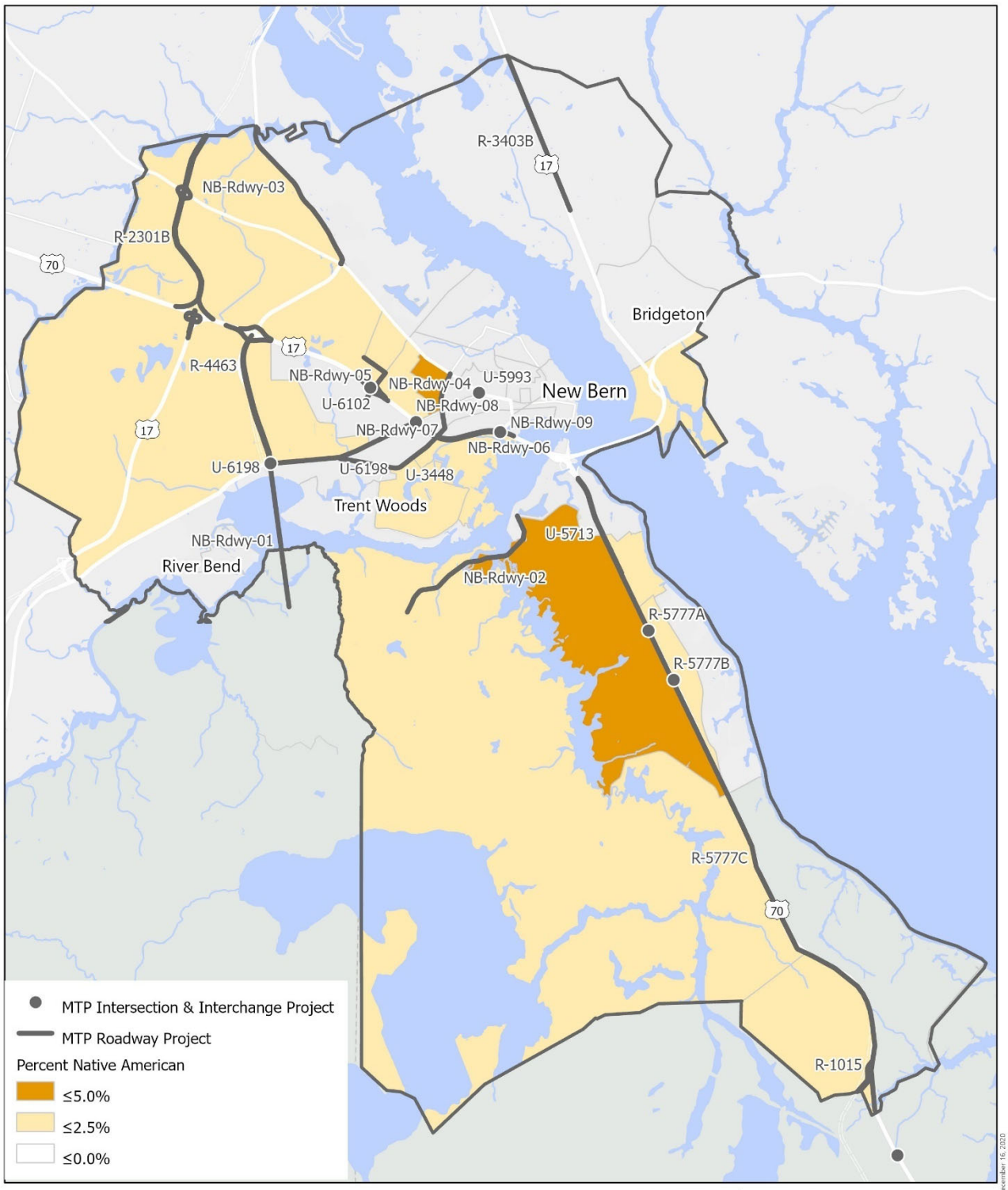
Percent Population in Minority - Native America



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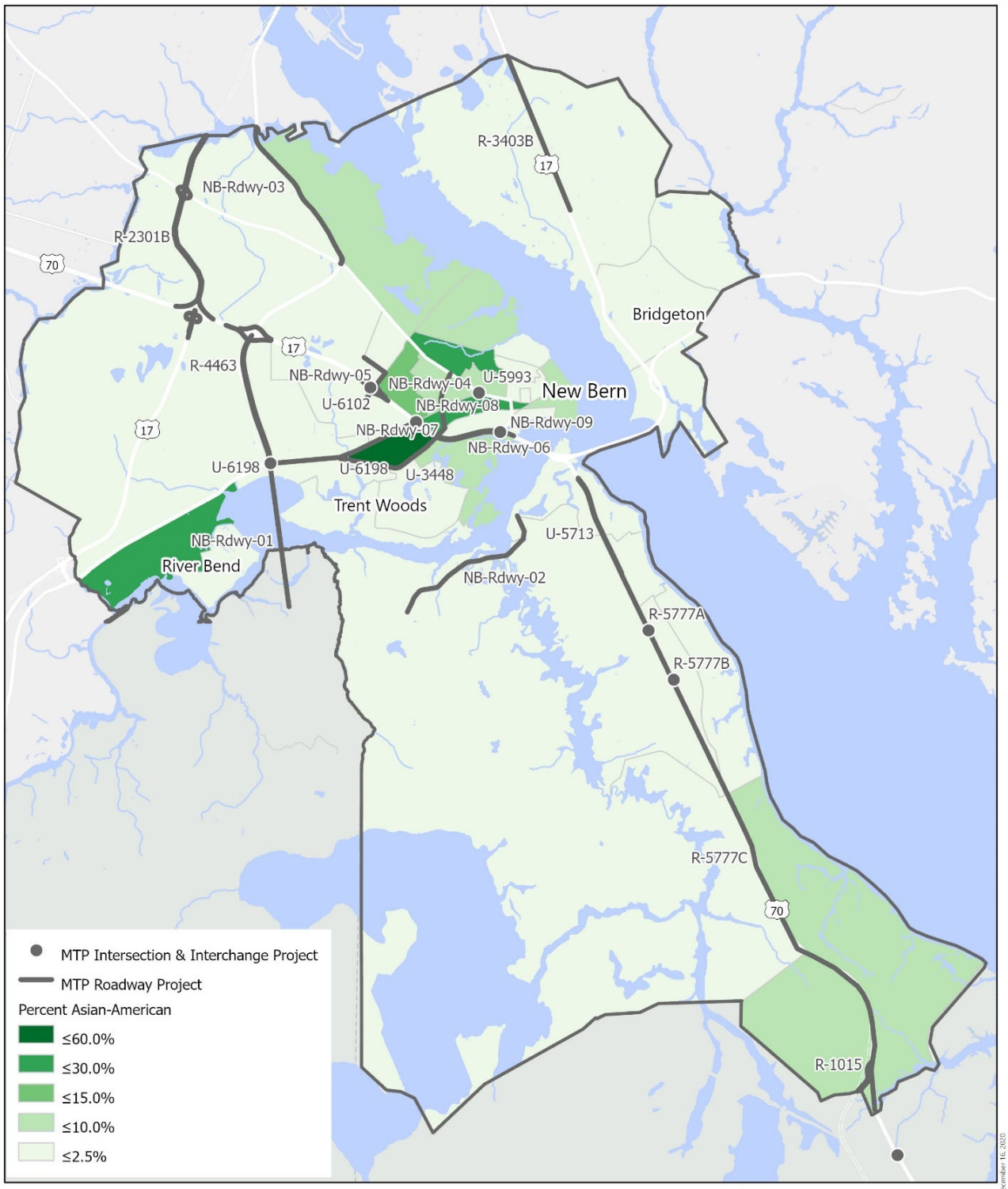
Percent Population in Minority - Asian America



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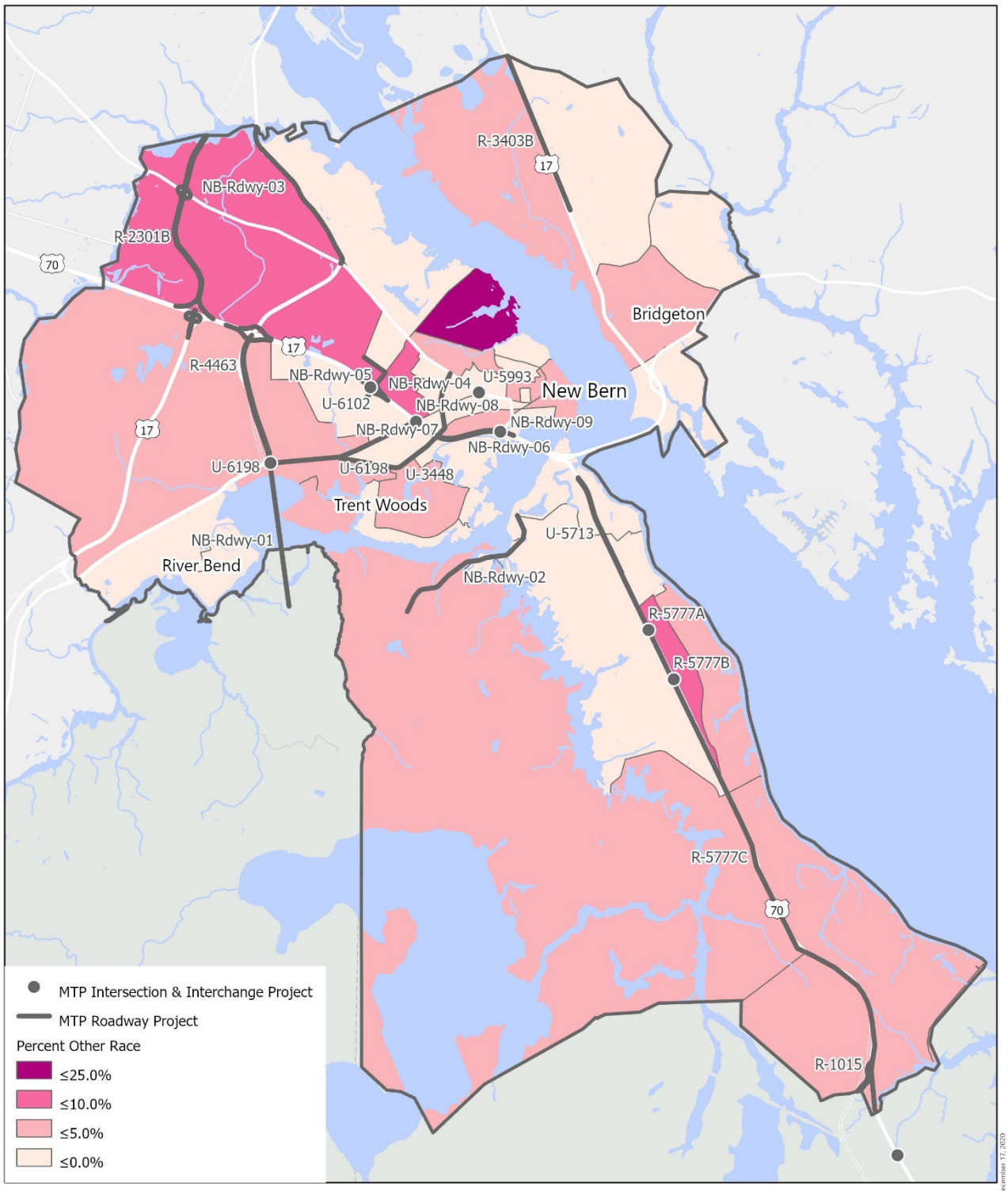
Percent Population in Minority – Other Race



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New Bern Area MPO Metropolitan Transportation Plan

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Appendix D:

Community Understanding Report (CUR)

Community Understanding Report for the New Bern Area MPO 2045 Metropolitan Transportation Plan

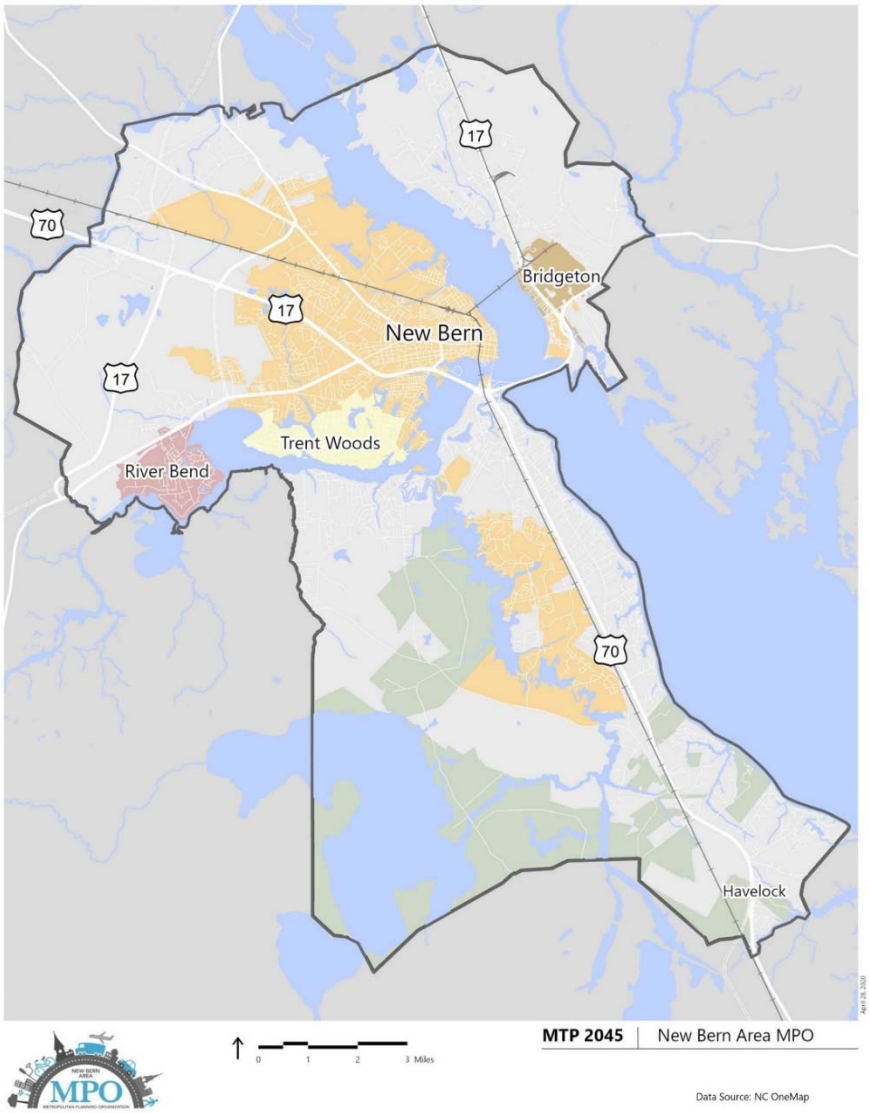
Table of Contents

List of Figures

1. Introduction

This Community Understanding Report (CUR) is prepared for the New Bern Area Metropolitan Planning Organization (NBAMPO) as part of their 2045 Metropolitan Transportation Plan (MTP). The NBAMPO is responsible for coordinating transportation planning for an area that is approximately 106,221 acres in Craven County. The MPO area includes the City of New Bern, Town of River Bend, Town of Trent Woods, Town of Bridgeton, and unincorporated land in a portion of Craven County, as shown in Figure 1 below.

Figure 1: MPO Study Area



2. Population Trends and Projection

The study area has seen sustained population growth over the last several decades, however, according to data from the U.S. Census Bureau and NC Demographer, this growth is anticipated to level off over the next twenty years. Projected population change from 2019 to 2045 is shown in Figures 2 and 3 below.

Figure 2: Craven County Population Change

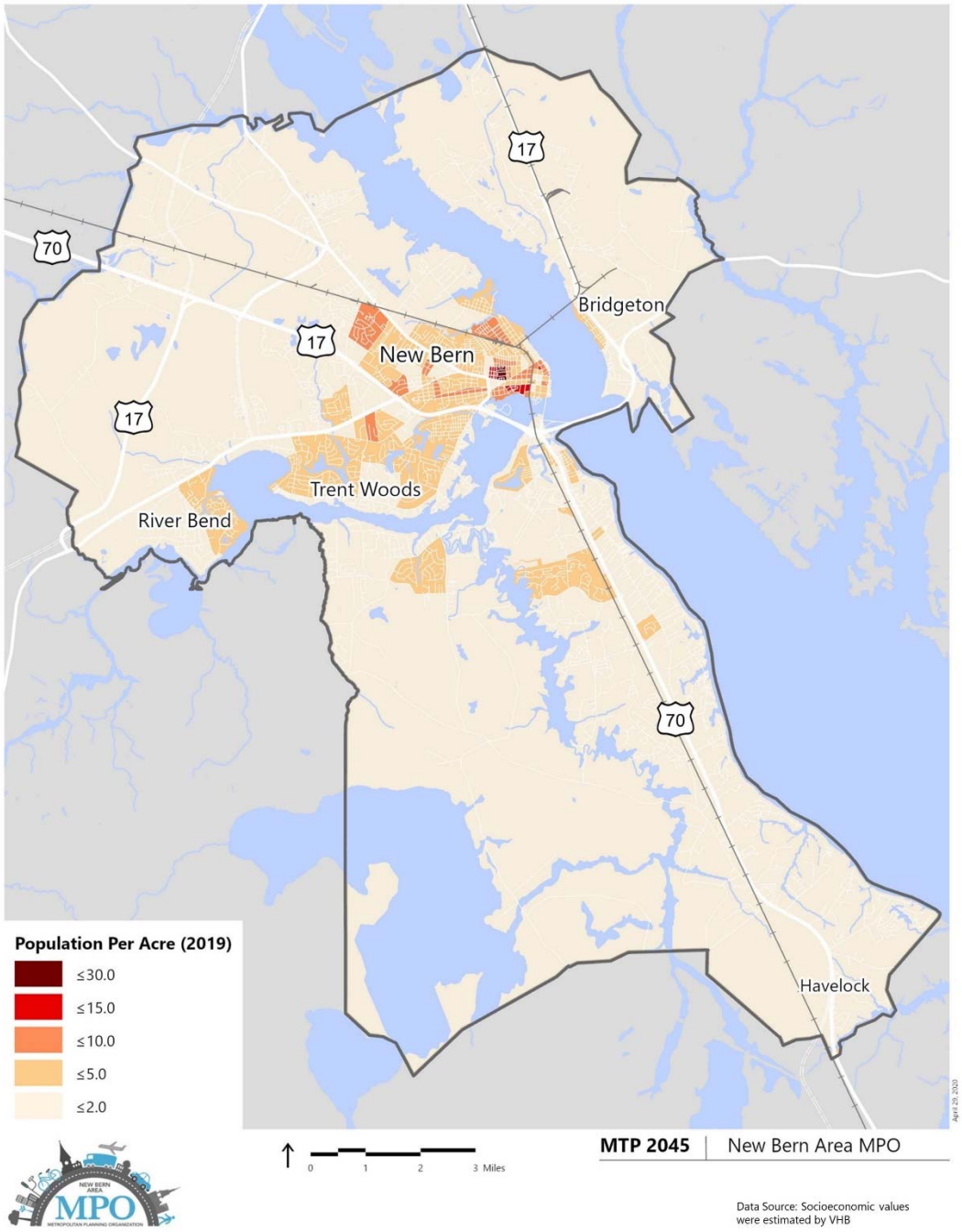
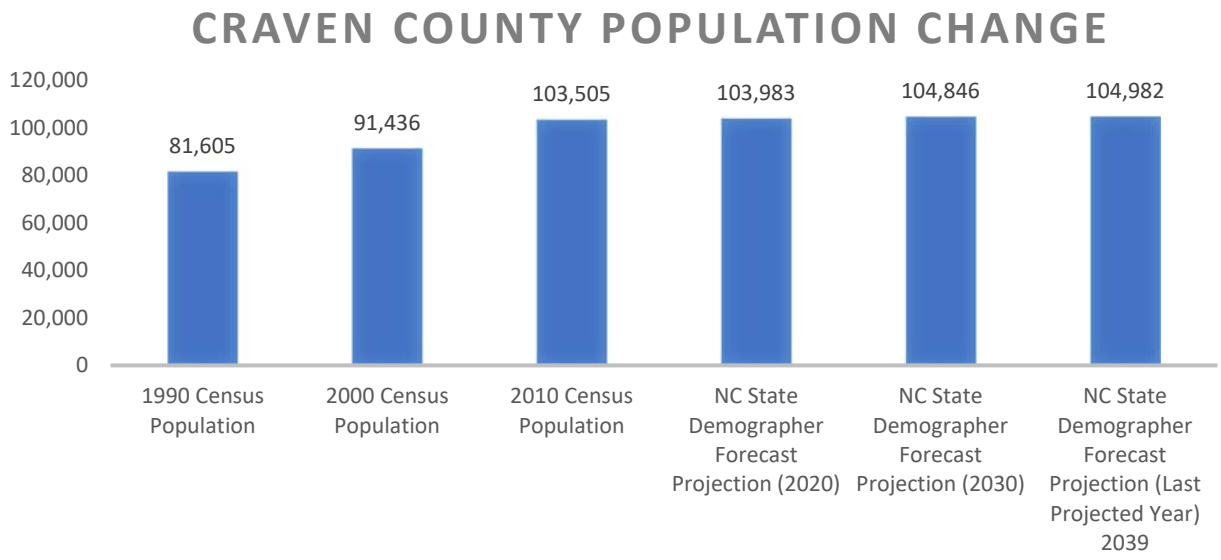


Figure 3: Craven County Population Change



Source: U.S. Census Bureau, Census 2000 Summary File 1
https://files.nc.gov/ncosbm/demog/countytotals_2020_2029.html
https://files.nc.gov/ncosbm/demog/countygrowth_2030.html
https://files.nc.gov/ncosbm/demog/countygrowth_2039.html

A. What are the two most important reasons the CTP Study Area experienced the population trends it did? (Cite the source.)

1. The Cherry Point Marine Base has grown and supported continued population and employment growth in the area.
   Source: Cherry Point Regional Joint Land Use Study (2016)

2. The rural nature of the county and the location on the coast away from major interstates has tempered population and employment growth.

B. What are the two most important reasons the CTP Study Area is likely to experience the population trends forecast?

1. Cherry Point Marine Base nearby provides stable employment and population base.
2. Natural features, high-quality healthcare, and low cost of living makes the area an attractive place to live.

C. If known, how is the study area expected to grow? Which areas will have lower or higher growth?

The southern and northern portions of the study area have seen elevated growth rates, particularly the area around the Coastal Carolina Regional Airport and along US 70 south

of the Trent and Neuse Rivers. Population growth in downtown New Bern has been lower than the rest of the study area.

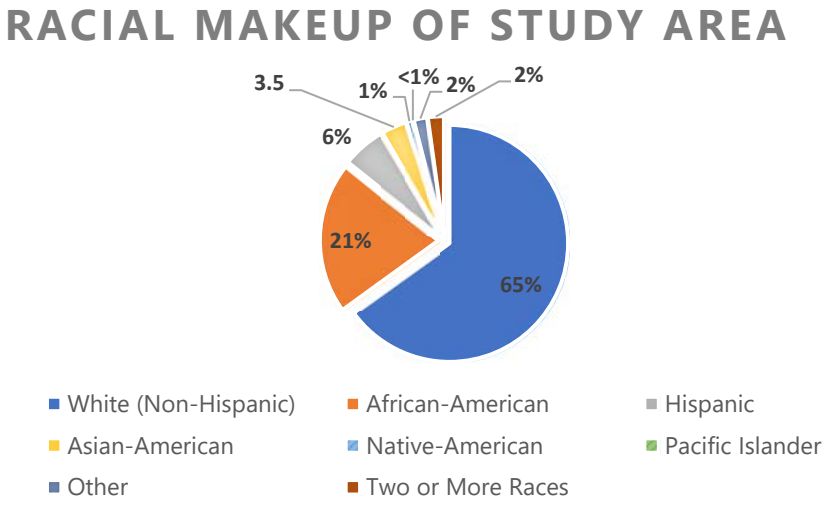
Source: US Census Bureau, Census 2010 and Census 2000, Summary File 1 100% Data, Table P1 (2010) and P001 (2000) "Total Population"

3. Population Diversity

A. Identify notable and/or underrepresented communities in the MTP Study Area that need to be considered during the MTP process (total and percentage if available)? This does not need to be limited to Limited English Proficiency (LEP) groups.

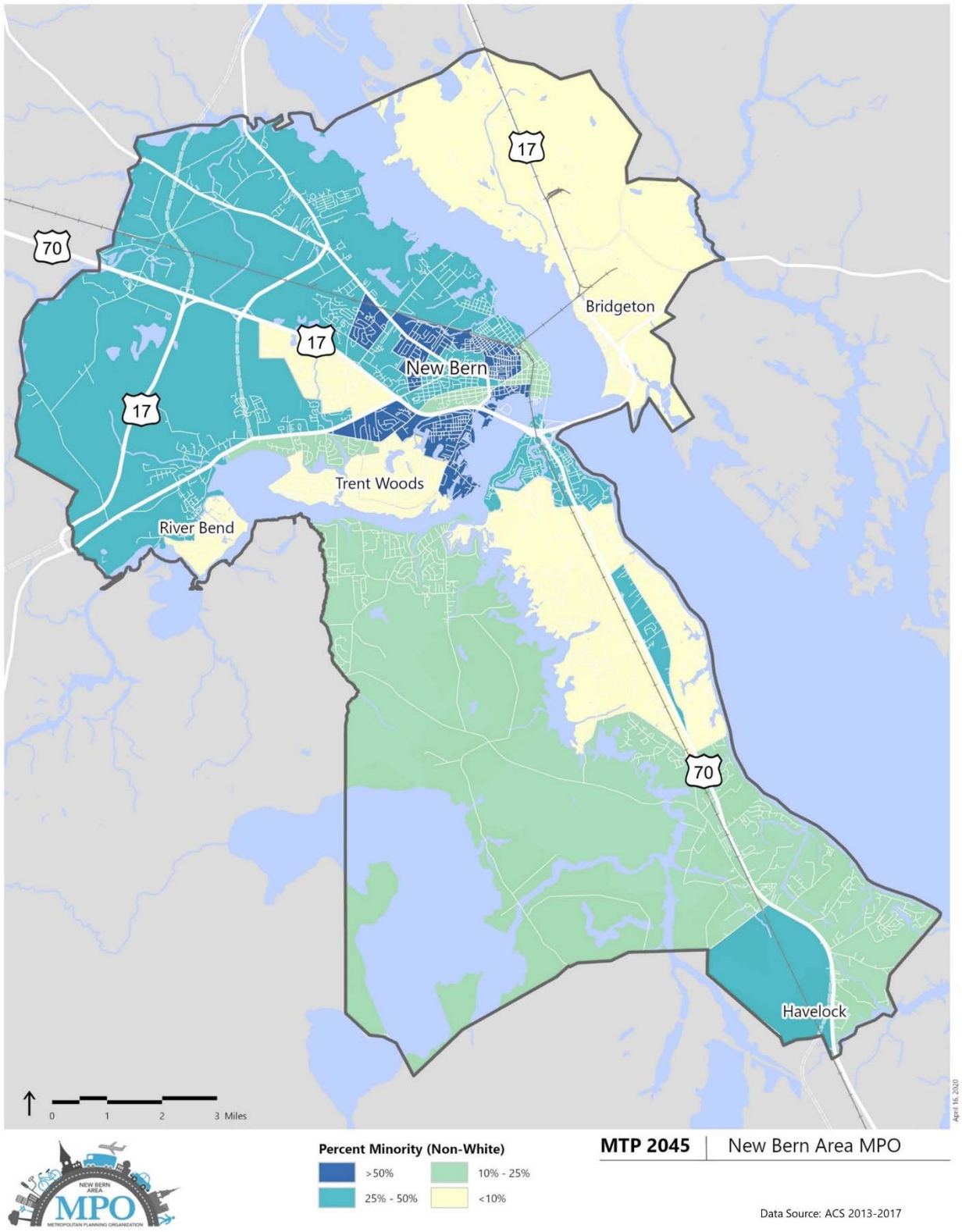
ACS Census data shows the largest racial minority group in the study area to be African Americans (see Figures 4 and 5 below). With a population of roughly 14,000, this group makes up approximately 21% of the total population. Concentrations of African American populations are found in central New Bern where they exceed 75% of the population in some communities. Those who identify as Hispanic or Latin American consist of approximately 6% of the study area with a population near 4,500. Hispanic and Latin American populations are less concentrated but constitute as much as 25% of the population in lower density areas of northwest New Bern, north of US 17. Asian Americans consist of 3.5% of the total population with approximately 2,500 and are largely concentrated in central New Bern and southwest of the downtown along MLK Blvd. Other racial minority groups such as Native Americans, Hawaiians/Pacific Islanders, and those made up of two or more races constitute less than 2% of the total study area population each.

Figure 4: Racial Makeup of Study Area



Source: U.S. Census Bureau, ACS 2013-2017

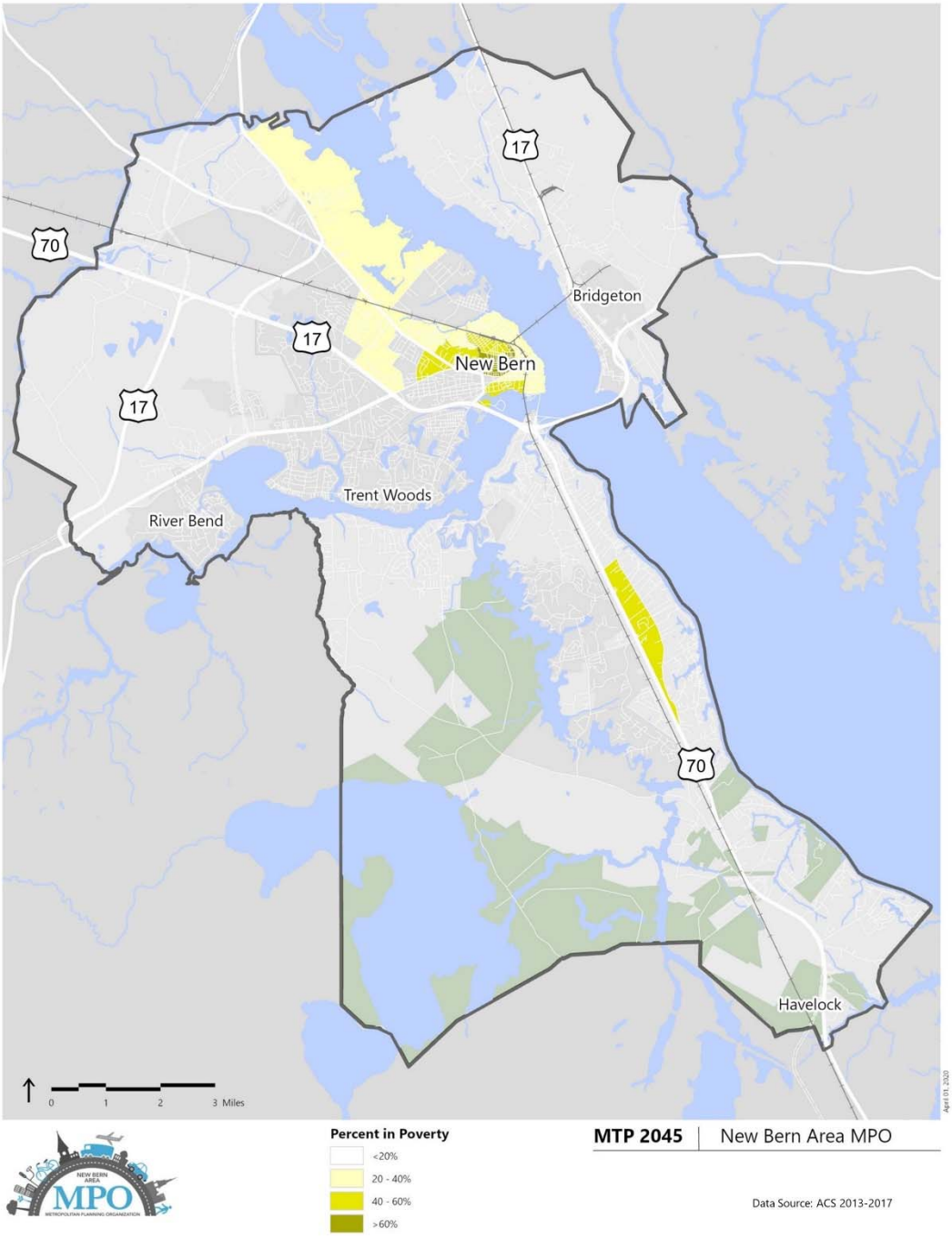
Figure 5: Percent Minority (Non-White)



B. Note low income populations in the MTP Study Area (total and percentage). The map from the RPO Title VI Plan may be sufficient.

Roughly 12% of the total study area population is living under the poverty line and 5% are considered very poor. Figure 6 below illustrates the percent of population in poverty within the study area.

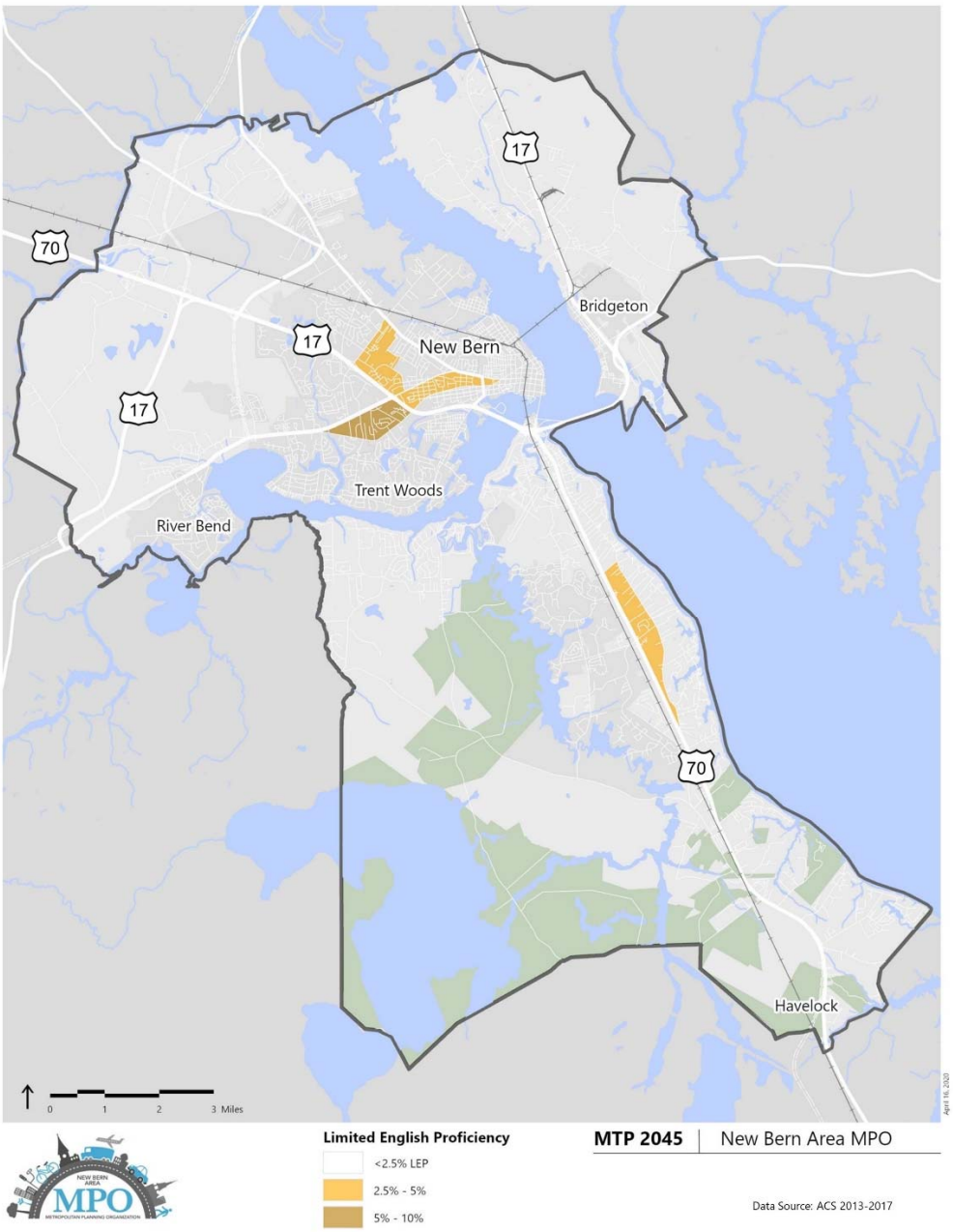
Figure 6: Percent Poverty



A. Identify the main LEP language groups. Note which LEP language groups total at least 5% of the population, or 1000 total population, whichever is less. This may come from the RPO Title VI Plan.

The population of the study area is primarily English speaking (see Figure 7 below). With only 1.7% (817) speaking Spanish and 1.7% (807) speaking a language of Asian origin.

Figure 7: LEP Language Groups



B. Are there areas within the MTP Study Area where concerns about race, ethnicity, income have affected project outcomes? (Provide examples and location.)

Based on input from the MPO in 2016, there are no areas where concerns about race, ethnicity, or income have affected past outcomes.

C. Are there communities or populations within the MTP Study Area that have raised a concern about lack of voice in public opinions? (Provide examples and location.)

Based on input from the MPO in 2016, no communities or populations have raised a concern about lack of voice in public decisions.

D. Identify the presence and locations of other potential transportation disadvantaged populations, including households with zero vehicles and seniors.

The NBAMPO study area has less zero vehicle households compared to Craven County as a whole (see Figure 8 below). As shown in Figure 9 below, these zero vehicle households are primarily concentrated in and north of New Bern. There are significant concentrations of populations ages 65 and older throughout the NBAMPO study area (see Figure 10).

Figure 8: Zero Vehicle Households

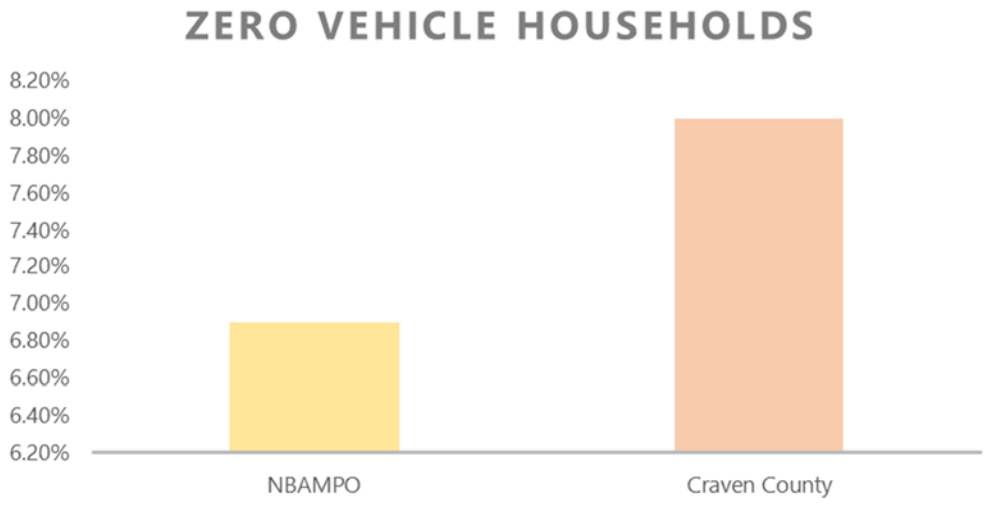


Figure 9: Zero Vehicles

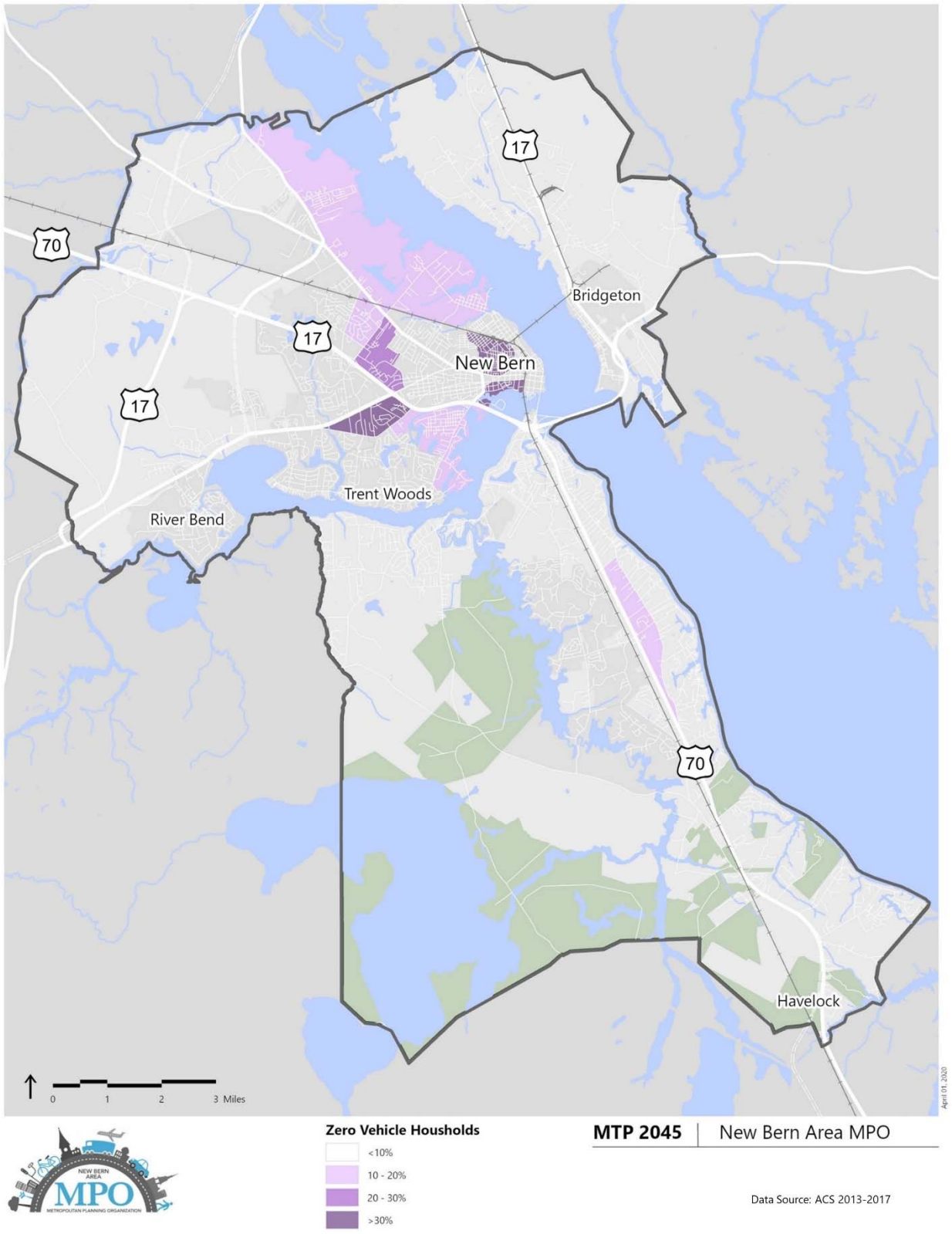
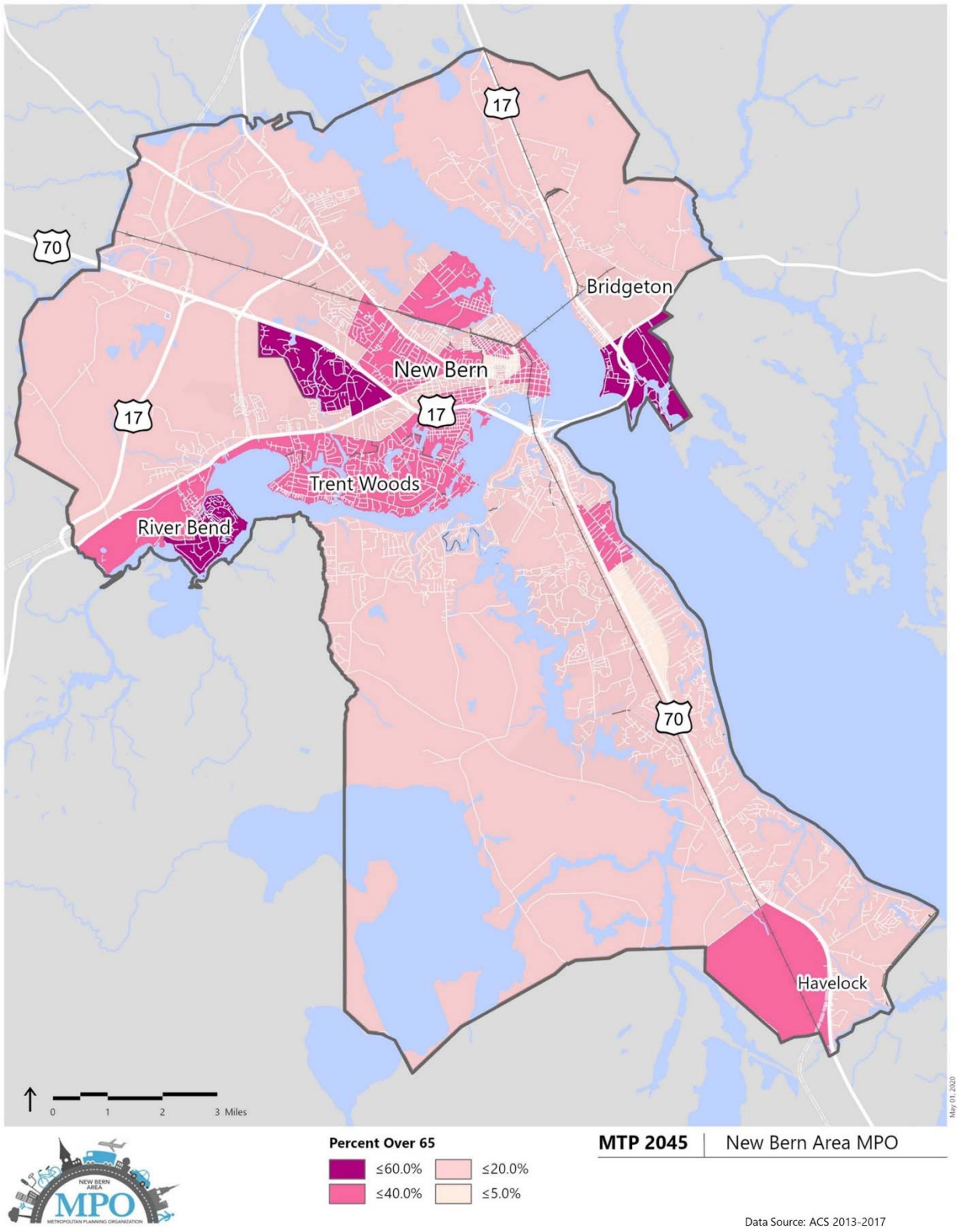


Figure 10: Percent Population Over 65 Years of Age



4. Community Character

A. Have communities identified community character goals?

The New Bern, River Bend, and Trent Woods Regional Land Use Plan (2010) identifies preservation of character, cultural resources, and historic heritage as a community goal.

Sources: New Bern, River Bend, and Trent Woods Reginal Land Use Plan (2010), http://www.newbern-nc.org/files/4114/0070/2218/New_Bern_Final__Draft_12_14_10.pdf;

B. Have communities delineated any gateways, historic districts, view sheds, open space and other areas to be protected or enhanced?

The New Bern Renaissance Plan identifies the Gateway District, around Broad, Pollock, and Queen in downtown New Bern, as an area for preservation and enhancement. The River Bend Comprehensive Plan (2013) identifies maintaining and enhancing the community's appearance as one of the key goals.

Sources: New Bern Renaissance Plan, https://www.dropbox.com/s/a3hugnabz54fzx8/NewBernRenassaincePlan130102HI2final.pdf; River Bend Comprehensive Plan (2013): http://www.riverbendnc.org/assets/2013-comprehensive-plan---with-attachments.pdf.

C. List all major historic downtowns or districts.

1. New Bern Historic District in downtown New Bern.
2. Ghent Historic District, west of downtown New Bern.
3. Degraffenried Park Historic District, west of downtown New Bern.
4. Riverside Historic District, north of downtown New Bern.

There are numerous areas of the NBAMPO listed on the National Register of historic places (see Figures 11 and 12 below).

Figure 11: Central New Bern National Register Historic Districts and Sites

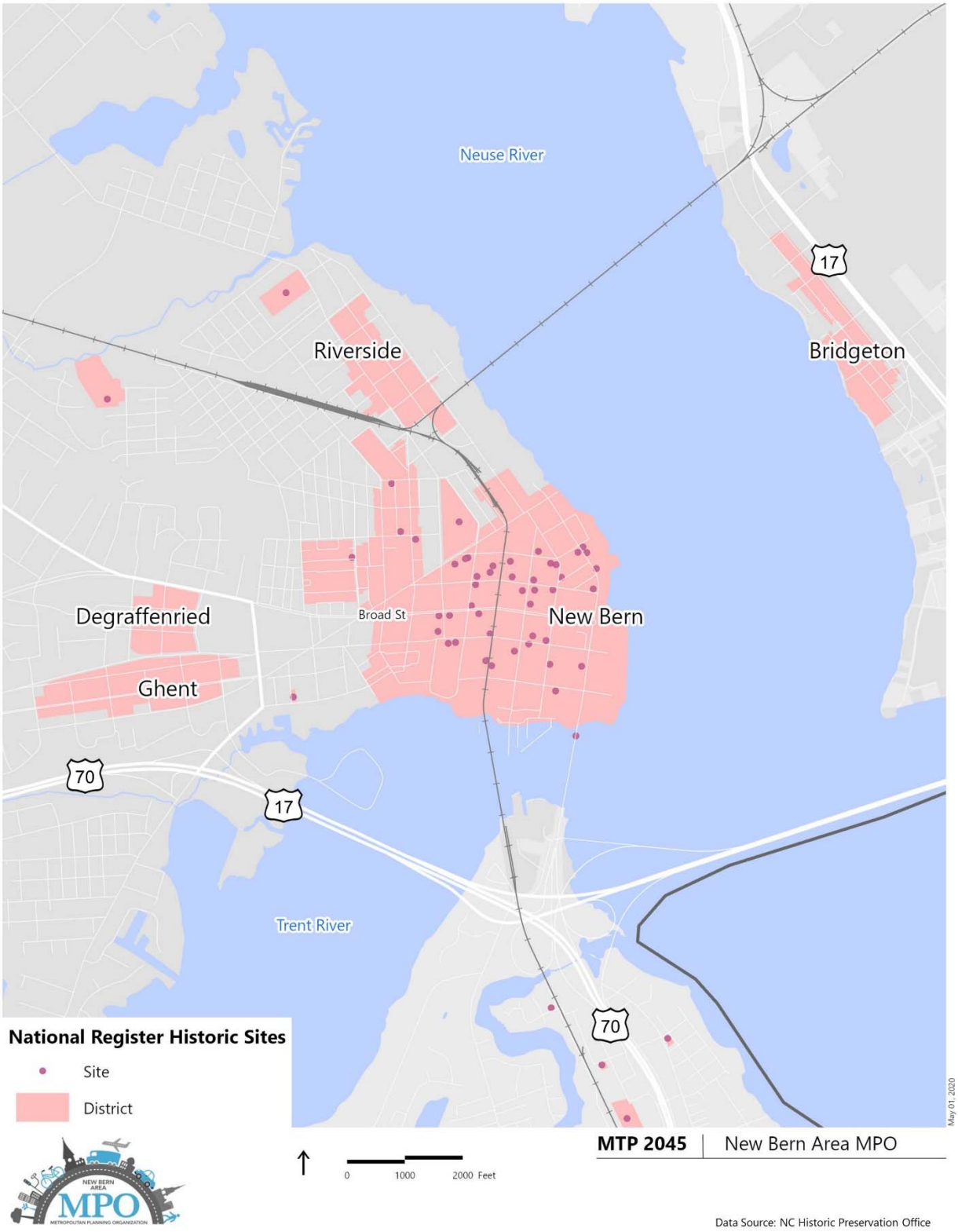
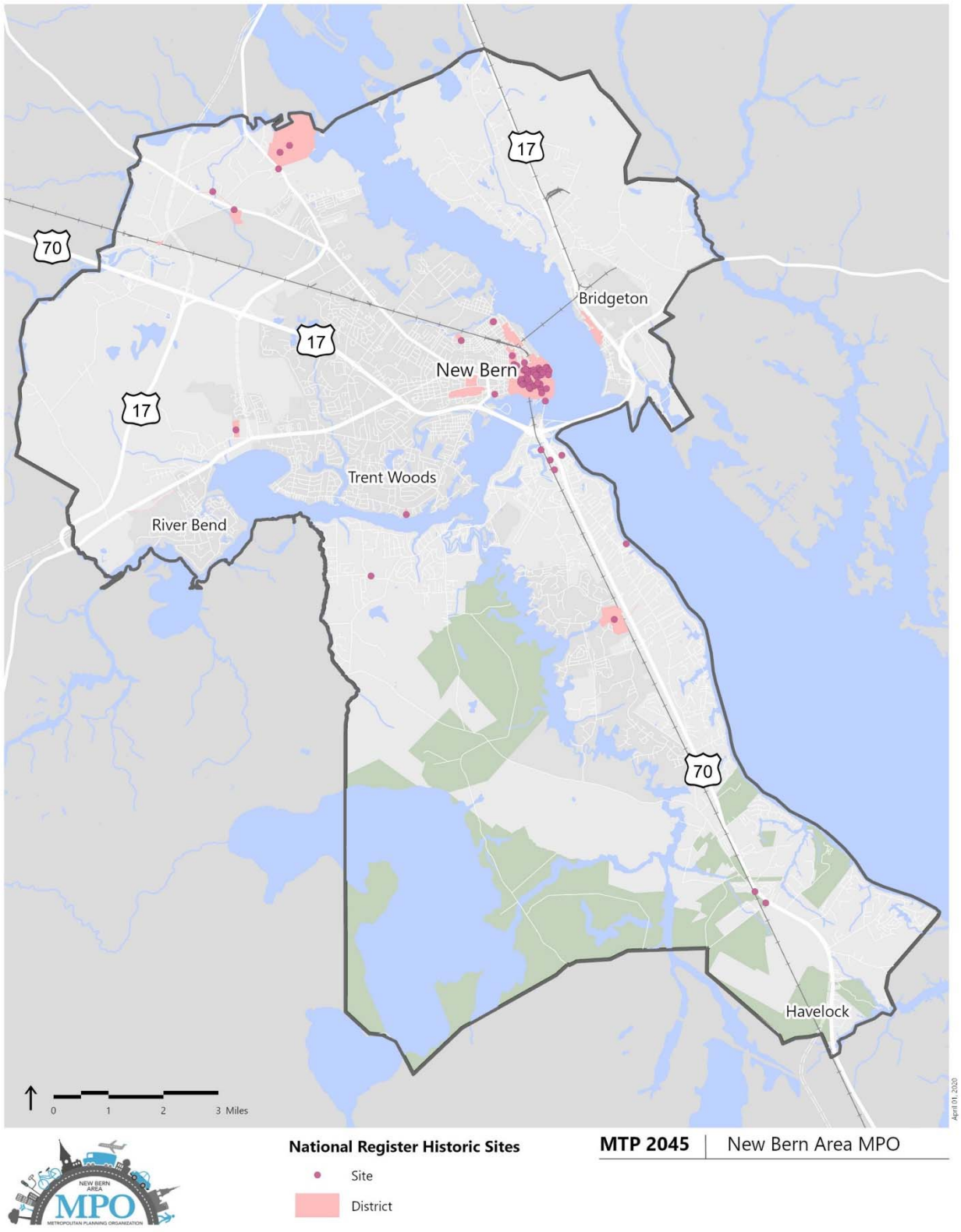


Figure 12: Study Area National Register Historic Districts and Sites



D. List mixed use urban centers.

- Downtown New Bern

E. List major industrial parks, office parks and single use centers.

Large concentrations of industrial uses are not present in the study area, except for two small areas of industry on the north and south of New Bern.

- Northern New Bern, southwest of the intersection of NC 55 and NC 43, there is the presence of Bosch Home Appliances and two other sizable employers.
- South of the City is an industrial area that consist of several small employers along Kale Road.
- Just south of the study area is the Marine Corps Station at Cherry Point, a major employment and single use center.
- Coastal Carolina Regional Airport.
- Eastern Carolina Medical Center.

F. List large commercial strips and single use corridors (from a traffic generating perspective).

In New Bern, larger strips of commercial land use are present along:

- US BUS 17
- US 70
- NC 55

Long stretches of commercial areas along these highways are where a majority of retail in the study area is located. Each corridor contains a mixture of small scale and big box retail as well as numerous fast food and other dining options.

G. List major attractions or events in the study area (example: sporting events, festivals, tourism destinations/attractions).

Major Attractions:

- New Bern Historic District
- The birthplace of Pepsi Cola
- Several golf courses

Largest annual festivals:

- Mumfest (October 9-11, 2020)

Largest sporting events and venues:

- MS Bike Weekend (September 26-27, 2020)
- Neuse River Bridge Run (March 28, 2020)

Largest commercial and civic entertainment venues:

- New Bern Civic Theatre
- Bank of the Arts
- Cullman Performance Hall

Major attractions:

- Tryon Palace
- New Bern Civic Theatre
- Bank of the Arts
- Cullman Performance Hall

5. Schools, Parks, and Community Centers

Based on publicly available resources, enrollment for both K-12 and higher education is expected to decrease in Craven County in the future (see Figures 13 and 14). There are currently numerous public schools located within the NBAMPO study area (see Figure 15).

Figure 13: Craven County Community College Enrollment

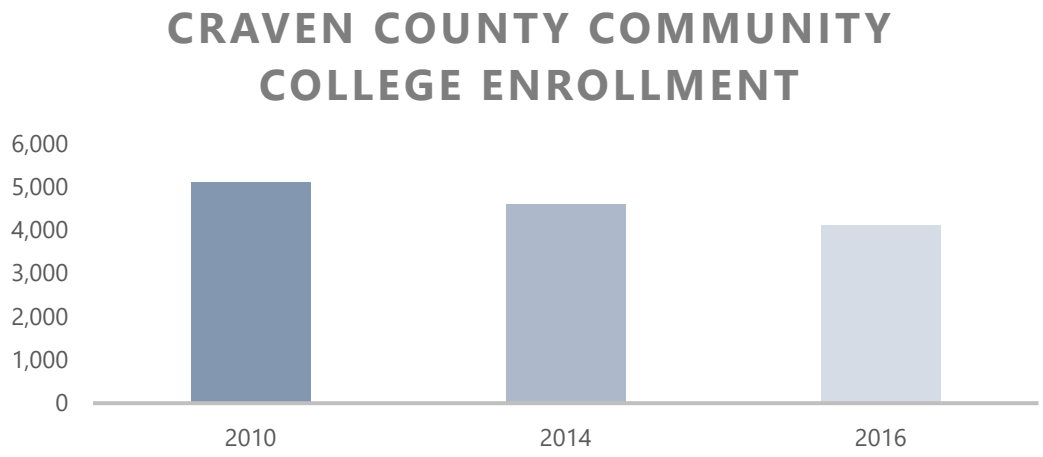
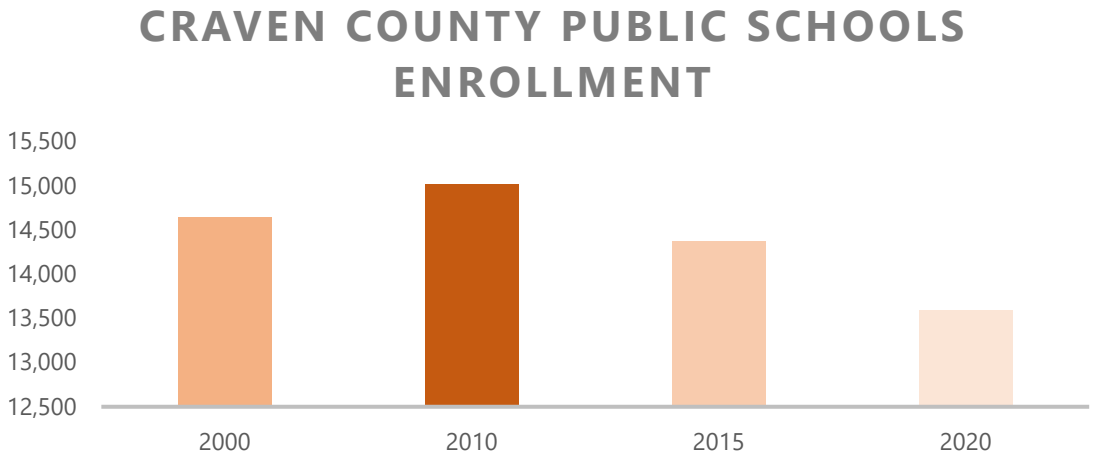


Figure 14: Craven County Public Schools Enrollment



Source: https://www.publicschoolreview.com/north-carolina/craven-county-schools/3703310-school-district

A. Schools within NBAMPO Study Area

Colleges:

- Craven Community College

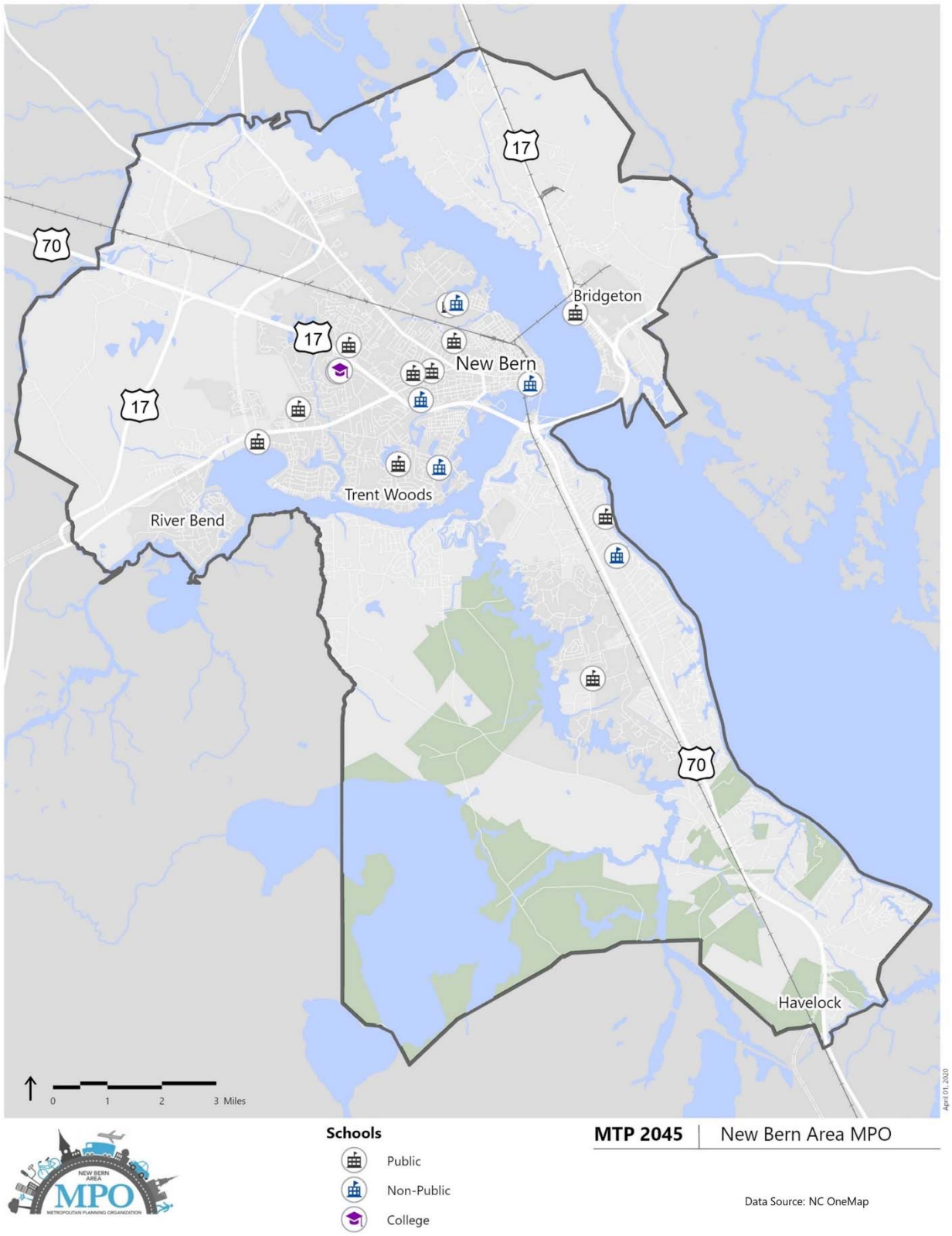
Public Schools:

- Albert H Bangert Elementary
- Ben D Quinn Elementary
- Brinson Memorial Elementary
- J T Barber Elementary
- Oaks Road Elementary
- Trent Park Elementary
- Bridgeton Elementary
- Creekside Elementary
- Grover C Fields Middle
- H J MacDonald Middle
- New Bern High
- Craven Early College High

Private Schools:

- Epiphany School
- St. Paul Catholic Education Center
- Calvary Baptist Church School

Figure 15: Schools Within NBAMPO Study Area



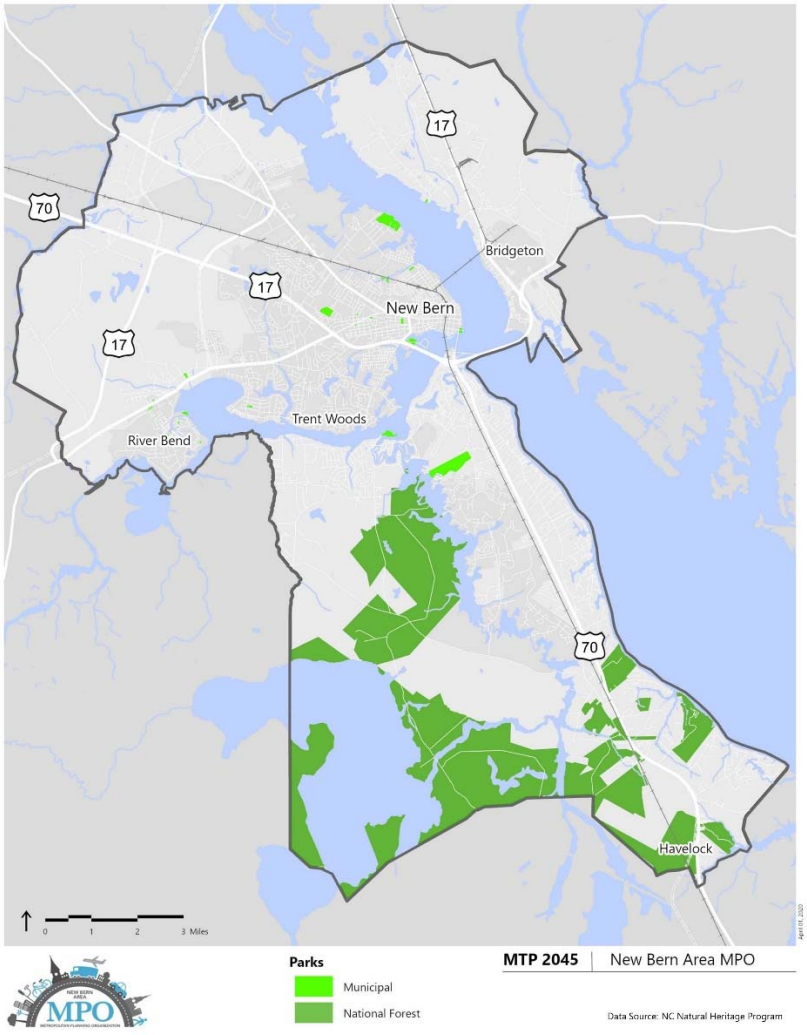
B. Are there particular geographic areas within the MTP Study Area where school facilities or operations have been especially affected by school age population changes? Are there schools that are expected or likely to close? Are there locations identified where new schools may be constructed?

Pursuant to the Craven County Schools Long Range Facility Needs Assessment (2019), there are recommendations to replace/retire five elementary and two middle schools within the next several years located within the NBAMPO study area.

C. Identify local, state, and national parks and recreational facilities.

There are numerous parks in the NBAMPO study area, including the Croatan National Forest, as illustrated in Figure 16 below.

Figure 16: Parks



D. Are there any new parks and recreational facility locations planned?

The City of New Bern, where nearly all local parks and recreational facilities in the study area are located, estimates a current shortage of all park and recreation types. The City projects a need for one additional recreation center in addition to the park acreage detailed in Table 1 below.

Table 1: Proposed Additions to System in New Bern

PARK TYPE	TYPICAL SIZE IN ACRES	ACRES NEEDED	POTENTIAL LOCATION	PROPOSED SIZE IN ACRES
MINI	<4	4		
NEIGHBORHOOD	4-12	9	HJ McDonald Middle School	5
			Creaburne Forest area	6
COMMUNITY	13-50	86	Pembroke Community	30
			Carolina Colors	26
			Highway 43 Connector	30
DISTRICTS	>50		Martin-Marietta Quarry	654
			Simmons St. Oaks Rd wetland	52

Source:https://www.newbernnc.gov/Parks%20and%20Rec/2013%20Comprehensive%20Master%20Plan.pdf

E. List community centers, performing arts centers, libraries and museums.

Community/Recreation Centers:

- West New Bern Recreation Center
- Pembroke Community Center
- Stanley White Recreation Center

Performing Arts Centers:

- New Bern Civic Theatre
- Bank of the Arts
- Cullman Performance Hall
- Double Tree Hilton Deck
- Masonic Theatre
- Orringer Auditorium
- Riverfront Convention Center
- Ratio Theatre's Front Room Cabaret Café Club
- Stanley Hall

Libraries:

- Branch of the Craven-Pamlico-Carteret Regional Library System

Museums:

- Tryon Palace
- New Bern Fireman's Museum

6. Public Safety/Emergency Response

A. Identify any areas with high crime incidents that are relevant to the transportation plan.

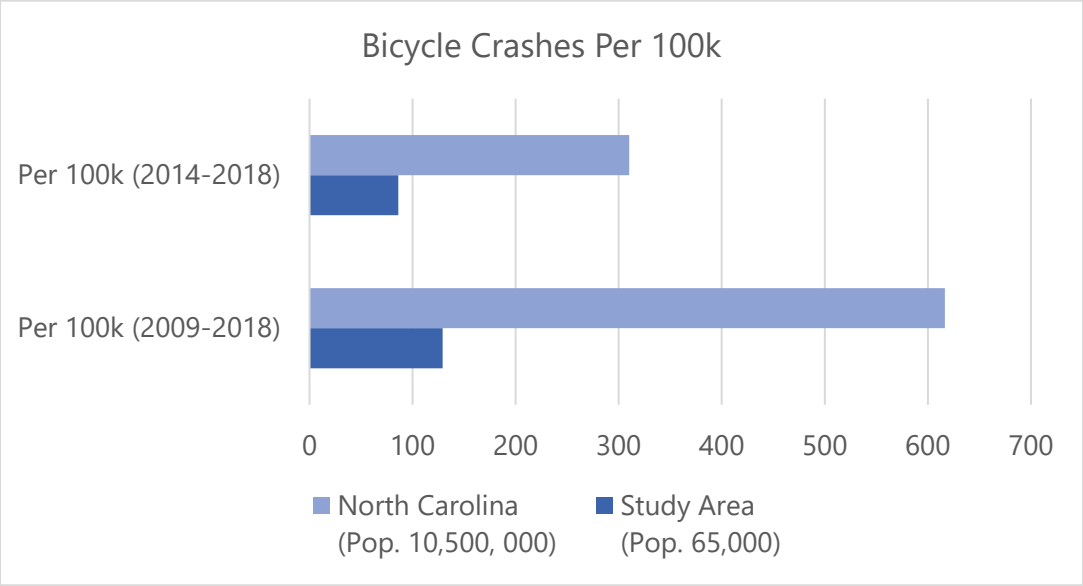
According to local EMS and law enforcement officials in 2016, crime is a little elevated along US 70 corridor around James City, but overall crime remains low throughout the study area.

B. Are there areas within the MTP Study Area with high numbers of pedestrian or bicyclist incidents or that otherwise discourage pedestrian or bicyclist use?

Bicycle Crashes

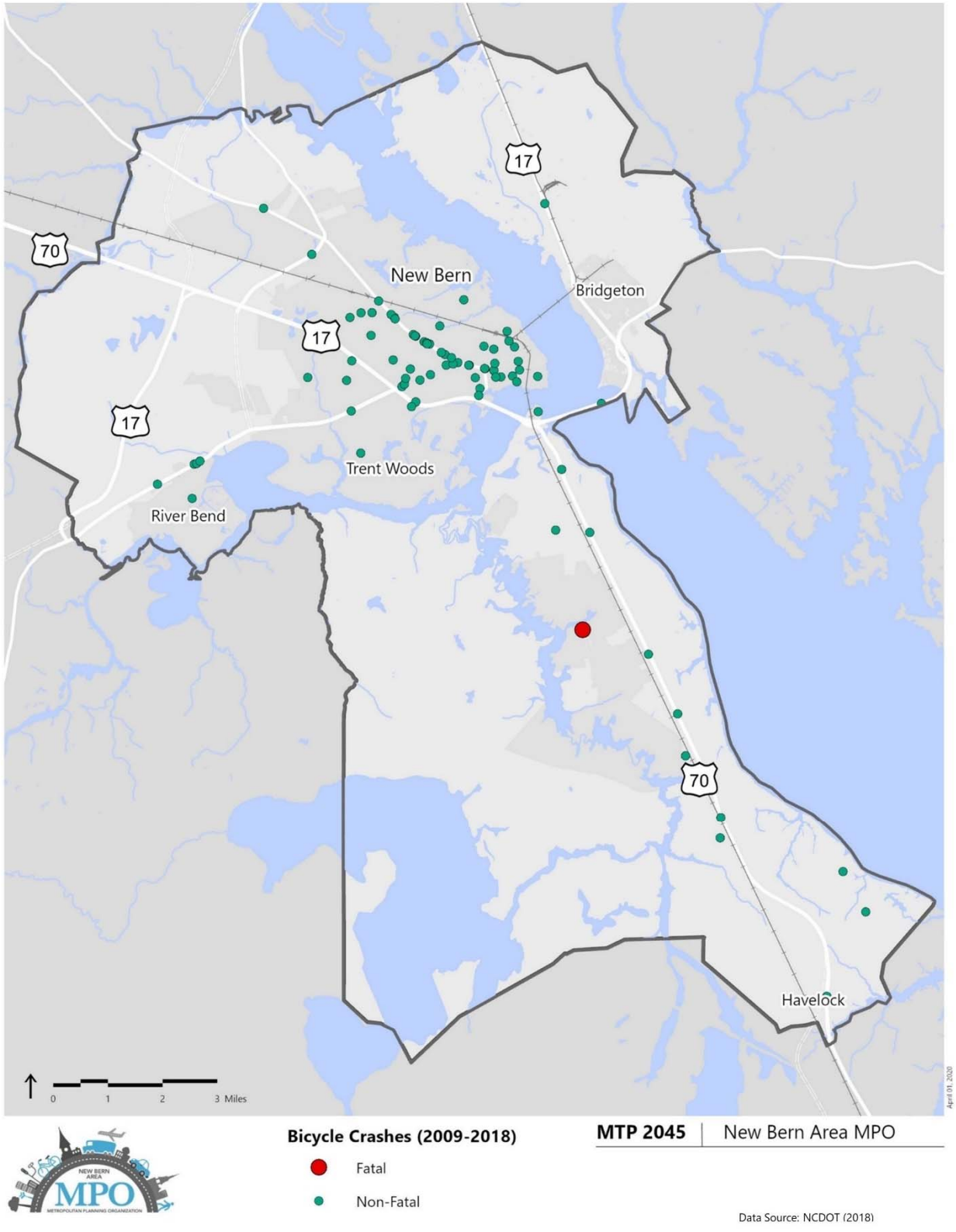
The rate of crashes in the study area is much lower than the State as a whole and has decreased over the past five years (see Figure 17). Despite this, it is important to point out that the relatively low rate of crashes in the study area may be due to lower rates of walking and biking in the study area compared to more urban parts of the State. Vehicular crashes with bicyclists are mostly located in the more densely populated areas in and around downtown New Bern, as shown in Figure 18.

Figure 17: Bicycle Crashes Per 100k (2009-2018)



Source:https://www.newbernnc.gov/Parks and Rec/2013 Comprehensive Master Plan.pdf
NCDOT (2018)

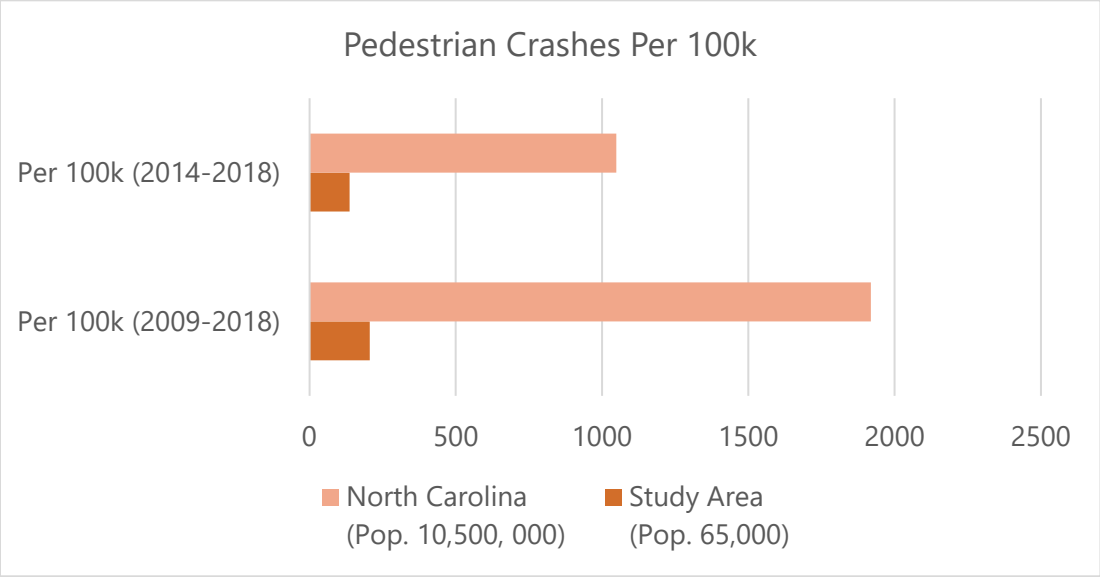
Figure 18: Bicycle Crashes



Pedestrian Crashes

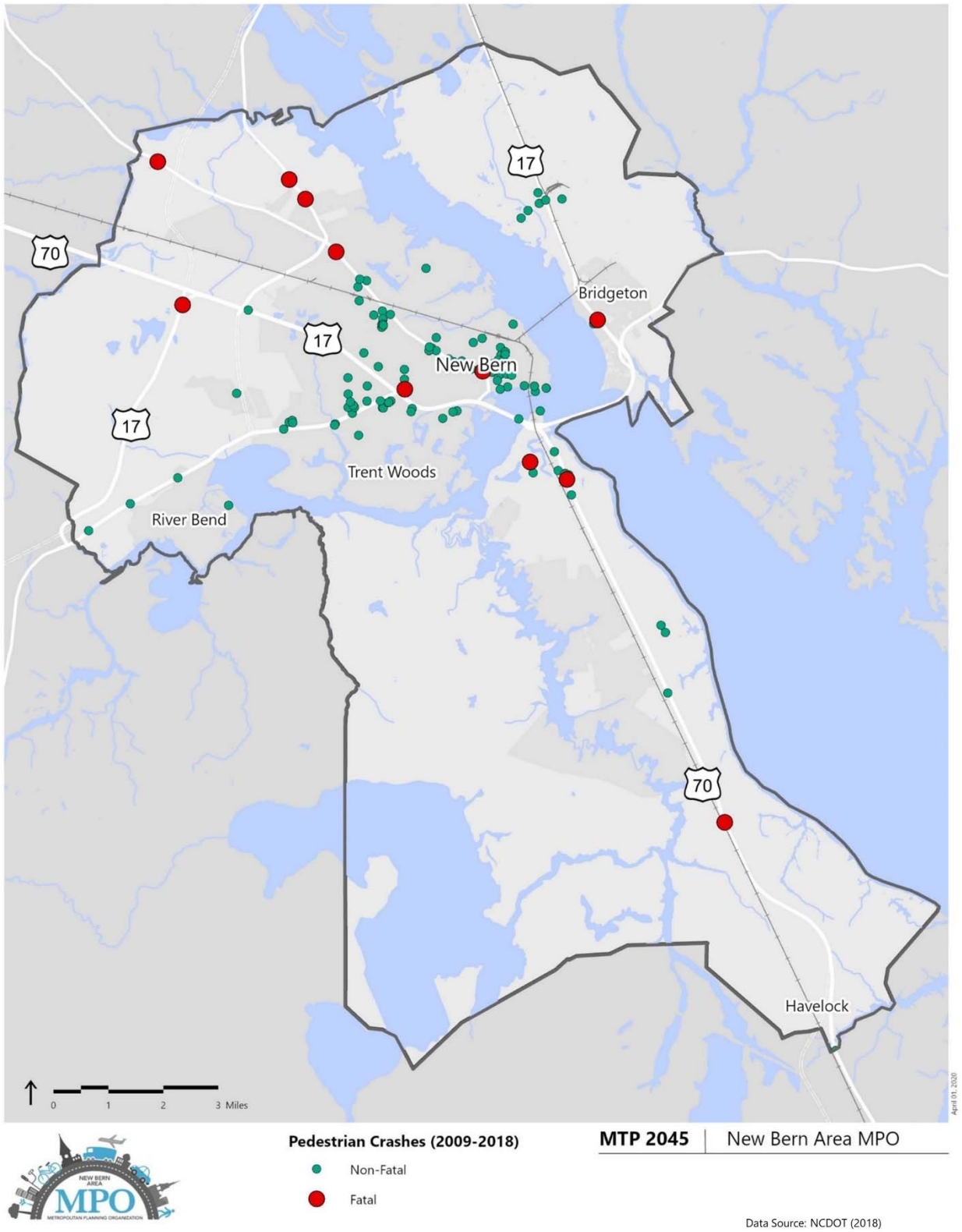
Crash rates with pedestrians are also significantly lower relative to the State as a whole (see Figure 19). Most vehicular crashes with pedestrians are clustered in commercial areas along Business US 17, NC 55 and Broad Street, except for one notable cluster which is located at the Craven Terrace low-income housing development near central New Bern (see Figure 20).

Figure 19: Pedestrian Crashers Per 100k (2009-2018)



*Source:*https://www.newbernnc.gov/Parks and Rec/2013 Comprehensive Master Plan.pdf *NCDOT (2018)*

Figure 20: Pedestrian Crashes



C. Are there locations within the MTP Study Area with high medical response calls? (nursing homes, retirement communities, summer camps, etc.)

According to local EMS officials in 2016, retirement homes and nursing homes have higher call volumes than other locations. Many of these homes are located in New Bern.

D. Are there places in the MTP Study Area with known issues (isolation, access, etc.) with emergency response or evacuation?

According to local EMS and law enforcement officials in 2016, the Brice's Creek area is sometimes cut off by storm surge, hampering EMS response. EMS responses can also be hampered by crossing railroad tracks.

7. Economic Conditions

A. What are the major employment centers in the MTP Study Area (note the number of jobs if available)?

1. Downtown New Bern
2. Cherry Point Marine Base (south of MTP study area)
3. Craven County Regional Medical Center

B. Which industry categories and companies employ the most people? (provide available employment data for each)?

1. Department of Defense, Public Administration, 1000+ Employees
2. Defense Ex Army, Air Force, and Navy, Public Administration, 1000+ Employees
3. Wal-Mart Associates Inc., Retail Trade, 1000+ employees

Source: https://accessnc.opendatasoft.com/explore/embed/dataset/top-employers-qcew/table/?disjunctive.areafacet&disjunctive.datefacet&sort=-rank&refine.areafacet=North%20Carolina~%E2%80%8BState~North%20Carolina&refine.areafacet=North%20Carolina~%E2%80%8B%E2%80%8B%E2%80%8B%E2%80%8B%E2%80%8BCounty~Craven%20County

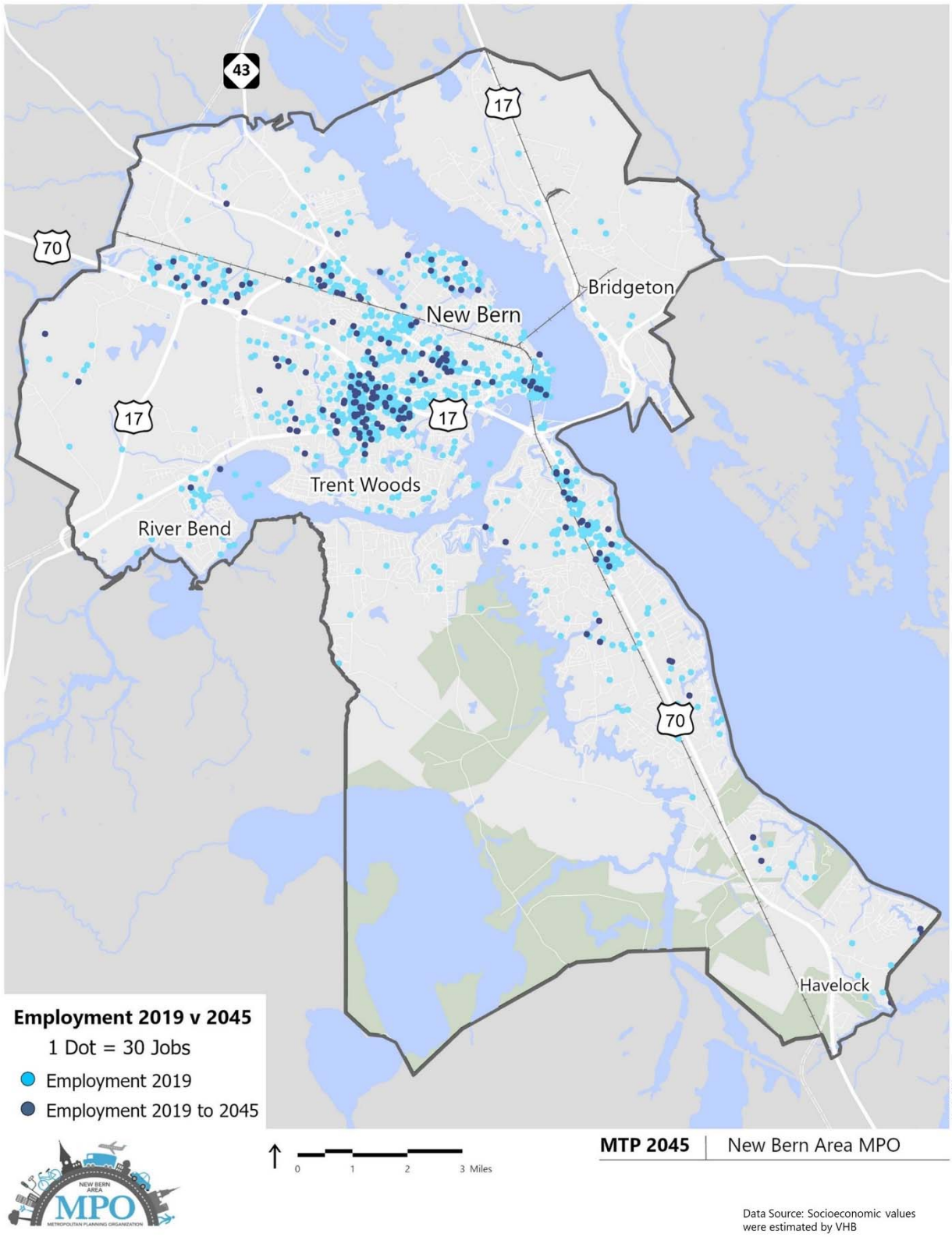
C. Which industries/companies have produced the most new jobs over the last ten years?

1. Accommodation and food service
2. Health care and social assistance
3. Professional, scientific, and technical services

D. How many jobs are expected in the next 10 years? 20 years? What type of jobs?

Figure 21 illustrates the projected employment growth through 2045 within the NBAMPO study area.

Figure 21: Craven County Employment Change



E. Are these jobs expected to be in the existing major employment centers or in other areas?

Job growth is expected to occur both around existing major employment centers and on the peripheries of established commercial and urban areas.

8. Development Goals

A. Identify major target areas for residential development.

Residential development is likely to continue within the jurisdictions located in the NBAMO study area. The US 70 corridor could receive new residential development. There are several residential developments identified as approved or under construction within New Bern. West New Bern is a large mixed-use development under construction at NC 43 and US 70 with 1,500 residential units proposed.

Source:
https://newbern.maps.arcgis.com/apps/Cascade/index.html?appid=67a605360b49492f837cbf607d68bf8f

B. Identify major target areas for employment centers.

The US 70 corridor is likely to continue to receive new employment growth. New Bern will also continue to see employment growth.

C. Identify major target areas for commercial development.

The US 70 corridor, New Bern, and Bridgeton are likely to continue to see commercial development.

D. Will development density be higher, lower or about the same as existing development?

New development should be of similar density to past development but may be a little higher. The rural nature of the County means there is still available land to develop, so pressures to develop at higher densities are not likely, but some new infill development may increase densities in established areas. Downtown New Bern, due to its listing as a National Registered Historic District, adds additional demolition and development restrictions.

E. Will the proximity of housing to jobs, shopping and services be more, less or about the same as existing development?

Proximity of housing to jobs, shopping, and services is expected to be about the same as existing development. Land development is expected to continue in similar patterns to existing which will keep jobs, homes, and services in a similar proximity.

F. What plans for land use, highways, sidewalks, greenways, and bicycle routes already exist in the planning area? (Provide a link or where to find it.)

The 2040 MTP provides information on planned highway, sidewalk, greenway, bicycle routes, and land development in the study area out to 2040. In addition, both Bridgeton and River Bend have bicycle and pedestrian plans.

Source: http://files.www.nbampo.org/news/draft-metropolitan-transportation-plan-destination-2040/NBAMPO_MTP_2.24.16.pdf
http://files.www.nbampo.org/documents/Bridgeton_Bike_Ped_Plan_August_2018.pdf
http://files.www.nbampo.org/documents/River_Bend_Bike_Ped_Plan_August_2018.pdf

9. Farming Operations

A. List roads that are known to be impacted by farming equipment or timber trucks.

- US 17
- Old US 70
- US 70

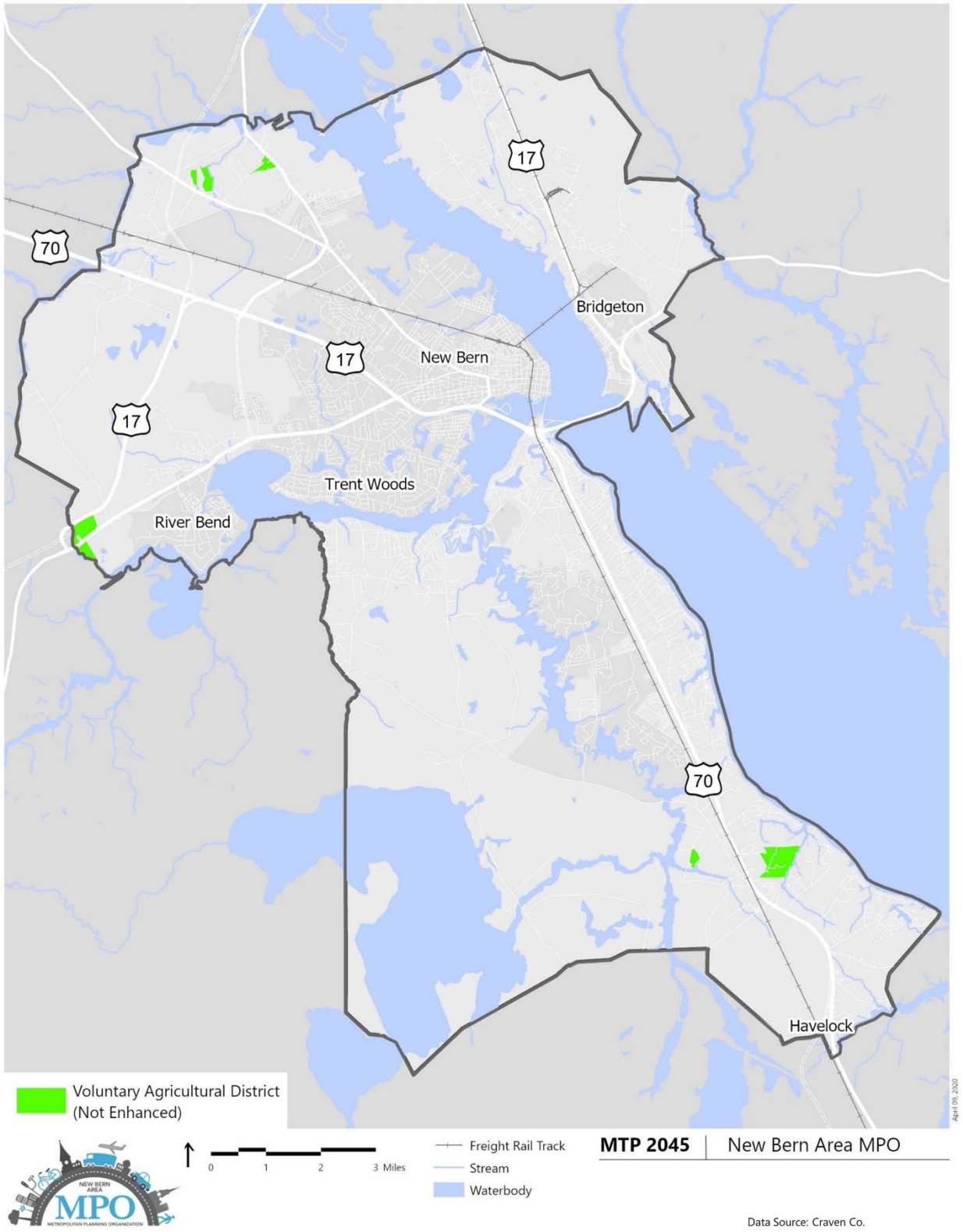
Source: https://www.cravencountync.gov/DocumentCenter/View/1475/Agricultural-District-and-Enhanced-Voluntary-Agricultural-District-Ordinance-PDF?bidId=

B. Are any farms given special designation (Century Farms, voluntary agricultural districts VADs/EVADs, preservation agreements)? (MAP – if data is available)

Craven County has 19 farms designated as a century farm, the oldest dating back to 1772. A Craven County Voluntary Agricultural District (VAD) is in place, designated by an ordinance of the Board of County Commissioners (see Figure 22).

Source: http://www.ncagr.gov/paffairs/Century/ccounties.htm
https://www.cravencountync.gov/DocumentCenter/View/1475/Agricultural-District-and-Enhanced-Voluntary-Agricultural-District-Ordinance-PDF?bidId=

Figure 22: Voluntary Agricultural Districts



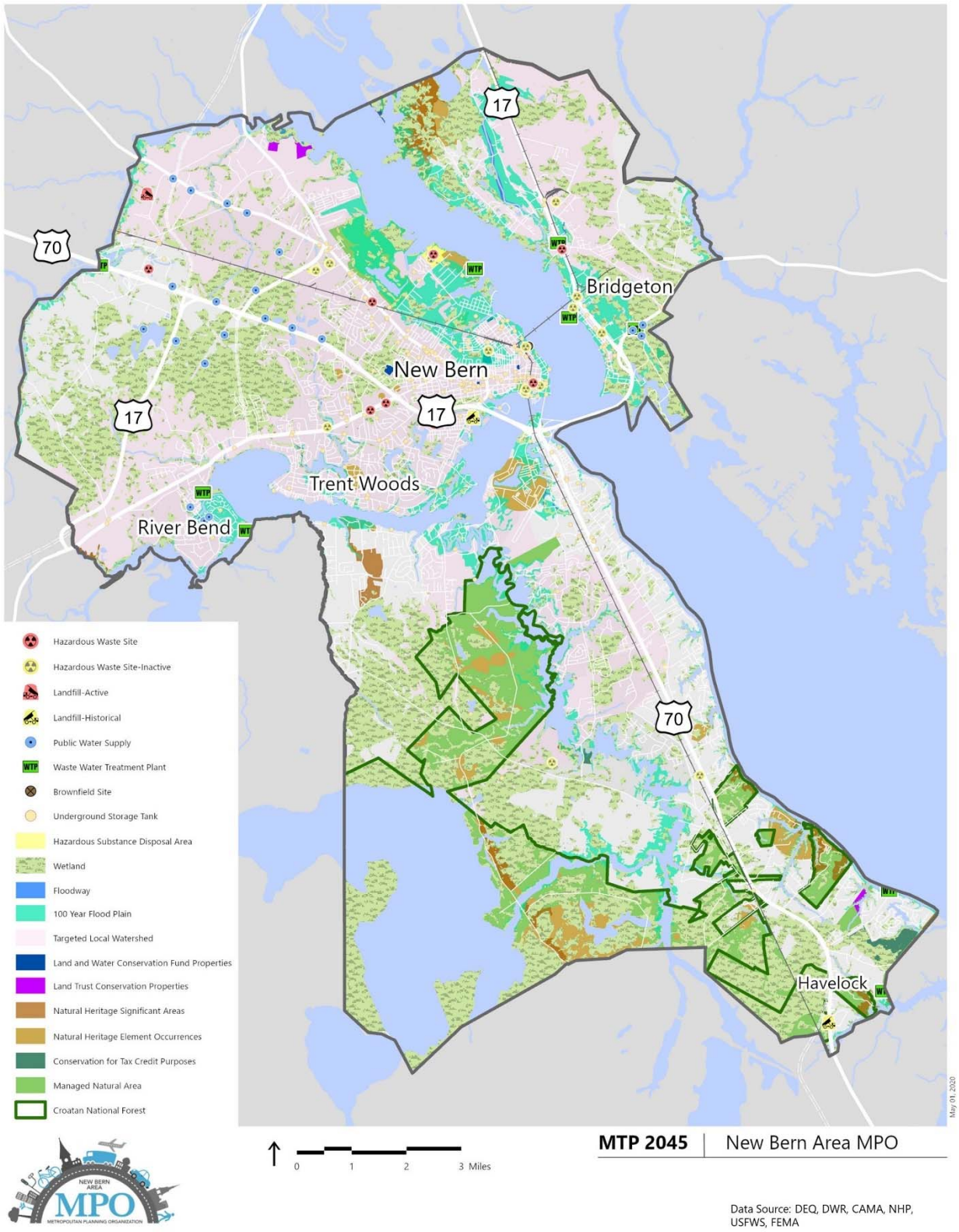
10. Natural Resources

A. Locate and describe any community identified natural areas, waters, and resources or other valued environmental areas or resources. Please also describe why the resource is important to the community.

The MTP Study Area has an abundance of notable sensitive environmental features (see Figure 23). Some important things to note are the following:

- Approximately 40% of the MTP Study Area is wetland areas.
- There are several natural heritage areas and other conservation lands throughout the study area, particularly in the southern portion of the study area and near streams and rivers. Many areas are home to rare or sensitive plant and animal habitats
- There are many areas prone to flooding, as much of the study area elevations are close to sea level.
- Located on the southern end of the study area is the Croatan National Forest; one of the area's most important natural resources.

Figure 23: Environmental Features



11. Transportation Choices

A. Identify major existing and proposed bicycle and pedestrian destinations.

There is some pedestrian activity in New Bern, but no major destinations. There are plans for a new multi-use trail along Dr. MLK Blvd between US 70 and US 17. The Neuse River Recreation Area has trails that cyclists can use. There is also an optional pathway for the Mountains-to-Sea Trail through New Bern. The main Mountains-to-Sea Trail route is just south of the study area.

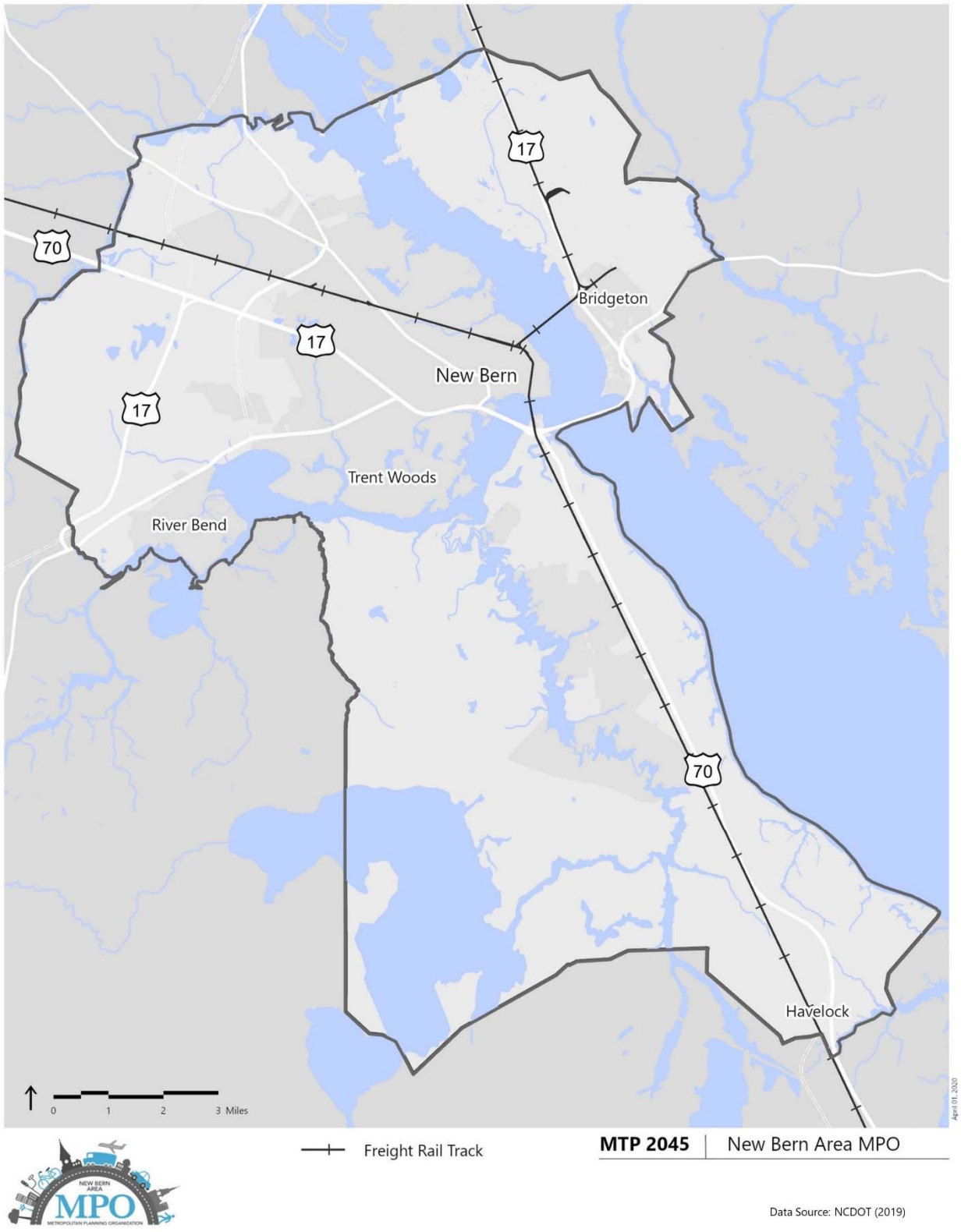
B. Identify major existing and proposed transit (bus and/or rail) destinations.

As a predominately rural county, there are no major transit routes in the area. New Bern has two fixed-route transit routes which operate in opposing directions on a loop. Transit use is limited in the study area. Amtrak Thru-Way Bus Service provides the area with a connection to the Wilson Amtrak Station. There are two rail corridors in the study area, but these are used for freight service and do not currently have any passenger service. NCDOT is currently updating its Statewide Comprehensive Rail Plan, which includes potential projects in Craven County.

C. Identify major existing and proposed freight corridors and destinations.

The MTP study area has two rail corridors, both used for freight (see Figure 24). One corridor is in the southwest portion of the study area and is owned by North Carolina Railroad Company (NCRR). The other corridor is owned by Norfolk Southern (NS) and located in the northeast portion of the study area.
Source: https://www.ncrr.com/nc-rail-map/

Figure 24: Freight Rail Track



Appendix E: Indirect and Cumulative Effects Assessment

Executive Summary

The North Carolina Department of Transportation's (NCDOT's) Transportation Planning Branch (TPB), in partnership with the New Bern Area Metropolitan Planning Organization (NBAMPO), completed an Indirect and Cumulative Effects (ICE) Assessment as part of the NBAMPO's 2045 Metropolitan Transportation Plan (MTP) development process. This ICE Assessment represents an update of the assessment that was prepared with the 2040 MTP. Four primary products were prepared as part of the ICE Assessment, with each product building off of one another, as follows:

- Product 1: Existing Conditions Assessment
- Product 2: Future Growth Potential Assessment
- Product 3: Indirect and Cumulative Effects (ICE) Screening
- Product 4: Best Management Practices Recommendations

These products were prepared based on the guidance included in NCDOT's draft *CTP-ICE Procedures and Tools*, revised July 2014, and coordination with regulatory and jurisdictional agencies. This effort is one part of a larger NCDOT initiative to integrate the long-range planning process with the environmental review process (i.e., National Environmental Policy Act [NEPA]/State Environmental Policy Act [SEPA]). As the MTP development process provides a comprehensive and integrated plan for an area's future transportation needs, incorporating the evaluation of potential indirect and cumulative effects (i.e., impacts caused by a plan or project which occur later, or are removed in distance, but reasonably foreseeable; and incremental impacts of a proposed action added to other past, present and future actions) at this stage provides value to, and consistency between, long-range planning and project development.

NBAMPO 2045 Metropolitan Transportation Plan (MTP)

The NBAMPO MTP Study Area evaluated in the ICE Assessment was approximately 98,324 acres and included the City of New Bern, Town of River Bend, Town of Trent Woods, Town of Bridgeton, and unincorporated land in a portion of Craven County. The MTP identifies future transportation deficiencies and investments and system improvement recommendations for all modes of transportation necessary to meet the transportation needs of the region through the design year of 2045. The projects proposed in the MTP are varied in scope, purpose and need, and location. The majority of the projects are related to existing location roadway improvements and those on new location. In addition, the MTP includes projects related to other modes of transportation such as public transit, rail, bike and pedestrian. The projects proposed in the 2045 MTP are similar to those from the 2040 MTP with a few projects identified as "unfunded" in the 2045 MTP.

ICE Assessment

Product 1 – Existing Conditions Assessment

The MTP-ICE Plan-Level Existing Conditions Assessment (Product 1) documented a preliminary screening of seven human and environmental factors at the MTP Study Area geography, including forecasted population and employment growth, available land, water and sewer availability, market for development, public policy, and notable environmental features. Each of the variables received a qualitative rating, varying from "lesser likelihood" to "greater likelihood", relative to anticipated indirect effects resulting from the human and environmental factors. After compiling the ratings from each of the factors, the cumulative result was determined to be "possible" indirect effects, similar to the assessment associated with the 2040 MTP. The great amount of notable environmental features in the MTP Study Area weighed heavily in this result, as did

the amount of land available for development and the availability of water and sewer services, each representing a higher likelihood for indirect effects. However, the forecasted medium-low population and employment growth, along with the more stringent local growth management policies (rating at a lesser likelihood) offset categories of higher likelihood.

Product 2 – Future Growth Potential Assessment

Product 2 is an assessment of the potential for growth in the MTP Study Area and could be used to inform the MTP planning process, including the development of land use scenarios and alternatives. Product 1 was used as a baseline, and the comprehensive and land use plans of the various jurisdictions within the MTP Study Area were evaluated to identify land use, zoning, water and sewer infrastructure, development limitations, and natural and cultural features. These factors, when assessed together, provided insight into future growth potential. Socioeconomic data from the New Bern MPO travel demand model for each of the Traffic Analysis Zones (TAZ) on forecasted population and employment growth was analyzed for the MTP Study Area to determine the areas of future growth potential.

Growth in the MTP Study Area was expected to continue at a medium-low rate based on the socio-economic data projections for the MPO travel demand model and local plans. Craven County and the City of New Bern are actively promoting economic development and growth, the cultural and natural resources continue to attract people to the area, and infrastructure capacity exists. Furthermore, the positive economic trends in the area, quality of life, employment opportunities, and air and rail access are important drivers in the projected growth. The numerous natural resources and conservation efforts, in combination with the presence of regulatory policies and growth management, are expected to focus development and growth into specific areas.

Product 3 – ICE Screening

The ICE Screening (Product 3), using the results of Products 1 and 2, is an assessment of the potential indirect and cumulative effects of the NBAMPO MTP (plan-level) scenario and three selected proposed projects. The plan-level of the MTP proposed projects resulted in a rating of "possible" indirect effects, slightly reduced from "likely" in the ICE Assessment for the 2040 MTP. This is primarily due to the reduced scope of the proposed projects. Sensitivity and abundance of notable environmental features were strong drivers for the indirect effects screening results.

The screening of cumulative effects for the overall MTP plan, when considered in the context of other past, present, and future actions resulted in a rating of "possible" cumulative effects to the area's community and natural features, which is the same result as the ICE Assessment for the 2040 MTP. The potential direct natural environmental impacts by the proposed projects would require avoidance, minimization, and mitigation, consistent with prevailing regulations and coordination with environmental resource agencies. In addition, the MTP's proposed projects and future development would be required to follow federal, state and local regulations for protecting resources.

Product 4 – Best Management Practices Recommendations

Overall, the findings of the ICE Assessment indicated a rating of "possible" cumulative effects to notable community features and natural features in the MTP Study Area. Product 4 outlines planning guidance and tools that could be used by the local jurisdictions within the MTP Study Area to assist in minimizing potential indirect and cumulative effects from proposed projects in the 2045 NBAMPO MTP. Some examples of these tools include Smart Growth policies, zoning ordinance revisions, transfer of development rights (TDR)

programs for farmland protection, and green infrastructure planning. An additional recommendation in Product 4 for the 2045 MTP is for the local jurisdictions to prioritize updating local land use plans that protect resources important to the community.

Implementing one or more of these strategies to protect important natural and community resources may assist in streamlining future transportation project delivery, as project permitting focuses on avoiding and minimizing effects to resources in the vicinity of proposed projects. Some resources provide not only planning guidance, but funding opportunities, and grant-writing assistance for local communities. Using these resources, which provide lessons learned and example documents from similar communities, would assist in reaching the goals in the MTP Study Area.

Set the Scene - Technical Memorandum for 2045 New Bern MTP –ICE (ENVISION 2045)

Existing Conditions Assessment and Matrix

(MTP-ICE Product 1)

Revision Date: March 2021

Date of Original Version: May 2020

This Technical Memorandum documents the Indirect and Cumulative Effects (ICE) Existing Conditions Assessment for the 2045 New Bern Area Metropolitan Transportation Plan (MTP). This Technical Memorandum was prepared with the assistance of the New Bern Area Metropolitan Planning Organization (NBAMPO) and NCDOT Transportation Planning Division (TPD) and serves as an update to the ICE Existing Conditions Assessment that was completed in 2016 for the 2040 MTP. The coordination included in this effort is intended to ensure consistency between long-range planning and the requirements of the National Environmental Policy Act (NEPA) during project development.

Overview and Characterization of the MTP Study Area

The MTP Study Area (see Figure 1) is approximately 98,324 acres (see Table 1 for definition) and includes the City of New Bern, Town of River Bend, Town of Trent Woods, Town of Bridgeton, and unincorporated land in a portion of Craven County. The remaining portion of Craven County is part of the Down East Rural Planning Organization. As shown in Table 2, jurisdictions within the MTP Study Area have populations ranging from 444 people (Town of Bridgeton) to more than 30,000 in the City of New Bern.

The City of New Bern is located at the center of the MTP Study Area. The northern and southern boundaries of the MTP Study Area include some of the unincorporated parts of Craven County (the remainder of the County is not included in the NBAMPO). Pamlico County borders to the east, and Jones County borders to the west of the NBAMPO. The Neuse River and Trent River are major water bodies that flow through the area into the Pamlico Sound. Two US highways and two state highways are in this region: US 17, US 70, NC 55, and NC 43.

New Bern is rich in history and culture. The City is the second-oldest colonial town in North Carolina, was the capital of the North Carolina colonial government, and was the state capital for a short period of time. The award-winning museums, art galleries, historic resources and Swiss influences make New Bern a culturally diverse place. In part because of New Bern's appeal, it has become an attractive retirement destination. In addition, agriculture, particularly timbering, is present in the MTP Study area.

The MTP Study Area is also rich in notable natural features, including the Croatan National Forest and surrounding water bodies, the Neuse and Trent Rivers. Located between New Bern and Emerald Isle, the Croatan National Forest is made up of 161,000 acres and features coastal and inland swamp habitats. The forest is expansive and undeveloped and spreads in an area between Morehead City, Cape Carteret and New Bern. The waterfronts, history, entertainment, high-quality healthcare, highway access, and the Coastal Carolina Regional Airport attract tourists and residents throughout the year.

Figure 1. MTP Study Area

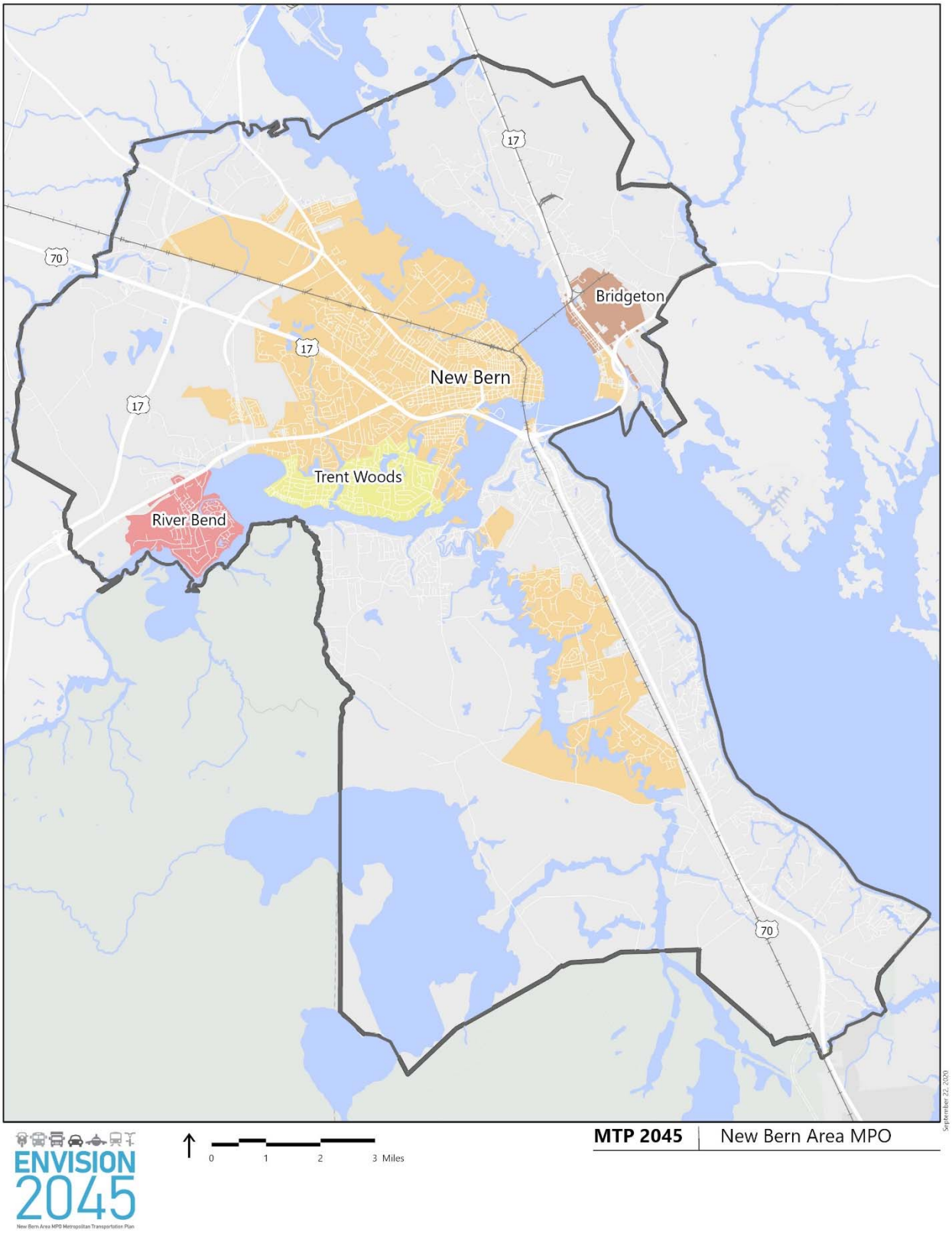


Table 1. MTP Study Area

Criteria	Acres
MTP Study Area (total)[1]	98,324
Water, tidal wetlands, and transportation infrastructure right-of-way (roads, rail lines)	10,987
MTP Study Area without water, tidal wetlands, and transportation right-of-way	87,337

[1] It should be noted that the total acreage of the MTP study area is not exactly equal to that studied in the 2016 ICE Assessment due to redrawn boundaries in GIS.

Table 2. 2018 Population

Geography	2018 Population
City of New Bern	30,113
Town of River Bend	3,043
Town of Trent Woods	4,045
Town of Bridgeton	444
Craven County[1]	19,527

[1] Approximately 80% of Craven County is within the MTP Study Area.

MTP-ICE Plan-Level Existing Conditions Matrix Results

The MTP-ICE Plan-Level Existing Conditions Matrix documents a preliminary screening of seven human and environmental factors at the MTP Study Area level. Each of the seven factors received a qualitative rating, varying from 'lesser likelihood' to 'greater likelihood', relative to anticipated indirect effects resulting from the seven human and environmental factors based on guidance from NCDOT and local planners. For instance, the Forecasted Population Growth factor received a 'not likely' rating because the population of the MTP Study Area is not expected to grow substantially through the horizon year of the MTP; therefore indirect effects resulting from an increased population are not likely. When ratings from each of the other factors were compiled, the cumulative result is that there are 'possible' indirect effects. The great amount of notable environmental features in the MTP Study Area weighed heavily in this result, as did the 'likely' ratings for the amount of land available for development and the availability of water and sewer services. However, the forecasted population and employment growth, along with the more stringent growth management factors offset categories of higher likelihood. These factors in combination account for the rating of 'possible' indirect effects that are expected for the MTP Study Area. This results are very similar to those in the 2016 ICE Assessment – Product 1.

Figure 2 illustrates the results of the preliminary screening. Additional information related to the assessment for each of the seven factors follows.

Figure 2. Preliminary MTP-ICE Plan-Level Existing Conditions Matrix

Product 1: MTP - ICE Plan-Level Existing Conditions Matrix: New Bern MTP Study Area

Rating	Forecasted Population Growth	Forecasted Employment Growth	Available Land	Water/Sewer Availability	Market for Development	Public Policy	Notable Environmental Features	Result
Greater Likelihood	> 3% annual population growth	> 3% increase New Jobs Expected	60% or greater of available land*	Services available [muni 100%; county 20% of area]	Development activity abundant	Less stringent; no growth management	Notable Feature(s): Abundant / More Sensitive	
Expected							X	
Likely				X				
Possible			X		X			**Possible Indirect Effects**
Not Likely	X	X						
Not Expected						X		
Lesser Likelihood	No population growth or decline	No new Jobs or Job Losses	0 - 9% of available land*	Limited or no service available now or in future	Development activity lacking	More stringent; growth management	Notable Feature(s): Minimal / Less Sensitive	

Forecasted population and employment growth were calculated for the MTP Study Area using the Traffic Analysis Zones (TAZ) level socioeconomic data from the New Bern Area travel demand model. The socioeconomic data in the model was forecasted using a "top-down, bottom-up approach", looking from at the overall MTP study area to specific TAZs, and from the TAZs to the general study area. A county-level control total projection was established as the basis for all forecasting. TAZ-level data was used to distribute the growth within the MPO (inside and outside of the model area) for each model year.

Forecasted Population Growth

Rating: Not Likely

The annualized population growth rate for the MTP Study Area was determined to be 0.9 percent through 2045. This rate is very similar to the 0.8 percent annualized growth rate seen in the 2016 ICE Assessment. According to the guidance from NCDOT and local planners, this level of growth is categorized as a medium-low rating. Based on review of local land use plans, the overall MTP Study Area has grown at a moderate rate in recent decades, with some areas such as New Bern and Trent Woods experiencing higher growth rates. Given the anticipated modest growth rate (0.9 percent annually) for the area and focused planned development projects in New Bern, *Forecasted Population Growth* is rated as 'not likely', for its part in influencing the overall rating of the potential for indirect effects.

The areas that had the highest population densities in 2019 are shown in

Figure 3.

Forecasted Employment Growth

Rating: Not Likely

The employment growth for the MTP Study Area is projected to grow at a slower rate than the population. With annual employment growth rates projected to be approximately 0.6 percent for the MTP Study Area, the *Forecasted Employment Growth* is categorized as a medium-low rating, for its part in contributing to the overall rating of the potential for indirect effects. According to the guidance from NCDOT and local planners, this level of employment growth is categorized as a 'not likely' rating. This growth rate and associated rating is lower than that projected in 2016 (i.e., 1.3 percent).

The areas that had the highest employment densities in 2019 are shown in Figure 4.

Figure 3. 2019 Population Density

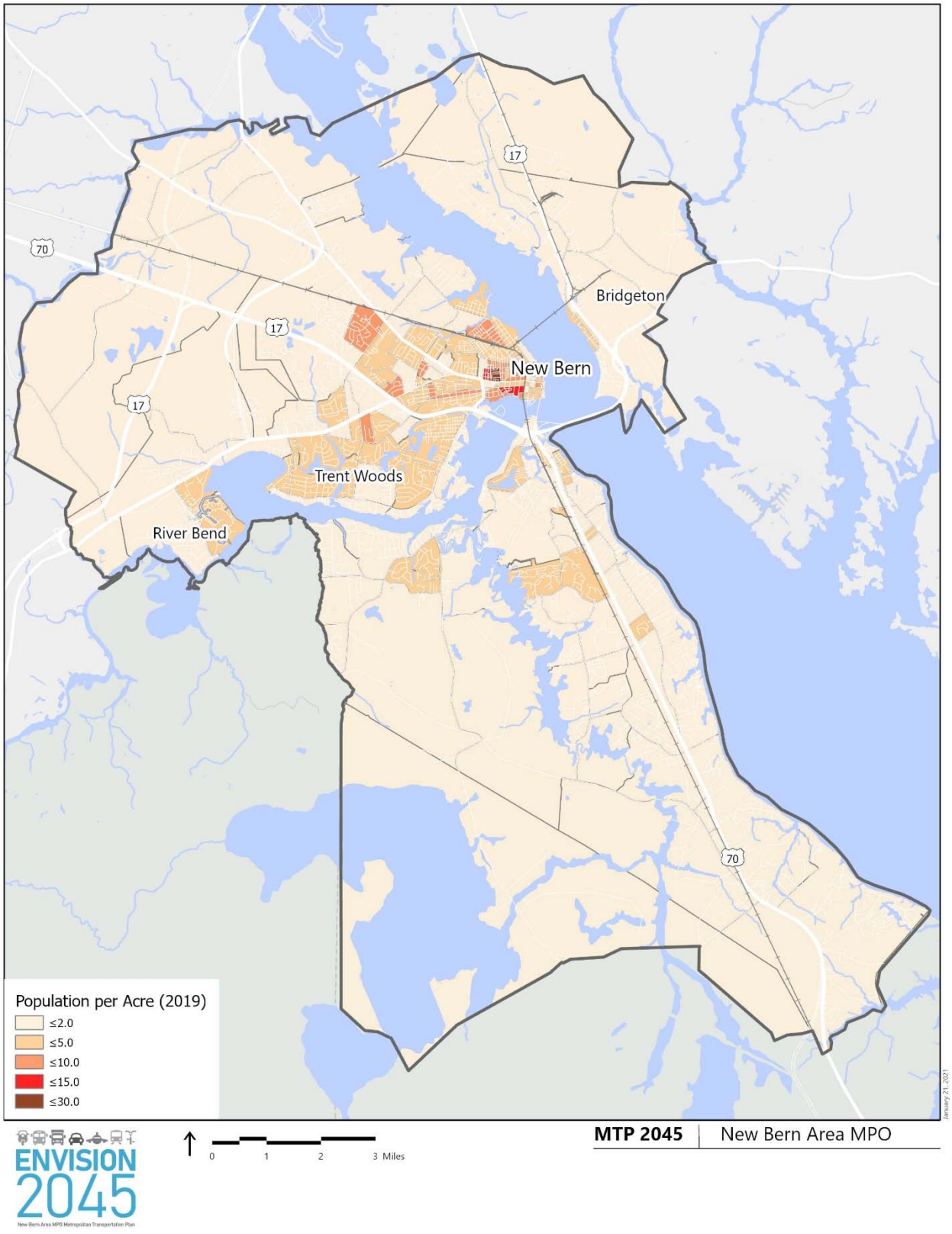
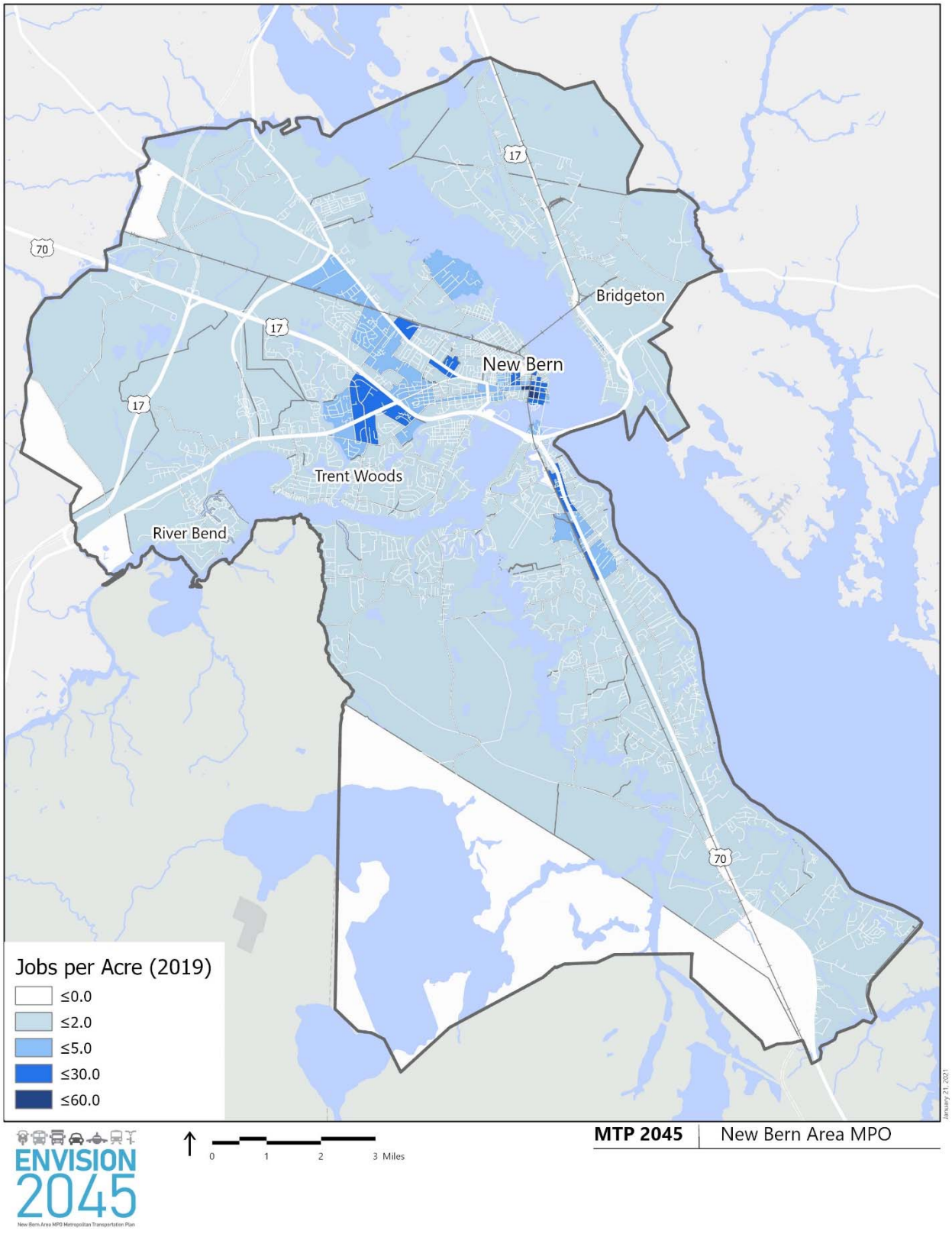


Figure 4. 2019 Employment Density



Available Land

Rating: Likely

To evaluate available land, existing land use in the MTP Study Area was assessed using GIS data to perform a quantitative analysis for its developability. The total land area (excluding water, tidal wetlands, and transportation right-of-way) of the NBAMPO is 87,337 acres.

Each TAZ was assessed to determine if it was developable or was fully developed and utilized. Building permit and developable parcel data was used to identify where current growth is occurring. After this initial assessment, non-developable land such as public parks, voluntary agricultural districts (VADs), NCDOT mitigation properties, managed areas (including the Croatan National Forest), floodways, and buffer protection areas were removed from the available category. Overall, this non-developable land (approximately 59,292 acres) represents 55.3 percent of the land in the MTP study area.

In total, there are approximately 39,032 acres of land available for development in the MTP Study Area; approximately 44.7 percent of the land is categorized as developable. Based on the available information and that 44 percent of the MTP Study Area is available for development, the factor of *Available Land* is assigned a rating of 'possible' for its influence on the overall potential for indirect effects. The percent of available land and associated rating is similar to that determined in the 2016 ICE Assessment.

The areas of developable land are shown on Figure 5.

Water and Sewer Availability

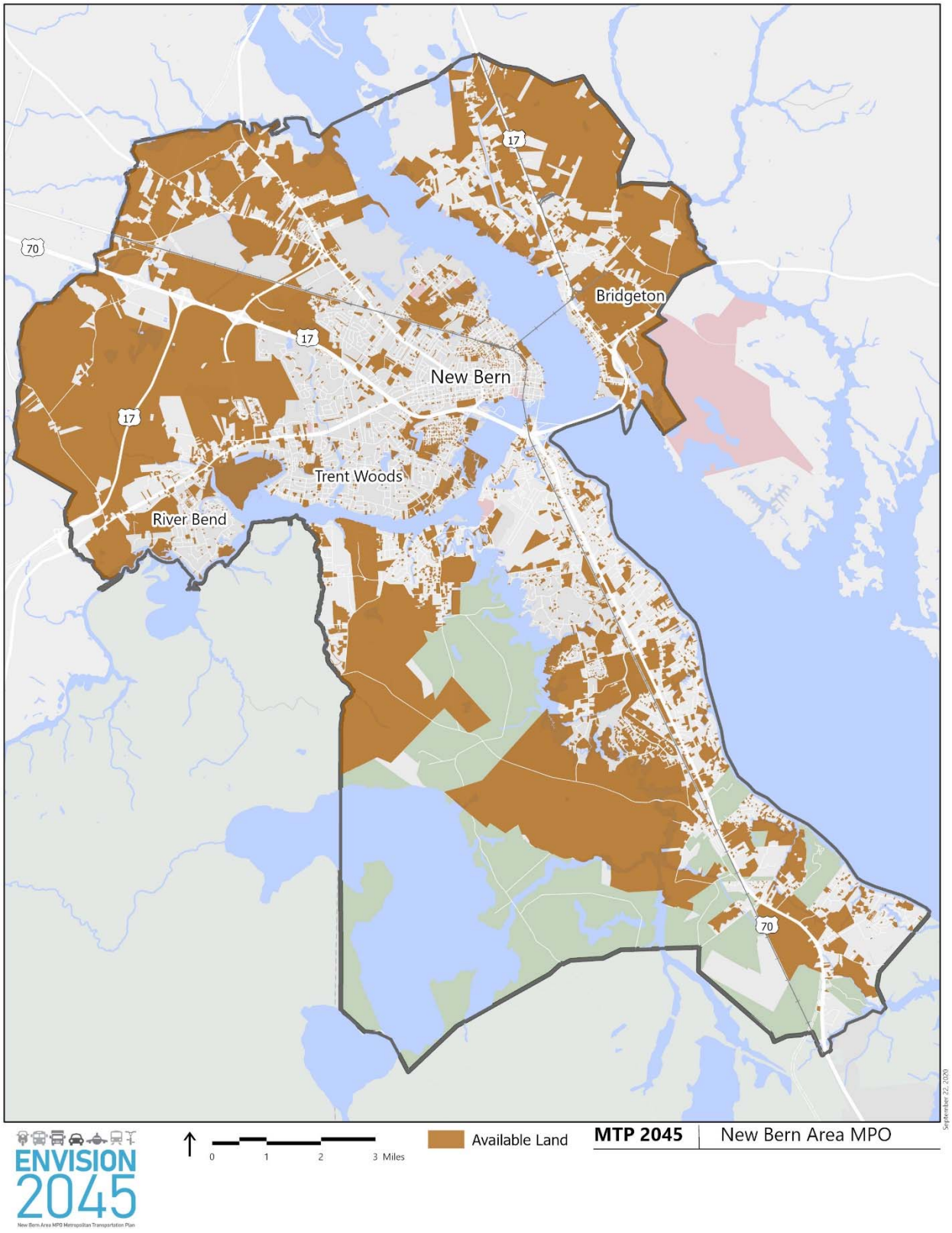
Rating: Likely

Areas served by water and sewer service were determined by utilizing available GIS data and discussions with local contacts to determine the portion of the MTP Study Area currently served and planned extensions of service. In the majority of the MTP Study Area, water and sewer services are provided by the City of New Bern. Drinking water is provided for residents of New Bern, Carolina Colours, Clarks, Cove City, the Craven County Industrial Park, Taberna, and Trent Woods. Total water usage for 2018 was 1.31 billion gallons (3.58 million gallons per day). The City's Water Treatment Division continues to employ 20 wells, a filter/softener water treatment facility, 3 ground storage tanks, 5 booster pump stations and 6 elevated storage tanks.

The municipal areas have close to 100 percent water and sewer coverage, while the county has some areas with service. Craven County Water provides service to many areas outside of the municipal boundaries, including portions of Harlowe, Havelock, James City, Brice's Creek, Vanceboro, Ernul, Cove City, Fort Barnwell, Jasper, and Spring Garden. Water and sewer is available in most areas of the MTP Study Area north of the Trent River/west of the Neuse River. Water and sewer services do not seem to be available in the far northwest (north of NC 55) nor west of US 17 (west of Trent Woods and River Bend). To the south of the Trent River, water and sewer are available in the developed areas on the southern side of the river and along US 70 south to the MTP Study Area boundary. South of the Trent River and west of Brice Creek, water and sewer service is not available. On the east side of the Neuse River, water and sewer is provided throughout Bridgeton by First Craven Sanitary.

Given that approximately 100 percent of the City of New Bern and approximately 15 percent of the County has water and sewer available and there is ample ability to expand, a 'likely' rating is given to *Water and Sewer Availability* for this factor's part in the overall potential for indirect effects.

Figure 5. Areas with Available Developable Land Map



Market for Development

Rating: Possible

This category is more subjective, with information on development trends, and the current development pressures within the MTP Study Area that were assessed, along with a review of the land development policies and regulations. Based on the TAZ-level projections, both population and employment in the NBAMPO are expected to increase, each with an annual growth rate of 0.9% and 0.6%, respectively. The MPO has a large tourism based economy in addition to several anchor institutions and companies, such as Craven Community College, UPS, MOEN, healthcare providers, and is home to Coastal Carolina Regional Airport. Carolina East Medical Center just completed major additions and renovations, including a Cancer Center and Diagnostics Center. In addition, both Craven County and the City of New Bern, the two largest jurisdictions within the MTP Study Area, have economic development offices with staff focused on attracting businesses. A public-private economic development partnership exists between Craven County and the cities of New Bern and Havelock (the Craven 100 Alliance) to plan for long-term economic development. The West New Bern Community, a large mixed-use development with approximately 1,500 residential units purposed, is an example of the type of the development changing the landscape of the NBAMPO study area.

Overall, the market for commercial, industrial and residential development continues to grow within the MTP Study Area. As such, the impact of *Market for Development* on the overall assessment of the potential for indirect effects is rated as 'possible', similar to the result of the 2016 ICE Assessment.

Public Policy

Rating: Not Expected

The assessment of growth management included the degree to which the protection of resources is incorporated into existing environmental regulations at the state, local and/or federal level. A review of development ordinances and land use plans provided information on public policy pertaining to growth and the level of existing resource protection.

The NBAMPO, as illustrated in Figure 1, is situated along the eastern coast of North Carolina with two major waterbodies traversing the MTP Study Area. Communities are linked by bridges, and there are notable wetlands, conservation areas, and agricultural land. The MPO communities, recognizing the sensitivity of the area and development constraints, have adopted growth management policies described in multiple land use plans. These plans include Coastal Area Management (CAMA) land use plans, the 2002 Eastern Carolina Joint Land Use Study, the Craven County Agricultural Development Plan, historic preservation plans, bike and pedestrian plans, hazard mitigation plans, neighborhood plans and urban design plans. For example, there are management policies for public access, land use compatibility, conservation, stormwater control, infrastructure carrying capacity, water quality and appearance. In addition, each of the municipalities adhere to zoning ordinances to guide growth and development.

Public Policy is given a rating of 'not expected' in terms of possible indirect effects, due to the presence of numerous policies and regulations of the jurisdictions within the MTP Study Area, which signifies more stringent growth management.

Notable Environmental Features

Rating: Expected

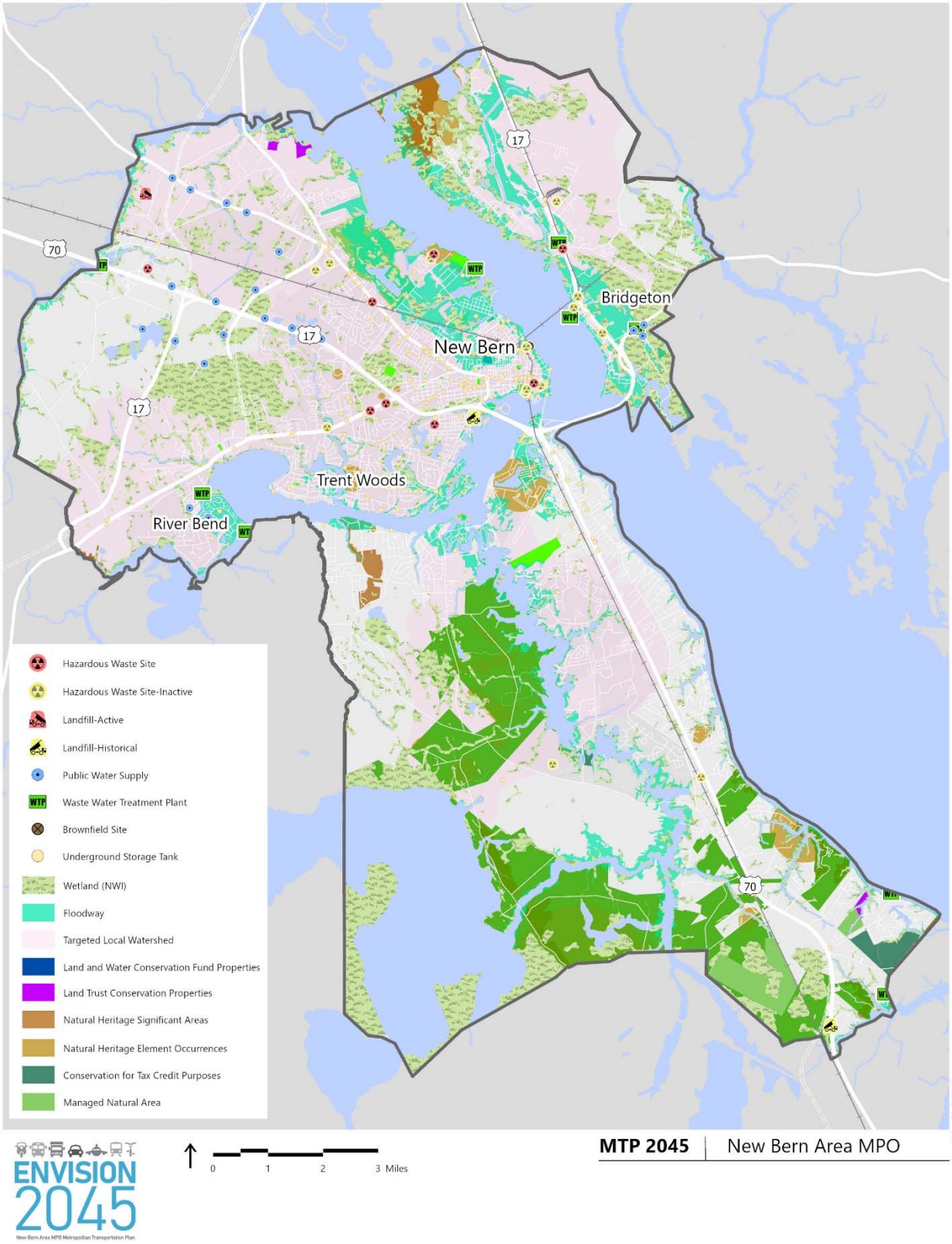
This category was assessed based on the sensitivity and abundance of notable environmental resources. Sensitivity of environmental features was determined by consulting data from local, state, and federal regulations, programs, and agencies overseeing these notable resources such as the NC Division of Water Resources. The Environmental Features Map was used in this assessment, as well as discussion with local representatives knowledgeable of area resources.

The MTP Study Area has an abundance of sensitive notable environmental features, as illustrated on the Environmental Features Map,

Figure 5. There are several historic resources in downtown New Bern, Trent Woods, and near US 70 south of the Coastal Carolina Regional Airport. Approximately 40 percent of the MTP Study Area is wetlands. There are approximately 18 square miles of the Croatan National Forest located within the MPO study area. There is a Natural Heritage Area south of the Trent River, near the Reedy Branch Creek. There are Land and Water Conservation Funds properties at the northern end of the MTP Study Area on both sides of the Neuse River. A smaller area at the southern end of the MTP Study Area is also a Land and Water Conservation Funds property. The southern end of the MTP Study Area contains large parcels of managed land, some of which is also Conservation Tax Credit Property. There is an area of managed land to the north of downtown New Bern along the Neuse River. A large portion of New Bern, Trent Woods, River Bend, and Bridgeton are Targeted Local Watersheds, which represent opportunities for watershed improvements. Many areas have been identified in the Natural Heritage Program as having the potential for occurrences of rare plants and animals, and/or unique natural communities. There is also a sizable amount of agricultural land in the MTP Study Area.

Because of the abundance and sensitivity of natural environmental features in the MTP Study Area, this category remains at a rating of 'expected,' similar to the 2016 ICE Assessment, for its influence on the overall rating of the potential for indirect effects.

Figure 5. Environmental Features Map



Summary

Based on this evaluation of existing social and economic variables within the NBAMPO MTP Study Area, this area has a positive growth trend, which could reasonably be expected to continue in the future. Approximately 44 percent of the MTP Study Area is land available for development, water and sewer infrastructure exists in all the municipalities and a portion of the County, and there is some market for development. The growth opportunities of these existing conditions, combined with the presence of notable environmental features, resulted in an overall rating of 'possible' for the potential for indirect effects.

Overall, this updated evaluation resulted in similar findings to the 2016 ICE Assessment – Product 1, with the only notable change being a decrease in the projected employment growth rate. These existing characteristics of the MTP Study Area will provide the baseline foundation and context for identifying future growth potential areas and evaluating the desired transportation projects in the next steps of the ICE assessment.

References

Bridgeton, Town of, North Carolina. http://www.bridgetonnc.net/

Craven County, North Carolina. CAMA Core Land Use Plan. Adopted August 3, 2009.

Craven County, North Carolina. Lawrence, Grace. Craven County Agricultural Development Plan.

Craven County, North Carolina. Craven County Multi-Jurisdictional Hazard Mitigation Plan. Adopted July 6, 2010.

Craven County, North Carolina. Comprehensive Economic Development Strategic Plan. July 2013.

Craven County, North Carolina. http://www.cravencountync.gov/

Craven County, North Carolina. http://gis.cravencountync.gov/downloads-zip-files.aspx

Craven County Water Department. 2019 Annual Drinking Water Quality Report.

NC One Map – various regulatory agencies http://data.nconemap.gov/geoportal/catalog/main/home.page

NCDOT GIS Unit https://connect.ncdot.gov/resources/gis/pages/gis-data-layers.aspx

New Bern, City of, North Carolina. http://www.newbern-nc.org/

New Bern, City of. 2018 Water Quality Report.

River Bend, Town of, North Carolina. http://www.riverbendnc.org/

Trent Woods, Town of, North Carolina. http://www.trentwoodsnc.org/

Socio-Economic Data by Traffic Analysis Zones (TAZs) from the New Bern Area MPO travel demand model

http://www.ci.new-bern.nc.us/departments/engineering-water-sewer/water-production-treatment/annual-water-report/

NC Division of Coastal Management CREWS wetlands. http://portal.ncdenr.org/web/cm/gis-data-download-page

Technical Memorandum for 2045 New Bern MTP–ICE Future Growth Potential Assessment (MTP-ICE Product 2)

Revision Date: March 2021

Date of Original Version: December 2020

This Technical Memorandum documents the Indirect and Cumulative Effects (ICE) Future Growth Potential Assessment for the 2045 New Bern Area Metropolitan Transportation Plan (MTP) and serves as an update to the memo prepared for the 2040 MTP in 2016. This Technical Memorandum was prepared with the assistance of the New Bern Area Metropolitan Planning Organization (NBAMPO) and NCDOT Transportation Planning Division (TPD), This coordination helps ensure consistency between long-range planning and the National Environmental Policy Act (NEPA) process during project development.

MTP-ICE Future Growth Potential Mapping

The comprehensive and land use plans of the various jurisdictions within the MTP Study Area document historical, existing, and future land use as well as factors that determine land use patterns such as zoning, water and sewer infrastructure, development limitations, and natural and cultural features. These factors, depicted on the environmental features maps and evaluated in Product 1, when assessed together, provide insight into future growth potential. Socioeconomic data from the New Bern MPO Model for each of the Traffic Analysis Zones (TAZ) on forecasted population and employment growth was combined for the MTP Study Area to determine the areas of future growth potential. Figures 1 and 2 illustrate the future long-term growth potential and available land within the MTP Study Area.

Overview and Characterization of the Land Classification System

The MTP Study Area is comprised of several municipalities and unincorporated areas in the County. An existing land use map was created from parcel data from these entities (see Figure 3). The parcel data included 119 land use types, which were concentrated into eight main categories to provide consistency throughout the overall MTP Study Area, including: agricultural, commercial, industrial, recreation, residential, services (i.e., institutional, medical, religious, and government-owned), utilities, and vacant. Existing comprehensive and land use plans were reviewed and compared to the future growth potential map to determine if any major changes in land use categories are expected in the future. For the purposes of this report, it was assumed that the overall types of land uses would remain the same in the future.

Utility Service Areas

In the majority of the MTP Study Area, water and sewer services are provided by the City of New Bern. Drinking water is provided for residents of New Bern, Carolina Colours, Clarks, Cove City, the Craven County Industrial Park, Taberna, and Trent Woods. The central, eastern and northern areas of the MPO are currently served by water and sewer . The northwestern area and southwestern area are not completely served by water and sewer. Based on the growth potential areas, utility service areas may be expanded in the future to accommodate the anticipated growth.

Figure 1. Future Growth Potential Map

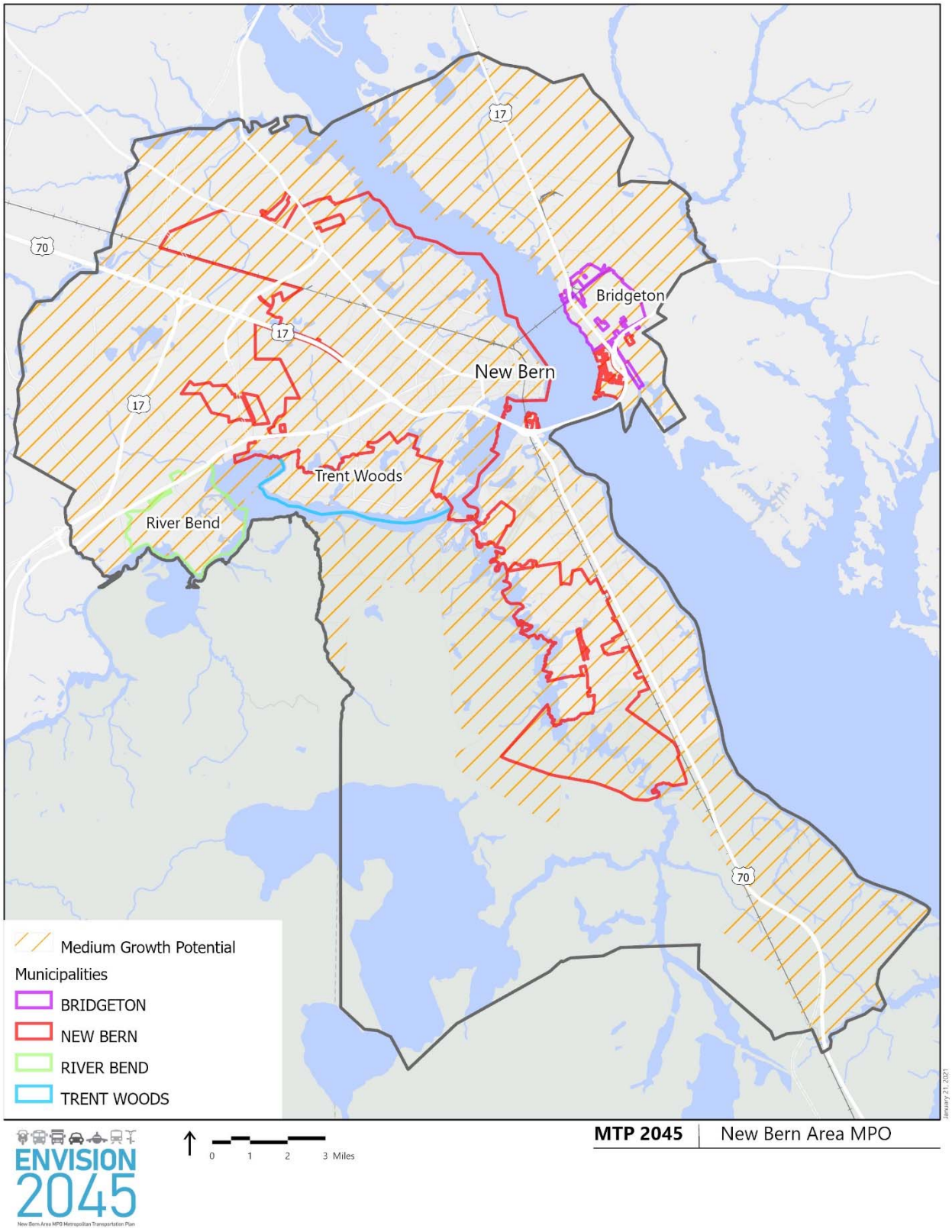


Figure 2. Future Growth Potential with Available Land Map

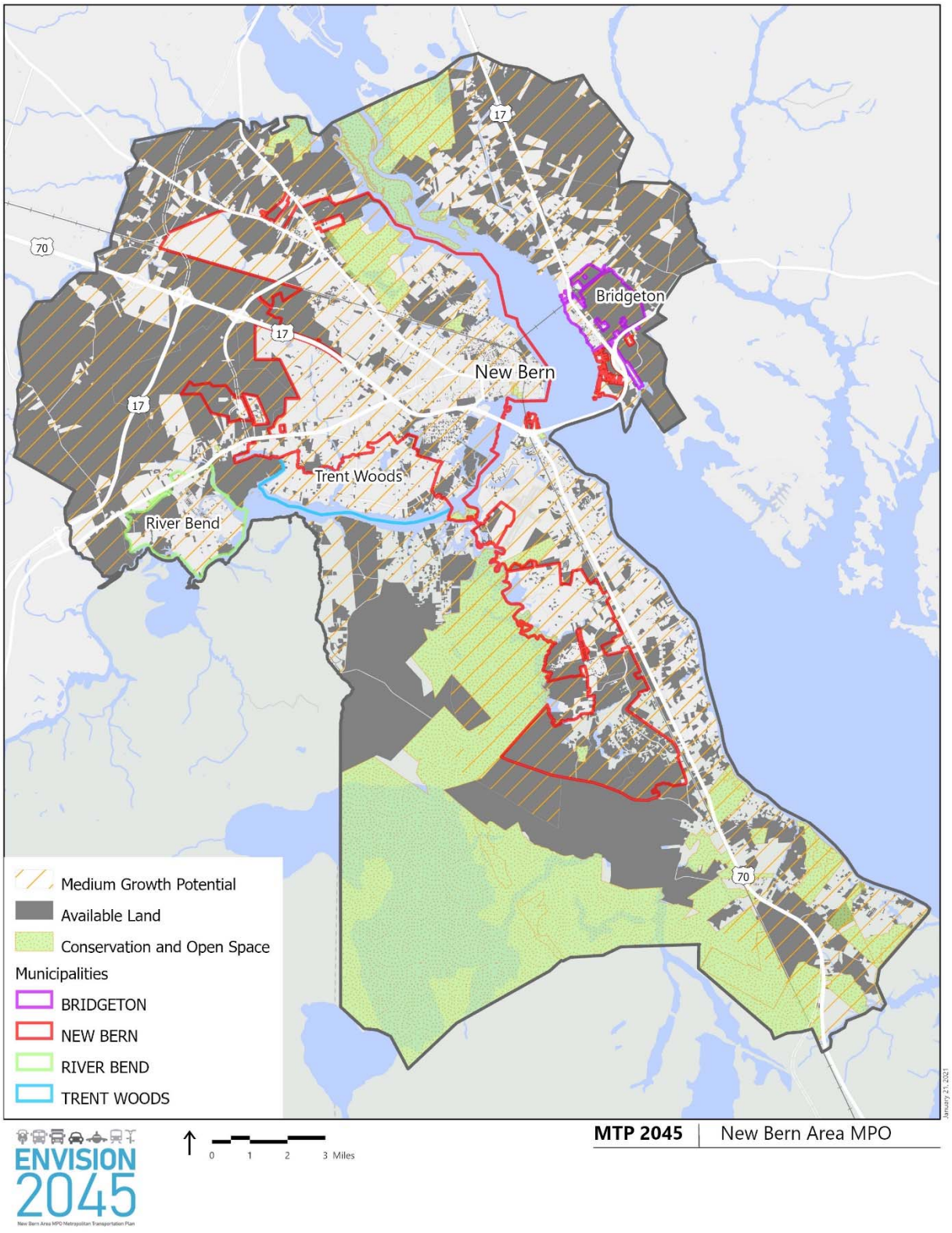
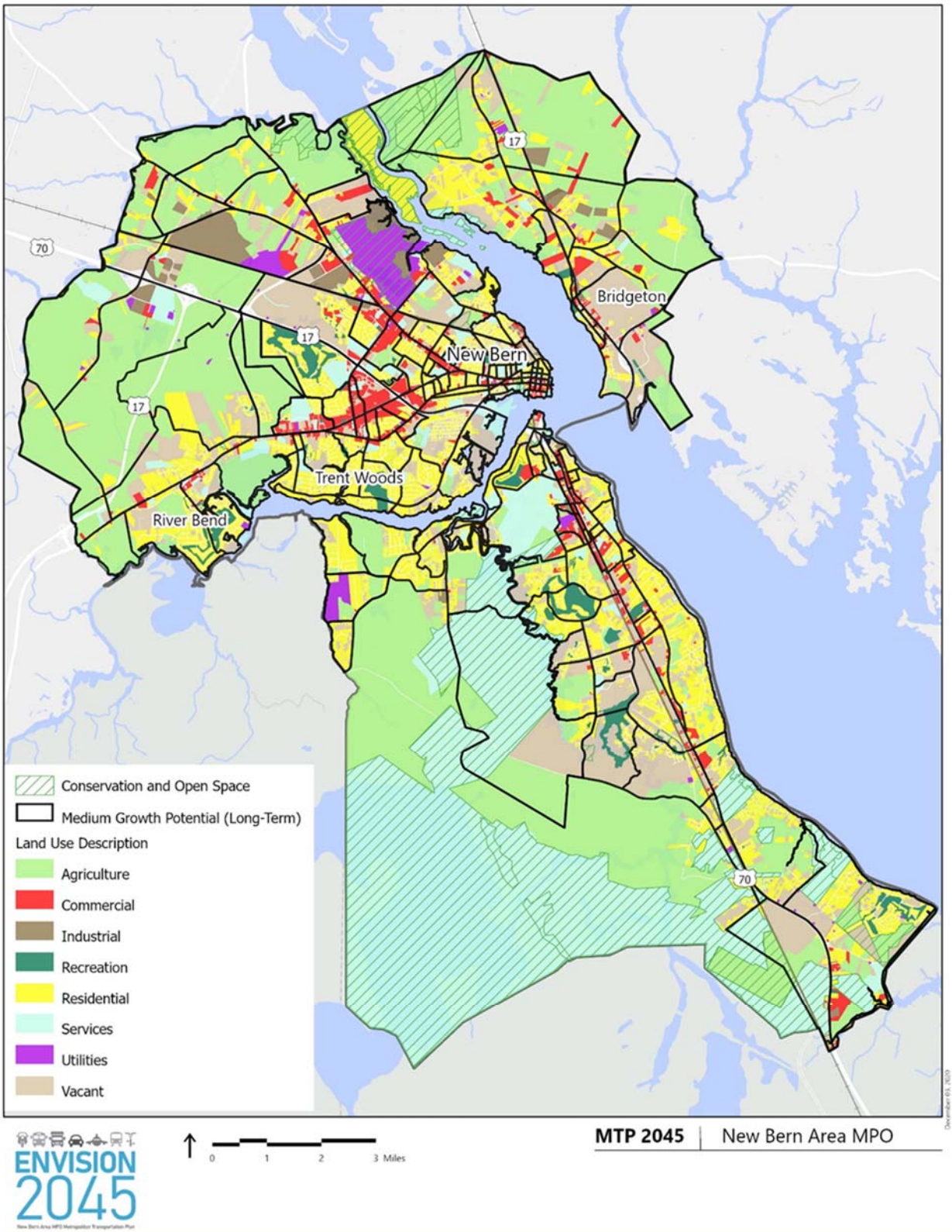


Figure 3. Existing Land Uses & Growth Potential



Available Lands

As documented in Product 1, approximately 39,000 acres or 44 percent of the MTP Study Area is land available for development. Although there are pockets of available land within the municipalities in the MTP Study Area that provide opportunities for in-fill development, most of the available land is outside the municipal boundaries. The Town of Bridgeton and the unicorporated areas have the highest percentage of available land. Much of this available land is identified as agricultural or services in the parcel-level existing land uses (see Figures 2 and 3), which will not have the same development potential as available land situated within more urban areas or along transportation corridors. For example, the land in the northeast and northwest portions of the MTP Study Area (north of Bridgeton and north of River Bend, respectively) are defined as available. However, the land is currently zoned and used for agricultural purposes, which permits low-density development.

While development is not specifically restricted just because land is zoned as or used for agricultural purposes, the unique character of the MTP Study Area is important when evaluating these lands for development. Based on information from the NC Agriculture and Consumer Services, Craven County has approximately 245 farms (81,360 acres). In addition, Craven County has 271,238 acres of timber land (approximately 59 percent of the total land in Craven County). Many of the land use plans in the area prioritize argricultural operations. Specifically, Craven County's *Comprehensive Economic Development Strategic Plan*, July 2013 (*Economic Development Plan*), identifies agribusiness as a collaborative target – recommending that the County support agricultural operations, diversify the agricultural sector, and partner with the Craven County Cooperative Extension Center, stating that "the diversification and expansion of agriculture and related industries will provide the County with business development potential far into the foreseeable future". The County also prepared the *Craven County Agricultural Development Plan* (*Agricultural Plan*) through a grant provided by the NC Department of Agriculture and Consumer Services, which provides recommendations for addressing opportunities and challenges related to agriculture in the County. The *Agricultural Plan* stated that the County's agriculture and forestry contributed cash receipts over $33.6 million for crops and $20.5 million for livestock in 2010, ranking sixth in the State for timber harvested and delivered. Updated data (2019) was available from North Carolina Department of Agriculture and Consumer Services, which indicated $27.7 million for crops and $20.7 million for livestock cash receipts for the County.

In addition, Craven County is home to Marine Corps Air Station Cherry Point, and according to the County's *Economic Development Plan*, the Department of Defense (DoD) accounts for over 61 percent of the County's employment. Agriculture is a compatible use for military operations, and the DoD plays an active role in preserving agricultural land. For example, the DoD provides funds through the NC Foundation for Soil and Water Conservation to owners of working lands within specific military flight paths and special use areas through the Market-based Conservation Initiative in North Carolina. With the military defense industries serving such a dominate role in the County's economy, it is essential that compatible land uses, such as agriculture and forestry, are maintained.

Based on the *Agricultural Plan*, existing agricultural preservation tools available to the County include working land protection programs and tools, the Present-Use Value Tax Program, Voluntary Agricutural Districts (VADs), Enhanced Voluntary Agricultural Districts (EVADs), conservation easements, agricultural agreements, farm transition planning, and the NC Agricultural Development and Farmland Preservation Trust Fund. Specific to development and land restrictions in the County, the *Agricultural Plan* recommends

expanding the VAD and EVAD programs, conducting farm transition planning programs, and encouraging landowner enrollment in the County's Present Use Value program.

Overall, while specific development restrictions are not associated with lands used for agricultural operations, it is clear that agriculture is a critical component of the County's economy, directly contributing employment and revenues, and serving as an important part of the military's operations, the largest employer in the area. Therefore, agricultural land in the MTP Study Area is identified as available for development, but these unique characteristics of the area should be considered.

Growth and Development Areas

As the MTP Study Area is situated within a Coastal Area Management Act (CAMA) county, an adopted land use plan is required to protect conservation areas and natural resources. In addition, there are several other land use plans for specific portions of the area that drive local objectives regarding development and resource protection. The important natural features, including surface waters, the Croatan National Forest, and conservation areas in the MTP Study Area significantly focus potential development within municipal boundaries and along existing transportation corridors. As illustrated in Figure 2, there are pockets of potential growth areas primarily along US-70 south of Trent River, and in the northern potion of the MTP Study Area. The County's *Economic Development Plan* identifies suitable development sites based on specific criteria. Many of these sites are located in areas identified as growth potential areas (i.e., New Bern, Bridgeton, and along US-70).

The moderate growth in population and employment projected in the New Bern MPO travel demand model is also anticipated in the local land use plans. These plans site area attractions and resources, quality of life factors, and employment opportunities as the reasons for this growth. Specifically, the County's *Economic Development Plan* states several positive trends in the County, such as a concentration of skilled workers, education attainment levels, and access to railroad services, will continue to be attractive to industries. Also, from a quality of life perspective, the County is well-served with healthcare facilities, housing prices are relatively affordable, and area schools are performing on par with overall testing standards. In addition, the County is implementing initiatives to improve on some of its weaker factors to increase the area's marketability and continue the anticipated growth. The recently updated (2020) *Pamlico Sound Regional Regional Hazard Mitigation Plan* states that the population growth is primarily expected in New Bern, River Bend, and the unincorporated portions of Craven County.

In-Fill, Preservation, and Redevelopment Areas

Much of the municipal land within the MTP Study Area is developed, especially in Trent Woods. The central, historical downtown area of New Bern is developed, but the fringe area, especially in the northwest, has some potential for growth. River Bend has a pocket of land in the northwest portion of the Town that is developable. However, a portion of that land is currently used for agricultural purposes. A significant portion of Bridgeton is available for development.

There are opportunities for in-fill development and redevelopment within the MTP Study Area. For example, the City of New Bern conducted a Brownfields Inventory in 2010 identifying potential brownfield properties, some along the Neuse River and Queen Street. The area along the Neuse River is defined as having growth potential, and may offer prime redevelopment opportunities. In addition, the City completed the New Bern Gateway Renaissance Plan and the Greater Five Points Transformation Plan, which present revitalization strategies for some neighborhoods and brownfield sites. As documented in Product 1, the MTP

Study Area is rich in cultural resources. New Bern values the historic resources within the community and a Historic Preservation Commission, appointed by the Board of Alderman, oversees guidance for the historic district.

Conservation, Open Space, and Agricultural Areas

A significant portion of the MTP Study Area includes conservation, open space, and agricultural lands. Some of these areas are protected through local and state regulations, and significant development is not expected to occur within these areas. For example, floodways, NCDOT mitigation areas, VADs, managed natural areas, and tidal wetlands are excluded from the land available for development. As previously indicated, there is a significant amount of land within the MTP Study Area used for agricultural purposes, which would be expected to experience development limited to low-density residential. However, as indicated in Figures 2 and 3, some of these agricultural areas are identified as having growth potential, such as the area northwest of River Bend and east of Bridgeton, and could be rezoned for other uses.

Summary

Growth in the MTP Study Area is expected to continue based on the projections in the MPO travel demand model and local plans. Craven County and the City of New Bern are actively promoting economic development and growth, the cultural and natural resources continue to attract people to the area, and infrastructure capacity exists. Furthermore, the positive trends in the area, quality of life, employment opportunities, and rail access will be important drivers in the projected growth. While much of the available land is within the County, there are also opportunities for infill and redevelopment in the municipalities.

The numerous natural resources and conservation efforts, in combination with the presence of regulatory policies and growth management, is expected to focus development and growth into specific areas. It is recommended that the local jurisdictions review existing adopted plans to determine if an update is necessary. Many of the existing local plans are getting close to 10 years old. The significant amount of agricultural land will also play a major role in the anticipated growth with its limited development potential. The growth potential information in this assessment will be used to inform the next steps in the ICE Assessment.

References

Bridgeton, Town of, North Carolina. http://www.townofbridgeton.org/

Craven County, North Carolina, CAMA Core Land Use Plan. Adopted August 3, 2009.

Craven County, North Carolina. Lawrence, Grace. Craven County Agricultural Development Plan.

Craven County, North Carolina. Craven County Multi-Jurisdictional Hazard Mitigation Plan. Adopted July 6, 2010.

Craven County, North Carolina. Comprehensive Economic Development Strategic Plan. July 2013.

Craven County, North Carolina. http://www.cravencountync.gov/

Craven County, North Carolina. http://gis.cravencountync.gov/downloads-zip-files.aspx

NC Agriculture and Consumer Services. http://www.ncagr.gov/stats/AgStat/Section06.pdf

NC One Map – various regulatory agencies http://data.nconemap.gov/geoportal/catalog/main/home.page

New Bern, City of, North Carolina. Brownfields Inventory. October 8, 2010.

New Bern, City of, North Carolina. Greater Five Points Transformation Plan. February 22, 2016.

New Bern, City of, North Carolina. The New Bern Gateway Renaissance Plan, EPA Brownfields Area-Wide Planning Pilot Program.

New Bern, City of, North Carolina. 2019 Water Quality Report.

New Bern, City of, North Carolina. 2019 Wastewater Treatment Report.

New Bern, City of, North Carolina. http://www.newbernnc.gov/

Pamlico Sound Regional Hazard Mitigation Plan, 2020.

River Bend, Town of, North Carolina. http://www.riverbendnc.org/

Trent Woods, Town of, North Carolina. http://www.trentwoodsnc.org/

Socio-Economic Data by Traffic Analysis Zones (TAZs) from the New Bern MPO travel demand model

US Department of Agriculture, Forest Service; Forest Statistics for North Carolina, 2019. https://www.srs.fs.usda.gov/pubs/ru/ru_fs259.pdf

Technical Memorandum for 2045 New Bern MTP–ICE Screening for Indirect Effects (MTP-ICE Product 3/Part 1)

Revision Date: March 2021

Date of Original Version: January 2021

This Technical Memorandum documents the 2045 New Bern Area Metropolitan Transportation Plan (MTP)-Indirect and Cumulative Effects (ICE) Screening for Indirect Effects, and represents an update to the ICE Screening prepared for the 2040 New Bern Area MTP. The first screening is a broad-level screening assessing the potential indirect effects across the entire MTP Study Area, and is called a Plan-Level Screening. The second screening, called a Project-Level Screening, focuses on three specific proposed projects in the MTP.

This Technical Memorandum was prepared with the assistance of the New Bern Area Metropolitan Planning Organization (NBAMPO), NCDOT Transportation Planning Branch (TPB), and NCDOT's DEEP (Delivering Efficiently and Effectively Projects) team. The DEEP team consists of representation from NCDOT, North Carolina Department of Environmental Quality (NCDEQ), US Army Corps of Engineers (USACE), and the Federal Highway Administration (FHWA). This coordination helps ensure consistency between long-range planning and the National Environmental Policy Act (NEPA) process during project development.

MTP-ICE Plan-Level Screening Results for the MTP Study Area

A MTP-ICE Plan-Level Screening was conducted for the MTP Study Area, based on the multi-modal recommendations in the Draft 2045 New Bern Area MTP. The Plan-Level Screening looked at the entire MTP Study Area, and the results for the variables evaluated in Product 1 remain unchanged, with the addition of two other variables (i.e., scope of transportation plan investments and macro change in accessibility).This technical memorandum explains the analysis conducted, including use of the MTP-ICE Screening Matrix for Indirect Effects and summarizes the results. This Plan-Level Screening for potential indirect effects resulted in a finding of "possible indirect effects". The Macro Change in Accessibility and forecasted employment growth influenced these results. The proposed projects on new location and major upgrades to freeways would create the opportunity to increase capacity and travel speeds, alter travel patterns, and provide access to currently developable land. In addition, the availability of land, the general availability of water and sewer service, and sensitivity and abundance of notable environmental features contributed to the cumulative result that there are likely indirect effects from the Draft MTP scenario. Overall, the proposed highway projects are anticipated to have more indirect effects than the public transportation/rail and bicycle projects in the MTP Study Area. Refer to Table 3-1 for the plan-level screening. The overall finding of this assessment respresents a reduced potential for indirect effects from "likely" to "possible".

Proposed MTP Projects

The projects proposed in the MTP are varied in scope, purpose and need, and location. The majority of the projects are related to existing location highway improvements and those on new location. In addition, some projects incorporate multi-modal facilities, increasing safety for bicyclists and pedestrians. The proposed project list for the 2045 MTP represents minimal changes/additions to the 2040 MTP project list.

Table 3-1 MTP-ICE Screening Matrix for Indirect Effects, Plan-Level (2045 NBAMPO MTP Study Area)

Rating	Scope of Trans. Plan Investments	Macro Change in Accessibility	Forecasted Population Growth	Forecasted Employment Growth	Available Land	Water/Sewer Availability	Market for Development	Public Policy	Notable Environmental Features	Result
Greater Likelihood	High	High	> 3% annual population growth	> 3% increase New Jobs Expected	60% or greater of available land*	Services available [muni 100%; county 20% of area]	Development activity abundant	Less stringent; no growth management	Notable Feature(s): Abundant / More Sensitive	
Expected									x	
Likely						x				
Possible	x	x			x		x			**Possible Indirect Effects**
Not Likely			x	x						
Not Expected								x		
Lesser Likelihood	Low	None	No population growth or decline	No new Jobs or Job Losses	0 - 9% of available land*	Limited or no service available now or in future	Development activity lacking	More stringent; growth management	Notable Feature(s): Minimal / Less Sensitive	

Highway Projects

The proposed highway projects in the MTP include upgrades to several major thoroughfares, intersection improvements, as well as a few major thoroughfares on new location. These projects are listed in Table 3-2 below and illustrated in Figure 3-1. In Table 3-2, the table entries for 'Horizon Year' have been color coded to distinguish which horizon timeframe each project is in (blue: 2021-2025, red: 2026-2035, green: 2036-2045). More detailed descriptions on the proposed projects can be found in Chapter 4 of the MTP. These projects are depicted on the Environmental Features Map (Figure 3-2) and Future Growth Potential Map (Figure 3-3).

Public Transportation and Rail Proposals

The NBAMPO is focused on creating a multi-modal transportation system in the MTP Study Area, providing bicycle and pedestrian facilities, and transit options. Currently, a State freight rail line (Corridor 17) runs through New Bern, traveling from the Port of Morehead City to northwest of Goldsboro. While this rail line, owned by the North Carolina Railroad (NCRR), plays a significant role in the State's economy (specifically agriculture within the region), there are concerns regarding community impacts due to the line running through the downtown business district of New Bern. The *Comprehensive State Rail Plan*, dated August 2015, recommends that the feasibility of a rail bypass around New Bern be examined, with a possible alignment along the New Bern bypass for US 70 (it should be noted that NCDOT is in the process of updating the *Comprehensive State Rail Plan* at the time of this analysis).

Public transportation is currently provided through the Craven Area Rural Transit System (CARTS), servicing Craven, Jones and Pamlico Counties. CARTS provides bus service for the general public and human service agency clients, with its operations centered in New Bern. Recommendations from the *Craven Area Rural Transit System Transit Development Plan*, dated June 2017, were focused on bridging gaps for its users. Increasing the use of technology, added safety measures, revising routes, and rebranding were among the recommendations.

Bicycle Proposals

There are two state bicycle routes that traverse the MTP Study Area (Ports of Call NC Bike Route 3 and Ocracoke Option NC Bike Route 7) and the City of New Bern has made bicycle facilities a priority, focusing on implementation of recommendations in New Bern's *Comprehensive Bicycle Plan*, dated 2006. Additionally, Bridgeton and River Bend both adopted their own bicycle and pedestrian plans in 2018. Overall, there are proposals for bicycle and pedestrian facilities throughout the MTP Study Area, including bike lanes, shared lanes, paved shoulders, shared use paths, and multi-use trails.

Table 3-2: FY Projects for the 2045 New Bern Area MTP

HORIZON YEAR	ID	LOCATION	ROADWAY	FROM	TO	TYPE
2025	R-4463A	New Bern	NC 43 CONNECTOR	NC 43/NC 55	US 17	NEW LOCATION
2025	R-5777B	Craven County	US 70	at West/East Thurman Rd	--	INTERCHANGE UPGRADE
2025	R-5777A	Craven County	US 70	at Taberna Way	--	INTERCHANGE UPGRADE
2025	R-5777C	Craven County	US 70	Thurman Rd	Havelock Bypass	UPGRADE TO FREEWAY
2025	U-5713	James City	US 70	Neuse River Bridge	Grantham Rd	UPGRADE TO FREEWAY
2035	U-5993	New Bern	NC 55 (Neuse Blvd)	at US 17 Bus	--	INTERSECTION UPGRADE
2035	R-3403B	New Bern	US 17	Antioch Rd	NC 43	WIDENING
2035	U-6198	New Bern	US 17/MLK Blvd	US 70 Interchange	Trent Creek Rd/Future NC 43	UPGRADE TO SUPERSTREET
2035	AV-5891	Coastal Carolina Regional Airport	--	--	--	RUNWAY EXTENSION
2045	NB-Rdwy-04	New Bern	Glenburnie Rd	Elizabeth Ave	McCarthy Blvd (Craven Comm College)	WIDENING
2045	NB-Rdwy-05	New Bern	Elizabeth Ave	Racetrack Rd	S Glenburnie Rd	WIDENING
2045	NB-Rdwy-08	New Bern	US 70	at MLK Jr Blvd	--	INTERCHANGE UPGRADE
2045	U-6102	New Bern	US 70	at Glenburnie Rd	--	INTERCHANGE UPGRADE
2045	NB-Rdwy-02	New Bern	Brices Creek Rd	Crump Farm Rd	Kelso Rd	WIDENING
2045	NB-Rdwy-03	New Bern	NC 43 Washington Post Rd	NC 55	MPO Boundary	UPGRADE TO BOULEVARD
2045	NB-Rdwy-07	New Bern	Simmons St	Trent Rd	NC 55 (Neuse Blvd)	ROAD DIET
2045	NB-Rdwy-09	New Bern	US 70/US 17	at Country Club Rd		INTERCHANGE UPGRADE
2045	U-3448	New Bern	Trent Rd	US 17 / MLK Blvd	Simmons St	WIDENING
UNFUNDED	NB-Rdwy-01	<multiple>	Brices Creek Rd Connector (Alt A)	US 17	Brices Creek Rd	NEW LOCATION
UNFUNDED	NB-Rdwy-06	New Bern	US 70/US 17	MLK Blvd	Country Club Rd/First St	WIDENING
UNFUNDED	R-2301B	Craven County	US 17 New Bern Bypass	US 70 in New Bern	SR1400 River Rd	WIDENING, INTERCHANGE UPGRADE

Note: The proposed project R-1015 is not included in this indirect effects assessment since the majority of each of these project proposals is outside the MTP Study Area.

Figure 3-1: Map of FY Projects for the 2045 New Bern Area MTP

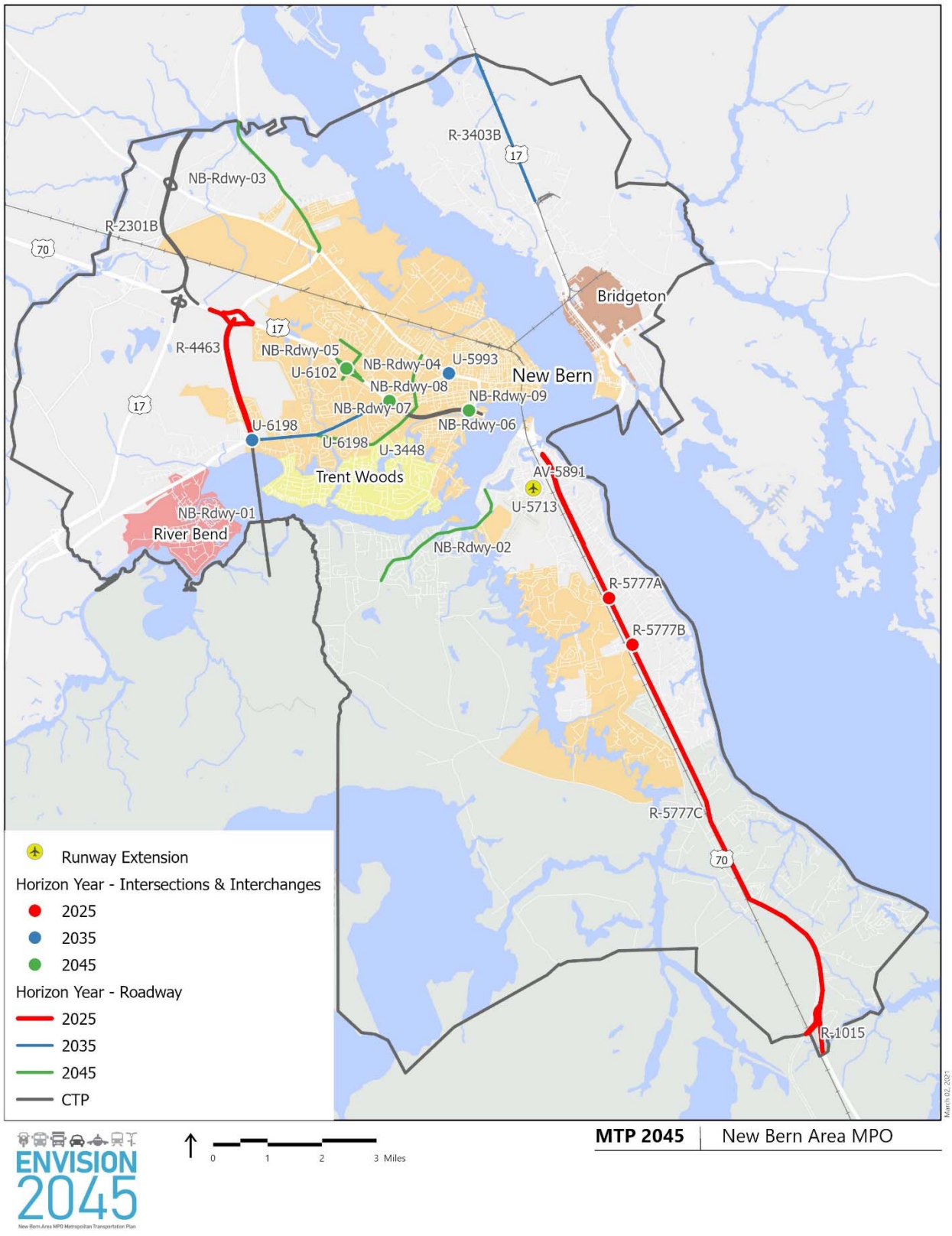


Figure 3-2: FY Projects for the 2045 New Bern Area MTP & Environmental Features

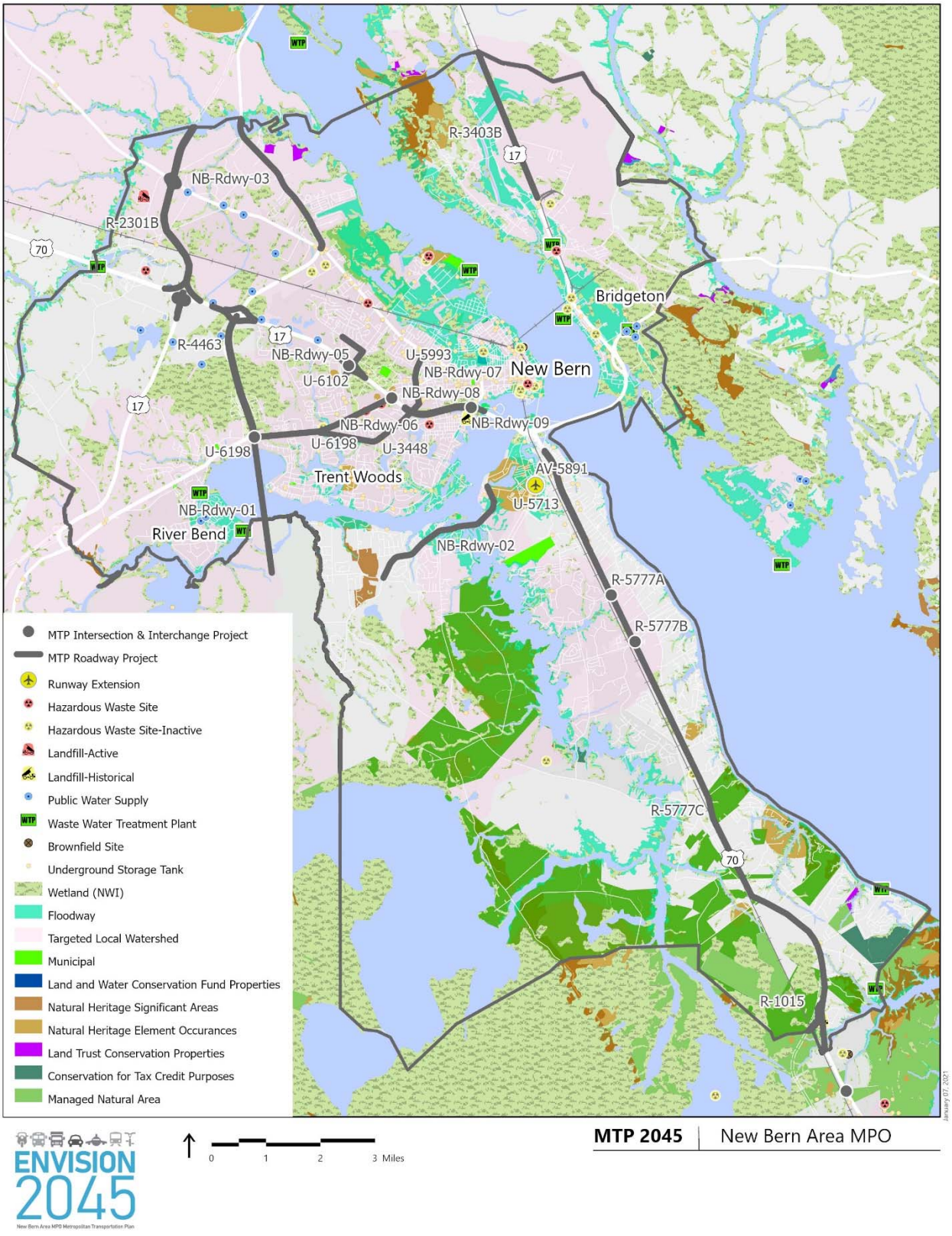
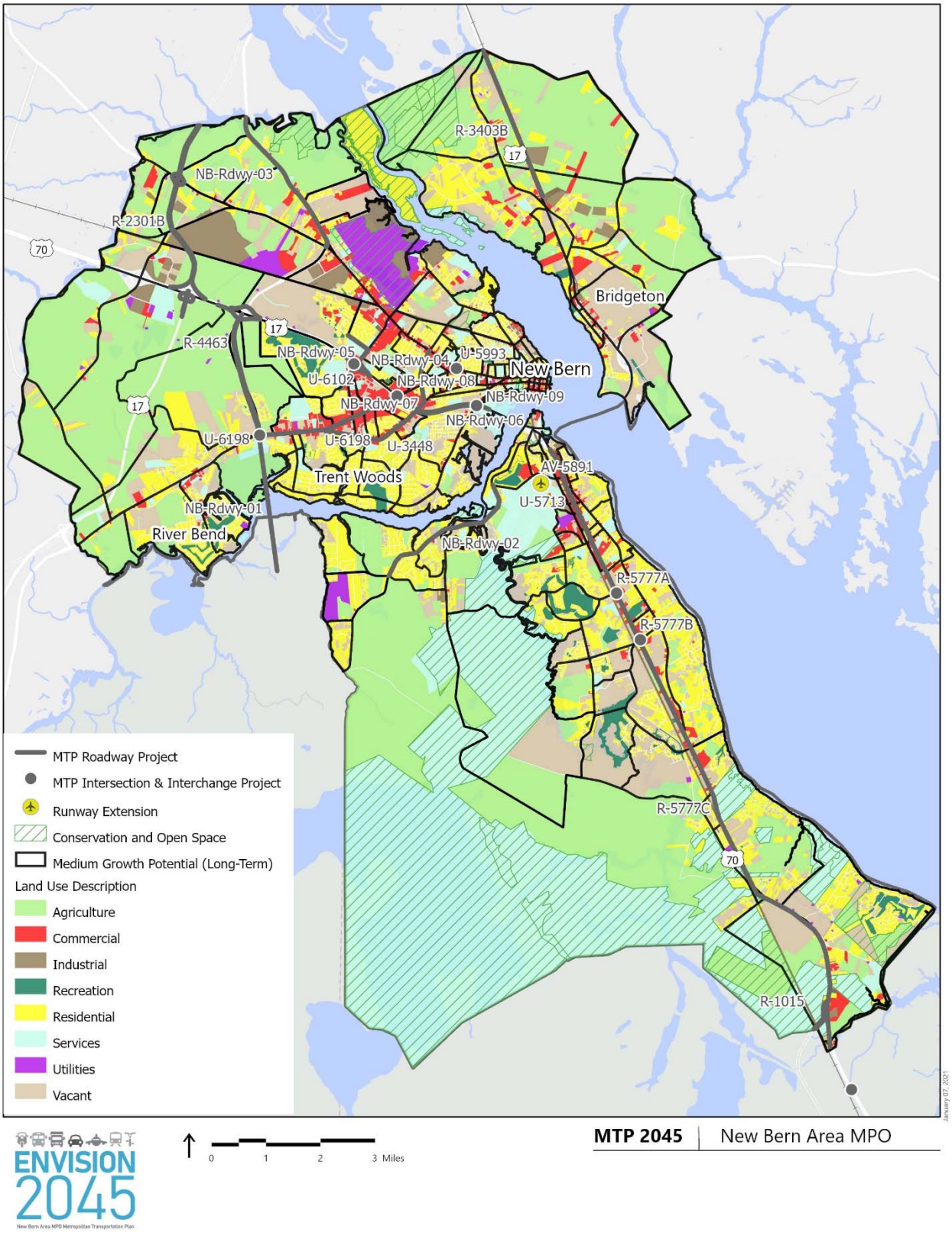


Figure 3-3: FY Projects for the 2045 New Bern Area MTP, Future Growth Potential, & Land Use



Scope of Transportation Plan Investments

Rating: Possible

The proposed highway projects in the MTP include a mix of intersection improvements, road diets, corridor upgrades and widenings, and projects on new location. The only proposed project on new location for this analysis includes the NC 43 connector from NC 55 to US 17 (R-4463A). There are other new location projects that are noted in the MTP, but are unfunded at this time. The NC 43 connector is proposed to be constructed in the 2025 horizon year. New location projects would be expected to alter travel patterns. Land use would be impacted because this project would provide access to developable land primarily to the northwest of New Bern. Currently these areas are comprised of a mix of uses including residential, with the majority being agricultural.

The proposed highway scenario may impact travel patterns and land use, but the magnitude of this scenario, with several small to mid-sized projects, is less than that of large-capacity projects. The other widening and improvement projects are proposed primarily to meet demand, create safe multi-modal options, and improve traffic flow and access. The public transportation/rail and bicycle scenario projects would not be considered major investments because they would not greatly affect land uses.

The *Scope of Transportation Plan Investments* results in the rating of "possible" indirect effects. This rating is based on the mix of proposed highway projects, with a few projects on new location that may impact travel patterns and land use.

Macro Change in Accessibility

Rating: Possible

There are several proposed projects in the MTP that would impact accessibility within the MTP Study Area. The project on new location would create new access to areas, increase property exposure and potentially create new transportation land use nodes, specifically in the northwestern portion of the MTP Study Area. This access may encourage new development in these areas, specifically around the NC 43 connector, as there are currently industrial uses at the northern terminus and residential uses at the southern terminus. The area between NC 55 and US 17 is currently used for agricultural purposes, and a subdivision is situated just north of US 17. The proposed US 70 project in the southern portion of the MTP Study Area will limit accessibility within the area and reduce travel time along the corridor as it includes upgrading the facility to a freeway. The majority of the other proposed projects are not expected to significantly impact accessibility.

Macro Change in Accessibility resulted in the rating of "possible" indirect effects due to the changes in access along US 70 and the construction of roadway on new location. The proposed new location project will provide new accessibility to areas that may present opportunities for development such as residential and commercial growth. The existing conditions in the MTP Study Area, such as available land, water and sewer infrastructure, economic development priorities, and limited zoning regulations in some areas would support this potential growth. It should be noted that a major project - the proposed Brices Creek Road Connector on new location with a bridge across the Trent River – is unfunded in the current 2045 MTP, a change from the 2040 MTP.

Forecasted Population Growth

Rating: Not Likely

Forecasted population growth was calculated for the MTP Study Area using the Traffic Analysis Zones (TAZ) level socioeconomic data from the NBAMPO travel demand model. A county-level control total projection

was established as the basis for all forecasting. TAZ-level data was used to distribute the growth within the NBAMPO (inside and outside of the model area) for each model year. The annualized population growth rate for the MTP Study Area was determined to be 0.9 percent through 2045 (very similar to the 0.8 percent growth rate documented in the 2040 analysis). Based on review of local land use plans, the overall MTP Study Area has grown at a moderate rate in recent decades, with some areas such as New Bern and Trent Woods experiencing higher growth rates. Given the anticipated modest growth rate for the area and lack of large development projects, *Forecasted Population Growth* resulted in the ratings of "not likely", or less of a concern.

Forecasted Employment Growth

Rating: Not likely

The employment growth for the MTP Study Area is projected to grow at a slower rate than the population. With annual employment growth rates projected to be approximately 0.6 percent for the MTP Study Area, the *Forecasted Employment Growth* resulted in a "medium low" rating for indirect effects, or "not likely". This growth rate and associated rating is lower than that projected in the 2016 assessment.

Available Land

Rating: Possible

To evaluate available land, existing land use in the MTP Study Area was assessed for its developability. The total land area (excluding water and transportation right-of-way) of the NBAMPO is 87,337 acres.

Each TAZ was assessed to determine if it was developable or was fully developed and utilized. Building permit and developable parcel data was used to identify where current growth is occurring and how future growth might occur, especially in rural areas that are in close proximity to urban areas and/or planned roadway improvements. After this initial assessment, public parks, voluntary agricultural districts (VADs), NCDOT mitigation properties, managed areas, right-of-way for roads and rail lines, rivers and streams, floodways, and buffer protection areas were removed from the available category.

The Town of Trent Woods has the least amount of developable land. The Town of River Bend and the City of New Bern both have some available land for development. The areas with the most amount of available land for development is the Town of Bridgeton and the unincorporated areas of the MTP Study Area.

Overall, there are more than 39,000 acres of land available for development in the MTP Study Area; 44 percent of the land is categorized as developable, resulting in a "possible" rating for *Available Land* to create indirect effects. This rating is less than the available land rating in the 2016 ICE Assessment.

Water and Sewer Availability

Rating: Likely

In the majority of the MTP Study Area, water and sewer services are provided by the City of New Bern. Drinking water is provided for residents of New Bern, Carolina Colours, Clarks, Cove City, the Craven County Industrial Park, Taberna, and Trent Woods. Total water usage for 2018 was 1.31 billion gallons (3.58 million gallons per day). The City's Water Treatment Division has 20 wells, a filter/softener water treatment facility, three ground storage tanks, five booster pump stations, and six elevated storage tanks.

The municipal areas have close to 100 percent water and sewer coverage, while the county has some areas with service. Water and sewer is available in most areas of the MTP Study Area north of the Trent River/west of the Neuse River. Water and sewer are not available in the far northwest (north of NC 55) nor

west of US 17 (west of Trent Woods and River Bend). To the south of the Trent River, water and sewer are available in the developed areas on the southern side of the river and along US 70 south to the MTP Study Area boundary. South of the Trent River and west of Brice Creek, water and sewer service is not available. On the east side of the Neuse River, water and sewer is provided throughout Bridgeton by First Craven Sanitary.

Given that approximately 100 percent of the City of New Bern and approximately 15 percent of the county has water and sewer available and there is ample ability to expand, resulting in a "likely" rating for potential indirect effects on *Water and Sewer Availability*.

Market for Development

Rating: Possible

Based on the TAZ projections, both population and employment in the NBAMPO are expected to increase, each with an annual growth rate of 0.8% and 0.6%, respectively. The NBAMPO has a large tourist economy and several large institutional employers/anchor companies, such as Craven Community College, UPS, MOEN, and healthcare providers. In addition, both Craven County and the City of New Bern, the two largest jurisdictions within the MTP Study Area, have economic development offices with staff focused on attracting businesses. A public-private economic development partnership exists between Craven County and the cities of New Bern and Havelock (the Craven 100 Alliance) to plan for long-term economic development.

Overall, the market for commercial, industrial and residential development continues to grow within the MTP Study Area. As such, *Market for Development* resulted in a rating of "possible" concern.

Public Policy

Rating: Not Expected

The MTP Study Area is situated along the eastern coast of North Carolina with two major waterbodies traversing through the MTP Study Area. Communities are linked by bridges, and there are significant wetlands and conservation areas. The NBAMPO communities, recognizing the sensitivity of the area and development constraints, have adopted growth management policies described in multiple land use plans. These local plans include required Coastal Area Management (CAMA) land use plans, the 2002 Eastern Carolina Joint Land Use Study, historic preservation plans, bike and pedestrian plans, hazard mitigation plans, and urban design plans. For example, there are management policies for public access, land use compatibility, conservation, stormwater control, infrastructure carrying capacity, water quality and appearance. In addition, each of the municipalities adhere to zoning ordinances to guide growth and development.

Public Policy was is identified as a rating of "not expected" (less concern) for the numerous policies and regulations of the jurisdictions within the MTP Study Area. It should be noted that many of these local plans are aging, some being close to 20 years old. Therefore, the local jurisdictions should consider updating local plans that protect important resources and direct growth management.

Notable Environmental Features

Rating: Expected

The MTP Study Area has an abundance of sensitive notable environmental features, including the Neuse and Trent Rivers, and there are several historic resources in downtown New Bern, Trent Woods, and near US 70 south of the Coastal Carolina Regional Airport. Trent River is classified as tidal saltwater, nutrient sensitive, and prime recreation. The Neuse River in the MTP Study Area retains a high amount of nutrients, is prone to

phytoplankton bloom formation, and identified as impaired. Approximately 40 percent of the MTP Study Area is wetlands. There is a Natural Heritage Area south of the Trent River, near the Reedy Branch Creek. There are Land and Water Conservation Funds properties at the northern end of the MTP Study Area on both sides of the Neuse River. A smaller area at the southern end of the MTP Study Area is also Land and Water Conservation Funds property. The southern end of the MTP Study Area contains large parcels of managed land, some of which is also Conservation Tax Credit Property. There is an area of managed land to the north of downtown New Bern along the Neuse River. A large portion of New Bern, Trent Woods, River Bend, and Bridgeton are Targeted Local Watersheds, which represent opportunities for watershed improvements. Many areas have been identified in the Natural Heritage Program as having the potential for occurrences of rare plants and animals, and/or unique natural communities. There is also a significant amount of agricultural land in the MTP Study Area.

Because of the abundance and sensitivity of natural environmental features in the MTP Study Area, this category resulted in a rating of "expected" (high concern for indirect effects).

Conclusion

Overall, based on the existing conditions and future growth potential in the MTP Study Area, and the MTP scenario, the Plan-Level Screening resulted in the finding that potential indirect effects ratings of "possible". The MTP proposed projects vary in scope, purpose and need, and location. The proposed highway projects are anticipated to have more indirect effects than the public transportation/rail and bicycle projects in the MTP Study Area. This result is reduced from the "likely" indirect effects associated with the 2016 ICE Assessment, primarily due to the reduced changes in accessibility and lower forecasted employment growth.

MTP-ICE Project-Level Screening

Several specific project proposals in the draft MTP were evaluated individually for potential indirect effects. The MTP-ICE Project-Level Screening examines each of the factors included in the Plan-Level (entire MTP Study Area) Screening, but at a finer scale in order to understand the indirect effects of specific projects.

Specific Projects Evaluated for Indirect & Cumulative Effects (ICE)

A study area was defined for each of the projects based on grouping adjacent TAZs to the proposed corridor. These projects were selected based on NCDOT proposed criteria for selecting project proposals for ICE screening in long-range planning. One project from the previous ICE Screening associated with the 2040 MTP was included to evaluate changes over time. It should be noted that two of the projects evaluated in the 2040 MTP ICE Screening are no longer appropriate for assessment – improvements to US 70 in James City have already received permits and the proposed Brices Creek Road Connector over Trent River is not included in the 2045 MTP fiscally-constrained project list. The following projects are included as project proposals in this ICE assessment:

- **Project NB-Rdwy-03**: Improvements to NC 43 (Washington Post Road) from Neuse Boulevard to the MTP Study Area Boundary. The proposed project includes improving NC 43 to a boulevard facility and is expected to be completed by the horizon year 2045. This project was evaluated in the 2040 MTP ICE Assessment, and any updates are summarized herein.

Example Selection Criteria

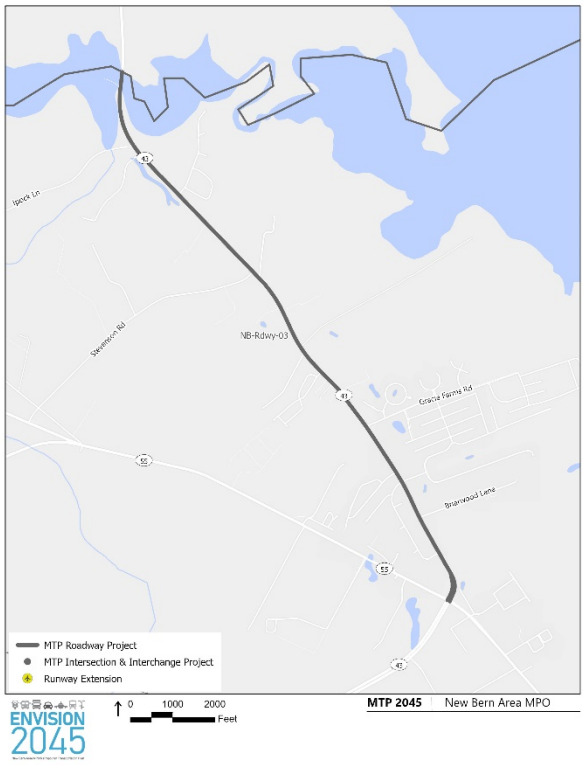
- Close to being implemented/funded
- Size of scope
- Controversial
- In environmentally-sensitive areas
- Likely indirect & cumulative effects
- Other special needs/considerations

- **Project AV-5891**: Proposed runway extension at the Coastal Carolina Regional Airport. The proposed project is expected to be completed by the horizon year 2035.
- **Project R-3403B**: Improvements to US 17 from north of SR 1433 (Antioch Road) to NC 43. The proposed project includes upgrading the facility from a two-lane to four-lane highway and is expected to be completed by the horizon year 2035.

Project Level ICE Assessment

Project NB-Rdwy-03 – NC 43 Improvements

Improvements to NC 43 (Washington Post Road) from NC 55 to the MTP Study Area Boundary. The proposed project includes improving NC 43 to a boulevard and is expected to be complete by the horizon year 2045. Currently, the facility consists of one lane in each direction and a middle turn lane. As indicated in the MTP, the facility will be over capacity in the horizon year 2040. The proposed upgrade to a boulevard will address these capacity deficiencies. Based on the indirect effects screening, detailed in Table 3-3 below, this project is "likely" to result in indirect effects, similar to the results of the 2016 ICE Assessment.



Scope of Transportation Plan Investments

Rating: Possible

The proposed NC 43 upgrade to a boulevard will result in greater capacity on the facility, which connects US 17 and NC 55. Therefore, while it is not considered a major investment, the project does have the potential for indirect effects.

Macro Change in Accessibility

Rating: Not Likely

The proposed upgrade to a boulevard of NC 43 is not expected to impact accessibility in the area. The current facility includes a middle turn lane throughout the entire corridor, and the proposed improvements will maintain accessibility to goods and services. Therefore, effects due to access changes are "not likely".

Forecasted Population and Employment Growth

Rating: Likely

Overall, population and employment are expected to grow in the MTP Study Area (approximately 0.8% and 0.6% annually, respectively). Based on this socioeconomic data, growth is expected within the area along the majority of the project corridor. As such, a rating of "likely" was given to this specific project area for indirect effects regarding these variables.

Table 3-3 MTP-ICE Screening Matrix for Indirect Effects, Project Level – Project NB-Rdwy-03 (Improvements to NC 43)

Rating	Scope of Trans. Plan Investments	Macro Change in Accessibility	Forecasted Population Growth	Forecasted Employment Growth	Available Land	Water/Sewer Availability	Market for Development	Public Policy	Notable Environmental Features	Result
Greater Likelihood	High	High	> 3% annual population growth	> 3% increase New Jobs Expected	40% or greater of available land*	Services available [muni 100%; county 20% of area]	Development activity abundant	Less stringent; no growth management	Notable Feature(s): Abundant / More Sensitive	
Expected										
Likely			x	x	x	x	x		x	Likely Indirect Effects
Possible	x							x		
Not Likely		x								
Not Expected										
Lesser Likelihood	Low	None	No population growth or decline	No new Jobs or Job Losses	0 - 9% of available land*	Limited or no service available now or in future	Development activity lacking	More stringent; growth management	Notable Feature(s): Minimal / Less Sensitive	

Availabile Land

Rating: Likely

The NC 43 corridor has a substantial amount of land identified as available both along and proximate to the corridor, particularly in the northern portion of the MPO study area. There is a small pocket of conservation/open space north east of the corridor and a larger portion of conservation land on the east side at the southern portion of the project corridor. Due to the amount of available land and the anticipated growth identified in this area, a "likely" rating was given for this variable.

Water and Sewer Availability

Rating: Likely

The City of New Bern provides water and sewer service to a portion of the NC 43 project corridor. In addition, Craven County provides water to the northern portion of the corridor. However, sewer service may be limited in the northern portion of the project corridor. As water and sewer are available in a significant portion of the project corridor, the potential for indirect effects was rated as "likely".

Market for Development

Rating: Likely

The NC 43 project corridor is currently comprised of a mix of uses including: commercial, industrial, institutional, residential and agricultural. There are some undeveloped properties along the corridor, and low-density residential and agricultural properties are the major land uses in the northern portion of the project corridor. Based on the socioeconomic data, growth is expected along the majority of the corridor. This, in addition to the substantial amount of available land, general water and sewer availability, economic development initiatives in Craven County and New Bern, and direct access into the City of New Bern, this project was determined to "likely" have indirect effects related to the market for development.

Public Policy

Rating: Possible

The southern portion of the NC 43 project corridor within the New Bern city limits is zoned primarily for residential (with the majority promoting low-density residential development) and agricultural purposes. There are a few parcels zoned for commercial and light industrial uses. In addition, New Bern has several adopted plans for development within the City. Craven County has a limited zoning ordinance, and focuses primarily on protecting water resources. As such, the potential for indirect effects was rated as "possible" for this variable.

Notable Environmental Features

Rating: Likely

The NC 43 project corridor traverses a local watershed area. There is also a large managed conservation area (privately-owned, NC Coastal Land Trust) just east of the southern portion of the corridor and some areas designated as important agricultural land and forested areas. Wetlands are

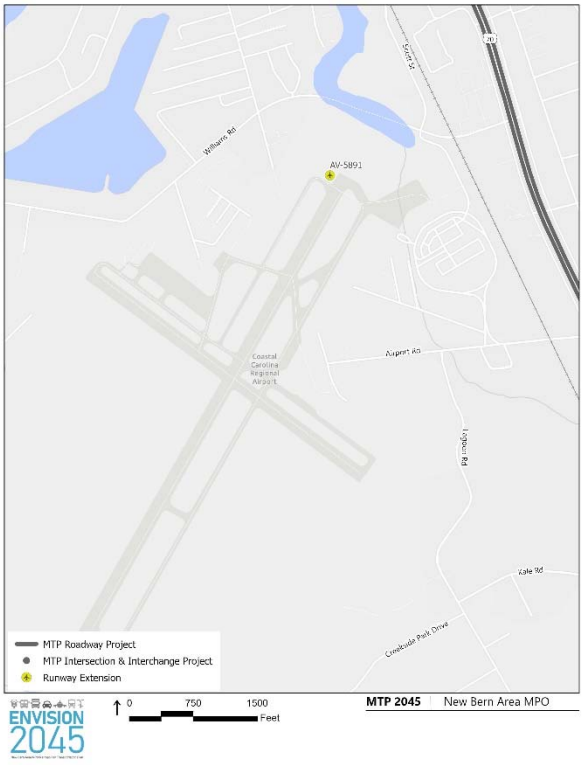
present adjacent to Bachelor Creek, which NC 43 crosses, and at the northern project area terminus along the Neuse River. Another notable feature along the project corridor includes a regional trail. Due to the numerous environmental features along the project corridor, the potential indirect effects to this variable was rated as "likely".

Conclusion

Based on the screening, indirect effects are likely with the proposed NC 43 project. With the numerous environmental features along the corridor, available land, water and sewer infrastructure, and projected growth within the next 10 years, indirect effects associated with development resulted in a ratings of "likely".[1] There were no substantial changes to date associated with the proposed project components or existing conditions from the 2016 assessment that impacted the current analysis.

Project AV-5891 – Coastal Carolina Regional Airport Runway Extension

STIP Project AV-5891 includes the construction of a runway extension at the Coastal Carolina Airport ("Airport") in order accommodate the industries trend toward larger planes.[2] To maintain the 1,000-foot clear runway safety zones, Williams Road will also need to be realigned.[3] The Airport is used for both commercial and military flight services, and growth is expected to continue. AV-5891 is expected to be complete by the horizon year 2035, and will assist in bolstering regional economic development. Based on the indirect effects screening, detailed in Table 3-4 below, this project is "likely" to result in indirect effects.



Scope of Transportation Plan Investments

Rating: Expected

The proposed runway extenstion at the Airport is part of a 20-year master plan that also includes additional facilities, jet bridges, a larger holding area, potential for more commercial vendors, an expanded terminal, and aerospace development. As indicated in the MTP, the airport is poised for growth with approximately 200 acres ready for new commercial development. It is expected that the land will be developed with a mix of aeronautical enterprises, warehouses, and light manufacturing. Therefore, this project is considered a major investment, and indirect effects are expected.

▼

[1] As detailed in the MTP, low-income and minority populations have been identified within this project area.
[2] It should be noted that there is another STIP project identified for this airport in the Final 2020-2029 STIP: AV-5808, which includes design and construction of taxiways, taxi lanes, and apron areas.
[3] Sourced from the Coastal Carolina Regional Airport Master Plan dated 2012. An update to the Master Plan is currently underway and more information can be found at: https://www.flyewn.com/.

Table 3-4 MTP-ICE Screening Matrix for Indirect Effects, Project Level – Project AV-5891 (Coastal Carolina Regional Airport Runway Extension)

Rating	Scope of Trans. Plan Investments	Macro Change in Accessibility	Forecasted Population Growth	Forecasted Employment Growth	Available Land	Water/Sewer Availability	Market for Development	Public Policy	Notable Environmental Features	Result
Greater Likelihood	High	High	> 3% annual population growth	> 3% increase New Jobs Expected	40% or greater of available land*	Services available [muni 100%; county 20% of area]	Development activity abundant	Less stringent; no growth management	Notable Feature(s): Abundant / More Sensitive	
Expected	x					x				
Likely									x	**Likely Indirect Effects**
Possible			x	x			x			
Not Likely		x			x			x		
Not Expected										
Lesser Likelihood	Low	None	No population growth or decline	No new Jobs or Job Losses	0 - 9% of available land*	Limited or no service available now or in future	Development activity lacking	More stringent; growth management	Notable Feature(s): Minimal / Less Sensitive	

Macro Change in Accessibility

Rating: Not Likely

The proposed runway extension is not expected to provide new accessibility in the area, but may allow for additional accessibility by larger aircraft. The current facility hosts approximately 250,000 passengers per year and continues to see that number grow. Therefore, overall effects due to access changes are rated as "not likely".

Forecasted Population and Employment Growth

Rating: Possible

Overall, population and employment are expected to grow in the MTP Study Area (approximately 0.8% and 0.6% annually, respectively), which would represent a rating of medium-low (not likely). However, the Airport is located in areas of the MTP with TAZs that are expected to grow, and the proposed extension will support new businesses and jobs in the area – supporiting economic growth. Therefore, a rating of "possible" was given to this specific project area for indirect effects regarding these variables.

Availabile Land

Rating: Not Likely

The Airport owns approximately 200 acres of land ready for development. However, there is not much available land identified around the airport and natural constraints include the rivers and Croatan National Forest. Therefore, overall available land is not prominent in the project area, and thus, a "not likely" rating was given.

Water and Sewer Availability

Rating: Expected

The City of New Bern provides water and sewer service to the Airport. As municipal water and sewer services are available, the potential for indirect effects was rated as "expected".

Market for Development

Rating: Possible

There has been substantial local efforts and support for implementing the Airport's 20-year master plan to grow and support economic development in the area. In addition, as previously detailed, the Airport has hunderds of acres of developable land ready for commercial use. The majority of the area around the Airport is developed with a mix of uses. Overall, due to the strong support for the project to drive economic development, this project was determined to "possible" have indirect effects related to the market for development.

Public Policy

Rating: Possible

As previously indicated, this project is part of a 20-year master plan for the Airport. In addition, local jurisdictions and the County have multiple adopted land use plans that manage growth, even though the County has a limited zoning ordinance. Therefore, this project is being planned with

growth management policies in place. As such, the potential for indirect effects was rated as "not likely" for this variable.

Notable Environmental Features

Rating: Likely

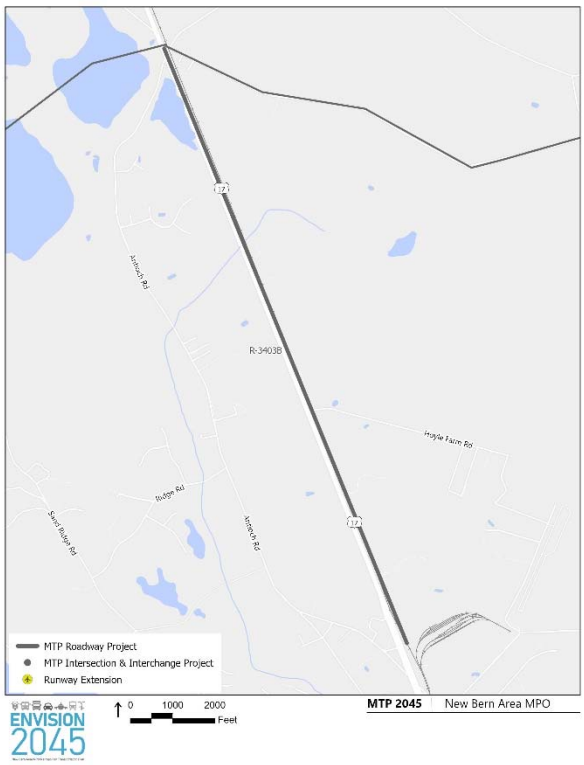
The Airport, and associated proposed runway extension, is situated between and proximate to both the Trent and Neuse Rivers. In addition, the area is identified as a local watershed. Another notable feature, the Croatan National Forest, is located just west of the Airport. Due to the numerous environmental features and associated sensitivity on or proximate to the Airport, the potential indirect effects to this variable was rated as "likely".

Conclusion

Based on the screening, indirect effects are likely with the proposed runway extension project. With the numerous environmental features in the area, scope of the project, market for development, water and sewer infrastructure, and projected growth within the next 10 years, indirect effects associated with development resulted in a ratings of "likely".

Project R-3403B – Improvements to US 17 from SR 1433 to NC 43

STIP Project R-3403B proposes to widen US 17 north of Bridgeton from Antioch Road (SR 1433) to NC 43 from two lanes to a four-lane freeway, with an associated capacity of 56,000-65,000 vehicles per day (vpd).[4] US 17 is the primary north-south transportation corridor in the Coastal Plains, connecting major economic development centers in Virginia and South Carolina with military operations, tourist destinations, and airports in eastern North Carolina. The proposed widening of US 17 and partially controlling access will increase mobility and safety, and encourage economic development along the corridor. The proposed project is expected to be complete by the horizon year 2035. Based on the indirect effects screening, detailed in Table 3-5 below, it is "possible" for this project to result in indirect effects.



[4] It should be noted that STIP Project R-2513A is adjacent to R-3403B and proposes to widen US 17 from NC 43 to Spruill Town Road (SR 1438).

Table 3-5 MTP-ICE Screening Matrix for Indirect Effects, Project Level – Project R-3403B (Improvements to US 17)

Rating	Scope of Trans. Plan Investments	Macro Change in Accessibility	Forecasted Population Growth	Forecasted Employment Growth	Available Land	Water/Sewer Availability	Market for Development	Public Policy	Notable Environmental Features	Result
Greater Likelihood	High	High	> 3% annual population growth	> 3% increase New Jobs Expected	40% or greater of available land*	Services available [muni 100%; county 20% of area]	Development activity abundant	Less stringent; no growth management	Notable Feature(s): Abundant / More Sensitive	
Expected										
Likely								x		
Possible	x		x	x	x				x	**Possible Indirect Effects**
Not Likely		x				x	x			
Not Expected										
Lesser Likelihood	Low	None	No population growth or decline	No new Jobs or Job Losses	0 - 9% of available land*	Limited or no service available now or in future	Development activity lacking	More stringent; growth management	Notable Feature(s): Minimal / Less Sensitive	

Scope of Transportation Plan Investments

Rating: Possible

Currently, US 17 in this location is a two-lane facility extending from Antioch Road (SR 1433) to NC 43. The scope of the proposed project includes widening this roadway to four lanes, which would help reduce congestion, decrease travel time, and increase reliability of the network. Therefore, this project was rated as having the possibility for indirect effects for this variable.

Macro Change in Accessibility

Rating: Not Likely

As the proposed widening of US 17 in this location is not expected to result in major changes to accessibility, and is not proposed to address access management, it was rated as "not likely" to have indirect effects associated with same . Overall, the project is expected to improve the level of servicesalong the corridor, but would not create or improve accessibility to goods and services. Therefore, effects due to access changes are "not likely".

Forecasted Population and Employment Growth

Rating: Possible

Overall, population and employment are expected to grow in the MTP Study Area at a medium-low rate (approximately 0.8% and 0.6% annually, respectively). Based on this socioeconomic data, growth is expected within the area along the majority of the project corridor and there is available land to accept this growth. As such, a rating of "possible" was given to this specific project area for indirect effects regarding these variables.

Availabile Land

Rating: Possible

The NC 43 corridor has a substantial amount of land identified as available both along and proximate to the corridor, particularly in the northeaster portion of the MPO study area. Due to the amount of available land and the anticipated growth identified in this area, a "possible" rating was given for this variable.

Water and Sewer Availability

Rating: Not Likely

Water is provided in Township 2, where the project is located, by the First Craven Sanitary District. Craven County also has some water services available. However, sewer services are very limited in the project location, north of Bridgeton. Major plans for expansion of water and sewer services to the project area are not anticipated in the near future. The City of New Bern provides water and sewer service to a portion of the NC 43 project corridor. Therefore, the potential for indirect effects was rated as "not likely" for these variables.

Market for Development

Rating: Not Likely

The US 17 project corridor is currently comprised primarily of agricultural uses, with pokets of commercial and industrial traveling south to Bridgeton. There are additional areas of residential uses west of the corridor, closer to the Neuse River. Based on the socioeconomic data, growth is expected along the majority of the corridor. However, the lack of sewer availability and targeted economic development initiatives decrease the likelihood of a strong development market in the project area. As such, this project was determined to "not likely" have indirect effects related to the market for development.

Public Policy

Rating: Possible

As the project corridor is located in Craven County, with Bridgeton being the closest jurisdiction, there is limited policy oversight regarding growth management. Craven County has a limited zoning ordinance, and focuses primarily on protecting water resources. As such, the potential for indirect effects was rated as "likely" for this variable.

Notable Environmental Features

Rating: Possible

The US 17 project corridor traverses a local watershed area. There are also some water resources, floodways, and wetlands identified primarily in the northern portion of the project corridor. However, there are no identified conservation or areas of natural significance identified along the corridor. Therefore, while there are some natural features along the corridor, the potential indirect effects to this variable was rated as "possible".

Conclusion

Based on the screening, indirect effects are possible with the proposed NC 43 project. There is available land for development, but the corridor lacks a strong market for development and infrastructure. The minimal policy oversight could result in unmanaged growth. However, the projected growth is expected at a medium-low rate. Overall, indirect effects associated with proposed project resulted in a rating of "possible".

Summary

This screening determined that the MTP projects could possibly result in indirect effects. While the proposed projects vary in size, scope, purpose and impact, there will be changes in accessibility, capacity, and travel patterns within the MTP Study Area. These potential changes combined with the area's available land, water and sewer service, and sensitivity and abundance of notable environmental features were the drivers for the indirect effects screening results. This information will be used in addition to the cumulative effects screening (Product 3/Part 2) to comprehensively evaluate potential practices that may be used to protect local resources and drive growth in a manner consistent with local goals and objectives. While many of the variables remained the same between the 2016 assessment and this assessment, the reduced change in accessibility associated with some projects being removed from the 2045 MTP fiscally-constrained project list and lower forecasted employment growth changed the result from "likely" to "possible" for indirect effects.

References

Bridgeton, Town of, North Carolina. http://www.bridgetonnc.net/

Craven County, North Carolina, CAMA Core Land Use Plan. Adopted August 3, 2009.

Craven County, North Carolina. Craven Area Rural Transit System Transit Developoment Plan. June 2017.

Craven County, North Carolina. Comprehensive Economic Development Strategic Plan. July 2013.

Craven County, North Carolina. http://www.cravencountync.gov/

Craven County, North Carolina. http://www.cravencountync.gov/departments/trn.cfm

New Bern, City of, North Carolina. http://www.newbern-nc.org/

New Bern, City of. Comprehensive Bike Plan, 2006.

North Carolina Department of Transportation. US 70 Corridor, Raleigh to Morehead City. http://www.ncdot.gov/projects/us70corridor/

North Carolina Department of Transportation, Rail Division. Comprehensive State Rail Plan – Implementing the 25-Year Vision. August 2015.

North Caroline State Historic Preservation Office GIS Web Service. http://gis.ncdcr.gov/hpoweb/

River Bend, Town of, North Carolina. http://www.riverbendnc.org/

River Bend, Town of. Town of River Bend Comprehensive Plan, November 2013.

Trent Woods, Town of, North Carolina. http://www.trentwoodsnc.org/

Technical Memorandum for 2045 New Bern MTP–ICE
Screening for Cumulative Effects
(MTP-ICE Product 3/Part 2)

Revision Date: March 2021

Date of Original Version: January 2021

This Technical Memorandum documents the 2045 New Bern Area Metropolitan Transportation Plan (MTP)-Indirect and Cumulative Effects (ICE) Screening for Cumulative Effects, and represents an update to the ICE Screening prepared for the 2040 New Bern Area MTP. This cumulative effects screening is a broad assessment, applied to the entire MTP Study Area. Documentation of screening for indirect effects (for the entire MTP Study Area and separately for specific project proposals) can be found in MTP-ICE Screening for Indirect Effects Technical Memorandum (MTP-ICE Product 3 – Part 1).

This Technical Memorandum was prepared with the assistance of the New Bern Area Metropolitan Planning Organization (NBAMPO) and NCDOT Transportation Planning Branch (TPB). This coordination helps ensure consistency between long-range planning and the National Environmental Policy Act (NEPA) process during project development.

MTP-ICE Plan-Level Screening Results for the MTP Study Area

Cumulative effects are "possible" for notable community and natural habitat features upon implementation of the projects proposed in the MTP. This rating is, in part, due to the potential for stronger protection of community features in local planning policies and ordinances. The abundance of diverse natural and habitat features in the MTP Study Area also have the potential for more local protection. These results regarding the potential for cumulative effects are the same as the results associated with the 2016 ICE Assessment for the 2040 MTP, as shown in Table 3-6 below.

Table 3-6: 2045 MTP-ICE Screening Matrix for Cumulative Effects: Plan-Level

Rating	Notable Cultural Features			Notable Community Features			Notable Water Quality Features			Notable Natural & Habitat Features			Result
Greater Likelihood	Unique Resources Not Protected / Recognized			Unique Resources Not Protected / Recognized			Unique Resources Not Protected / Recognized			Unique Resources Not Protected / Recognized			
	Past Actions	Current Activities	Future Development	Past Actions	Current Activities	Future Development	Past Actions	Current Activities	Future Development	Past Actions	Current Activities	Future Development	
Expected													
Likely				X						X			
Possible					X	X	X				X	X	Possible Cumulative Effects
Not Likely								X	X				
Not Expected	X	X	X										
Lesser Likelihood	Features Incorporated in Local Planning and Protection			Features Incorporated in Local Planning and Protection			Features Incorporated in Local Planning and Protection			Features Incorporated in Local Planning and Protection			

Notable Cultural Features

Rating	Past	Present	Future
	Not expected	Not expected	Not expected

The MTP Study Area, with its location along the coast, has played an important role in North Carolina's history. Craven County was established in 1712, with New Bern as its county seat in 1722. Craven County grew in size and importance during the mid-18th century which continued through the 19th century with the active railroad system. The area saw significant activity during the Civil War, and is home to several well-known battlegrounds.

New Bern, founded in 1710, was settled by Swiss and German immigrants, and served as a major port and trading center in the 1800s. In 1862 during the Civil War, New Bern was captured and occupied by the Union Army. The City has a strong religious history with numerous historic churches, including St. Paul's Catholic Church (the oldest Catholic Church in the State. Historic Cedar Grove Cemetery has graves of Confederates who died in the Battle of New Bern and the National Cemetery holds the remains of Union soldiers and veterans of later wars. The New Bern Academy is the oldest chartered school in the State, established by law in 1766, and served as a hospital during the Civil War.

New Bern has three recognized historic districts with homes, retail and churches dating back to the early 18th century. There are numerous sites located in New Bern that are identified on the National Register of Historic Places. Tryon Palace is a well-known historic property, built by the governor in 1770, which is used today for community events and exhibits. Single historic properties or those with potential are situated throughout the MTP Study Area. The Sloan Mansion in the Town of Trent Woods is listed on the National Register, and is important to the local community. However, New Bern is the only place within the MTP Study Area with such a high concentration of historic properties.

James City, a small community located just south of New Bern, also has a significant place in history, serving as the Civil War camp where escaped slaves came for protection from all over the Carolinas, eventually becoming the largest refuge in the state for black men and women. Over time, the area evolved into a thriving, independent community. A shift in area ownership created hardship for the community, increasing poverty, and forcing people to leave.

The jurisdictions within the MTP Study Area have had longstanding support for preserving local cultural resources. In addition to the protection provided by the National Register and State regulations, local plans place historic preservation as a priority. The *Craven County CAMA Core Land Use Plan*, dated 2009, states several objectives and policies to protect these cultural resources. Furthermore, New Bern has its own *Historic Preservation Plan* for the City overall. The community vision stated in a 2010 draft regional land use plan for New Bern, River Bend, and Trent Woods includes the importance of maintaining historic heritage. The *Comprehensive Economic Development Strategic Plan* for Craven County, dated 2013, recommends focusing on culture-based economic development opportunities existing within the County. There is also the *State of North Carolina 2013-2022 State Historic Preservation Plan: Legacy – A Gift from the Past for a Better Tomorrow*, which was prepared to "help the state's citizens, private organizations, and public agencies identify, protect, and enhance North Carolina's historic resources and communities".

Specifically in New Bern, there is additional support for the protection of cultural resources through several organizations, including the New Bern Preservation Foundation, New Bern Historical Society, and the City's Historic Preservation Commission. Overall, there is an emphasis placed on preserving cultural resources within the MTP Study Area, supporting the local economy and telling the history of the place. With all the support in place for this preservation, a rating of "not expected" was given for cumulative effects to notable cultural features for past, current, and future actions, which is the same result as the 2016 ICE assessment associated with the 2040 MTP.

Notable Community Features

Rating	Past	Present	Future
	Likely	Possible	Possible

As the MTP Study Area encompasses several jurisdictions and portions of Craven County, with over 80,000 people, there are numerous community features located throughout to service the population. The majority of these features are located within or in close proximity to the jurisdictions. Some examples of the community features in the MTP Study Area include: government complexes, public schools, Craven County Community College, Craven County Regional Medical Center, parks and recreational programs, beach/boating access, Craven County Regional Airport, emergency operation centers, senior centers, churches, regional trails and bicycle routes.

Providing transportation options has become a major priority for the jurisdictions within the MTP Study Area, so greenways, trails, bike lanes, and sidewalks are garnering more attention and more protection. The MTP is proposing numerous bicycle projects to expand this community feature. New Bern has adopted a *Comprehensive Pedestrian Plan* and *Comprehensive Bike Plan*. The *Craven County CAMA Core Land Use Plan* also prioritizes community facilities, and includes several objectives for improving/protecting them. Craven County does not have any regionally significant parks, but instead has locally significant parks. Most of the jurisdictions within the MTP Study Area have a Parks and Recreation Department that maintains these community features.

As many of the locally-adopted plans place importance on community features and more policies are progressing to protect and/or expand these features, a rating of "possible" was given for present and future actions. Stronger policies and recognition would assist in preserving the existing community features and adding new features. These are relatively current plans and policies, so past actions were rated as likely for cumulative effects. It should be noted that some of the current plans are getting old, and jurisdictions should prioritize updating these plans where important resources and protection of same is documented.

Notable Water Quality Features

Rating	Past	Present	Future
	Possible	Not Likely	Not Likely

Water resources are abundant in the MTP Study Area, being located along the coast, with the Neuse River traversing north south to join the Pamlico Sound, the Trent River traversing through the middle of the Study Area, several streams, substantial wetland areas, and watersheds. The jurisdictions within the MTP Study

Area prioritize protecting the quality of these water resources. The *Craven County CAMA Core Land Use Plan* includes "improvement/protection of water quality" as a key issue. Craven County includes portions of the Tar-Pamlico, Neuse, and White Oak River Basins. Each of these basins has a River Basinwide Water Quality Plan, which Craven County follows. In addition, based on input from Craven County, it uses its zoning ordinances to protect water quality. The Neuse River Estuary is listed in the North Carolina 2014 Clean Water Act 303(d) list for water quality impairments for aquatic life and fish consumption due to algal growth and mercury.

Each of the municipalities within the MTP Study Area focus on educating residents about stormwater management and protecting water quality. For example, Trent Woods provides a brochure for residents on the Town website that provides best management practices (BMPs) for protecting water quality and preventing runoff. New Bern has a city-wide stormwater management program. There are also protections for water quality through state and federal regulations.

Overall, while there are substantial water resources in the MTP, a rating of "not likely" was given to present and future actions due to the strong policies and regulations in place to protect water quality. A rating of "possible" was given to past actions primarily due to the recent prioritizing of stormwater management from local jurisdictions. This represents the same result as the 2016 ICE Assessment for the 2040 MTP.

Notable Natural & Habitat Features

Rating	Past	Present	Future
	Likely	Possible	Possible

The MTP Study Area, rich with notable environmental features supports many natural habitats. There are several identified Natural Heritage Areas, primarily located along water bodies and within the Croatan National Forest. These areas are defined by the NC Natural Heritage Program (NHP) as having special biodiversity significance due to the presence or rare species, unique natural communities, important animal assemblages, or other ecological features. Some areas have been protected through available conservation programs (Conservation Tax Credit, Land & Water Conservation Funds). The NHP also collects information on occurrences of rare plants, animals, natural communities, and animal assemblages, and identifies the location of these as element occurrences. The majority of the Natural Heritage Element Occurrences identified within the MTP Study Area are located within the Natural Heritage Areas.

Based on the most recent US Fish & Wildlife Services (USFWS) list of endangered, threatened, and candidate species for Craven County (10/08/20) and National Marine Fisheries Service (NMFS) there have been several changes since the 2016 ICE Assessment. The table below provides current details on the USFWS and NMFS list (see Table 3-7).

Table 3-7: Federally Listed Species List

Scientific Name	Common Name	Federal Status
Vertebrate:		
Alligator mississippiensis	American alligator	Threatened*
Laterallus jamaicensis	Black rail	Threatened
Noturs furiosus	Carolina madtom	At Risk
Chelonia mydas	Green sea turtle	Threatened
Dermochelys coriacea	Leatherback sea turtle	Endangered
Necturs lewisi	Neuse River waterdog	At Risk
Myotis septentrionalis	Northern long-eared bat	Threatened
Picoides borealis	Red-cockaded woodpecker	Endangered
Calidris canutus rufa	Red knot	Threatened
Hetrodon simus	Southern hognose snake	At Risk
Trichechus manatus	West Indian manatee	Endangered
Acipenser brevirostrum	Short-nosed sturgeon	Endangered
Acipenser naccarii	Atlantic sturgeon	Endangered
Vascular Plant:		
Ludwigia ravenii	Raven's seedbox	At Risk
Lysimachia asperulaefolia	Rough-leaved loosestrife	Endangered
Aeschynomene virginica	Sensitive joint vetch	Threatened
Asplenium heteroresiliens	Venus fly trap	Candidate

* Due to similarity of appearance to crocodiles

In addition, Eagle nests, Colonial waterbird colonies, and gull-tern-skimmer colonies are present in the MTP Study Area. Working with resource agencies on avoidance and minimization plans can provide protection for these species.

The NHP has also assessed the biodiversity and wildlife conservation value based on numerous variables compiled from different resource agencies, including but not limited to Natural Heritage Areas, element occurrences, important bird areas, wetlands, high quality waters, and stream bioclassification. These values are a representation of high integrity ecosystems that may garner protection to conserve native biodiversity. There are a few areas within the MTP Study Area that are highly ranked for conservation value by this assessment.

The NHP serves to identify rare species and natural communities as a way to make recommendations and facilitate potential future protections of natural features. No past or present official legal protections exist to protect most of the natural heritage sites and/or plants and animal species in the MTP Study Area. With state

and nationally-recognized natural features, these *Notable Natural Habitat Features* have been given "likely" to "possible" ratings due to the lack of protection in local planning regulations, similar to the results of the 2016 ICE Assessment.

Summary

The cumulative effects of the overall MTP plan, when considered in the context of other past, present, and future actions are "possible" to community and natural features. The potential direct natural environmental impacts by the proposed projects would require avoidance, minimization, and mitigation, consistent with prevailing regulations and coordination with environmental resource agencies. In addition, the MTP's proposed projects and future development would be required to follow federal, state and local regulations for protecting resources. Future growth (medium-low rate) is expected within the MTP Study Area, and it is anticipated that the projects proposed in the MTP will spur some development. Best management practices (BMPs) by local jurisdictions may support the protection of these important resources and manage the anticipated growth. The next step in this ICE Assessment (Product 4) is to provide recommendations on these BMPs.

References

Bridgeton, Town of, North Carolina. http://www.bridgetonnc.net/

Craven County, North Carolina, CAMA Core Land Use Plan. Adopted August 3, 2009.

Craven County, North Carolina. Comprehensive Economic Development Strategic Plan. July 2013.

Craven County, North Carolina. http://www.cravencountync.gov/

National Marine Fisheries Service. Endangered and Threatened Species. Threatened and Endangered Species Directory Page | NOAA Fisheries.

New Bern, City of, North Carolina. http://www.newbern-nc.org/

New Bern, City of. City of New Bern Pedestrian Plan.

New Bern, City of. Comprehensive Bike Plan, 2006.

New Bern, City of. New Bern Historic Preservation Plan.

New Bern, River Bend, and Trent Woods Regional Land Use Plan (Final Draft), October 2010.

North Carolina Conservation Planning Tool. http://portal.ncdenr.org/web/cpt/cpt-report

North Carolina Department of Environmental Quality, Division of Water Resources. http://portal.ncdenr.org/web/wq/ps/csu/303d

North Carolina Natural Heritage Data Explorer. https://ncnhde.natureserve.org/

North Carolina Natural Heritage Program. http://www.ncnhp.org/

North Carolina State Historic Preservation Office GIS Web Service. http://gis.ncdcr.gov/hpoweb/

North Carolina, State of. State of North Carolina 2013-2022 State Historic Preservation Plan: Legacy – A Gift from the Past for a Better Tomorrow.

River Bend, Town of, North Carolina. http://www.riverbendnc.org/

Trent Woods, Town of, North Carolina. http://www.trentwoodsnc.org/

United States Fish and Wildlife Services. Endangered Species (10/08/20). http://www.fws.gov/endangered/

Technical Memorandum for 2045 New Bern MTP–ICE Best Management Practices Recommendations (MTP-ICE Product 4)

Revision Date: March 2021

Date of Original Version: January 2021

This Technical Memorandum documents the 2045 New Bern Area Metropolitan Transportation Plan (MTP)-Indirect and Cumulative Effects (ICE) Best Management Practices Recommendations and was prepared with the assistance of the New Bern Area Metropolitan Planning Organization (NBAMPO) and NCDOT Transportation Planning Branch (TPB). This coordination helps ensure consistency between long-range planning and the National Environmental Policy Act (NEPA) process during project development. Recommendations outline strategies that local governments may implement in order to minimize potential indirect and cumulative effects from proposed transportation projects. This technical memorandum builds off the ICE Assessment prepared for the 2040 MTP. Implementing one or more of these strategies to protect important natural and community resources may assist in streamlining future transportation project delivery, as project permitting focuses on avoiding and minimizing effects to resources in the vicinity of proposed projects.

Overview

The MTP-ICE Assessment evaluated the proposed projects in the 2045 NBAMPO MTP for potential indirect and cumulative effects. This evaluation was conducted for the entire MTP Study Area (Plan-Level Screening) and also for selected individual proposed projects (Project-Level Screening). There were some projects removed from the 2045 MTP that were included in the 2040 MTP and shown as "unfunded", which reduced the overall scope of the transportation investments between the two MTPs. Overall, the 2045 MTP was determined to have a reduced potential for indirect and cumulative effects when compared to the 2040 MTP. However, the findings indicated possible cumulative effects to notable community features and natural features in the MTP Study Area. These possible effects, which are documented in Products 1, 2 and 3, are based primarily on the amount of land available for development, water/sewer infrastructure, development market, and notable environmental features in the MTP Study Area combined with the forecasted growth (population and employment), existing public policy, and scope of the project proposals in the MTP. As described in Product 3, cultural resources and water quality features seem to be well protected through policy and development regulations in the MTP Study Area. This Technical Memorandum outlines several tools that could be used by the jurisdictions within the MTP Study Area (i.e., City of New Bern, Town of Bridgeton, Town of Trent Woods, Town of River Bend, and Craven County) to assist in minimizing potential indirect and cumulative effects from proposed projects in the 2045 NBAMPO MTP.

Land Use and Growth

Overall, as documented in Product 1, there are more than 39,000 acres of land available for development in the MTP Study Area (i.e., approximately 44 percent of the land is categorized as developable). The municipal areas have close to 100 percent water and sewer coverage, while Craven County has some areas with service (estimated at approximately 15 percent). The majority of the growth is projected in areas where

water and sewer are available. Based on review of local plans and initiatives, long-term economic development is a priority and the market for commercial, industrial and residential development continues to grow. The planned growth at the Coastal Carolina Regional Airport is of particular interest over the next 20 years.

The MTP Study Area has an abundance of sensitive notable environmental features, as detailed in Product 1, and a variety of land uses and population centers. The important natural features, including surface water, the Croatan National Forest, and conservation areas in the MTP Study Area constrain potential development to within municipal boundaries and along existing transportation corridors.

Although there are pockets of available land within the municipalities in the MTP Study Area that provide opportunities for in-fill development, most of the available land is outside the municipal boundaries. Much of this available land is identified as being used for agricultural or service purposes, which do not have the same development potential as available land situated within more urban areas or along transportation corridors. As detailed in Product 2, maintaining agricultural land in the MTP Study Area is a priority based on the revenues generated, economic opportunities, and compatibility with the active military operations just south of the MTP Study Area.

The following strategies, which have been successful in other parts of North Carolina and across the country, could assist in minimizing the potential indirect and cumulative effects resulting from the proposed MTP projects and land development. Website links are provided for additional information.

Smart Growth

Smart Growth strategies have been successful at conserving natural land and sensitive environmental areas and creating great communities. There are ten basic Smart Growth principles that guide the approach, two of which are specific to the growth and land use in the MTP Study Area:

- Preserve open space, farmland, natural beauty, and critical environmental areas, and
- Strengthen and direct development towards existing communities.

The focus of Smart Growth is to create locally-based, long-term conservation plans to protect the environment and preserve important elements of the local culture and economy, rather than using a reactive preservation strategy often creating small fragments of conserved land. There are 200 implementation policies for local governments to use in the *Getting to Smart Growth* publications. For example, the jurisdictions within the MTP Study Area may want to consider implementing agricultural districts for some of the more important agricultural areas, which primarily exclude incompatible land uses (i.e., suburban development); adopting a green infrastructure plan, prioritizing open space that should be protected and identifying open space appropriate for development; and implementing zoning tools, such as incentive zoning and cluster development zoning to preserve important resources.

Directing development towards existing communities is crucial in preserving sensitive environmental areas. The City of New Bern has inventoried existing brownfields (i.e., property where there is a presence or potential presence of a hazardous substance, pollutant, or contaminant) located within the City boundaries in their *Brownfields Inventory*, dated October 2010. The City should advertise the development opportunities and available grant funding (State and Federal) associated with brownfield redevelopment. An "infill checkup" is another proactive opportunity to identify and prioritize infill sites available for redevelopment, and understand if there are any obstacles that are preventing investment. Economic

incentives provided by local jurisdictions have also been successful at directing investment into areas with existing infrastructure or revitalization areas, such as favorable lending terms, direct grants, tax abatements, density bonuses, and expedited permitting treatment. Refer to website links below for additional information.

There are also Growing Smart resources published by the American Planning Association (APA) that focus more specifically on changes in planning statutes or procedures. There are examples of innovative approaches to legislative reform or new legislation.

Hazard planning is particularly important in the MTP Study Area, which already occurs at the County level. This hazard planning is anticipated to become more necessary in the future, particularly in coastal communities. The APA has numerous hazards planning resources, including planning for protection and post-disaster recovery. The NC Department of Environmental Quality (NCDEQ) is currently accepting applications for funding to assist NC coastal communities facilitate a community-driven process to set resilience goals, assess need and capacity, and create projects to enhance community resilience to coastal hazards. The first phase will focus on risk and vulnerability assessments, with project prioritization, design, and implementation to follow.

http://www.epa.gov/smartgrowth/about-smart-growth
http://www.epa.gov/smartgrowth/getting-smart-growth-100-policies-implementation
Model Statutes for Planning and the Management of Change (planning-org-uploaded-media.s3.amazonaws.com)
Growing Smart User Manual (planning-org-uploaded-media.s3.amazonaws.com)
Hazards Planning
NC DEQ: N.C. Resilient Coastal Communities Program

Revise Zoning Ordinances

The desire for economic growth and protecting natural resources are priorities for the jurisdictions within the MTP Study Area. Implementing zoning ordinances that promote mixed-use development and guide growth to specific areas can create more connectivity, compact development, and a greater identity for the community. Form-based zoning (i.e., regulating physical form rather than land uses), unified development ordinances (UDOs), and mixed-use ordinances have been successful in fostering development and protecting natural resources, with several examples in North Carolina (e.g., City of Raleigh, Town of Garner, Town of Apex, City of Winston-Salem, City of Greensboro, Currituck County, and Wake County).

These zoning ordinances, with a focus on regulating the form of the built environment, differ from conventional zoning, which primarily controls land use and density. Rather, these ordinances describe what the community wants instead of what the community does not want. In addition, these ordinances are created through a comprehensive visioning process and community engagement. The City of New Bern has several small area plans that focus on placemaking/keeping. Generally, development under these ordinances incorporates diverse architecture, materials, and uses, and promote infill that is compatible with the existing community character. Overall, these ordinances provide a comprehensive approach to land use regulation and streamline the development process. It is important to understand that the creation of these ordinances can be costly and gradual due to the stakeholder involvement and effort required in drafting standards and regulations. Another option is to create a pattern book to direct design and development. Pattern books provide community character data and guidelines to steer development efforts and protect important resources and enhance their identity. These pattern books can include regulations or just offer suggestions. Refer to website links below for additional information.

https://www.planning.org/divisions/planningandlaw/propertytopics.htm
https://www.planning.org/planning/2004/nov/formfirst.htm
http://formbasedcodes.org/definition
Residential Pattern Book | Roanoke, VA

Farmland Protection

There are additional land use and growth tools specific to farmland protection. As previously mentioned, the MTP Study Area includes a substantial amount of farmland, which is important to the local economy and culture. As detailed in Product 2, there are existing agricultural preservation tools available in Craven County and the Department of Defense (DoD) provides funding assistance for some of the working lands within the MTP Study Area. The use of voluntary agricultural districts (VADs) and Enhanced VADs (EVADs), which include conservation overlays, exists withing the MTP Study Area. Craven County has also published recommendations for expanding the existing agricultural preservation tools in its *Agricultural Development Plan adopted in 2013*.

In addition to these tools, the jurisdictions within the MTP Study Area may find focusing on Purchase of Development Rights (PDR) and Transfer of Development Rights (TDR) programs helpful in protecting farmland. TDR programs have been successful in communities with rapid development of rural and undeveloped land, as they preserve the rural area, focus compact growth in developed areas, and compensate property owners for the development potential of their property. The agricultural property is preserved through the landowner severing development rights (sending area) in exchange for compensation from another landowner who wants increased development rights (receiving area) (e.g., preserving agricultural property to allow increased density on another property).

These programs may be especially useful in Craven County and the City of New Bern, as there is some projected growth in agricultural areas and available land along transportation corridors (e.g., NC 43 and US 17), as illustrated in Products 2 and 3, which may provide TDR opportunities. The success of TDR programs is based on purchasers of the development rights – there must be a demand for higher density development in the receiving area. Refer to website links below for additional information.

https://www.planning.org/divisions/planningandlaw/propertytopics.htm
http://www.ctnc.org/protect/info-nc-landowners/land-protection-programs/protecting-farmland/
http://www.farmlandinfo.org/policies-programs
http://www.cdc.gov/healthyplaces/healthtopics/healthyfood/farmland.htm

Natural Resources

The MTP Study Area has an abundance of sensitive natural resources, with a few areas highly ranked for conservation by the NC Natural Heritage Program (NHP). Approximately 39 percent of the MTP Study Area is wetlands; the Croatan National Forest and several identified Natural Heritage Areas are also present. Some areas are currently protected through available conservation programs (e.g., Conservation Tax Credit, Land & Water Conservation Funds). There are several federally-listed species under the Endangered Species Act in the MTP Study Area. No past or present official legal protections exist to protect most of the natural heritage sites and/or plants and animal species in the MTP Study Area.

Local land use plans include general policies to protect wetland, estuarine systems, and areas of environmental concern. With the projected growth, current and expected development, and proposed

transportation projects, the local jurisdictions may find the following tools/resources helpful in managing growth and protecting these natural resources.

Green Growth Toolbox

The Green Growth Toolbox, developed by the North Carolina Wildlife Resources Commission (NCWRC) can assist the jurisdictions within the MTP Study Area to identify and conserve priority wildlife habitats and natural resources while accommodating planned growth. The toolbox provides North Carolina-specific conservation data, which can be mapped and used for visioning, plan development, ordinances, and site/development review. For example, a map of the conservation data can be prepared to visualize the best potential areas for incentives and ordinances. In addition, conservation recommendations are provided in the Green Growth Toolbox, based the NCWRC's *Conservation Recommendation for Priority Species and Habitats* (2012) and *Guidance to Address Cumulative Impacts* (2002). These recommendations include conservation and management, buffers, connections, and healthy ecosystems, for during construction and post development. This resource also provides numerous examples of local planning documents, ordinances, and incentives from NC communities varying in size and location. Refer to website links below for additional information.

Another useful resource for the County, local jurisdictions, and MPO is NCDOT's ATLAS (Advancing Transportation through Linkages, Automation, and Screening), particularly when evaluating transportation infrastructure projects. ATLAS provides a central repository for hundreds of GIS-based data sets from across the state on water resources, protected species, historic resources, utilities, traffic, and right-of-way, in addition to many other topics. This searchable tool can be used to screen transportation projects against spatial project data for potential effects.

http://www.ncwildlife.org/Conserving/Programs/GreenGrowthToolbox/ConservationData.aspx
http://www.ncwildlife.org/Conserving/Programs/GreenGrowthToolbox/ConservationRecommendations.aspx
Project Atlas (ncdot.gov)

Green Infrastructure Planning

The MTP Study Area, with important natural features, substantial wetlands, a national forest, numerous water bodies, and communities that are focused on growth and economic development, would be a good candidate for implementing green infrastructure planning strategies. The basis of green infrastructure planning is understanding the interrelated features of a community and how the health of these features dictate the health of the community. It is recognizing as a community that the built environment and ecological environment are connected. Green infrastructure planning has been used as a flexible and comprehensive planning tool, identifying local ecological systems composed of core areas, hubs, and corridors – all critical for habitat protection.

Virginia has been successful in using green infrastructure planning to identify and preserve important natural features. Many of the Virginia municipalities have used grants and technical assistance awarded by the Virginia Department of Forestry and the USDA Forest Service Southern Region through the Green Infrastructure Center (GIC). The North Carolina Forest Service provides assistance to NC communities interested in green infrastructure planning. Johnston County has the Johnston County Natural Resource Initiative (JCNRI) to develop and promote strategies for the conservation of natural resources. The NC Forest

Service led an assessment as part of this initiative to identify and highlight the natural resources of the county.

Green infrastructure planning could assist the MTP Study Area jurisdictions in protecting farms and forests, visualizing their future, prioritizing financial resources, providing predictability for developers and conservationists, supporting a variety of ecosystems, and facilitating tourism focused on the area's abundance of natural resources. In addition, green infrastructure planning identifies potential mitigation areas within the local community prior to new development and/or transportation projects being proposed. Refer to website links below for additional information.

https://www.planning.org/pas/memo/open/may2009/
http://www.conservationfund.org/what-we-do/strategic-conservation-planning
https://www.environment.fhwa.dot.gov/ecological/eco_entry.asp
https://www.environment.fhwa.dot.gov/integ/index.asp

Habitat Cohesion and Protection

To truly preserve the sensitive natural habitats in the MTP Study Area, jurisdictions need to ensure that there is an overall plan for this protection, as it is crucial to maintain cohesive habitats rather than fragments. Local ordinances primarily focus on protection of wetlands and water bodies, but many times refer back to federal and state regulations. To ensure quality habitat is preserved, a comprehensive evaluation of habitat in the area should be conducted, and areas prioritized for protection. The National Oceanic and Atmospheric Administration (NOAA) created a Landscape Fragmentation Tool that maps types of fragmentation present for a specific land cover, and illustrates the amount of fragmentation present in a landscape. This information can then be used to evaluate potential habitat impacts.

A combined effort by the jurisdictions within the MTP Study Area to map important resources and use the Landscape Fragmentation Tool map layers to understand the fragmentation present would prepare a usable baseline for existing conditions. This baseline could be used to identify priority areas for protection and monitor future fragmentation. Based on this assessment, the MTP Study Area jurisdictions can use a mix of land use and growth tools to protect the prioritized natural habitats. Refer to website links below for additional information.

http://www.ncwildlife.org/Conserving/Programs/HabitatConservationProgram.aspx
http://www.beginningwithhabitat.org/toolbox/wetlands_wl.html
https://coast.noaa.gov/digitalcoast/tools/lft?redirect=301ocm

Incorporate Resources into Local Plans

Overall, the resources (community or natural) that are locally important should be incorporated into and prioritized in local plans (i.e., comprehensive plans, local and regional land use plans, neighborhood plans, and resource-specific preservation plans). There are federal and state regulations that protect some resources, but those resources that define a place, attract people to the community, support the economy, and provide diverse habitat need a high level of visibility and local protection. Several of the tools in this report (e.g., Green Growth Toolbox, Landscape Fragmentation Tool, and brownfields inventory/infill checkup) provide mechanisms for assessing existing conditions and prioritizing resources, which is necessary to understand the value. Once resources are prioritized, these should be included into updates and new local plans. During the preparation of this ICE Assessment update from the 2040 MTP to the 2045 MTP

numerous local plans have aged out of relevancy and usefulness for continuing to plan for the future. It is recommended that the local jurisdictions evaluate the age and relevancy of the local plans and ensure important resources are protected. Implementing actions to protect the locally-important resources are essential to include in the plans. Many of the tools provide model development ordinances and examples of local plans for specific resource protection that the MTP Study Area jurisdictions can use as guidance. Another strong recommendation is to incorporate equity and sustainability components into all the plan updates.

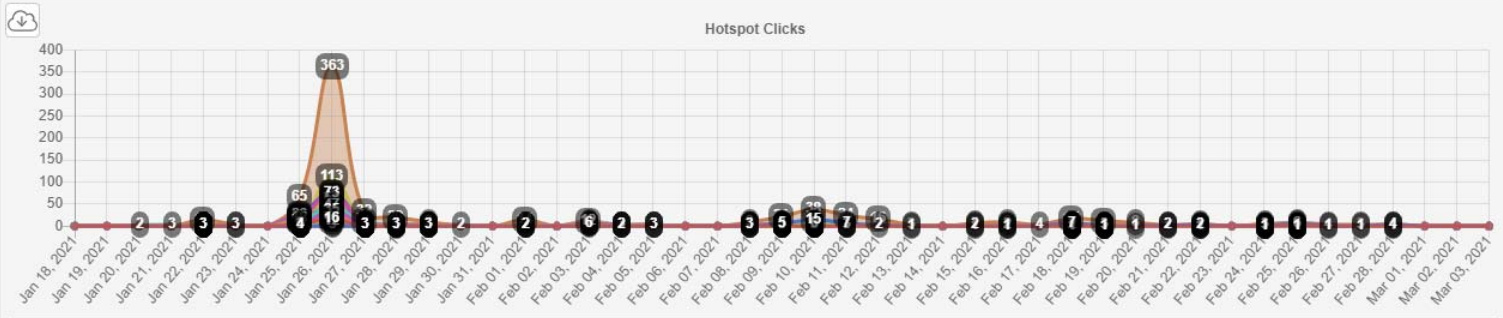
Summary

There are numerous resources and tools available to assist the MTP Study Area communities achieve their vision. These resources continue to grow and evolve as success stories are documented in other locations and new information is discovered. Many of these tools are provided by resource agencies, which focus on balancing growth and resource protection. Some resources provide not only planning guidance, but funding opportunities, and grant-writing assistance for local communities. Technology continues to improve, and planning is becoming more data driven. Take advantage of these innovations, for both understanding the existing conditions of your community, determining performance measures, and tracking through dashboards that can be shared with the public.

Starting with an accurate baseline of what the community has and wants is crucial to using the correct tools and reaching a successful outcome. The MTP Study Area jurisdictions have put forth substantial effort in preparing local and regional plans that describe existing conditions and state goals and objectives. The environmental features of the MTP Study Area largely create its unique character and attract a considerable number of tourists and residents to the area. Protecting these features and directing growth to specific areas may create additional growth opportunities, such as ecotourism and retirement communities which represent potential future economic growth areas that may benefit the MTP Study Area. Planning resources are available for these notable defining characteristics of a community to individual growth sectors. Using these resources, which provide lessons learned and example documents from similar communities, will assist in reaching the goals of the MTP Study Area communities.

Appendix F: Public Participation

Hotspot Click Report | 035-NBAMPO | NBAMPO MTP | 2021-1-18 - 2021-3-3 | EXPORT CSV | UTM Filters



733 NBAMPO MTP - Welcome Image (Image: Welcome_v3)

145 NBAMPO MTP - Proposed Projects

133 NBAMPO MTP - (Full URL: https://vhb.zoom.us/j/97109438395?pwd=TVhuUlAzNnpSN1c4cmV0NEVYczRqUT09)

117 NBAMPO MTP - NBAMPO 2045 Envision Interactive Map

113 NBAMPO MTP - Vision, Goals, & Objectives

109 NBAMPO MTP - Meeting & Project Overview

75 NBAMPO MTP -

75 NBAMPO MTP -

68 NBAMPO MTP - Indirect & Cumulative Effects Assessment

68 NBAMPO MTP -

63 NBAMPO MTP - (Full URL: https://www.nbampo.org/mtp-update)

54 NBAMPO MTP - Meeting Room (Full URL: https://vhb.zoom.us/j/97109438395?pwd=TVhuUlAzNnpSN1c4cmV0NEVYczRqUT09)

52 NBAMPO MTP -

51 NBAMPO MTP -

46 NBAMPO MTP - - *Rich Text Content

37 NBAMPO MTP - Please Provide Comments

32 NBAMPO MTP -

30 NBAMPO MTP -

27 NBAMPO MTP -

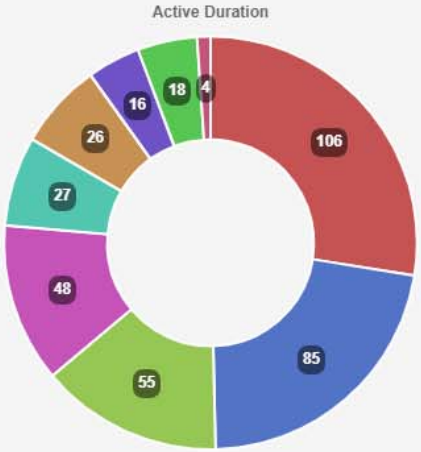
21 NBAMPO MTP - Welcome Audio (Audio: Campo Welcome)

15 NBAMPO MTP -

12 NBAMPO MTP - Meeting Room

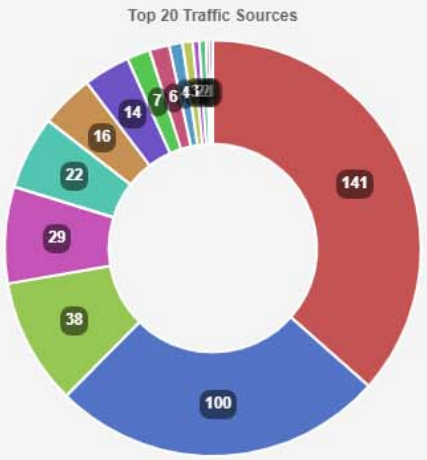
6 NBAMPO MTP - Investment Strategy

Active Duration Report | 035-NBAMPO | NBAMPO MTP | 2021-1-18 - 2021-3-3 | EXPORT CSV | UTM Filters



106	0 to 10 seconds
85	11 to 30 seconds
55	31 to 60 seconds
48	1 to 2 minutes
27	2 to 3 minutes
26	3 to 5 minutes
16	5 to 10 minutes
18	10 to 30 minutes
4	30+ minutes

Traffic Sources Report | 035-NBAMPO | NBAMPO MTP | 2021-1-18 - 2021-3-3 | EXPORT CSV | UTM Filters



141	(direct)
100	https://www.nbampo.org/
38	https://vhb.zoom.us/
29	https://www.nbampo.org
22	http://m.facebook.com/
16	http://m.facebook.com
14	https://l.facebook.com/
7	https://vhb.zoom.us
6	https://www.nbampo.org/mtp-update
4	https://t.co/
3	https://cards-frame.twitter.com/
2	https://l.facebook.com
2	https://vhb.zoom.us/j/97109438395?pwd=TVhuUlAzNnpSN1c4cmV0NEVYczRqUT09
1	https://www.linkedin.com/
1	https://www.nbampo.org/mtp-update?fbclid=IwAR1LdIBjHrDPHC-ZE2M5BR8Y-ch8JyMKuagz8r_ttV4ZiEeLDsrA5lyyw6U

NBAMPO MTP (2045 Envision): Public Comments Received

	Commentor	Contact Information	Receipt Date	Responder	Comments	Response
1	Julia Shankin	julia.shankin@gmail.com	1/26/2021	NBAMPO	I joined the zoom call at 4:00 in order to talk about the various impacts that the James City superhighway MTP would have on the surrounding community and was extremely disappointed in the Webinar Q&A session. While the presentation showed that great attention had been placed in assessing the impact that the superhighway would have on the environment, disadvantaged communities, biking and pedestrian paths, and more, there was no actual information available on WHAT these impacts would be. In the Q&A session, every relevant question about subsequent results of the highway expansion was deflected as being "beyond the scope of this project." If this project does not include mitigating damage to the environment, establishing functional public transportation, uplifting communities of color and low-income communities, increasing community connections, building accessibility for pedestrians and bikers, and considering the long-term needs of the community as a whole, then what is this project for?? Expanding the highway will temporarily decrease traffic congestion, but history has shown that increasing populations and mobilization will simply result in the same problem a few years down the line. Instead, energy and funding should be directed at producing systems that will decrease dependency on cars and build public spaces to support the community and local economy.	You attended the virtual public engagement meeting held by the New Bern Area MPO at the end of January. I understand you had some concerns about the widening of Highway 70 through James City, and were frustrated with the lack of response pertaining to that project during the meeting question and answer. The virtual meeting was held to discuss the long-range transportation plan being presented to citizens. It was not designed to discuss specific projects, so my apologies if that was not adequately conveyed. The upgrade of US 70 through James City has been an effort for more than 5 years. The NCDOT, the NBAMPO and numerous consulting firms did an extensive public engagement process with the residents and business owners in James City that spanned more than 2 years, wrapping up just last year. The impacts to the environment will be minimal through James City, as the new roadway will follow the existing infrastructure. Some businesses in James City are being impacted, with many having already moved to new locations, or are in the process of doing so. The impacts to residents in James City will also be minimal, as again, the improvements will be made along the existing corridor. Bicycle and pedestrian facilities are part of the project improvements, and will be constructed along access roads and will connect under the planned bridge expanses to ensure residents in the area have safe and efficient means to walk and bike within their community. The improvements to this portion of Highway 70 align with a statewide effort to upgrade this corridor to interstate standards. This portion of James City poses an extremely high safety risk, and these improvements will make traversing this area safer and more efficient for all modes of transportation. While I understand your support at decreasing dependency on cars, we must consider the traffic volumes, freight movements and infrastructure support of our military bases as well. The planned improvements to James City will provide economic development growth, safe connections for all modes of traffic and continue the needed support of businesses and residents alike. We appreciate your comments and your attendance of the virtual meeting in January. If you would like to discuss further, please don't hesitate to contact me.
2	Andie D'Angelo	dangeloandie@gmail.com	1/26/2021	NBAMPO	I would like to see increased access to public transportation, specifically, an active bussing system that connects major areas of the county together (I.e. connects downtown new bern to shopping on MLK, connection between new bern, james city, and havelock. Increased access to bike lanes is critical to developing safe and environmentally friendly infrastructure. I hope to see more bike lanes that allow travel across major bridges and highways in the county.	Thank you for taking the time to read our updated long range transportation plan and providing feedback. The NBAMPO supports the efforts for increased bicycle and pedestrian safety and connectivity and have included these facilities on all future corridor improvements where appropriate. For example, improvements to the Glenburnie exit along current US70, and upgrades to Glenburnie between Elizabeth Avenue and McCarthy Blvd. include safe bicycle and pedestrian facilities. Recently, the NBAMPO helped Bridgeton and River Bend with new bicycle/pedestrian plans, and is working with the City of New Bern to update their plan in the coming year. The City of New Bern recently updated their Land Use Plan and now requires any existing business making changes and all new construction to include a sidewalk along their property. Important to note, all bicycle and pedestrian updates require buy-in from city/local officials. The State will pay 80% of the infrastructure cost, but the City or Township must pay the remaining 20%. Therefore, while we can create and support the best laid infrastructure, without the support of community leaders willing to provide the 20% match, even those plans cannot move forward. CARTS operates independently from the New Bern Area MPO, and is run by Craven County, but the MPO works alongside CARTS to ensure cooperative planning. CARTS completed a Transportation Development Plan a few years ago, but unfortunately, some of the phased route improvements have taken more time to complete. We recognize the need for improved transit services within our area and will continue to support that effort and CARTS within our role and requirements as a Metropolitan Planning Organization. Our board members are comprised of CARTS members, Craven County personnel as well as commissioners and Aldermen from each jurisdiction, so communication is open and improved transit services is a frequent topic of discussion. The Brices Creek Road Connector project is a potential future project that was included from the Craven County CTP (Comprehensive Transportation Plan). The CTP has not yet been finalized due to COVID-19 delays on public meetings. Environmental studies were not conducted when formulating this plan, but prior to implementing any future projects, a detailed study would be completed in cooperation with the appropriate environmental resource agencies. This project has been presented as an evacuation route for those living in the Brices Creek area, who currently have limited options for safely and quickly evacuating during a hurricane or other event. The MTP document is a fiscally constrained document and is updated every five years. Public input is included in the final document and taken into consideration for future projects. We thank you again for your participation, and we encourage you to share your vision with your Alderman and Commissioners as well.
3	Ben Lindemann	ben.lindemann77@gmail.com	1/25/21 4:21PM	NBAMPO	When will New Bern get side walks that are fully connected & also three foot bike lanes? People need safe alternate means of getting around & also safe means to exercise with fearing for there lives.	Discussed during public meeting & responded to down below.
4	Keith Boulware	keboulware1@juno.com	1/25/21 6:36PM	NBAMPO	I tried to figure out who determined the 2045 plan? Also when would a future review occur to see how accurate the 2045 plan is going?	Discussed during public meeting.
5	Debbie Gent	d.gent3@suddenlink.net	1/25/21 9:30PM	NBAMPO	How is this going to affect our already heavily traveled and worn down small "cut threw" roads.	Discussed during public meeting & responded to down below.
6	Liz Fieschko	liz.fieschko@gmail.com	1/26/21 9:27AM	NBAMPO	What are the furute plans for bike routes? How will city planning be done in an equitable and socially-and racially-justice way-particularly when confronting New Bern's history of slavery/	Discussed during public meeting.
7	Mark Keane	keanemark@gmail.com	1/26/21 3:03PM	NBAMPO	With New Bern being a popular retirement destination for many people relocating from states North and West were bicycling is encouraged as an alternative mode of transportation as it reduces the carbon footprint, solves the lack of parking issue, and promotes healthy living. What planning is in place for bicycle trails/paths/ bike lanes in and around New Bern? Would be great if interconnecting bike paths / delineated bike lanes were built to facilitate access to downtown New Bern from James City, Trent Woods, Craven Community College, and West New Bern.	Discussed during public meeting.
8	Ronald Sage	rsage1215@gmail.com	02/01/2021 11:23:04	NBAMPO	2045 Horizon Year Project NB Rdwy-04 = Widen Glenburnie Rd to 6 lanes from Elizabeth Ave to Craven Community College. My comments are thus - Provide pedestrians to access this 'widened' area via foot and bike, via a safe, protected route. Wide enough for simultaneous uses. Provide signaled crosswalks where pedestrians are required to cross over motor vehicle travel lanes.	Thank you for your input. Safe and effective bicycle and pedestrian infrastructure is part of the improvement for this project. Final designs have not been determined.
9	Ronald Sage	rsage1215@gmail.com	02/01/2021 11:47:05	NBAMPO	2045 Horizon Year Project NB Rdwy-05 = Upgrade Elizabeth Ave to a 2 lane facility with a two-way left turn lane. My comments are thus - I would request a dedicated Left turn signaled lane, off Elizabeth onto Glenburnie, and a dedicated Right turn signaled lane off Elizabeth onto Glenburnie. Leaving the center lane a straight across/through lane. Provide pedestrians to access this 'widened' area via foot and bike, with priority pedestrian signals to wide crosswalks. Wide enough for simultaneous uses.	Thank you for your input. Safe and effective bicycle and pedestrian infrastructure is part of the improvement for this project. Final designs have not been determined.
10	Ronald Sage	rsage1215@gmail.com	02/01/2021 11:52:32	NBAMPO	2045 Horizon Year Project U-6102 = Upgrade interchange at Glenburnie Rd and US70. My comments are thus - I would request 2 lane dedicated Left turn signaled lanes, at the off ramp at Glenburnie. This would tie into project NB-Rdwy-04. Request in this same project, 2 lane dedicated Right turn signaled lanes onto Glenburnie. Provide pedestrians to access this 'widened' area via foot and bike, with priority pedestrian signals to wide crosswalks. Wide enough for simultaneous uses.	Thank you for your input. Safe and effective bicycle and pedestrian infrastructure is part of the improvement for this project. Final designs have not been determined.
11	Ronald Sage	rsage1215@gmail.com	02/01/2021 11:59:09	NBAMPO	2045 Horizon Year Project NB-Rdwy-04/NB-Rdwy-05/U-6102 = Accommodate access for pedestrians to use the 'behind' the curbing area right of each side of the roadway, for pedestrian uses with foot and bike. Do NOT make a bike lane on this busy stretch of road. Make/continue the multi-use path along Glenburnie that ends currently at Elizabeth Ave, extend to the Community Colleges sidewalks; Do NOT end simply at the throat of the entrance. Provide pedestrians to access this 'widened' area via foot and bike, with priority pedestrian signals to wide crosswalks. Wide enough for simultaneous uses, that prioritizes pedestrian crossings at the Off/On ramps to US70.	Thank you for your input. Safe and effective bicycle and pedestrian infrastructure is part of the improvement for this project. Final designs have not been determined.
12	Bethany Richards	bethany@bikeboxproject.org	02/17/2021 20:31:35	NBAMPO	I urge this council to please allow more time for local citizens to create an ideal and well-thought out plan for the beneficial bike baths and road maintenance that is so needed in our area. This is a topic that continues to get overlooked in a time where people are looking for more outdoor recreation in a safe manner, to include bicycling and walking. I believe a coordinated plan can be more sufficiently provided and that help from the people that care about our progress as a region can be solved with a bit more time. Please allow us help with feedback, recommendations, and ideas. Thank You.	Thank you for your input regarding improved bicycle and pedestrian connections in and around New Bern. The NBAMPO supports the efforts for increased bicycle safety and connectivity and have included bike lanes on all future corridor improvements. Recently, the NBAMPO helped Bridgeton and River Bend with new bicycle/pedestrian plans, and is working with the City of New Bern to update their plan in the coming year. Important to note, all bicycle and pedestrian updates require buy-in from city/local officials. The State will pay 80% of the infrastructure cost, but the City or Township must pay the remaining 20%. Therefore, while we can create and support the best laid bicycle infrastructure without the support of community leaders willing to provide the 20% match, even those plans cannot move forward. The NBAMPO will continue our efforts to increase safety and connections for bicyclists and pedestrians, and we encourage you to share your vision with your Alderman or Commissioners as well.

	Commentor	Contact Information	Receipt Date	Responder	Comments	Response
13	Marcy Mills	marcysmills@embarqmail.com	02/17/2021 22:19:36	NBAMPO	New Bern and surrounding areas have been working hard to connect and unify surrounding neighborhoods by constructing miles of sidewalk from the Pembroke area to Trentwoods to downtown. Designated bike lanes have been created along Trent Rd, Broad Street, Pollock Street and from Pembroke overpass to downtown. I have cycled for the last decade and there are multiple roads that are heavily traveled and in need of repair. Our cycling community is very active. By improving and maintaining roads in our area, communities will be healthier and many more people will be using green energy as they commute while increasing commerce in and access to all of our surrounding neighborhoods and municipalities. Maintaining our streets and roads is a win win situation. Thank you!	Thank you for your input regarding improved bicycle and pedestrian connections in and around New Bern. The NBAMPO supports the efforts for increased bicycle safety and connectivity and have included bike lanes on all future corridor improvements. Recently, the NBAMPO helped Bridgeton and River Bend with new bicycle/pedestrian plans, and is working with the City o New Bern to update their plan in the coming year. Important to note, all bicycle and pedestrian updates require buy-in from city/local officials. The State will pay 80% of the infrastructure cost, but the City or Township must pay the remaining 20%. Therefore, while we can create and support the best laid bicycle infrastructure without the support of community leaders willing to provide the 20% match, even those plans cannot move forward. The NBAMPO will continue our efforts to increase safety and connections for bicyclists and pedestrians, and we encourage you to share your vision with your Alderman or Commissioners as well.
14	Ben Lindemann	ben.lindemann77@gmail.com	02/17/2021 23:03:23	NBAMPO	The city of New Bern needs to have better means of getting around for cyclists whether it be for transportation or for recreational use. Bicycle lanes are very important for this town to grow. We need a three foot wide buffer or bicycle lane to keep us safe from very distracted drivers & drivers who don't want to be slowed down by people riding bikes. So many times driver pass me while theres a car coming in the opposite lane almost hitting me. If people had safer means to ride bicycles, it will create less tension between motorists & cyclists. Also people who come to visit New Bern who bring their bicycles with them always ask if theres safe roads to ride on when they come. When they find out there aren't any safe roads to ride on they get very disappointed. We can NOT wait til 2045 to maybe have bicycle lanes put in. We need to have them put in now! I'm tired of having to worry if when I go for a bicycle ride if I'm going to come home to my loved ones or not. Please make it safe for us. We demand better for this town.	Thank you for your input regarding improved bicycle and pedestrian connections in and around New Bern. The NBAMPO supports the efforts for increased bicycle safety and connectivity and have included bike lanes on all future corridor improvements. Recently, the NBAMPO helped Bridgeton and River Bend with new bicycle/pedestrian plans, and is working with the City o New Bern to update their plan in the coming year. Important to note, all bicycle and pedestrian updates require buy-in from city/local officials. The State will pay 80% of the infrastructure cost, but the City or Township must pay the remaining 20%. Therefore, while we can create and support the best laid bicycle infrastructure without the support of community leaders willing to provide the 20% match, even those plans cannot move forward. The NBAMPO will continue our efforts to increase safety and connections for bicyclists and pedestrians, and we encourage you to share your vision with your Alderman or Commissioners as well.
15	Carole Stanton	carolestanton@yahoo.com	02/18/2021 5:16:30	NBAMPO	I have cycled in the New Bern area for 10 years. The safest way to get through New Bern is thru Trent Woods. Pembroke Road is very dangerous with all the pot holes. Please consider the repairing this road at the top of your list. It is not safe for road cyclists to share sidewalks. Thank you	Thank you for your input regarding improved bicycle and pedestrian connections in and around New Bern. The NBAMPO supports the efforts for increased bicycle safety and connectivity and have included bike lanes on all future corridor improvements. Recently, the NBAMPO helped Bridgeton and River Bend with new bicycle/pedestrian plans, and is working with the City o New Bern to update their plan in the coming year. Important to note, all bicycle and pedestrian updates require buy-in from city/local officials. The State will pay 80% of the infrastructure cost, but the City or Township must pay the remaining 20%. Therefore, while we can create and support the best laid bicycle infrastructure without the support of community leaders willing to provide the 20% match, even those plans cannot move forward. The NBAMPO will continue our efforts to increase safety and connections for bicyclists and pedestrians, and we encourage you to share your vision with your Alderman or Commissioners as well.
16	Bryan Larcher	bryan.larcher@gmail.com	02/18/2021 7:02:17	NBAMPO	We need bike lanes in New Bern. As the 70 overpass project begins more people are going to be on the backroads that we ride around new bern that are already unsafe to ride. Just drive down old Airport road with its non existent shoulders and windy roads and see how safe it is for bikers. This town needs bike lanes or to widen some roads to include shoulders. It's really a miracle that more riders haven't been hit by cars.	Thank you for your input regarding improved bicycle and pedestrian connections in and around New Bern. The NBAMPO supports the efforts for increased bicycle safety and connectivity and have included bike lanes on all future corridor improvements. Recently, the NBAMPO helped Bridgeton and River Bend with new bicycle/pedestrian plans, and is working with the City o New Bern to update their plan in the coming year. Important to note, all bicycle and pedestrian updates require buy-in from city/local officials. The State will pay 80% of the infrastructure cost, but the City or Township must pay the remaining 20%. Therefore, while we can create and support the best laid bicycle infrastructure without the support of community leaders willing to provide the 20% match, even those plans cannot move forward. The NBAMPO will continue our efforts to increase safety and connections for bicyclists and pedestrians, and we encourage you to share your vision with your Alderman or Commissioners as well.
17	Brett Roberts	cyclingdad1013@gmail.com	02/18/2021 7:06:10	NBAMPO	I am a cyclist myself and this sure would be nice to have! I've seen to much carelessness from drivers who don't get over far enough or want to get to to close to you from not paying attention! There is a reason why we have share the road signs but those don't seem to matter. This would be a great place to have for a cyclist to ride!	Thank you for your input regarding improved bicycle and pedestrian connections in and around New Bern. The NBAMPO supports the efforts for increased bicycle safety and connectivity and have included bike lanes on all future corridor improvements. Recently, the NBAMPO helped Bridgeton and River Bend with new bicycle/pedestrian plans, and is working with the City o New Bern to update their plan in the coming year. Important to note, all bicycle and pedestrian updates require buy-in from city/local officials. The State will pay 80% of the infrastructure cost, but the City or Township must pay the remaining 20%. Therefore, while we can create and support the best laid bicycle infrastructure without the support of community leaders willing to provide the 20% match, even those plans cannot move forward. The NBAMPO will continue our efforts to increase safety and connections for bicyclists and pedestrians, and we encourage you to share your vision with your Alderman or Commissioners as well.
18	Courtney Reichenbach	courtburch@yahoo.com	02/18/2021 7:10:28	NBAMPO	It would be great to have more bike lanes or wider shoulders. Especially madams moore and old airport roads. Way too many close calls with aggressive and distracted drivers.	Thank you for your input regarding improved bicycle and pedestrian connections in and around New Bern. The NBAMPO supports the efforts for increased bicycle safety and connectivity and have included bike lanes on all future corridor improvements. Recently, the NBAMPO helped Bridgeton and River Bend with new bicycle/pedestrian plans, and is working with the City o New Bern to update their plan in the coming year. Important to note, all bicycle and pedestrian updates require buy-in from city/local officials. The State will pay 80% of the infrastructure cost, but the City or Township must pay the remaining 20%. Therefore, while we can create and support the best laid bicycle infrastructure without the support of community leaders willing to provide the 20% match, even those plans cannot move forward. The NBAMPO will continue our efforts to increase safety and connections for bicyclists and pedestrians, and we encourage you to share your vision with your Alderman or Commissioners as well.
19	Donna Paliotti	donna.paliotti@yahoo.com	02/18/2021 7:23:55	NBAMPO	I would like to encourage those planning to improve the quality of life in New Bern to include better roads, road repairs and bike accessible lanes . conditions of most roads in New Bern are extremely dangerous to cyclist . Improving these would not only encourage a more healthy lifestyle and quality of life, but every study that has ever been conducted by any city planning has always proven to be a huge financial gain for cities to invest in this infrastructure. I often travel most weekends to either Raleigh, Topsail or Emerald Isle for much more enjoyable safer road conditions that are more favorable to cyclist. Please consider this as a top priority as it should be.	Thank you for your input regarding improved bicycle and pedestrian connections in and around New Bern. The NBAMPO supports the efforts for increased bicycle safety and connectivity and have included bike lanes on all future corridor improvements. Recently, the NBAMPO helped Bridgeton and River Bend with new bicycle/pedestrian plans, and is working with the City o New Bern to update their plan in the coming year. Important to note, all bicycle and pedestrian updates require buy-in from city/local officials. The State will pay 80% of the infrastructure cost, but the City or Township must pay the remaining 20%. Therefore, while we can create and support the best laid bicycle infrastructure without the support of community leaders willing to provide the 20% match, even those plans cannot move forward. The NBAMPO will continue our efforts to increase safety and connections for bicyclists and pedestrians, and we encourage you to share your vision with your Alderman or Commissioners as well.
20	Cherie Davis	cheriedavis@me.com	02/18/2021 7:25:54	NBAMPO	Please consider more bike lanes in New Bern. I am a cyclist among many others that would appreciate the safety of a bike lane around town. Thank you for your consideration on this matter. Cherie Davis	Thank you for your input regarding improved bicycle and pedestrian connections in and around New Bern. The NBAMPO supports the efforts for increased bicycle safety and connectivity and have included bike lanes on all future corridor improvements. Recently, the NBAMPO helped Bridgeton and River Bend with new bicycle/pedestrian plans, and is working with the City o New Bern to update their plan in the coming year. Important to note, all bicycle and pedestrian updates require buy-in from city/local officials. The State will pay 80% of the infrastructure cost, but the City or Township must pay the remaining 20%. Therefore, while we can create and support the best laid bicycle infrastructure without the support of community leaders willing to provide the 20% match, even those plans cannot move forward. The NBAMPO will continue our efforts to increase safety and connections for bicyclists and pedestrians, and we encourage you to share your vision with your Alderman or Commissioners as well.
21	Joanne Somerday	yadremos@gmail.com	02/18/2021 7:32:46	NBAMPO	How about a bike path from Trent Road to River Bend as that direction from the city continues to grow.	Thank you for your input regarding improved bicycle and pedestrian connections in and around New Bern. The NBAMPO supports the efforts for increased bicycle safety and connectivity and have included bike lanes on all future corridor improvements. Recently, the NBAMPO helped Bridgeton and River Bend with new bicycle/pedestrian plans, and is working with the City o New Bern to update their plan in the coming year. Important to note, all bicycle and pedestrian updates require buy-in from city/local officials. The State will pay 80% of the infrastructure cost, but the City or Township must pay the remaining 20%. Therefore, while we can create and support the best laid bicycle infrastructure without the support of community leaders willing to provide the 20% match, even those plans cannot move forward. The NBAMPO will continue our efforts to increase safety and connections for bicyclists and pedestrians, and we encourage you to share your vision with your Alderman or Commissioners as well.

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22	Mindy Boeck	mindyboeck@gmail.com	02/18/2021 8:23:49	NBAMPO	I would like to see more discussion about addressing a plan for safe cycling, walking, and running around the entire City of New Bern. Trent Woods is putting in sidewalks throughout the town and would like to see New Bern formulate an immediate plan to include side walks in all areas of New Bern.	Thank you for your input regarding improved bicycle and pedestrian connections in and around New Bern. The NBAMPO supports the efforts for increased bicycle safety and connectivity and have included bike lanes on all future corridor improvements. Recently, the NBAMPO helped Bridgeton and River Bend with new bicycle/pedestrian plans, and is working with the City o New Bern to update their plan in the coming year. Important to note, all bicycle and pedestrian updates require buy-in from city/local officials. The State will pay 80% of the infrastructure cost, but the City or Township must pay the remaining 20%. Therefore, while we can create and support the best laid bicycle infrastructure without the support of community leaders willing to provide the 20% match, even those plans cannot move forward. The NBAMPO will continue our efforts to increase safety and connections for bicyclists and pedestrians, and we encourage you to share your vision with your Alderman or Commissioners as well.
23	Ramon Venegas	rvenegasrico@gmail.com	02/18/2021 8:41:06	NBAMPO	In the past few years we have seen terrible accidents involving cars hitting cyclists. Very high human cost. It is our duty as a civilized society to do all we can to improve the safety of all our riders.	Thank you for your input regarding improved bicycle and pedestrian connections in and around New Bern. The NBAMPO supports the efforts for increased bicycle safety and connectivity and have included bike lanes on all future corridor improvements. Recently, the NBAMPO helped Bridgeton and River Bend with new bicycle/pedestrian plans, and is working with the City o New Bern to update their plan in the coming year. Important to note, all bicycle and pedestrian updates require buy-in from city/local officials. The State will pay 80% of the infrastructure cost, but the City or Township must pay the remaining 20%. Therefore, while we can create and support the best laid bicycle infrastructure without the support of community leaders willing to provide the 20% match, even those plans cannot move forward. The NBAMPO will continue our efforts to increase safety and connections for bicyclists and pedestrians, and we encourage you to share your vision with your Alderman or Commissioners as well.
24	Cassandra Crowder	cassandracrowder63@gmail.com	02/18/2021 9:13:14	NBAMPO	Definitely in need for Bike Lanes... all streets in City Limits of New Bern...	Thank you for your input regarding improved bicycle and pedestrian connections in and around New Bern. The NBAMPO supports the efforts for increased bicycle safety and connectivity and have included bike lanes on all future corridor improvements. Recently, the NBAMPO helped Bridgeton and River Bend with new bicycle/pedestrian plans, and is working with the City o New Bern to update their plan in the coming year. Important to note, all bicycle and pedestrian updates require buy-in from city/local officials. The State will pay 80% of the infrastructure cost, but the City or Township must pay the remaining 20%. Therefore, while we can create and support the best laid bicycle infrastructure without the support of community leaders willing to provide the 20% match, even those plans cannot move forward. The NBAMPO will continue our efforts to increase safety and connections for bicyclists and pedestrians, and we encourage you to share your vision with your Alderman or Commissioners as well.
25	Christa Kreutz	christa.kreutz@gmail.com	02/18/2021 9:16:45	NBAMPO	New Bern would be a great place to bike, but there are no bike paths and sometimes no shoulder. But people bike anyway and it's dangerous. Please consider adding bike lanes everywhere. Including Western NB. I work at BSH and I see people almost get hit on Neuse regularly. James city and along 70 should also be bike friendly. It's time for New Bern to enter the modern age and not just think about car traffic.	Thank you for your input regarding improved bicycle and pedestrian connections in and around New Bern. The NBAMPO supports the efforts for increased bicycle safety and connectivity and have included bike lanes on all future corridor improvements. Recently, the NBAMPO helped Bridgeton and River Bend with new bicycle/pedestrian plans, and is working with the City o New Bern to update their plan in the coming year. Important to note, all bicycle and pedestrian updates require buy-in from city/local officials. The State will pay 80% of the infrastructure cost, but the City or Township must pay the remaining 20%. Therefore, while we can create and support the best laid bicycle infrastructure without the support of community leaders willing to provide the 20% match, even those plans cannot move forward. The NBAMPO will continue our efforts to increase safety and connections for bicyclists and pedestrians, and we encourage you to share your vision with your Alderman or Commissioners as well.
26	Melanie Noble	melanienoble95@gmail.com	02/18/2021 16:57:51			
27	JoAnna Wishon	jomom23@gmail.com	02/19/2021 10:39:41	NBAMPO	I was very disappointed but not surprised to see that this committee didn't procure their own study of public transportation and relied instead on a years-old self-assessment performed by CARTS. It could appear to some that any CARTS-directed study would have to be viewed as self-preservation. In which case, this committee has failed it's only purpose- to make a plan that benefits ALL of New Bern's citizens equitably. How can you do that for public transportation without a real study? Shame on y'all! We deserve for this committee to actually study the issue - in a comprehensive and meaningful way. As I read this 'plan' it occurred to me that members of this committee probably aren't and never have been reliant on public transportation, and it's glaringly obvious if y'all thought we'd accept this nonsense. If you're not going to do any real work on this, the very least you can do is allow us more time to study the issue ourselves so that our public comments can provide you with the facts you don't have now. How long did you guys get to do the work? That's how long we'll need. Moving forward with this plan without allowing more time is the worst way to disrespect your citizens.	Thank you for taking the time to read our updated long range transportation plan and provide feedback. It's a lengthy and comprehensive document, outlining improvements we hope to accomplish in the future, so I appreciate the time it would have taken for your review. CARTS operates independently from the New Bern Area MPO, and is run by Craven County, but the MPO works alongside CARTS to ensure cooperative planning. CARTS completed a Transportation Development Plan a few years ago, but unfortunately, some of the phased route improvements have taken more time to complete. We recognize the need for improved transit services within our area and will continue to support that effort and CARTS within our role and requirements as a Metropolitan Planning Organization. Our board members are comprised of CARTS members, Craven County personnel as well as commissioners and Aldermen from each jurisdiction, so communication is open and improved transit services is a frequent topic of discussion. I would encourage you to reach out to CARTS and Craven County with your concerns as well, and we will continue to work toward improving all infrastructure for our residents. The Metropolitan Transportation Plan (MTP) document is updated every five years and public input is included in the final document and taken into consideration for future projects. If MPO staff can provide additional information, please let me know. I would be happy to discu this further as well.
28	Julia Shankin	julia.shankin@gmail.com	02/27/2021 19:42:28	NBAMPO	The current envision 2045 plan does not prioritize the local environment, coastal floodplain, and public welfare, which will all be jeopardized by building a superhighway. This highway increase reliance on automobiles for transportation, subsequently producing more highway runoff, pollution, and disruption of ecosystems, but it also comes with a high opportunity cost. Choosing to channe funds into a short-sighted, profit-focused development plan prevents opportunities for more energy-efficient forms of transportation, including access to safe biking, walking, and public transit. These forms of transportation are not only more energy-efficient, but they also provide opportunities for community building and physical activity which have been shown time and time again to increase overall happiness, quality of life, and local engagement. I request that the MPO reevaluate the Indirect and cumulative impact assessment ("ICIA") to consider the long-term impacts that the envision 2045 plan will have on climate-related emissions/development, as well as creating a more car-centered community.	Thank you for taking the time to read our updated long range transportation plan and providing feedback. The NBAMPO supports the efforts for increased bicycle and pedestrian safety and connectivity and have included these facilities on all future corridor improvements where appropriate. Recently, the NBAMPO helped Bridgeton and River Bend with new bicycle/pedestrian plans, and is working with the City of New Bern to update their plan in the coming year. The City of New Bern recently updated their Land Use Plan and now requires any existing business making changes and all new construction to include a sidewalk along their property. Improvements to the Glenburnie exit along current US70, and upgrades to Glenburnie between Elizabeth Avenue and McCarthy Blvd. include safe bicycle and pedestrian facilities. Important to note, all bicycle and pedestrian updates require buy-in from city/local officials. The State will pay 80% of the infrastructure cost, but the City or Township must pay the remaining 20%. Therefore, while we can create and support the best laid infrastructure, without the support of community leaders willing to provide the 20% match, even those plans cannot move forward. CARTS operates independently from the New Bern Area MPO, and is run by Craven County, but the MPO works alongside CARTS to ensure cooperative planning. CARTS completed a Transportation Development Plan a few years ago, but unfortunately, some of the phased route improvements have taken more time to complete. We recognize the need for improved transit services within our area and will continue to support that effort and CARTS within our role and requirements as a Metropolitan Planning Organization. Our board members are comprised of CARTS members, Craven County personnel as well as commissioners and Aldermen from each jurisdiction, so communication is open and improved transit services is a frequent topic of discussion. The Brices Creek Road Connector project is a potential future project that was included from the Craven County CTP (Comprehensive Transportation Plan). The CTP has not yet been finalized due to COVID-19 delays on public meetings. Environmental studies were not conducted when formulating this plan, but prior to implementing any future projects, a detailed study would be completed in cooperation with the appropriate environmental resource agencies. This project has been presented as an evacuation route for those living in the Brices Creek area, who currently have limited options for safely and quickly evacuating during a hurricane or other event. The MTP document is a fiscally constrained document and is updated every five years. Public input is included in the final document and taken into consideration for future projects. We thank you again for your participation, and we encourage you to share your vision with your Alderman and Commissioners as well.

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29	Joshua Hall	joshuathall2@gmail.com	02/27/2021 20:05:56	NBAMPO	As a resident of New Bern who wants the city to prosper in future decades, I would appreciate seeing a greater emphasis placed on making New Bern a bike-friendly city. The streets and highways of New Bern are difficult and unaccommodating to traverse by bike and would benefit greatly from being better connected in central places like Craven Community College, New Bern High School and major residential areas by bike paths and bike lanes. Additionally, the implementation of a more robust public transportation system would be beneficial in helping to reduce traffic congestion and in reducing vehicle emissions. Thank you for your time and consideration.	Thank you for taking the time to read our updated long range transportation plan and providing feedback. The NBAMPO supports the efforts for increased bicycle and pedestrian safety and connectivity and have included these facilities on all future corridor improvements where appropriate. Recently, the NBAMPO helped Bridgeton and River Bend with new bicycle/pedestrian plans, and is working with the City of New Bern to update their plan in the coming year. The City of New Bern recently updated their Land Use Plan and now requires any existing business making changes and all new construction to include a sidewalk along their property. Improvements to the Glenburnie exit along current US70, and upgrades to Glenburnie between Elizabeth Avenue and McCarthy Blvd. include safe bicycle and pedestrian facilities. Important to note, all bicycle and pedestrian updates require buy-in from city/local officials. The State will pay 80% of the infrastructure cost, but the City or Township must pay the remaining 20%. Therefore, while we can create and support the best laid infrastructure, without the support of community leaders willing to provide the 20% match, even those plans cannot move forward. CARTS operates independently from the New Bern Area MPO, and is run by Craven County, but the MPO works alongside CARTS to ensure cooperative planning. CARTS completed a Transportation Development Plan a few years ago, but unfortunately, some of the phased route improvements have taken more time to complete. We recognize the need for improved transit services within our area and will continue to support that effort and CARTS within our role and requirements as a Metropolitan Planning Organization. Our board members are comprised of CARTS members, Craven County personnel as well as commissioners and Aldermen from each jurisdiction, so communication is open and improved transit services is a frequent topic of discussion. The Brices Creek Road Connector project is a potential future project that was included from the Craven County CTP (Comprehensive Transportation Plan). The CTP has not yet been finalized due to COVID-19 delays on public meetings. Environmental studies were not conducted when formulating this plan, but prior to implementing any future projects, a detailed study would be completed in cooperation with the appropriate environmental resource agencies. This project has been presented as an evacuation route for those living in the Brices Creek area, who currently have limited options for safely and quickly evacuating during a hurricane or other event. The MTP document is a fiscally constrained document and is updated every five years. Public input is included in the final document and taken into consideration for future projects. We thank you again for your participation, and we encourage you to share your vision with your Alderman and Commissioners as well.
30	Darby Stroud	dstroudrdh@gmail.com	02/28/2021 9:29:20	NBAMPO	I would strongly urge you to reconsider this plan and to not follow through. As a citizen of New Bern, I have several concerns and feel very uneasy about the idea of a new bridge and more traffic coming through our small town. Not to mention, disrupting and bringing that traffic into our neighboring PROTECTED Croatan forest. New Bern is loved for its small town charm and the safety citizens feel in their neighborhoods. If you bring a new route for traffic, we have new pollution, new dangers, and new congestion in our day to day lives. Please reconsider and, ultimately, don't do this to our beautiful community.	Thank you for taking the time to read our updated long range transportation plan and providing feedback. The NBAMPO supports the efforts for increased bicycle and pedestrian safety and connectivity and have included these facilities on all future corridor improvements where appropriate. Recently, the NBAMPO helped Bridgeton and River Bend with new bicycle/pedestrian plans, and is working with the City of New Bern to update their plan in the coming year. The City of New Bern recently updated their Land Use Plan and now requires any existing business making changes and all new construction to include a sidewalk along their property. Improvements to the Glenburnie exit along current US70, and upgrades to Glenburnie between Elizabeth Avenue and McCarthy Blvd. include safe bicycle and pedestrian facilities. Important to note, all bicycle and pedestrian updates require buy-in from city/local officials. The State will pay 80% of the infrastructure cost, but the City or Township must pay the remaining 20%. Therefore, while we can create and support the best laid infrastructure, without the support of community leaders willing to provide the 20% match, even those plans cannot move forward. CARTS operates independently from the New Bern Area MPO, and is run by Craven County, but the MPO works alongside CARTS to ensure cooperative planning. CARTS completed a Transportation Development Plan a few years ago, but unfortunately, some of the phased route improvements have taken more time to complete. We recognize the need for improved transit services within our area and will continue to support that effort and CARTS within our role and requirements as a Metropolitan Planning Organization. Our board members are comprised of CARTS members, Craven County personnel as well as commissioners and Aldermen from each jurisdiction, so communication is open and improved transit services is a frequent topic of discussion. The Brices Creek Road Connector project is a potential future project that was included from the Craven County CTP (Comprehensive Transportation Plan). The CTP has not yet been finalized due to COVID-19 delays on public meetings. Environmental studies were not conducted when formulating this plan, but prior to implementing any future projects, a detailed study would be completed in cooperation with the appropriate environmental resource agencies. This project has been presented as an evacuation route for those living in the Brices Creek area, who currently have limited options for safely and quickly evacuating during a hurricane or other event. The MTP document is a fiscally constrained document and is updated every five years. Public input is included in the final document and taken into consideration for future projects. We thank you again for your participation, and we encourage you to share your vision with your Alderman and Commissioners as well.
31	Bailey Evans	bailey.elizabeth.evans@gmail.com	02/28/2021 13:14:10	NBAMPO	As a concerned citizen of New Bern who does not own a vehicle, I don't believe this plan adequately addresses the needs of our town. It is nearly impossible to navigate New Bern without a car. Simply rebranding the CARTS system will not change how inconvenient and in-useable that service is for most people. The routes are too limited, buses don't run often enough, and they do not consider the needs of working people. We are in desperate need of sidewalks and bike lanes, as it is nearly impossible to safely access schools, grocery stores, or other essential services via anything but a car. We don't just need these things in the suburbs for fun and safe neighborhoods, we need them all over town for improved quality of life for everyone. This plan does not focus enough on the needs of the people who live and work in New Bern. It does not meet its stated goal of identifying our transportation needs; it is not ready, yet.	Thank you for taking the time to read our updated long range transportation plan and providing feedback. The NBAMPO supports the efforts for increased bicycle and pedestrian safety and connectivity and have included these facilities on all future corridor improvements where appropriate. Recently, the NBAMPO helped Bridgeton and River Bend with new bicycle/pedestrian plans, and is working with the City of New Bern to update their plan in the coming year. The City of New Bern recently updated their Land Use Plan and now requires any existing business making changes and all new construction to include a sidewalk along their property. Improvements to the Glenburnie exit along current US70, and upgrades to Glenburnie between Elizabeth Avenue and McCarthy Blvd. include safe bicycle and pedestrian facilities. Important to note, all bicycle and pedestrian updates require buy-in from city/local officials. The State will pay 80% of the infrastructure cost, but the City or Township must pay the remaining 20%. Therefore, while we can create and support the best laid infrastructure, without the support of community leaders willing to provide the 20% match, even those plans cannot move forward. CARTS operates independently from the New Bern Area MPO, and is run by Craven County, but the MPO works alongside CARTS to ensure cooperative planning. CARTS completed a Transportation Development Plan a few years ago, but unfortunately, some of the phased route improvements have taken more time to complete. We recognize the need for improved transit services within our area and will continue to support that effort and CARTS within our role and requirements as a Metropolitan Planning Organization. Our board members are comprised of CARTS members, Craven County personnel as well as commissioners and Aldermen from each jurisdiction, so communication is open and improved transit services is a frequent topic of discussion. The Brices Creek Road Connector project is a potential future project that was included from the Craven County CTP (Comprehensive Transportation Plan). The CTP has not yet been finalized due to COVID-19 delays on public meetings. Environmental studies were not conducted when formulating this plan, but prior to implementing any future projects, a detailed study would be completed in cooperation with the appropriate environmental resource agencies. This project has been presented as an evacuation route for those living in the Brices Creek area, who currently have limited options for safely and quickly evacuating during a hurricane or other event. The MTP document is a fiscally constrained document and is updated every five years. Public input is included in the final document and taken into consideration for future projects. We thank you again for your participation, and we encourage you to share your vision with your Alderman and Commissioners as well.

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32	Emily Wilson	emilycole721@gmail.com	02/28/2021 19:31:13	NBAMPO	I am NOT in favor of the highway plan across the Trent river and into the National Croatan Forest. Not only would this bridge ruin the lovely view & lower property values, it would be massively detrimental to the environment. That is the last thing the Trent River needs. I'm furious that the same bridge would be cutting through the Croatan Forest. Which would again pollute the area, force wildlife to move, and is simply bad taste. This is a horrible plan and I really can't imagine the residents of new Bern being in support of this bridge. I've already talked to two close friends who've s this would make them consider moving out of New Bern. I've grown to love this town and I would be heart broken to see something like this happen to it.	Thank you for taking the time to read our updated long range transportation plan and providing feedback. The NBAMPO supports the efforts for increased bicycle and pedestrian safety and connectivity and have included these facilities on all future corridor improvements where appropriate. Recently, the NBAMPO helped Bridgeton and River Bend with new bicycle/pedestrian plans, and is working with the City of New Bern to update their plan in the coming year. The City of New Bern recently updated their Land Use Plan and now requires any existing business making changes and all new construction to include a sidewalk along their property. Improvements to the Glenburnie exit along current US70, and upgrades to Glenburnie between Elizabeth Avenue and McCarthy Blvd. include safe bicycle and pedestrian facilities. Important to note, all bicycle and pedestrian updates require buy-in from city/local officials. The State will pay 80% of the infrastructure cost, but the City or Township must pay the remaining 20%. Therefore, while we can create and support the best laid infrastructure, without the support of community leaders willing to provide the 20% match, even those plans cannot move forward. CARTS operates independently from the New Bern Area MPO, and is run by Craven County, but the MPO works alongside CARTS to ensure cooperative planning. CARTS completed a Transportation Development Plan a few years ago, but unfortunately, some of the phased route improvements have taken more time to complete. We recognize the need for improved transit services within our area and will continue to support that effort and CARTS within our role and requirements as a Metropolitan Planning Organization. Our board members are comprised of CARTS members, Craven County personnel as well as commissioners and Aldermen from each jurisdiction, so communication is open and improved transit services is a frequent topic of discussion. The Brices Creek Road Connector project is a potential future project that was included from the Craven County CTP (Comprehensive Transportation Plan). The CTP has not yet been finalized due to COVID-19 delays on public meetings. Environmental studies were not conducted when formulating this plan, but prior to implementing any future projects, a detailed study would be completed in cooperation with the appropriate environmental resource agencies. This project has been presented as an evacuation route for those living in the Brices Creek area, who currently have limited options for safely and quickly evacuating during a hurricane or other event. The MTP document is a fiscally constrained document and is updated every five years. Public input is included in the final document and taken into consideration for future projects. We thank you again for your participation, and we encourage you to share your vision with your Alderman and Commissioners as well.
33	ReEnvision New Bern	futurenewbern@gmail.com	02/28/2021 21:38:20	NBAMPO	I.New Bern is a Bike Community A.We are concerned citizens and organizations of New Bern who want to bike safely around our region. B.We attended the MPO public input meeting and were told that Bike Plans were recommended, but were not within the scope of this study by VHB. We do understand it is typical of the MTP process to only consider highway planning, and bike lanes are rather a consideration in the CTP process. II.Need Bike Safety A.The lack of bike lanes throughout the region forces our citizens to rely on car transportation and also endanger us if we choose to bike. B.The plan fails to provide solutions to bike safety while identifying safety as a constraint within NBAMPO. C.The plan lacks input from residents on key destinations. D.The plan does not include bike pathways to key destinations suited for the commuter, multi-use rider, and fitness rider. E.There is no implementation of "Continuously measure bicycle and pedestrian usage to understand traffic patterns of non-motorists and adjust planning accordingly." (p. 37) F.There is insufficient prioritization of "connecting neighborhoods and large complexes to each other and with school and major shopping areas." This is a point made on p.37 with insufficient implementation on p.39. G.There has not been any communication with the leadership of school districts. As the plan outlines "work with school districts to encourage and educate the proportionately higher percentage of non-motorists…," we are concerned by the lack of initiative and implementation. H.As points A-G outlines, the current MTP poses hindrances to being commuters, multiuse riders, and fitness riders. This plan will create a dependence on car transportation and contribute to traffic congestion. III.Solutions A.The MTO needs to put forth effective avenues to gain input from residents on key destinations to fulfill II.C. We must take action to ensure our local population with limited to no internet access can contribute and be included in the input on key destinations. B.The MTO must implement II. E. and publicize the data to the public on traffic patterns, so that the public can provide feedback and input. C. Per the issue stated in II.F., there is insufficient prioritization of "connecting neighborhoods…" This is clearly shown in the non-existent bike pathways connecting Craven Community College to New Bern High School, Downtown New Bern, Trent Woods, and the Greater Five Points Area. D.The MTO needs to begin communication with the leadership of school districts in order to fulfill the II.G. IV.Conclusion A.We appreciate the points made on p.37 regarding bike pathways. We appreciate the recognition of the importance of bike pathways in our region. B.Our region needs better. We need bike pathways for us to be commuters, multiuse riders, and fitness riders. C.Without bike pathways, our dependence on car transportation will continuously increase. MTP recognizes an increase in car transportation as a future projection. The bike pathways must be implemented to manage the increase of car traffic and to provide New Bernians the safe ability to bike. Sign Below (Name, Email, Position/Affiliated Organization)	Thank you for taking the time to read our updated long range transportation plan and providing feedback. The NBAMPO supports the efforts for increased bicycle and pedestrian safety and connectivity and have included these facilities on all future corridor improvements where appropriate. Recently, the NBAMPO helped Bridgeton and River Bend with new bicycle/pedestrian plans, and is working with the City of New Bern to update their plan in the coming year. 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34	ReEnvision New Bern	futurenewbern@gmail.com	02/28/2021 21:39:16	NBAMPO	We represent a group of concerned citizens in New Bern. We are writing to voice our strong opposition to the envision 2045 plan, specifically the impact it will have on the local environment, coastal floodplain, and public welfare. The lack of access to environmentally conscious transportation sources, coupled with an expanded highway, will have significant impacts on the lives of New Bernians as well as the health of our Rivers. The plan fails to address these critical policy concerns, and we request that the MPO take further steps to address environmental and public health. Specifically, we request that the MPO reevaluate the Indirect and cumulative impact assessment ("ICIA") by taking into account the possible long-term, climate-related impacts of increasing auto-transport. There is ever-increasing data to suggest that highway traffic has severe negative impacts on both public health and the environment. Both the Federal Environmental Protection Agency ("EPA") and the North Carolina Department of Environmental Quality ("NC DEQ") acknowledge that, "living and working near sources of air pollution can lead to higher exposure to air contaminants," many of which are linked to respiratory illnesses, heart disease, and premature death. Additionally, there is scientific consensus that increase highway traffic and motor vehicle usage contributes significantly to changes in global temperatures. In 2018, 28% of all Green House Gas ("GHG") emissions could be attributed to transportation sector. Light-duty vehicles, a classification including most passenger cars and trucks, contributed over half of the total GHG emissions from the transportation sector. The ICIA prepared fails to consider the adverse environmental impacts that stem from encouraging continued use of motor vehicles while limiting access to effective, environmentally conscious transportation. The current plan fails to consider these clear risks by disregarding the importance of multi-modal transportation through access to public transport and safe bike infrastructure. We urge the MPO to evaluate the long term impacts of increased highway traffic on air quality and the climate and include these evaluations in the ICIA. Additionally, we urge the MPO to increase focus on more energy efficient forms of transportation, including access to safe biking, walking, and public transit. Thank you for your dedication to making our community a more mobile and functional space. Liz Fieschko, liz.fieschko@gmail.com, Concerned Citizen and higher education professional, ReEnvision New Bern Jackson Seymore, jacksonseymore@gmail.com, Concerned Citizen and Environmental Chemist Charlotte Crooks, charlottesandra4@gmail.com, Concerned Citizen of New Bern Andie D'Angelo, adangelo@law.pace.edu, Concerned Citizen, ReEnvision New Bern, Law Student at Pace University Caitlin Trombley, caseofnewbern@gmail.com, CASE of New Bern Nate Polo, natepolo@live.unc.edu, Concerned Citizen, ReEnvision New Bern Julia Shankin, joolz@live.unc.edu, Concerned NC Citizen, student at UNC Chapel Hill Josh Hall, joshuathall2@gmail.com, Concerned Citizen of New Bern Laurie Howard, laurie.howard15@gmail.com, Concerned Former Citizen of New Bern and Geologist Mia Oldani, moldani0930@gmail.com, Concerned Citizen of New Bern Robert Trombley, trombley.robert@live.com, CASE of New Bern Shannon Lloyd, slloyd202@gmail.com, Concerned former Citizen of New Bern and Sustainable Development Professional Darby Stroud, dstroudrdh@gmail.com, concerned former citizen of New Bern Niki Potter, mnicholepotter@gmail.com, CASE of New Bern and Healthcare Professional JoAnna Wishon, CASE of New Bern, Concerned Craven County Citizen Burke Whaley, burkewhaley@gmail.com, Concerned Citizen and Sustainability Professional Devon Genua, devongenua@gmail.com, Concerned Citizen Lucas Dembart, ldembart@gmail.com, Concerned Craven County Citizen and Middle School Educator Kyle Dembart, kdembart@gmail.com, Concerned Citizen and Higher Education Professional Danielle D'Angelo, danielledevi2000@gmail.com, Concerned Citizer	Thank you for taking the time to read our updated long range transportation plan and providing feedback. 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					Bailee Walker,baileew@email.sc.edu, Concerned Citiz,e	
35	Nate Polo	natepolo@live.unc.edu	03/01/2021 0:00:54	NBAMPO	Hello to the New Bern MPO and to VHB, I am a citizen of New Bern and a member of ReEnvision New Bern. The 25-year MTP update gives me serious concerns for the health and prosperity of Craven County and its diverse residents. A New Bern native intent on living in my hometown in the future, I hope to represent the next generations of locals who will inherit and inhabit this town. Transportation is a defining quality of a place, which directly impacts lifestyle, community-closeness, and the flow of goods. In 2045, I will be 47 years old. I foresee myself married with kids, whom I hope can travel safely and sustainably. I intend to raise my family where my children can take themselves to school, where I can live free of the confines of a car, and where I have choices to travel without all the inherent risks of automobile use. Many of my concerns could be resolved by the adoption of North Carolina Complete Streets Policy, both on local streets and at critical intersections. The Complete Streets Policy is the NCDOT's official commitment to ensuring safe, multi-modal transportation; recognizing that transportation, quality of life, and economic development are inextricably connected through well-planned and context-sensitive transportation solutions. This policy requires NCDOT planners to consider and incorporate mult-imodal facilities in the design and improvement of all appropriate transportation projects at the inception of the transportation planning process. The 2045 New Bern Area MTP fails to include the Complete Streets considerations in most of the proposed projects. Wherever the Complete Streets Policy is not implementable, there is likely a strong case for implementing the Freeway and Street-based Transit (FAST) network approach. FAST is a significant and forward-thinking policy used in development in the Triangle to ensure that all infrastructure is built capable of multi-modality whenever feasible for adaptation. FAST is a novel solution -- designed in part by VHB -- which our MPO ought to seek out in order to maximize the function of every multi-million dollar NCDOT project. The New Bern area deserves serious public transit investment now and 25 years in the future, and FAST would ensure that our roadways are built so public transit is a viable option for our city. The FAST initiative needs to be considered for Interstate-42, MLK Blvd, new US 17, and the roadway expansion plans of the MTP. The following is a list of constructive criticism for each project proposed in the Envision 2045 as ordered in the Transportation Plan: Brices Creek Road Connector, NB-Rdwy-01, involves a brand new bridge over the Trent River between River Bend and Trent Woods. This seems like an unnecessary expenditure since there is a river crossing 2 miles downriver (US 70), and 5 miles upriver (US 17). The rationale of the plan is that Brices Creek Road, a rural back road, needs connection to a superhighway. This project is unnecessary, and will be incredibly impactful upon the Trent River and the greater Neuse River basin. The identified need is to ease congestion during evacuation, but no data has been presented about congestion during evacuation events. Brices Creek Road Widening, NB-Rdwy-02, is a widening with bike lanes intended, but along this dangerous roadway, the bike lane needs protection from car intrusion or an alternate green route. This rural road is extremely popular and extremely dangerous for local bikers who look for the safest road route to Jones County. The plan also needs to acknowledge the Historically Black neighborhood of Perrytown as an Environmental Justice concern. NC 43 (Washington Post Rd.), NB-Rdwy-03, requires bike, bus, and pedestrian access. Neuse Boulevard is a major commercial corridor, which also houses a substantial portion of the region's governmental and healthcare services, namely CarolinaEast Medical Center. Neuse Blvd is also one of the most diverse areas in town, and houses many of New Bern's affordable and workforce housing. Complete Street Policy and FAST needs to be applied here. Glenburnie Rd, NB-Rdwy-04, is the connecting underpass between middle school H.J. MacDonald and Craven Community College. This portion of roadway is vital as a crossing point of major thoroughfare Hwy 17, connecting the Northern and Southern hemispheres of New Bern. This portion needs to be outfitted completely with Bike, Ped, and Public transit connections. The MTP recommends expanding the 4 lanes to 6 lanes, which seems most useful as a Fixed Bus Corridor or rather as a hard barrier protected Bike Lane. This plan becomes the interruptor for the multi-modal systems of NB-Rdwy_05, and therefore needs to be reassessed in a broader context with the nearby and overall transportation types. Elizabeth Ave., NB-Rdwy-05, is appropriately being considered for Complete Streets as a connector to middle school HJ MacDonald, which is inseparable from aforementioned NB-Rdwy-04 in a continuous route. Considered together, Projects 04 and 05 ought to be given extremely high priority and ought to be designed with the same multi-modal travel options since they are a contiguous system. US 70/US 17, NB-Rdwy-06, is the Future Interstate-42 which is recommended to turn from a 4 lane highway into a 6 lane highway. A Marked Shoulder is also recommended. Complete Streets would be deadly and unattractive along this route, but a parallel within the Ghent neighborhood needs to be implemented, as well as a greenway along the stream flows of the Lawson Creek to increase New Bern's ability to live with the water. So too, I-42 needs to be built with FAST recommendations so that our system is flexible to the needs of our citizens whenever mass transit becomes feasible. Simmons Street Road Diet, NB-Rdwy-07, is a major connector between New Bern arterials. The MTP recommends bicycle lanes and sidewalks across the major roadway MLK Blvd. These plans are absolutely critical to implement. Agreed, the plan will create an inner loop of transit for a Downtown Neighborhood Loop, and also provide a major non-auto arterial pathway to Carolina East Medical Center and Grover C. Fields for any student or patient traveling from anywhere South. As cars will travel at 45 mph, and likely above, the Bike Lane needs to be built with protections from auto-intrusions unless death or maiming is acceptable for citizens who travel by bike. MLK Blvd. and US 70, NB-Rdwy-08, recommends widening the on/off ramps near Walmart and the Twin Rivers Mall. Surely the signals need improvement, but as we consider growth, let's be sure to carefully calculate their impacts on the 1) environmental justice populations 2) zero-car households 3) low-income populations 4) 65 yrs+ 5) Limited English Proficiency, 6) Minority Populations, 7) Delicate Wetlands. All of which will be adversely impacted by the widening of this on/off exit ramp to prepare for more cars. US 70/US 17 Interchange at Country Club Rd, NB-Rdwy-09, includes an "upgrade to interstate standards" which is very unclear and deserves a republication to the public before the Public can approve that we are okay with it. It may be very useful and important, but nothing in the documentation explains what it is or why it needs to occur. The documentation does state that the proposed development would happen near wetlands and a floodway. This development needs to be re-proposed to the Public with clarity and a new option for comment so we can ensure our safety. U.S. 17 New Bern Bypass, R-2301B, will be the final piece to connect NC 43, Bypassing New Bern entirely on a North-South Route. This project seems largely non-disruptive to human life in this segmented section outside of City Limits between agricultural and industrial properties, but this document does not speak for the rural populations nor the property owners underneath the proposed roadways. Corporations can comment if they prefer changes. It seems that Bosch, Moen, and Weyerhouser would request FAST so that they could ensure the possibility for future public transit options for the huge numbers of workers that staff their factories and plants. New Bern, at large, should be notified that they will be bypassed because this action has major commercial implications and indirect effects for the entire City of New Bern. From US 70 to Trent Creek Rd, U-6198, is the upgrade of an intersection East to West, but it actually seems to be the northern land connection to R-4463, a new stretch of highway that will require the new Trent River Bridge, NB-Rdwy-01. Both sections of this new US 17 fail to recognize that the highway would have to build over or through Elementary School Benn D Quinn. Building near schools has proven deleterious public health consequences such as child asthma, among other pulmonary and respiratory diseases. The new US 17 connection would drive between low-income and affordable housing developments at Craeberne Forest. This project needs an involved study before it can be factored into a legitimate local plan. Trent Road, U-3448, is a "minor thoroughfare" with recommendations for widening the roadway from 2 lanes to four lanes, with the addition of a bike lane and sidewalk. Trent Road is the historic highway running parallel to a primary arterial. Trent Road has become a local alternative for drivers who want to avoid the busy traffic of MLK. Trent Road is also the safest alternative for any pedestrian or biker who hopes to traverse New Bern East to West. Congestion is not a factor, nor the purpose of Trent Road. It is a side road for local traffic that wishes to move unhurriedly on the historic highway. There are schools, neighborhoods, doctor's offices, local businesses and amenities along this route that benefit from calm traffic, and remain safe with slow speeds and uncomplicated. This local route deserves Bike, Pedestrian, and Public Transit developments before more cars, but even before I wage that argument alone, I think this project deserves intensive local conversation since it has extreme utility and extreme potential. The number of bikers, and their origin-destinations ought to be studied. Glenburnie Road Interchange, U-6102, is a project that overlaps with NB-Rdwy-04 and Nb_Rdwy-05, and seems to be working at cross-purposes in their siloed considerations. The widening of these ramps need to ensure that nearby multi-modality is guaranteed and considered. This intersection is one of the most critical in New Bern since it is one of few places for local populations to fjord US 70. The populations who live near here are Environmental Justice Populations that would be severed from critical services and unique destinations. U-6102 needs to be very carefully designed to ensure safety for all socioeconomic groups and potential transportation types. In order to improve the NBA MPO, I ask that more rigorous study be used in determining the future of our local transportation network. Bicycle counts and pedestrian counts need to be considered in conjunction with highway plans, and such data ought to be publicly available. New Bern deserves an emphasis on Bike Lanes; there is nowhere more bikeable – and therefore accessible – than the Coastal Plains. Highways must be built in "protected status" for Bike Lanes according to the real risk posed by each roadway. This degree is not only attuned to the past fatalities, but the potential future fatalities. Highways also need to study the availability of services on either side of the highways, as construction begins to bisect any community at inception, posing novel health and safety threats. Fortunately, "the purpose of the Complete Streets Policy is to ensure that operation of North Carolina's transportation network will not create barriers or hazards to the movements of those users." Multi-modality is a requirement in transportation planning, so both the MTP and the CTP need to reflect that. This MTP update fails to meet its stated goals of ensuring accessibility, sustainability and equity, which would be largely solved by a closer following of State Policy. The MPO ought to embrace Complete Streets in the design approach, and seek to pass the policy at the local level. I would like to live in a New Bern where I can be sure my neighbors can get to work even when they cannot afford a car. I hope that my children can explore their hometown independently of an adult driver. I want to live in a place where I can commute to work without the stress and threat of being in an automobile. I propose see changes to the MTP for the sake of my future and all New Bernians. Thank you for reading. Sincerely, Nate Polo ReEnvision New Bern natepolo@live.unc.edu	Thank you for taking the time to read our updated long range transportation plan and providing feedback. 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ENVISION 2045

New Bern Area MPO Metropolitan Transportation Plan