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Thank you to the hundreds of local residents, business owners, community leaders, and government staff that participated in the development of this plan through meetings, events, comments forms, and plan review. Cover photos courtesy of moorecountync.gov.

Prepared by:

Scott Walston, PE Triangle Planning Group Supervisor NCDOT Transportation Planning Division

Special Assistance by:

Triangle Area Rural Planning Organization

Matt Day

Moore County Planning Department

Debra Ensminger

Multiple staff members of Transportation Planning Division, including:

- Julie Bogle, PE
- Dominique Boyd
- Saman T. Jeffers, El
- Travis Marshall, PE

In Cooperation with:

- Moore County
- Town of Aberdeen
- Town of Cameron
- Town of Candor
- Town of Carthage
- Town of Pinebluff
- Town of Robbins
- Town of Southern Pines
- Town of Taylortown
- Town of Vass
- Village of Foxfire
- Village of Pinehurst
- Village of Whispering Pines









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EXECUTIVE SUMMARY

In 2010, the Transportation Planning Division of the N.C. Department of Transportation (NCDOT), Moore County and its municipalities, and the Triangle Area Rural Planning Organization (TARPO) began a Comprehensive Transportation Plan (CTP) study for Moore County.

The Moore County CTP is a long-range, multimodal transportation plan that covers transportation needs through 2040. Modes of transportation evaluated as part of this plan include highway, public transportation, rail, bicycle, and pedestrian. This plan does not cover routine maintenance or minor operations issues. Refer to Appendix A for contact information on these types of issues.

Obtaining consensus on several recommendations lengthened the study time frame. Findings of this CTP study were based on an analysis of the transportation system, environmental screening and public input, detailed in Chapter 1. Figure 1 shows the CTP maps, mutually adopted by local jurisdictions, Moore County and NCDOT in 2019. TARPO endorsed the maps in 2018. <u>Descriptive information and definitions for designations depicted on the CTP maps can be found in Appendix B.</u>

Implementation of the plan is the responsibility of Moore County, its municipalities, and NCDOT.

This report documents the recommendations for improvements that are included in the Moore County CTP.

Major Recommendations:

U.S. 1 Synchronized Street: Improve the section of U.S. 1 between Roseland Road (SR 1112) and Old U.S. 1 to a synchronized street. (TIP U-5815).

U.S. 15-501 Synchronized Street: Improve the section between U.S. 1 and Brucewood Road to a synchronized street. (TIP U-5814).

U.S. 15-501: Widen to a 4-lane divided facility from Page Road (SR 1208) to Lee County, and from U.S. 1 to Hoke County.

N.C. 211: Widen to a 4-lane divided facility from Aberdeen to county line (R-2509) and from NC 73 to Holly Grove School Road (SR 1241) (R-5726).

Western Connector: Construct a multilane divided facility, mostly on new locations to connect N.C. 211 west of Pinehurst to U.S. 1 south of Aberdeen. It will provide relief for the congested N.C. 5.

Carthage Byway: Construct a 2-lane facility on a new location to remove through traffic from downtown Carthage.

More detailed information about these and other recommendations can be found in <u>Chapter 3</u>. <u>Appendix</u> <u>J</u> contains an overview of other plans incorporated into this study and <u>Appendix K</u> contains a timeline of the development of this study.

CHAPTER 1

Introduction and Overview

A Comprehensive Transportation Planning

The Comprehensive Transportation Plan (CTP) is North Carolina's long-range multimodal transportation plan.

The CTP represents a community's consensus on the future transportation system (including the existing system and improvements) needed to support anticipated growth and development over a 25-30 year time frame.

The CTP serves as an official guide to provide a well-coordinated, efficient, and economical transportation system for the future of the region. Modes of transportation evaluated as part of this plan include highway, public transportation, rail, bicycle, and pedestrian. This plan does not cover routine maintenance or minor operations issues.

Vision, Goals, Objectives

The CTP vision, goals and objectives are developed as part of the public involvement process, and help identify how the people within an area would like to develop the transportation system.

After reviewing the needs of the region, the formulated goals are:

Goal 1 Provide an efficient transportation system.

Goal 2 Provide an accommodating transportation system.

Goal 3 Provide a multi-modal transportation system.

Goal 4 Provide a transportation system that supports economic vitality.

Goal 5 Provide a safe transportation system.

Goal 6 Preserve and protect the ambiance and heritage of Moore County, inclusive of areas around municipalities.

Goal 7 Enhance the union of the built and natural environment to improve citizen health through the use of open space and recreational opportunities.

Goal 8 Optimize the uses of land within Moore County.

Goal 9 Provide information and seek citizen participation.

Goal 10 Accommodate a variety of housing types.

Planning Process

The CTP process consists of five high-level steps that outline the sequence of major activities. The basic flow of the process is shown in the figure below.

CTP process



The process is structured with the intent to offer flexibility to meet an area's planning needs. It balances the need to meet multimodal transportation demands while considering the natural and human environment within a community. It forms a strong connection between an area's transportation plan, locally adopted land development plans, and community vision and includes a thorough public involvement process.



D Public Involvement

Public involvement is a key element in the transportation planning process.

Moore County had an unprecedented public involvement plan to obtain citizen input and feedback throughout the study process. This section gives a brief synopsis of the public involvement opportunities throughout the process, with a more detailed discussion in Appendix K.

The Moore County Transportation Committee (MCTC) provided guidance throughout the entire CTP process, including population and employment projections and transportation recommendations. The meetings were advertised and open to the public.

From the outset, three rounds of public involvement were planned for the study, with a brief summary below.

Charrettes (Nov. 1-4, 2011 and Jan. 12, 2012):

Early in the process, five "focus areas" were identified as needing a community consensus

on transportation solutions (see Chapter 2). An exercise was created to help residents create locally accepted ideas to address important transportation decisions in these five focus areas. A majority of the public was interested in the U.S. 1 corridor. Eight charrettes were held, with 479 unique participants. The methodology behind the development of the materials used in the charrettes, the data obtained, and the resulting conclusions can be found in the *Moore County November 2011 Charrette Report*.

Public Meetings (March 23-24, 2015) :

The second round of public involvement was held after the N.C. Board of Transportation revised the Strategic Highway Corridors (SHC) policy to the Strategic Transportation Corridors (STC) policy. This change in NCDOT policy allowed additional flexibility in identifying solutions for the focus areas. Overall, the feedback was positive, especially the idea of the U.S. 1 synchronized street instead of a bypass.

Public Meetings (April 9 -23, 2018) :

Eight drop-in sessions were held for the draft CTP, with 66 total attendees. Overall, the feedback was positive except concerns over the proposed Western Connector concept. There was also an online survey to allow for comments online.

A website was also created and housed at ncdot.gov early in the process to share study information. The draft CTP was also presented to each municipality and the county during their regular council or work meetings prior to local adoption.

Final Adoptions (2018)

On August 29, 2018, the MCTC endorsed the draft CTP which included the proposals found in <u>Appendix H</u>. They did, however, add some consideration of a truck route.

This verbiage was included in the final motion by the committee: "Consider a different route other than or in addition to the Pinehurst Bypass and Western Connector to address truck traffic, may require coordination with adjoining local jurisdictions and Counties."

State Statute 136-66.2 requires that an area have a valid land development plan less than five years old. To satisfy local land use plans that were older than five years, Aberdeen and Pinehurst reaffirmed their existing land use plans (Sept. 24, 2018 and Oct. 9, 2018, respectively) since they were used in the development of the Moore County CTP. Moore County also chose to reaffirm its plan on Nov. 6, 2018 since their plan was nearly five years old.

TARPO endorsed the CTP on Dec. 13, 2018. The N.C. Board of Transprotation adopted on Jan. 10, 2019.

To meet future travel demand of the transportation system, we need reliable forecasts of future travel patterns to estimate congestion.

This is usually accomplished through a capacity deficiency analysis (which is a measure of how a facility is operating), a traffic crash analysis, and a system deficiency analysis. This information, along with population growth, economic development potential, and land use trends, is used to determine the potential impacts on the future transportation system.

CHAPTER 2

Existing and Future Transportation
System

Analysis Methodology and Data Requirements



Roadway System Analysis

A CTP includes the analysis of the existing transportation system and its ability to serve an area's travel demand.

The major roadways in and near Moore County are:

- U.S. 1 is a multi-lane facility which runs in the eastern part of the county near Cameron through Vass, Southern Pines, Aberdeen, and Pinebluff to the county line.
 U.S. 1 is the major connection to Raleigh, and Raleigh-Durham International Airport (RDU).
- U.S. 15-501 connects Carthage to Aberdeen and contains the Pinehurst traffic circle (where N.C. 2, Midland Road, and N.C. 211) come together.
- N.C. 211 is an east-west route that traverses the entire county and was recently widened between West End and the traffic circle.
- N.C. 24-27 is an east-west route throughout the county and connects Charlotte to Jacksonville. The section west of Carthage is designated a Scenic Byway.
- N.C.705, also known as the Pottery Highway/ Road, connects the unincorporated areas of Eagle Springs to Seagrove via the Town of Robbins. This is also designated a Scenic Byway.

Moore County is located between two major north/south interstate systems, I-73/I-74 just

to the west and I-95 to the east. However, neither run through the county.

In the development of this plan, reliable forecasts of future travel patterns must be estimated to identify existing and anticipated deficiencies. Traffic was projected from 2010 to 2040 using a travel demand model. The model incorporates local land use and locally approved growth projections to develop future growth rates and patterns. Complete documentation of the travel demand model can be found in the Moore County Travel Demand Model Development Documentation and Users Guide. Future 2040 traffic volumes were used to measure congestion. Recommendations were based on the results of these projections.

Appendix L shows 2040 traffic volumes using the existing roadway network, projects funded to be constructed in the 2018-2027 State Transportation Improvement Program (STIP), and the Carthage Byway and Western Connector proposals. Even with these improvements, several facilities will experience congestion concerns in the future, including N.C. 5, N.C. 24-27 in Carthage, U.S. 15-501, U.S. 1 and several other facilities.



Traffic Crash Assessment

Traffic crashes are often used as an indicator for locating congestion and roadway problems.

Crash patterns and data can lead to the identification of improvements that will reduce the number of crashes.

During the development of the Moore County CTP, high frequency crash locations were examined, using data fom Aug. 1, 2014 to

Aug. 1, 2017. During this period, a total of 73 intersections and 103 roadway sections were identified to a have high frequency of crashes, as illustrated in <u>Appendix M.</u>



Bridge Deficiency Assessment

Bridges having the highest priority are replaced as federal and state funds become available. Forty-seven deficient bridges were identified on roads evaluated as part of the CTP and are illustrated in Appendix F. Of these, only one is under construction for replacement and is included in the 2018-2027 STIP. Additionally, 14 of the 47 deficient bridges occur along roadways recommended for improvement in the CTP. As deficient bridges are replaced, every consideration should be given to proposed CTP recommendations and cross sections associated with the recommendation.

Table 5 in <u>Appendix F</u> gives a listing of the deficient bridges identified in the CTP and the ID number associated with CTP project proposals. <u>Refer to Appendix F for more detailed bridge deficiency information.</u>



Public Transportation and Rail

Public transportation and rail are vital modes of transportation that give alternatives for transporting people and goods from one place to another.

An inventory of existing and planned fixed public transportation routes for Moore County is presented on Sheet 3 of Figure 1. There are no current fixed public transportation routes in the county.

The A-Pines line is not a fixed route, so it is not displayed on the map. It is a deviated fixed route in the Southern Pines and Aberdeen area. The areas included in the route include connections from various residence areas to Sandhills Community College, Southern Pines Village Shopping Center, Walmart, and the Town & County Shopping Center.

All recommendations for public transportation were coordinated with the local governments. Recommendations include future deviated fixed routes connecting the northern and southern portions of the county.

Types of Public Transportation

Category	Description	Applicable to Moore County
Community Transportation	The vast majority of these systems serve the general public, and clients of human service agencies.	Yes
Regional Community Transportation	These systems are composed of two or more contiguous counties providing coordinated/ consolidated service.	No
Urban Transportation	These systems provide both urban and rural transportation within the county.	Unlikely
Regional Urban Transportation	These systems currently operate in three areas of the state, and connect multiple municipalities and counties.	Unlikely
Intercity Transportation	Greyhound and Amtrak provide services to cities and towns throughout the state as well as the United States and Canada.	'

Rail



Intercity passenger service is provided by Amtrak. The Amtrak Silver Star route between New York and Florida stops at the Southern Pines train station every day. Northbound trains stop early in the morning and southbound trains stop late in the evening. In 2017, 7,065 riders used the Southern Pines station.

There are two major freight railroad companies that operate in North Carolina, CSX Transportation and Norfolk Southern Corporation. Also, there are more than 17 smaller freight railroads, known as shortlines. An inventory of rail facilities for the planning area is presented on Sheet 3 of Figure 1.

Moore County railroads:

- Aberdeen Carolina and Western Railway connecting Moore County to Charlotte, and CSX and Norfolk Southern national rail networks. It is the largest privately held shortline railroad (150 miles).
- Aberdeen & Rockfish Railroad which connects Moore County at Aberdeen to Cumberland and Hoke counties. It interchanges with CSX Transportation at Aberdeen. A map of this shortline railroad can be found at the website: www.aberdeen-rockfish.com/ARRR System Map.png
- 3. CSX Transportation, running northeast toward Raleigh and southwest toward Columbia, S.C.



Bicyclists and pedestrians are a growing part of the transportation system in North Carolina. Many communities are working to improve mobility for cyclists and pedestrians.

The bicycle and pedestrian recommendation of the CTP was primarily based on the TARPO Regional Bicycle and Pedestrian Planning Framework adopted by TARPO in 2015. That framework was based on exisiting bicycle and pedestrian plans.

Inventories of existing and planned bicycle and pedestrian facilities for the planning area are presented on Sheets 4 and 5 of Figure 1.

Land Use

Land use is the physical patterns of activities and functions within an area.

G.S. 136-66.2 requires that local areas have a current (five or less years old) land development plan prior to adoption of the CTP. For the Moore County CTP, the 2013 Moore County Land Use Plan was used to meet this requirement. All the municipalities and county met the five-year requirement either by the date of their most current plan or by reaffirming their current plan.

Most of the major residential and employment growth in Moore County is in the southern portion, particularly Southern Pines, Pinehurst, and Aberdeen. The 2030 and 2040 future land use projections are reflected in the Moore County Travel Demand Model.

The established future growth data was developed locally by each of the municipalities and the county. The data was presented at the municipalities shown in the table below: It was endorsed by all the municipalities and Moore County with the exception of Taylortown, and afterwards by the MCTC on April 9, 2014.

Municipality Presentation of Growth Data			
Aberdeen - 12/3/13	Robbins - 1/9/14		
Cameron - 2/25/14	So. Pines - 10/28/13		
Carthage - 2/18/14	Taylortown - 2/24/14		
Foxfire - 12/10/13	Vass - 2/10/14		
Pinebluff - 1/16/14	Whispering Pines -		
	3/12/14		
Pinehurst - 12/10/13			

Refer to Appendix G for more detailed information on growth expectations and the socio-economic data forecasting methodology.

This chapter presents recommendations for each mode of transportation in the 2018 Moore County Comprehensive Transportation Plan (CTP) as shown in Figure 1. Some appendices tie directly in with this chapter.

CHAPTER 3

CTP Project Proposals

NCDOT Project Delivery Process

Years of extensive planning, study, and work occur before NCDOT ever begins building a roadway. The process, known as the Project Development Process, begins with NCDOT assisting municipalities and regions develop Comprehensive Transportation Plans, which are long-range plans that identify area transportation needs and priorities.

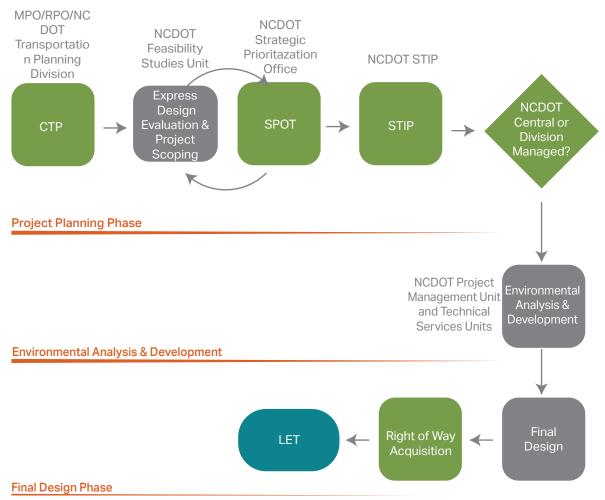
Once a project is programmed for funding, NCDOT initiates studies and the project enters into the Environmental Analysis and Development phase – a process that includes getting feedback from the public and analyzing how a proposed road might affect people living

and working in the area and its impact on the environment.

Once development is complete and engineers have determined the final design, how and exactly where a road will be built, NCDOT begins acquiring any necessary property to accommodate the project and then awards a construction contract ("Let"). Afterwards, construction begins.

The typical NCDOT Project Delivery Process is shown in the figure below.

Project Development Overview



More information on NCDOT's Project Delivery Process can be found at ncdot.gov

Implementation

The CTP is based on the projected growth for the planning area. It is possible that actual growth patterns will differ from those logically anticipated. As a result, it may be necessary to accelerate or delay the implementation of some recommendations found within this plan. Some portions of the plan may require revisions in order to accommodate unexpected changes in development. Therefore, any changes made to one element of the CTP should be consistent with the other elements.

Initiative for implementing the CTP rests predominantly with the policy boards and citizens of the county and its municipalities. As transportation needs throughout the state exceed available funding, it is imperative that the local planning area aggressively pursue funding for priority projects. Projects should be prioritized locally and submitted to the Triangle Area RPO for regional prioritization and submittal to NCDOT.

Refer to Appendix A for contact information on regional prioritization and funding.

Local governments may use the CTP to guide development and protect corridors for the recommended projects. It is critical that NCDOT and local governments coordinate on relevant land development reviews and all transportation projects to ensure proper implementation of the CTP. Local governments and NCDOT share the responsibility for access management and the planning, design and construction of the recommended projects.

Recommended improvements shown on the CTP maps represent an agreement of identified transportation deficiencies and potential solutions to address the deficiencies. While the CTP does propose recommended solutions, it may not represent the final location or cross section associated with the improvement. All CTP recommendations are based on high level systems analyses that seek to minimize impacts to the natural and human environment.

Moore County Focus Areas

Moore County has a long history of transportation planning, and it is outlined in <u>Appendix K.</u> In 2010, after two failed attempts to obtain agreement on a transportation plan with locally controversial projects, a different approach was needed.

The different approach of considering "Focus Areas" was born. The Focus Areas were main identified needs based on feedback that would benefit from acquiring local consensus prior to proceeding with the CTP process. The focus areas are outlined below:

- U.S. 1 Strategic Highway Corridor Sixlane synchronized street. See Highway Recommendations later in this chapter.
- N.C. 24-27 Strategic Highway Corridor in Cameron – At the beginning of this process, N.C. 24-27 was identified as an expressway. When the Strategic Highway Corridor policy was modified in March 2015, the expressway designation was removed. When 2040 projections did not indicate congestion concerns in Cameron, no recommendations were made for this focus area.
- N.C. 24-27 Strategic Highway Corridor in Carthage/Carthage Bypass – two-lane facility north of Carthage. See Appendix P for more information.
- West End improvements Widening of N.C. 211 plus the relocation of N.C. 73. See Highway Recommendations later in this chapter.

 Western Connector – Four-lane divided expressway from N.C. 211 to U.S. 1. <u>See</u> <u>Appendix P for more information.</u>

The MCTC reached agreement on the five focus areas in May 2016, and reaffirmed its support of the Western Connector concept on March 22, 2017. The work on the remainder of the Comprehensive Transportation Plan started in May 2016.

Highway Recommendations

The following pages contain information about the highway recommendations of the CTP. A highway assessment was completed during the development of the CTP. The highway recommendations are ordered as following:

- 1) Major recommendations (U.S. routes first, N.C. routes second, etc.).
- 2) Minor recommendations listed in a table.

No individual improvement is prioritized. The final recommendations will need to be locally approved, funded, and evaluated under a federal process to determine the final design details and location. Two recommendations, the Western Connector and Carthage Byway are not shown in this chapter. They have more detailed information in <u>Appendix P.</u>

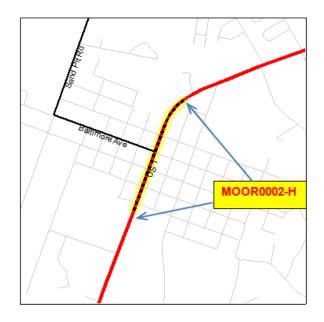
U.S. 1 Improvements - Pinebluff TIP/SPOT/CTP ID: MOOR0002-H

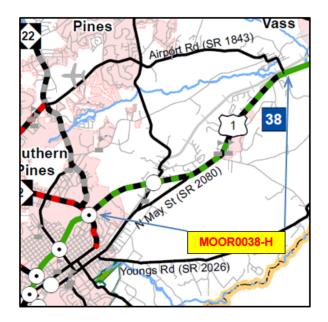
CTP PROPOSAL ID: 2

U.S. 1 / U.S. 15-501 Synchronized Street (N.C. 2 (Midland Road)) – Camp Easter Road

TIP/SPOT/CTP ID: MOOR0038-H

CTP PROPOSAL ID: 38





Purpose: Safety

Identified Need: Expected 2040 safety and operational concerns on U.S. 1 through the Town of Pinebluff due to increases in traffic

Recommendation: Add a median on U.S. 1 through the Town of Pinebluff, to create a consistent divided cross section throughout the county. The concept was discussed as part of U.S. 1 Focus Area discussions.

Existing Volume (2015):

11,000-12,000

Projected Volume (2040): 20,700

FOCUS AREA SOLUTION

Purpose: Safety

Identified Need: Safety and operational concerns on U.S. 1 between N.C. 2 and Camp Easter Road (SR 1853). The crash rate immediately south of this section (10/09-12/16) is 463.8 per million miles of travel, more than statewide crash rate of 307.2 Levels of services will likely degrade after 2035 due to congestion.

Recommendation: Construct 4-lane synchronized street (or reduced conflict intersection facility) between N.C. 2 and Camp Easter Road (SR 1853).

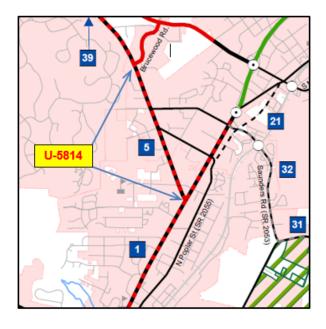
Existing Traffic Volumes (2015): 29,000-

36.000

Projected Traffic Volumes (2040): 63,000

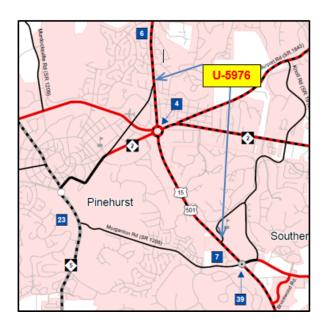
U.S. 15-501 Synchronized Street

TIP/SPOT/CTP ID: U-5814 CTP PROPOSAL ID: 5



U.S. 15-501 & Pinehurst Traffic Circle Improvements

TIP/SPOT/CTP ID: U-5976 CTP PROPOSAL ID: 4



Purpose: Safety

Identified Need: The section between U.S. 1 and Brucewood Road exceeds statewide crash averages. The crash rate (10/09-12/16) is 643.4 per million miles of travel, more than double the statewide crash rate of 307.2.

Recommendation: Construct four-lane synchronized street.

Additional Information: Funded STIP project (U-5814), with construction scheduled for FY 2023. Potential need to extend further north toward Morganton Road and Voit Gilmore Lane in long term.

Existing Traffic Volumes (2015): 19,000-30.000

Projected Traffic Volumes (2040): 37,500-44.500

Purpose: Facility Deficiencies

Identified Need: Current operational deficiency at the Pinehurst Traffic Circle, especially during peak periods.

Recommendation: Improvements to traffic circle, approaches, and intersections north and south along U.S. 15-501. This need is being studied by a consultant and a decision on the type of improvement has not been finalized.

Additional Information: Funded STIP project (U-5976) with construction scheduled for FY 2026.

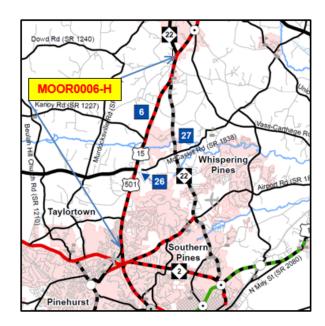
Existing Traffic Volumes (2015): 16,000-26,000

Projected Traffic Volumes (2040): 22,000 -39,000

U.S.15-501 Widening between Pinehurst and Carthage

TIP/SPOT/CTP ID: MOOR0006-H

CTP PROPOSAL ID: 6



Purpose: Capacity / Congestion

Identified Need: Current and future congestion concerns of U.S. 15-501 from Page Road. to northern junction of N.C. 22 in Carthage.

Recommendation: Multi-lane widening including a median.

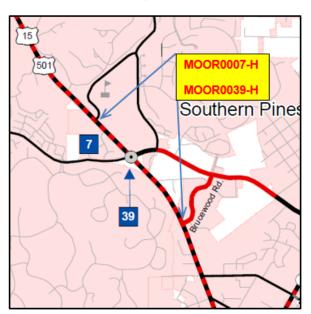
Additional Information: STIP project (R-5927) from Pinehurst to N.C. 73 is currently unfunded.

Existing Traffic Volumes (2015): 9,000-16,000

Projected Traffic Volumes (2040): 14,000-20.000

U.S. 15-501 Improvements near Morganton Road (SR 1205) & interchange at Morganton Road

TIP/SPOT/CTP ID: MOOR0007-H MOOR0039-H (interchange) CTP PROPOSAL ID: 7, 39



Purpose: Safety

Identified Need: There are current and future safety and operational issues of U.S. 15-501 near Morganton Road (SR 1205). Also, there is short gap between the limits of funded projects U-5814 and U-5976.

Recommendation: Construct synchronized streets to fill a gap in the corridor between the sections covered by projects U-5814 and U-5976. Construct interchange at Morganton Road.

Additional Information: STIP project (R-5891) to convert at-grade intersection to interchange at SR 1205/SR 1309 (Morganton Road) is currently unfunded.

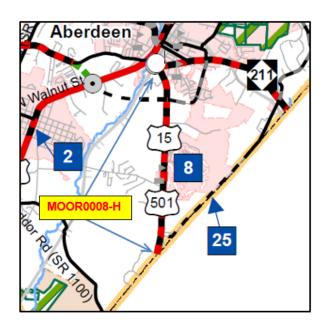
Existing Traffic Volumes (2015): 27,000-30.000

Projected Traffic Volumes (2040): 40,900-44,500

U.S. 15-501 Widening South of Aberdeen

TIP/SPOT/CTP ID: MOOR0008-H

CTP PROPOSAL ID: 8



Purpose: Capacity/Congestion

Identified Need: By 2040, there is expected to be congestion concerns of U.S. 15-501 South of Aberdeen.

Recommendation: Multi-lane widening of U.S. 15-501 from U.S. 1 south to Hoke County (and continuing on to Laurinburg).

Additional Information: Project was scored in STI Prioritization 5.0 as a three-lane design (alternating passing lane). The ultimate cross section is recommended to be four lanes divided.

Existing Traffic Volumes (2015): 9,200-13.000

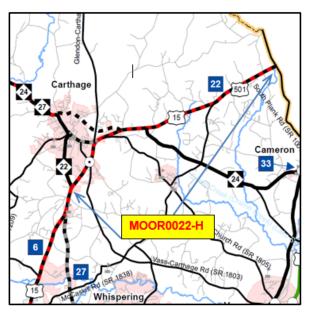
Projected Traffic Volumes (2040): 11,600-

27,200

U.S. 15-501 Widening from Carthage Northward

TIP/SPOT/CTP ID: MOOR0022-H

CTP PROPOSAL ID: 22



Purpose: Capacity/Congestion

Identified Need: By 2040, there is expected to be congestion concerns of U.S. 15-501 near Carthage.

Recommendation: Multi-lane widening of U.S. 15-501 from northern junction of N.C. 22 to Lee County line (continuing into Lee County). Submitted for funding consideration in past (Prioritization 3.0).

Additional Information: Submitted for funding consideration in past (Prioritization 3.0). Recommendation continues the multi-lane cross section recommended south of Carthage. Consistent with the widening recommendation in Lee County CTP.

Existing Traffic Volumes (2015): 6,900-

13,000

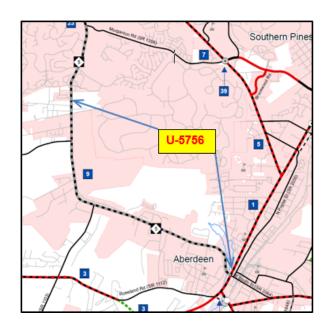
Projected Traffic Volumes (2040):

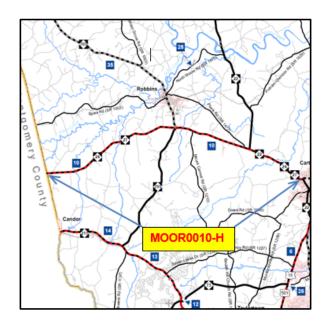
11,300-18,700

N.C. 5 Modernization Improvements TIP/SPOT/CTP ID: U-5756 and R-5892 CTP PROPOSAL ID: 9 N.C. 24-27 Widening West of Carthage

TIP/SPOT/CTP ID: MOOR0010-H

CTP PROPOSAL ID: 10





Purpose: Safety

Identified Need: N.C. 5 has safety and

operational issues.

Recommendation: Add turn lanes and shoulders on N.C. 5 from U.S. 1 to Pinehurst limits. Four lanes from U.S. 1 to Linden Road (SR 115), and three lanes from Linden to Blake Boulevard.

Additional Information: Funded TIP Project R-5892 improves (modernization) N.C. 5 from Blake Boulevard to N.C. 211 with construction in FY 2027.

Existing Traffic Volumes (2015): 9,000-14,000

Projected Traffic Volumes (2040):

18,100-22,800

Purpose: Modernization

Identified Need: Access should be improved along N.C. 24-27 to the proposed Mega Park in northwest Moore County (economic development).

Recommendation: Multi-lane widening of N.C. 24-27 from the Carthage Byway to Montgomery County.

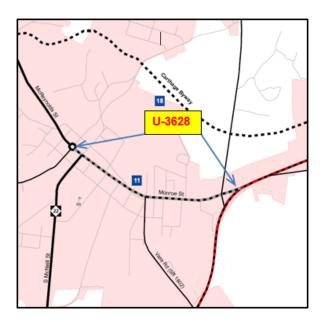
Additional Information: N.C. 24-27 was designated as one of the 1989 "Intrastate" corridors. The recommendation helps complete a portion of the four-lane corridor between Charlotte and Raleigh via N.C. 24-27, U.S. 15-501, and U.S. 1.

Existing Traffic Volumes (2015): 4,000-6,900

Projected Traffic Volumes (2040): 6,300-8,400

N.C. 24-27 (Monroe Street) Improvements in Carthage

TIP/SPOT/CTP ID: U-3628 CTP PROPOSAL ID: 11



Purpose: Safety

Identified Need: There are short-term safety and operational issues on N.C. 24-27 in Carthage.

Recommendation: Constructing three-lane section with curb/gutter and bike/pedestrian improvements.

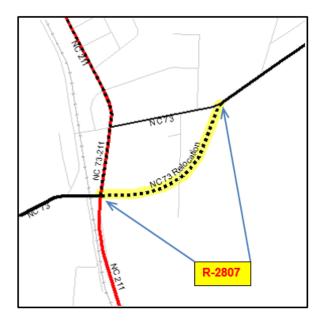
Additional Information: Funded STIP project (U-3628), with construction scheduled for FY 2023.

Existing Traffic Volumes (2015): 10,000-12,000

Projected Traffic Volumes (2040): 13,400

N.C. 73 Realignment at N.C. 211 near West Fnd

TIP/SPOT/CTP ID: R-2807 CTP PROPOSAL ID: 12



Purpose: System Linkage / Connectivity along N.C. 73.

Identified Need: N.C. 73 and N.C. 211 traffic volumes are expected to increase by 2040. Safety problems and crashes could increase with two offset t-intersections in a short distance involving left-turning traffic.

Recommendation: Constructing a twolane relocation of N.C. 73 and eliminate two offset t-intersections.

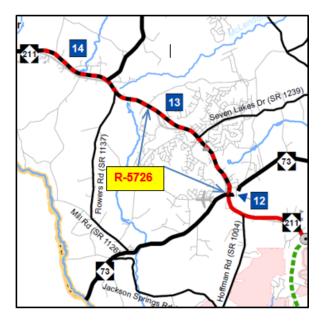
Additional Information: This recommendation should improve intersection operations and system connectivity by consolidating offset N.C. 73/211 intersections. TIP Project R-2807.

Existing Traffic Volumes (2015): 3,000
Exisiting Projected Volume (2040): 1000

(2040 realigned section): 3,900

N.C. 211 Widening from N.C. 73 west of Seven Lakes

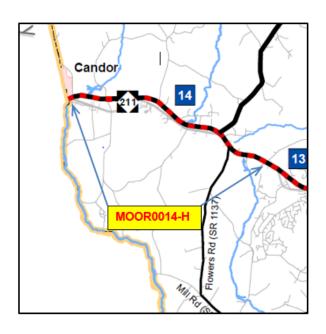
TIP/SPOT/CTP ID: R-5726 CTP PROPOSAL ID: 13



N.C. 211 Widening west of Seven Lakes

TIP/SPOT/CTP ID: H090158-A, MOOR0014-H

CTP PROPOSAL ID: 14



Purpose: Capacity / Congestion

Identified Need: This section of N.C. 211 has a current and future congestion issue.

Recommendation: Multi-lane widening of N.C. 211 from N.C. 73 to Holly Grove School Road.

Additional Information: Funded STIP project (R-5726), with construction scheduled for FY 2023.

Existing Traffic Volumes (2015): 7,300-13,000

Projected Traffic Volumes (2040):

12,000-21,300

Purpose: Mobility

Identified Need: A gap in the multi-lane section between funded project R-5726 and existing U.S. 220 freeway.

Recommendation: Four-lane divided boulevard.

Additional Information: Project was scored in STI Prioritization 5.0.

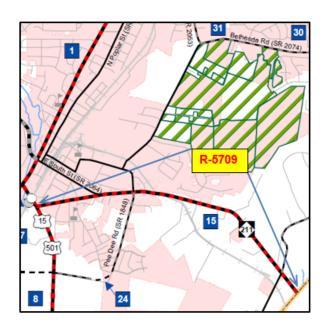
Existing Traffic Volumes (2015): 5,700-7,300

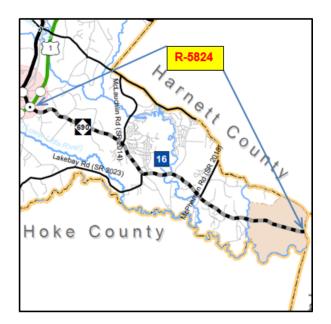
Projected Traffic Volumes (2040): 8,100-12,600

N.C. 211 Widening from U.S. 15-501 in Aberdeen to Hoke County

TIP/SPOT/CTP ID: R-5709 CTP PROPOSAL ID: 15 N.C. 690 Modernization

TIP/SPOT/CTP ID: R-5824 CTP PROPOSAL ID: 16





Purpose: Capacity / Congestion

Identified Need: Current and future congestion and capacity issues on N.C. 211.

Recommendation: Multi-lane widening of N.C. 211 from Aberdeen to Raeford.

Additional Information: Funded STIP project (R-5709), with construction scheduled for FY 2024.

Existing Traffic Volumes (2015): 4,300-

Projected Traffic Volumes (2040): 6,500-21,400

Purpose: Safety

Identified Need: Current safety and operational concerns.

Recommendation: Modernization of existing roadway. Add turn lanes, curve straightening, intersection improvements to N.C. 690.

Additional Information: Funded STIP project R-5824 with construction scheduled for FY 2023.

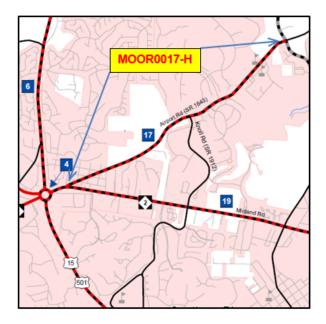
Existing Traffic Volumes (2015): 4,100-8.000

Projected Traffic Volumes (2040): 6,500-11,500

Airport Road Widening

TIP/SPOT/CTP ID: MOOR0017-H

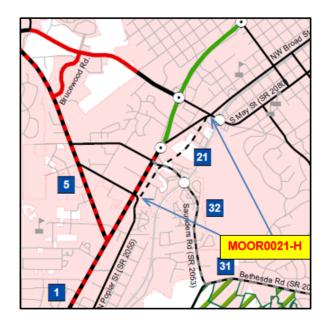
CTP PROPOSAL ID: 17



Broad Street - Poplar Street Connection

TIP/SPOT/CTP ID: MOOR0021-H, H170755

CTP PROPOSAL ID: 21



Purpose: Capacity / Congestion

Identified Need: Future congestion and capacity concerns.

Recommendation: Multi-lane widening of Airport Road between N.C. 2 and N.C. 22.

Additional Information: Project scored in STI Prioritization 4.0

Existing Traffic Volumes (2015): 6,000 **Projected Traffic Volumes (2040):**

11,900-15,100

Purpose: Capacity / Congestion, System Linkage / Connectivity

Identified Need: Current and future U.S. 1 congestion and system linkage.

Recommendation: Constructing a connection between Broad Street in Southern Pines and Poplar Street in Aberdeen, to allow local traffic an alternate to U.S. 1.

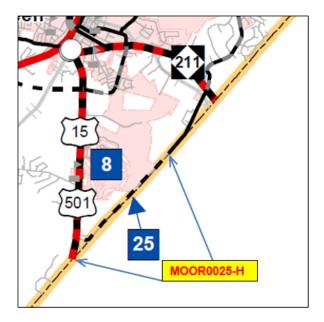
Additional Information: The concept was brought up in earlier discussions about U.S. 1 improvements as a potential way to ease the burden on U.S. 1. Uses some existing roadway segments/rights-of-way.

Existing Traffic Volumes (2015): N/A **Projected Traffic Volumes (2040):** 15,000

Carolina Road - Quewhiffle Road Connection

TIP/SPOT/CTP ID: MOOR0025-H

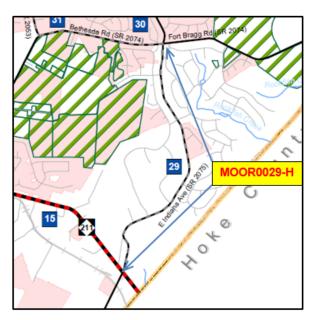
CTP PROPOSAL ID: 25



Indiana Avenue (SR 2075) Modernization and Realignment

TIP/SPOT/CTP ID: MOOR0029-H

CTP PROPOSAL ID: 29



Purpose: Other (emergency evacuation)

Identified Need: Improvement of emergency response time in this area and system linkage.

Recommendation: Constructing a twolane direct connection near county line between Carolina Road and Quewhiffle Road.

Additional Information: Submitted for funding consideration in the past (Prioritization 3.0). This recommendation should improve emergency response times and connectivity between eastern and southern sections of Aberdeen.

Existing Traffic Volumes (2015): N/A **Projected Traffic Volumes (2040):** N/A

Purpose: Mobility

Identified Need: Modernization of Indiana Avenue and system linkage.

Recommendation: Realignment of Indiana Avenue to either line up with Carolina Road or shift the offset further apart, to improve operations. Modernize Indiana Avenue by improving roadway width and other operational improvements.

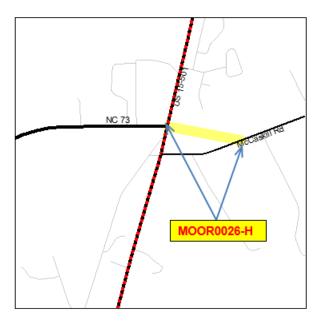
Additional Information: This recommendation is being examined as part of the R-5709. N.C. 211 improvements include shifting Indiana Avenue eastward to align with Carolina Road.

Existing Traffic Volumes (2015): 5,000 **Projected Traffic Volumes (2040):** 8,000

McCaskill Road Realignment at U.S. 15-501

TIP/SPOT/CTP ID: MOOR0026-H

CTP PROPOSAL ID: 26

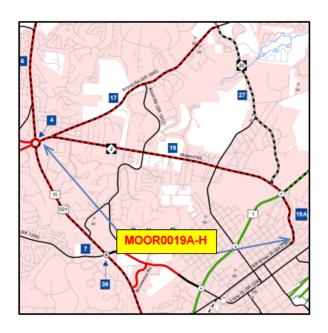


Midland Road Improvements

TIP/SPOT/CTP ID: MOORE0019-H,

MOOR0019A-H

CTP PROPOSAL ID: 19, 19A



Purpose: System linkage, safety

Identified Need: U.S. 15-501 and N.C. 73 traffic volumes are expected to increase by 2040. Safety problems and crashes could increase with two offset T-intersections in a short distance involving left-turning traffic.

Recommendation: Construct a two-lane realignment of McCaskill Road to line up with N.C. 73 at the U.S. 15-501 intersection, in order to improve operations.

Additional Information: The McCaskill Road realignment with N.C. 73 is included in funded STIP project (R-5927 from Pinehurst to N.C. 73) with construction scheduled for FY 2027.

Existing Traffic Volumes (2015): N/A Projected Traffic Volumes (2040): N/A

Purpose: Safety

Identified Need: Current safety and operational issues.

Recommendation: Construct assorted improvements as recommended in the Midland Road Corridor Study, including median, turn lane, intersection and interchange improvements. Improvements at the U.S. 1 interchange have been completed with project W-5708B. A road diet is recommended east of U.S. 1 with one lane in each direction and bike lanes.

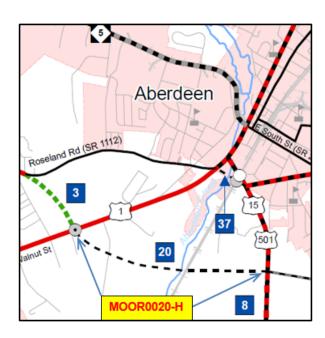
Existing Traffic Volumes (2015): 5,000-18,000

Projected Traffic Volumes (2040): 11,000-15,000

Western Connector Extension

TIP/SPOT/CTP ID: MOOR0020-H

CTP PROPOSAL ID: 20



Purpose: Congestion, System linkage

Recommendation: Construct a twolane extension of the proposed Western Connector to connect the Western Connector from U.S. 1 to N.C. 211 and U.S. 15-501. Access should be limited as much as possible to intersections or interchanges.

Additional Information: This proposal relieves traffic on U.S. 1 and improves connectivity south of Aberdeen.

Existing Traffic Volumes (2015): N/A Projected Traffic Volumes (2040): 9,600

Other Minor Recommendations

Table 3 list the minor recommendations included in the Comprehensive Transportation Plan.

Unaddressed Deficiencies

There are two unaddressed 2040 deficiencies not identified for further improvements in the Moore County CTP outlined below.

- Morganton Road (SR 1205) much of this route is near capacity by 2040. With so many other transportation improvements in the area (N.C. 5, U.S. 15/501, Western Connector, traffic circle), the decision was made to monitor the area and make future recommendations if warranted.
- N.C. 211 (west of the traffic circle to Juniper Lake Road (SR 1216)) – even after the recent improvement to a four-lane divided facility, it is anticipated this area will exceed capacity by 2040. It was decided to monitor the area and make future recommendations if warranted.

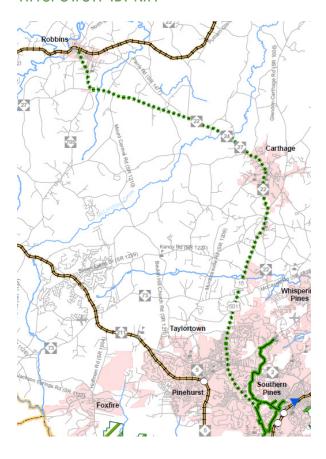
Table 3: Minor Comprehensive Transportation Plan Improvements				
Name	Section	Description/Comment	Proposed Cross Section	Area
NC 5 (R-5892)	Pinehurst Section	Add turn lanes, signal improvements, and other operational improvements	Varies	Pinehurst
Pee Dee Road (SR 2063)	At sharp curve	Straighten sharp curve to improve safety for increased traffic. Will be needed after construction of Western Connector and extension.	2 lanes	Aberdeen, County
NC 22	NC 2 - US 15/501	Add turn lanes where needed, modernization where needed due to development pressures.	2 lanes with turn lanes at major intersections	Carthage, County, Southern Pines, Whispering Pines,
North Moore Road (SR 1470)	North Moore High School - Lakey Siding Road (SR 1479)	Add turn lanes to improve access and congestion when school is in session	3 lanes	Robbins, County
Indiana Avenue (SR 2075)	NC 211 - Fort Bragg Road (SR 2074)	Modernization due to truck traffic	2 lanes	Aberdeen, Southern Pines, County
Fort Bragg Road(SR 2074)	Indiana Avenue (SR 2075) - Bethesda Road (SR 2074)	Modernization due to truck traffic	2 lanes	Aberdeen, Southern Pines, County
Bethesda Road (SR 2074)	Fort Bragg Road (SR 2074)- Saunders Boulevard (SR 2053)	Modernization due to truck traffic	2 lanes	Aberdeen, Southern Pines, County
Saunders Boulevard (SR 2053)	Bethesda Road (SR 2074) - US 1	Modernization due to truck traffic	2 lanes	Aberdeen, Southern Pines, County
NC 24-27	Near Cameron Elementary School	Add turn lanes to improve access and congestion when school is in session	3 lanes	Cameron
Union Church Road (SR 1805)	Grady Road (SR 1803) - Viking Drive (west) (SR 1883)	Add turn lanes to improve access and congestion when Union Pines High School is in session	3 lanes	County, Carthage
NC 705	NC 24-27 - Randolph County Line	Add turn lanes where needed. Economic development	2 lanes	County, Robbins
Linden Road Extension	Western Connector (proposed)-Linden Road	Construct two-lane connector on new location to provide local access to the Western Connector	2 lanes	County, Pinehurst
Roseland Road Extension	US 1 - US 15-501 @ NC 211	Construct two-lane connector on new location to eliminate dog-leg movement	2 lanes	Aberdeen
NC 705	NC 24-27 - Randolph County Line	Add turn lanes where needed. Economic development	2 lanes	County, Robbins

Public Transportation & Rail

There is only one recommended improvement associated with the public transportation mode.

Central Moore Bus Route

TIP/SPOT/CTP ID: N/A



Identified Need: Connectivity

Recommendation: Proposed bus route between southern Moore County and Robbins via Carthage. Currently it is envisioned to be a deviated fixed route similar to the existing "A-Pines" route.

Bicycle And Pedestrian

During the development of the CTP, there were many facilities identified as recommended

bicycle and pedestrian facilities. Inventories of existing and planned bicycle and pedestrian facilities for the planning area are presented on Sheets 4 and 5 of Figure 1. The CTP was primarily based on the TARPO Regional Bicycle and Pedestrian Planning Framework, adopted by TARPO in 2015. That framework was based on the following local plans:

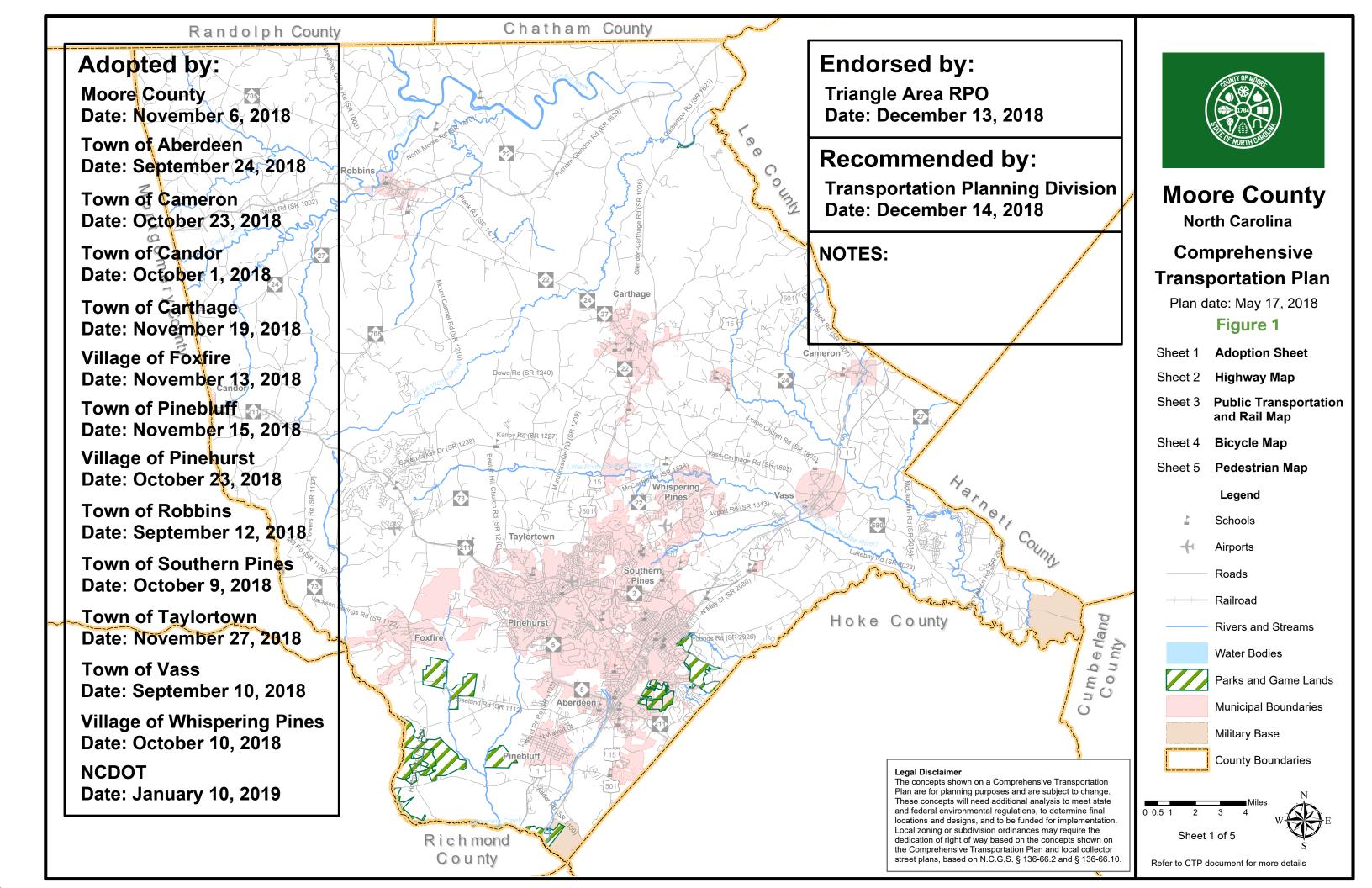
- Aberdeen Pedestrian Plan
- Aberdeen Bicycle Plan
- Southern Pines Sidewalk Plan
- Southern Pines Bicycle Plan
- Pinehurst Pedestrian Plan
- Pinehurst Bicycle Plan
- Cameron Bicycle and Pedestrian Plan
- Moore County Comprehensive Plan
- Central Park Regional Bicycle Plan
- Moore County Bicycle Route Map (from NCDOT)
- Previous Strategic Transportation Initiative (STI) Project Requests

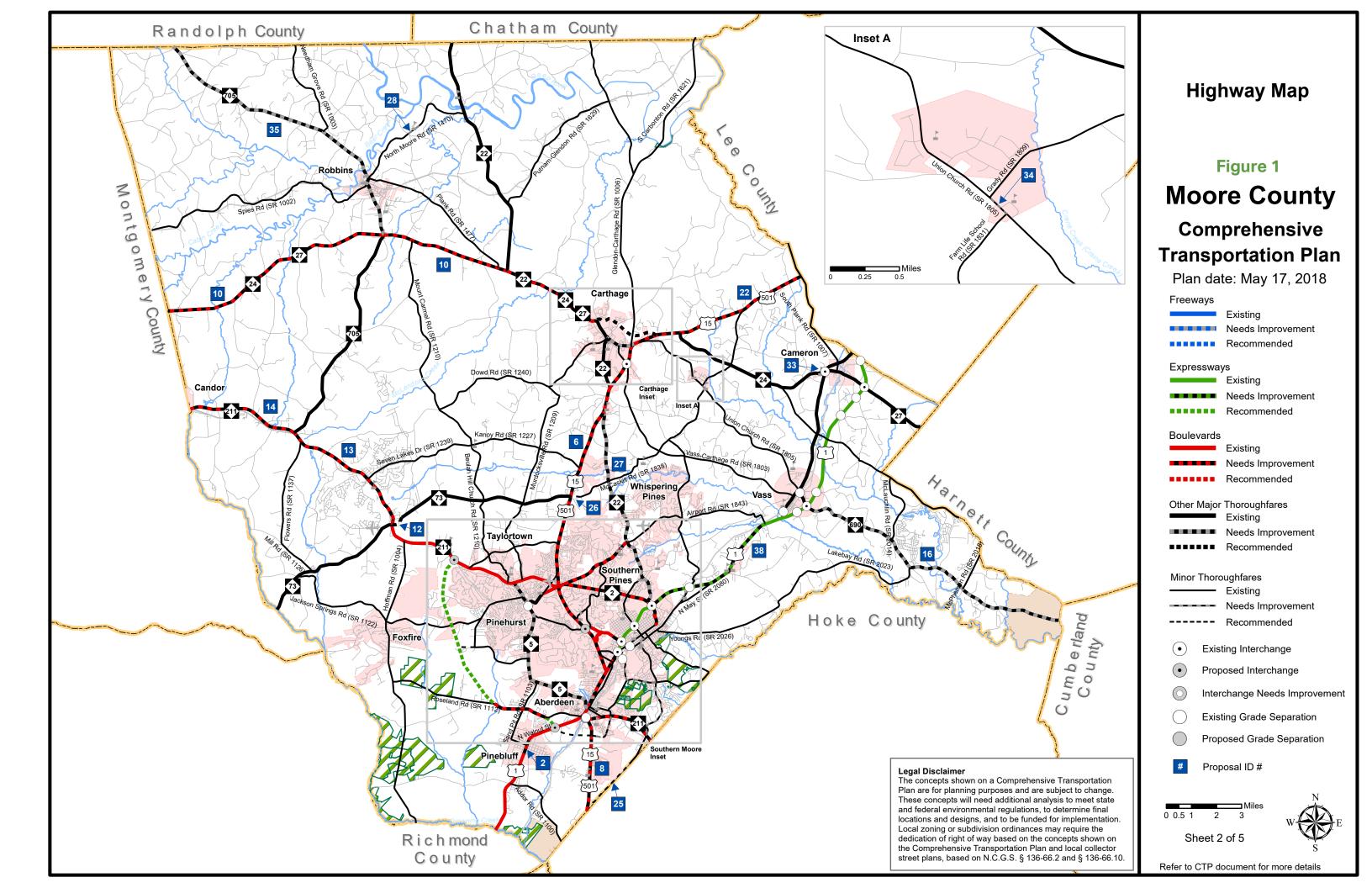
For more information on any of these facilities, please refer to the appropriate bicycle or pedestrian plan.

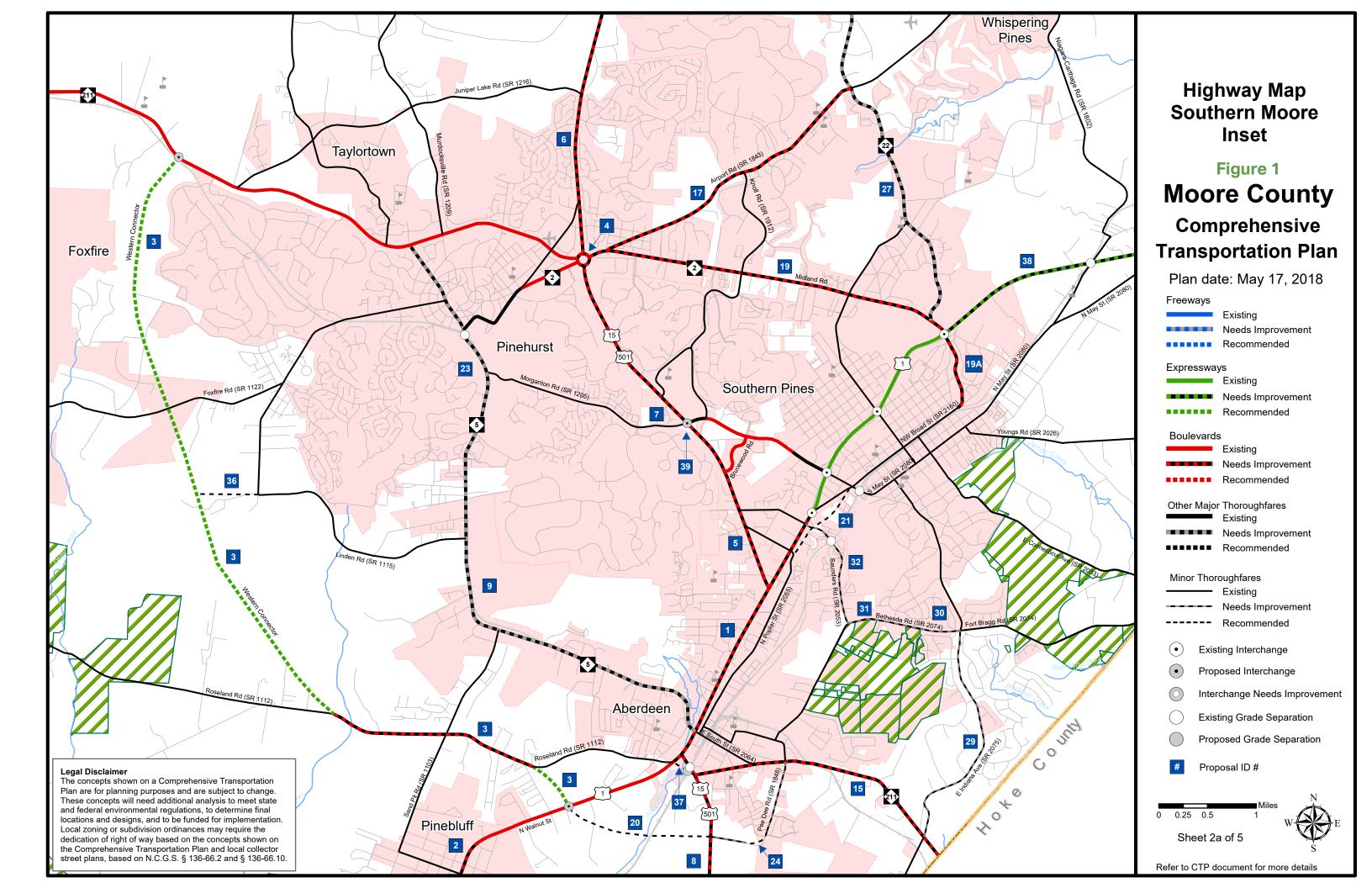
Vass does not have a bicycle and pedestrian plan, so comments from that area were received in April and May 2018 and added as recommendations to the maps.

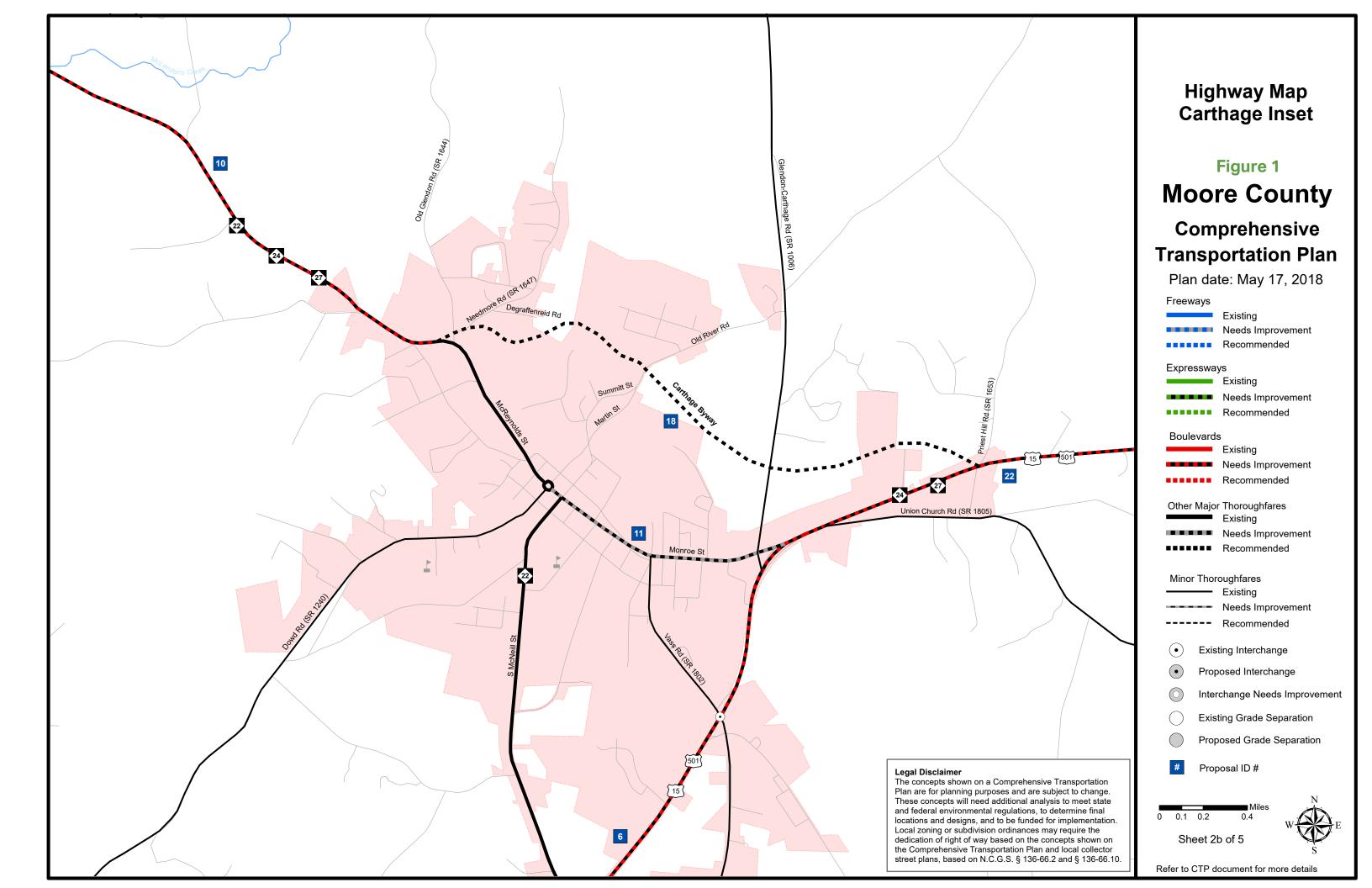
In accordance with American Association of State Highway and Transportation Officials (AASHTO), roadways identified as bicycle routes should incorporate the following standards as roadway improvements are made and funding is available:

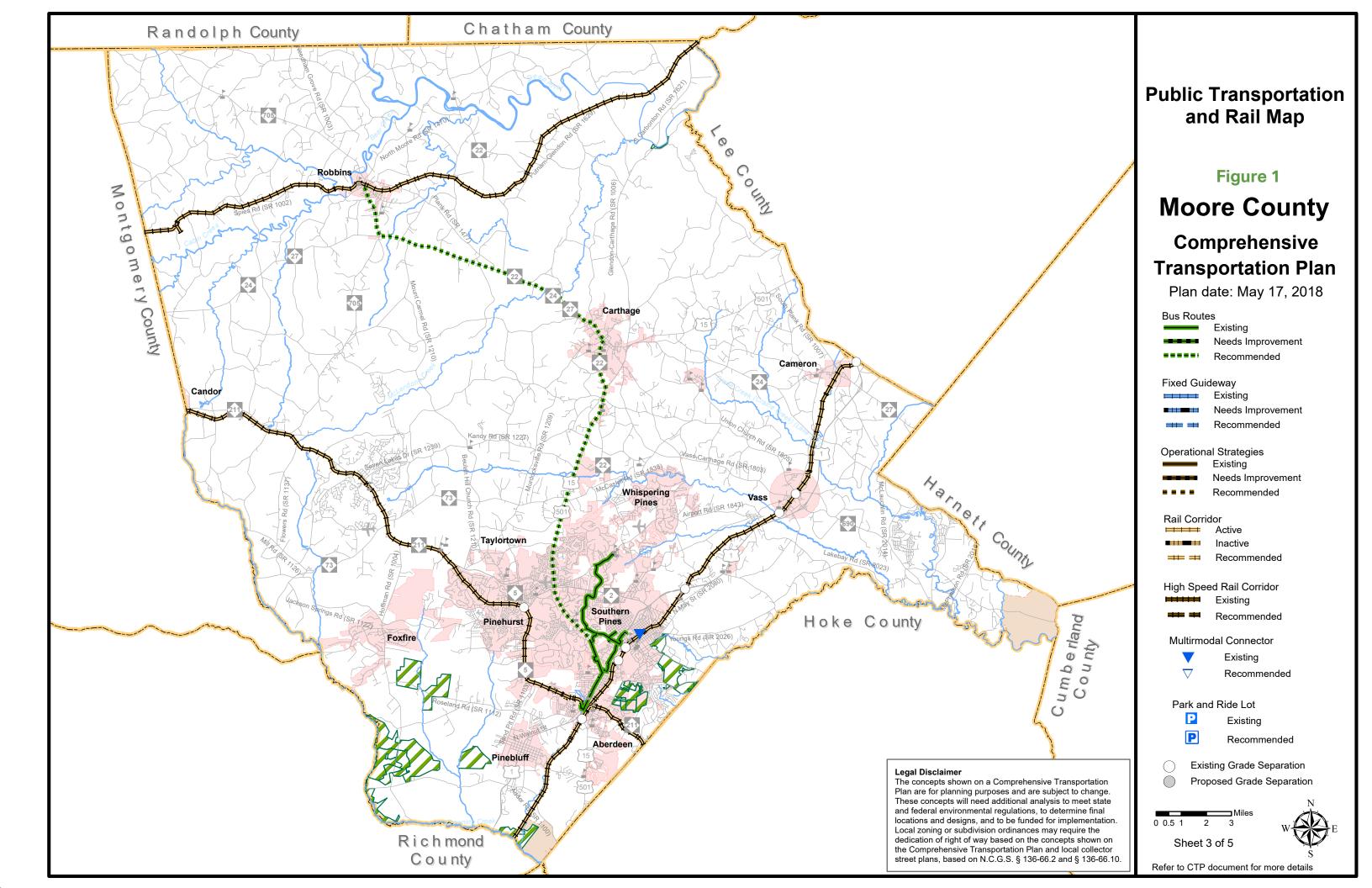
- Curb and gutter sections require, at minimum, 5-foot bike lanes or 14-footwide shoulder lanes.
- Shoulder sections require a minimum of 4-foot paved shoulder.
- All bridges along the roadways where bike facilities are recommended shall be equipped with 54-inch railings.

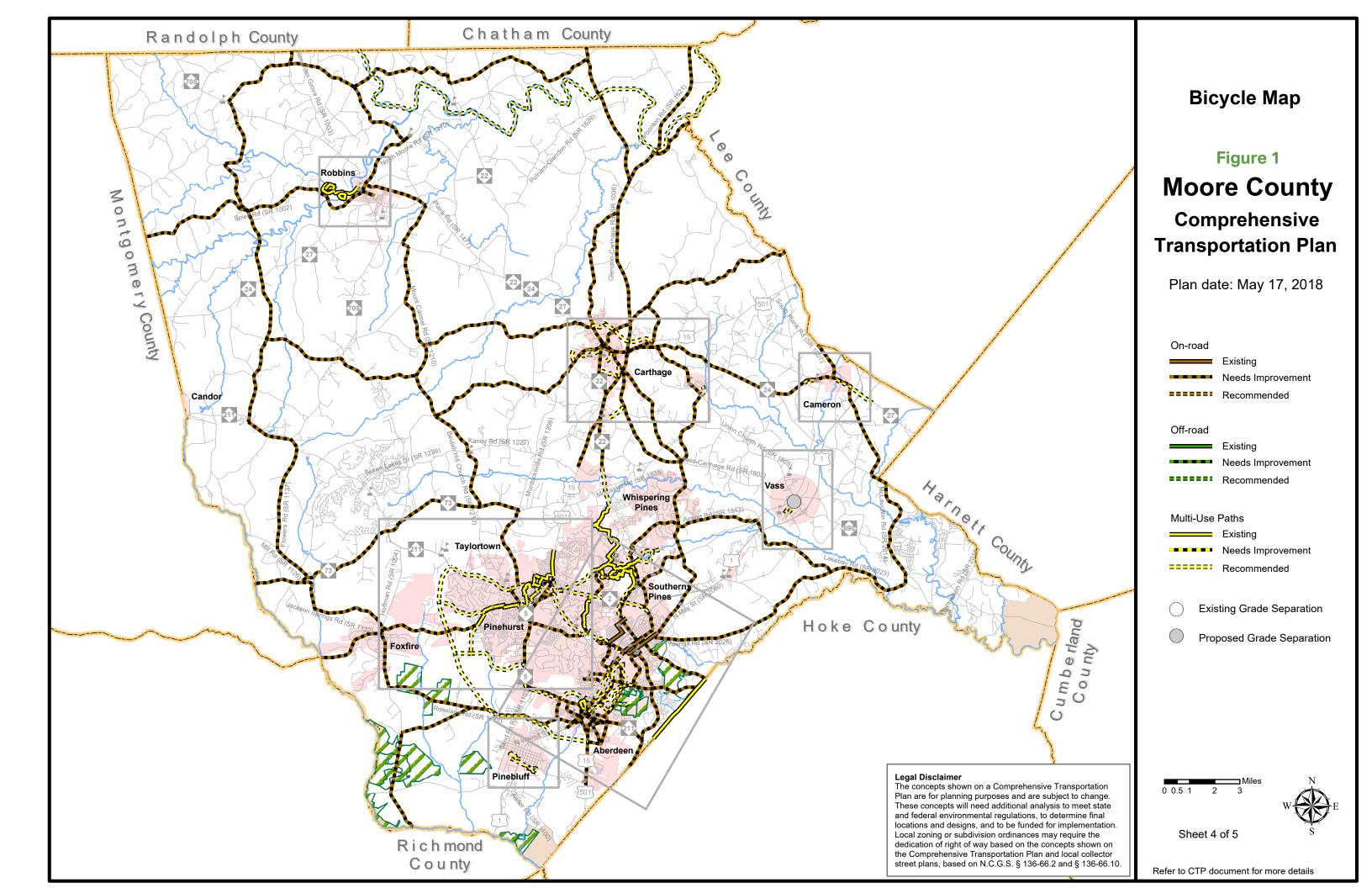


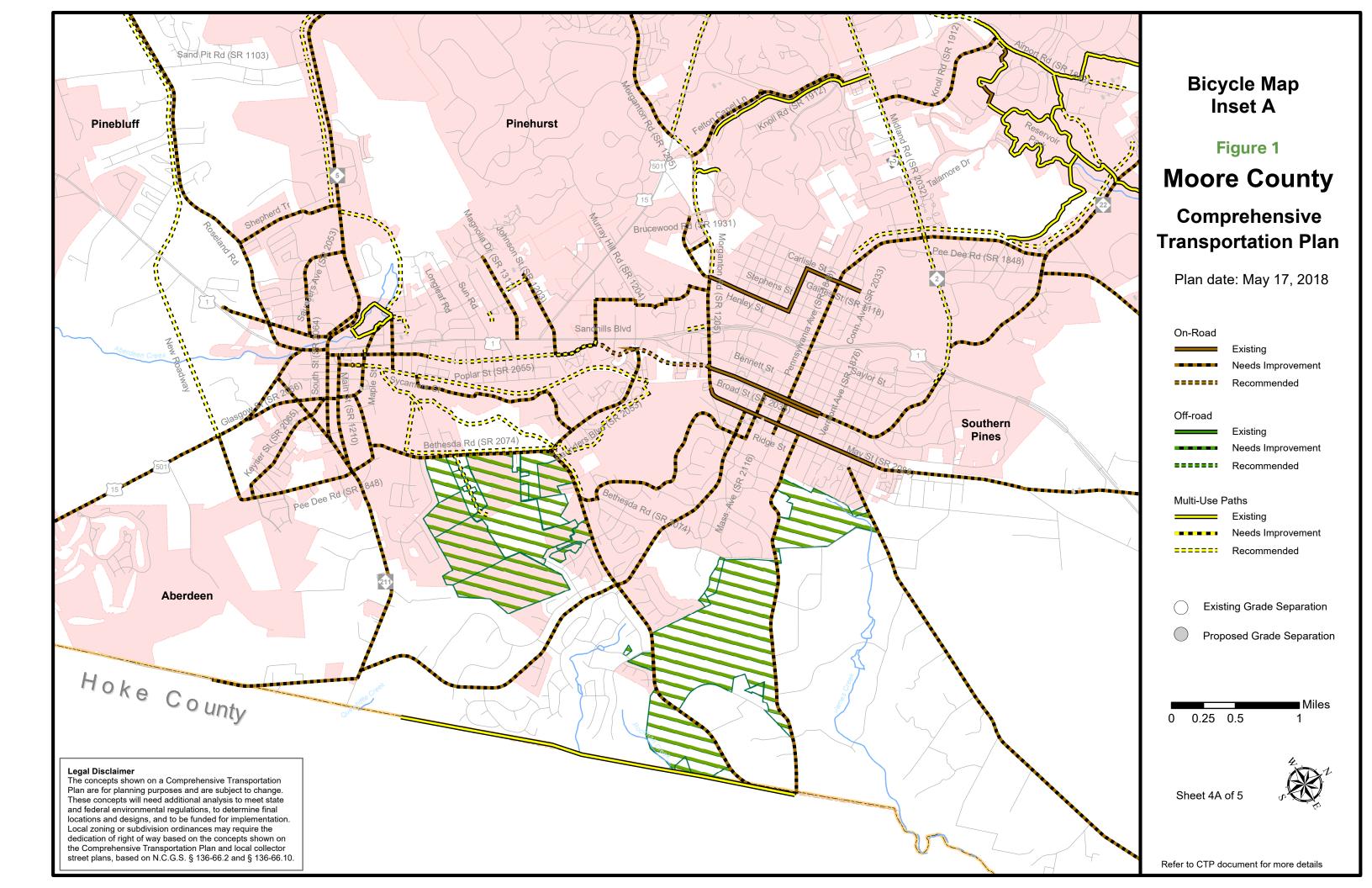


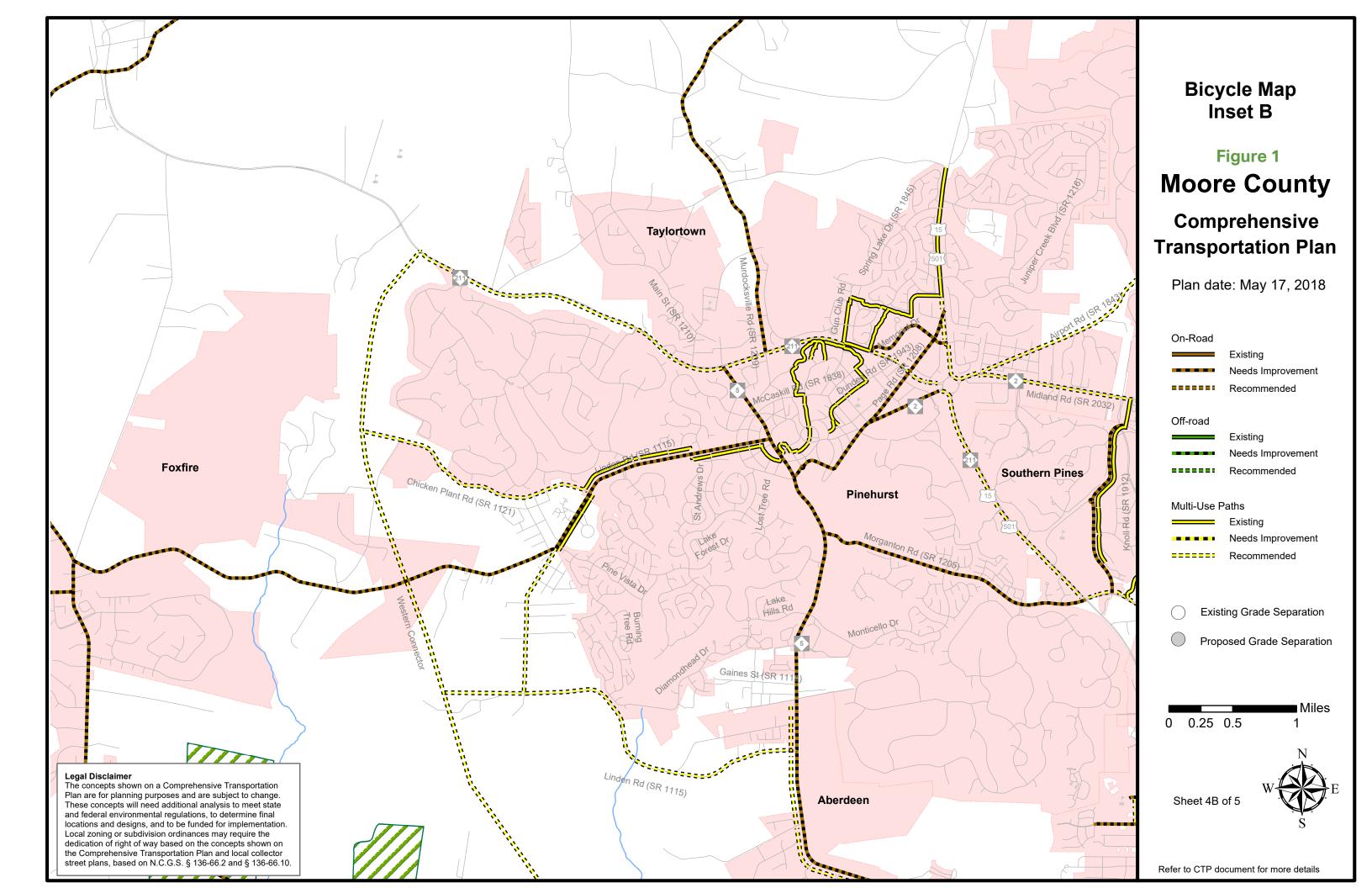


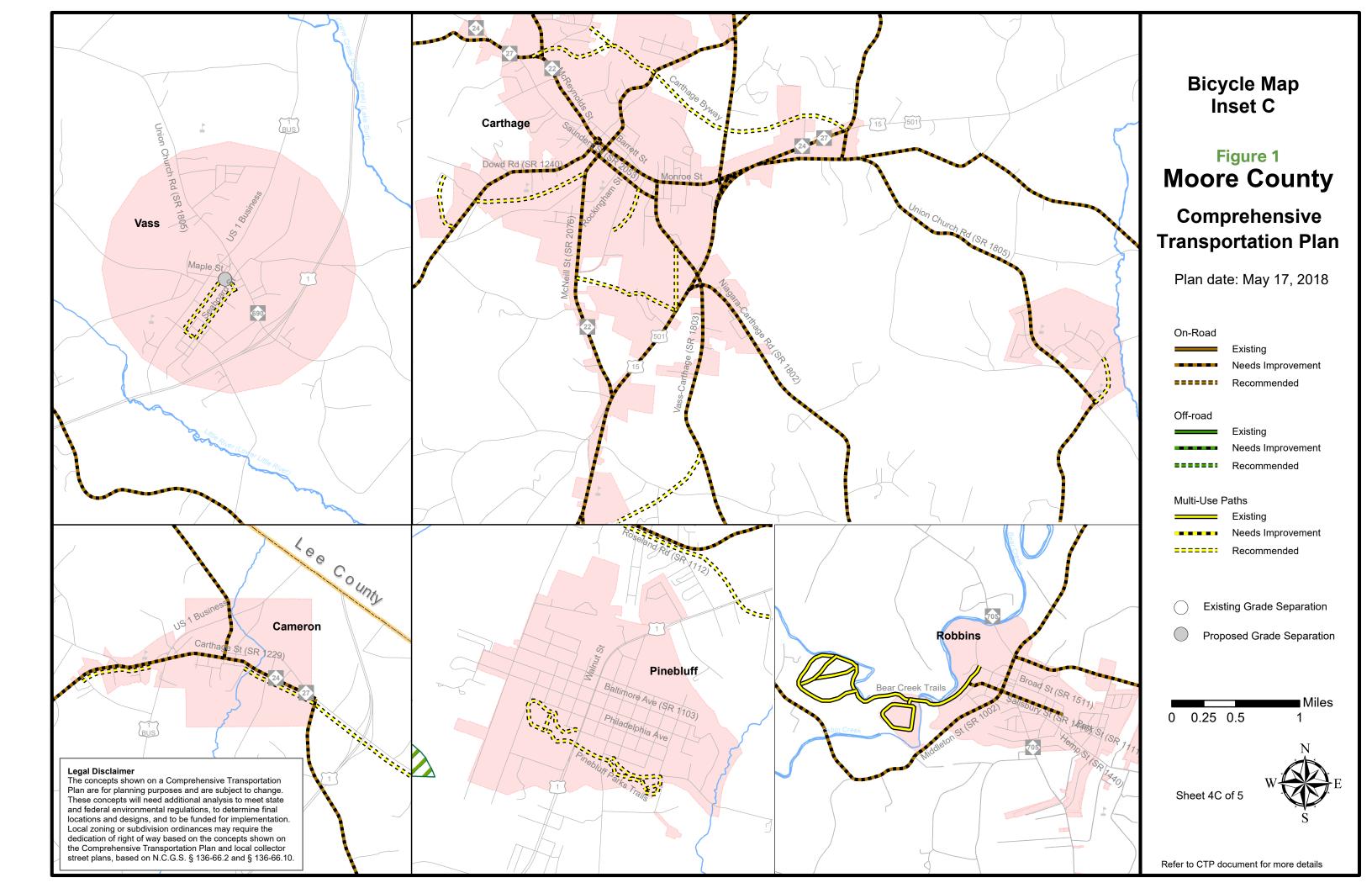


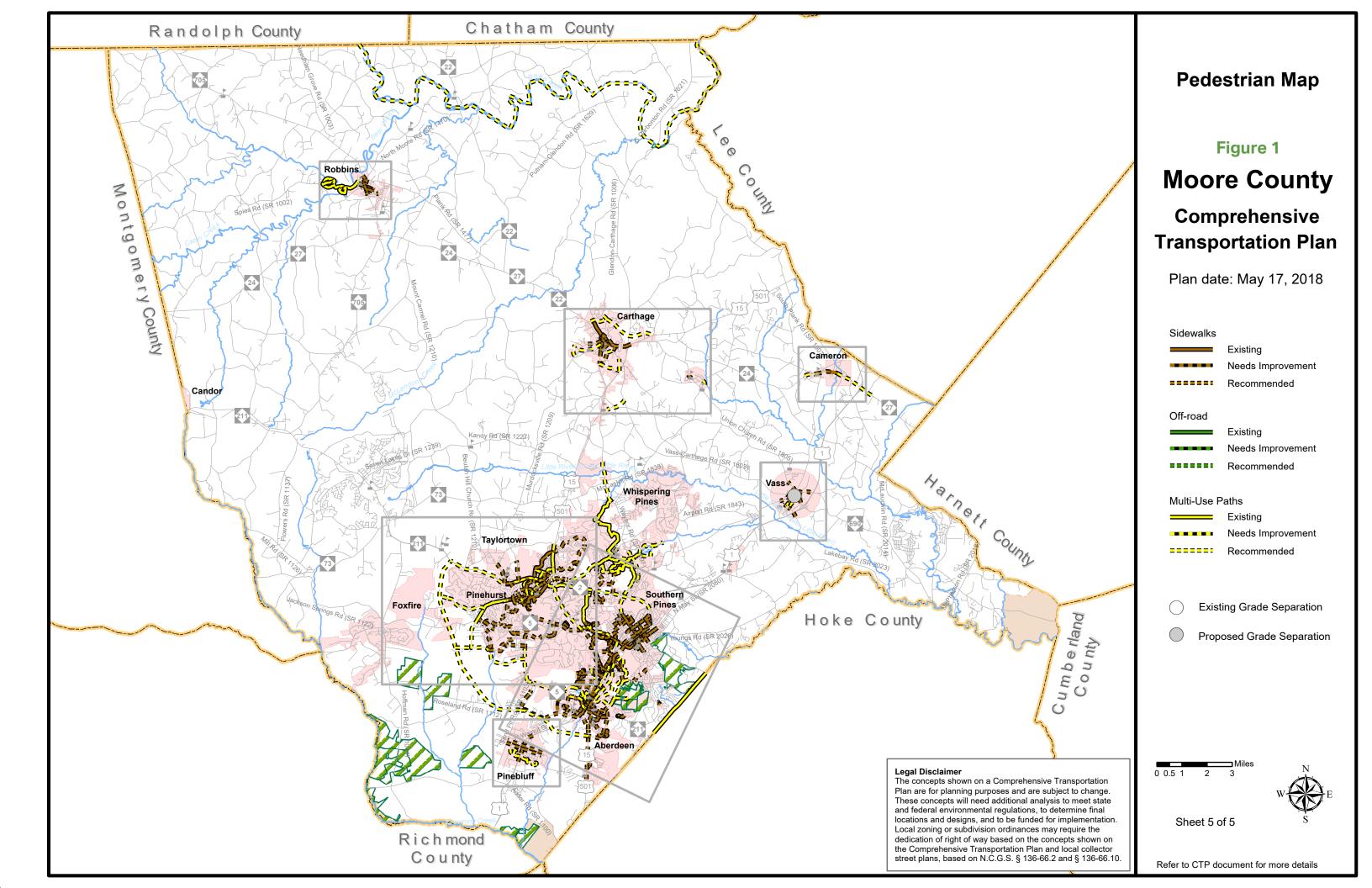


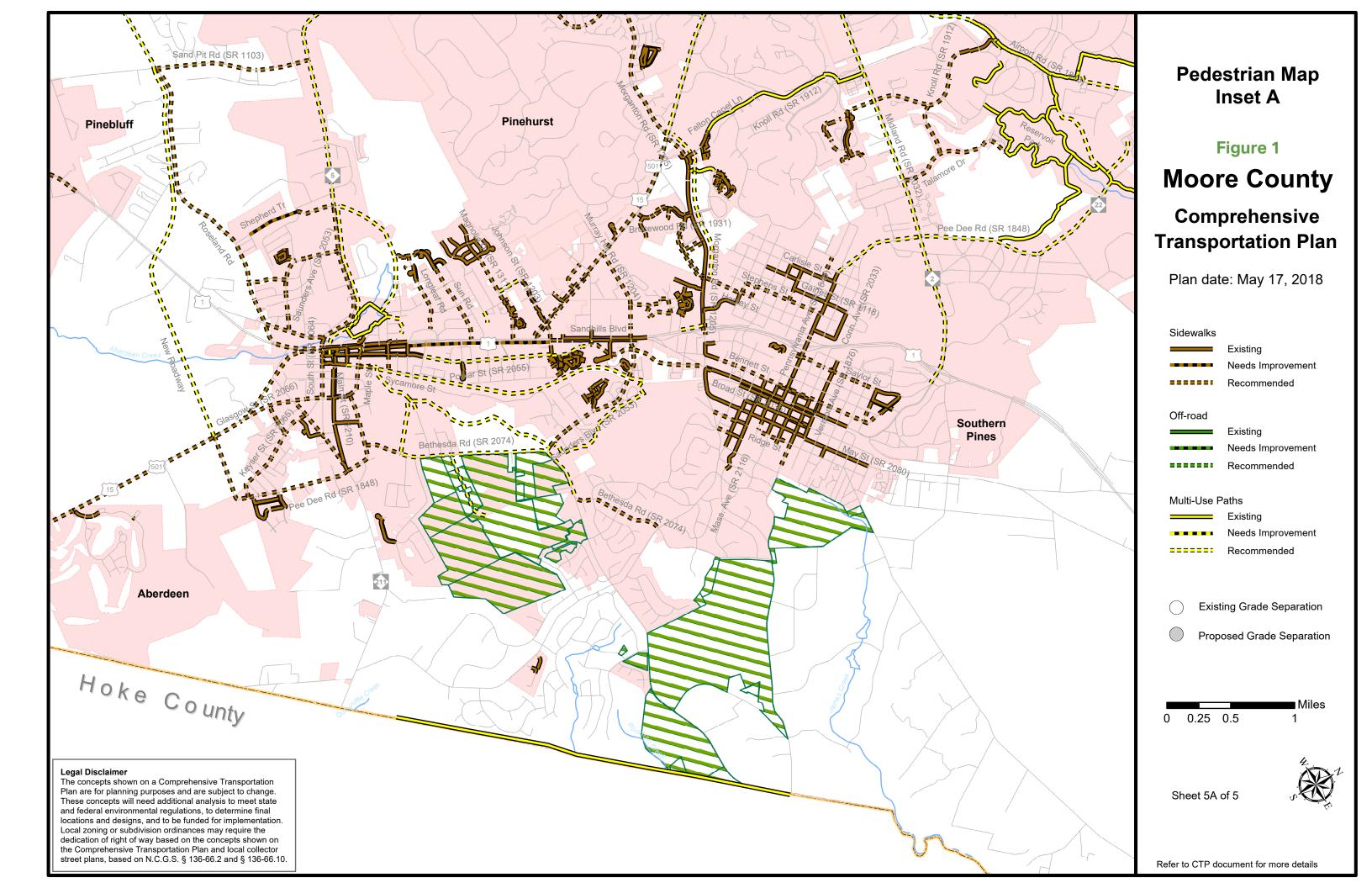


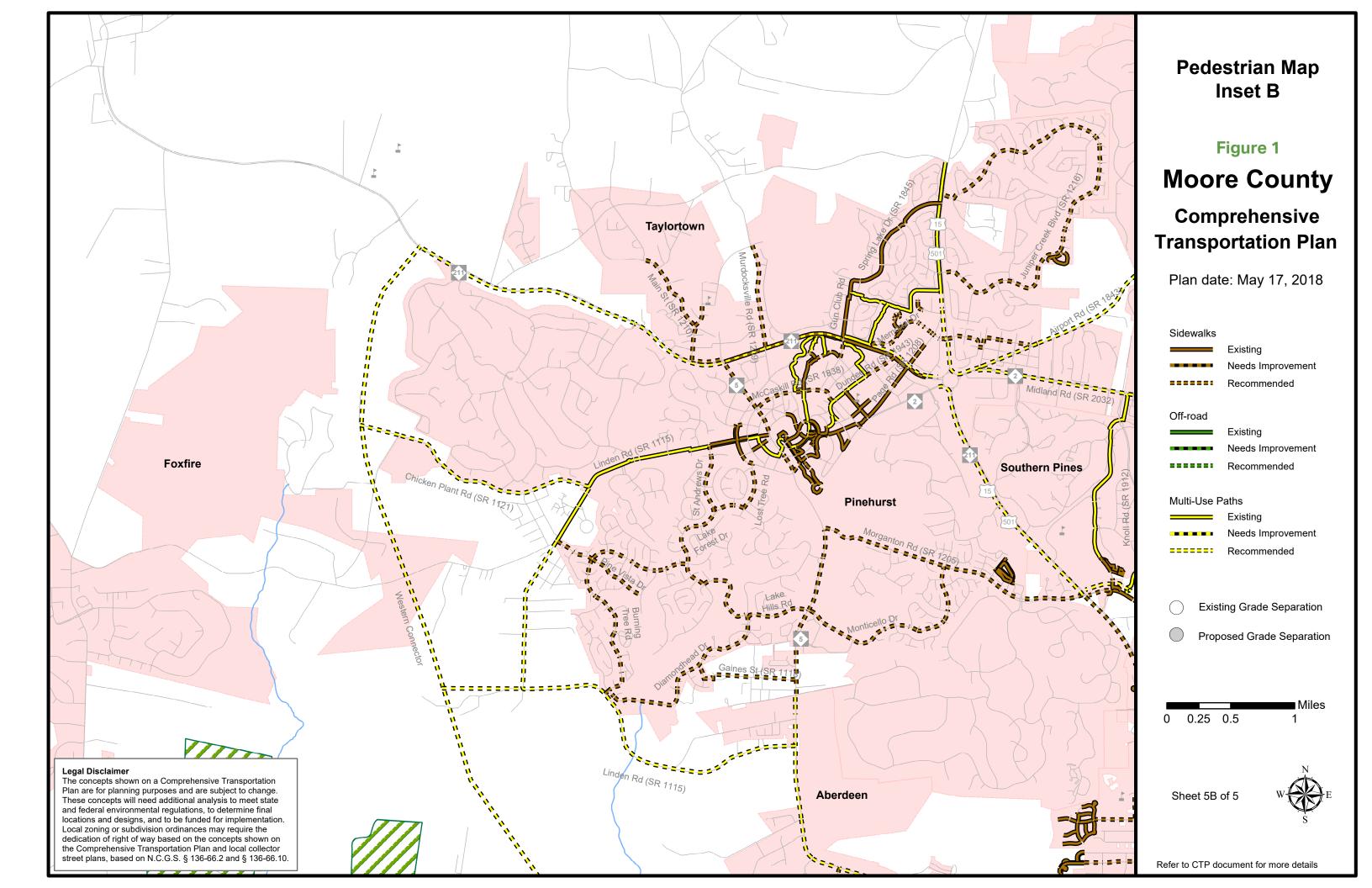


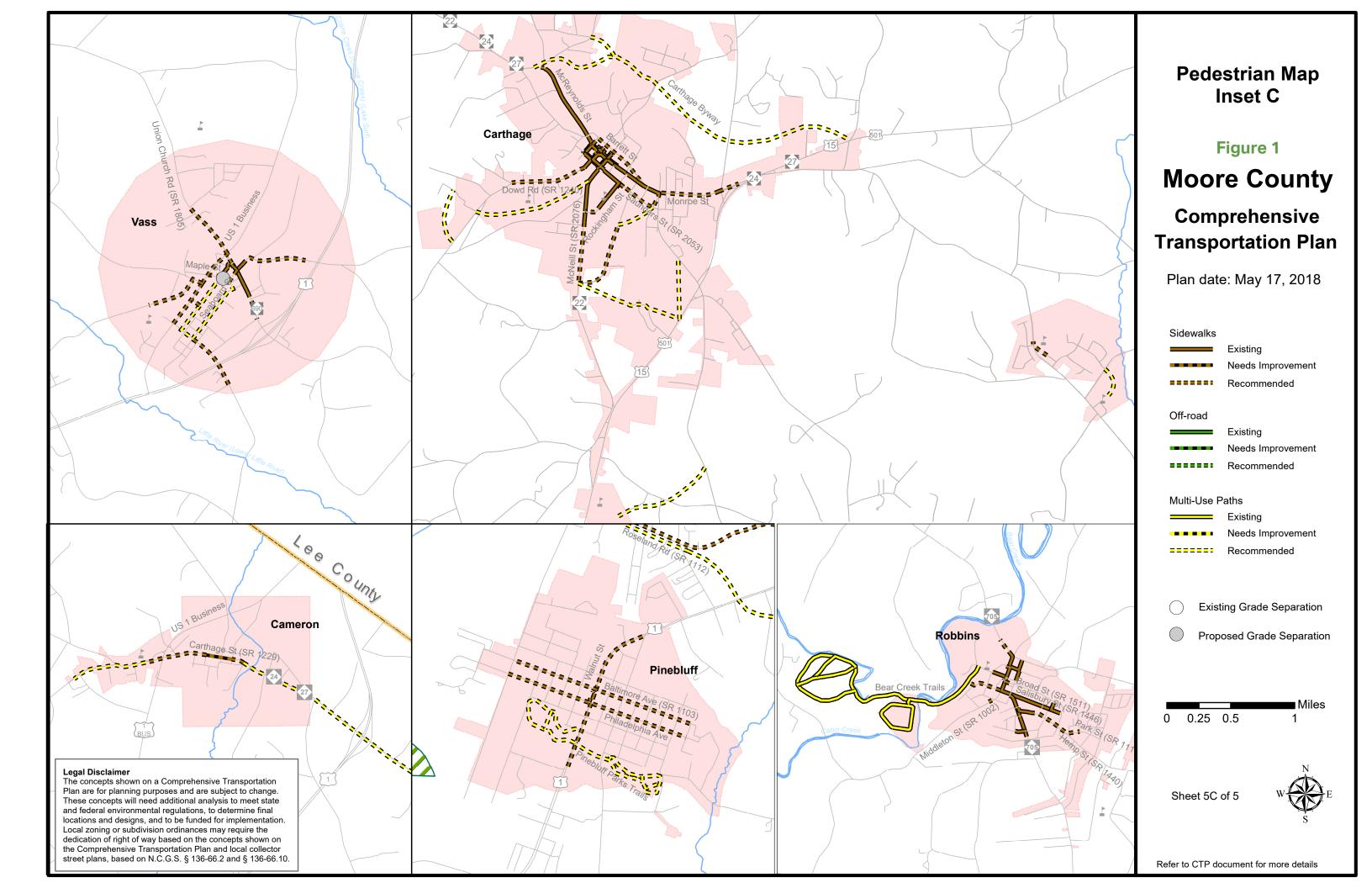












Appendices A-N

Appendix A Resources and Contacts

Local Planning Organization

Triangle Area Rural Planning Organization (www.tarpo.org)
Contact the RPO for information on long-range, multimodal planning services.
4307 Emperor Blvd., Suite 110 Durham, NC 27703
(919) 558-9397

N.C. Department of Transportation

Customer Service Office

Contact information for other units within NCDOT that are not listed in this appendix is available by calling the Customer Service Office or by visiting the NCDOT directory:

1-877-DOT-4YOU (1-877-368-4968)

http://www.ncdot.gov/contact/

Secretary of Transportation

https://www.ncdot.gov/about-us/our-people/Pages/default.aspx

1501 Mail Service Center Raleigh, NC 27699-1501 (919) 707-2800

Board of Transportation

https://www.ncdot.gov/about-us/board-offices/boards/board-transportation/Pages/default.aspx

1501 Mail Service Center Raleigh, NC 27699-1501 (919) 707-2820

Highway Division 8

121 DOT Drive Carthage NC 28327 (910) 947-3873

Contact the Highway Division with questions concerning NCDOT activities within each Division.

Contact the following NCDOT divisions and units¹ for:

Transportation Planning Division	Information on long-range, multimodal planning services. 1554 Mail Service Center, Raleigh, NC 27699 (919) 707-0900			
Strategic Planning Office	Information on prioritization of transportation projects. 1501 Mail Service Center, Raleigh, NC 27699 (919) 707-4740			
State Asset Management Unit	Information on the status of unpaved roads additions and deletions of roads to the state maintained system and the Industrial Access Funds program. 1535 Mail Service Center Raleigh, NC 27699 (919) 707-2500			
Program Development Branch	Information concerning roadway official corridor maps, feasibility studies and the State Transportation Improvement Program (STIP). 1542 Mail Service Center, Raleigh, NC 27699 (919) 707-4610			
Public Transportation Division	Information on public transit systems. 1550 Mail Service Center, Raleigh, NC 27699 (919) 707-4670			
Rail Division	Rail information throughout the state. 1553 Mail Service Center, Raleigh, NC 27699 (919) 707-4700			
Division of Bicycle and Pedestrian Transportation	Bicycle and pedestrian transportation information throughout the state. 1552 Mail Service Center, Raleigh, NC 27699 (919) 707-2600			
Structures Management Unit	Information on bridge management throughout the state. 1581 Mail Service Center, Raleigh, NC 27699 (919) 707-6400			
Roadway Design Unit	Information regarding design plans and proposals for road and bridge projects throughout the state. 1582 Mail Service Center, Raleigh, NC 27699 (919) 707-6200			
Transportation Mobility and Safety Division	Information on crash data throughout the state. 1561 Mail Service Center, Raleigh, NC 27699 (919) 773-2800			

Other State Government Offices

Department of Commerce – Rural Development Division

Contact the Department of Commerce for resources and services to help realize economic prosperity, plan for new growth and address community needs. http://www.nccommerce.com/rd

¹⁾ Unit websites are hyper-linked and can also be accessed at https://connect.ncdot.gov/Pages/default.aspx.

Appendix B Comprehensive Transportation Plan Definitions

This appendix contains descriptive information and definitions for the designations depicted on the CTP maps shown in Figure 1.

Highway Map

The "NCDOT Facility Type – Control of Access Definitions" document provides a visual depiction of facility types for the following CTP classification.

Facility Type Definitions

Freeways

- Functional purpose high mobility, high volume, high speed
- Posted speed 55 mph or greater
- Cross section minimum four lanes with continuous median
- Multimodal elements High Occupancy Vehicles (HOV)/High Occupancy Transit (HOT) lanes, busways, truck lanes, parkand-ride facilities at/near interchanges, adjacent shared use paths (separate from roadway and outside ROW)
- Type of access control full control of access
- Access management interchange spacing (urban one mile; non-urban three miles); at interchanges on the intersecting roadway, full control of access for 1,000 feet or for 350 feet plus 650 feet island or median; use of frontage roads, rear service roads
- Intersecting facilities interchange or grade separation (no signals or at-grade intersections)
- Driveways not allowed

Expressways

- Functional purpose high mobility, high volume, medium-high speed
- Posted speed 45 to 60 mph
- Cross section minimum four lanes with median
- Multimodal elements HOV lanes, busways, very wide paved shoulders (rural), shared use paths (separate from roadway but within ROW)
- Type of access control limited or partial control of access;
- Access management minimum interchange/intersection spacing 2,000ft; median breaks only at intersections with minor roadways or to permit U-turns; use of frontage roads, rear service roads; driveways limited in location and number; use of acceleration/deceleration or right turning lanes
- Intersecting facilities interchange; atgrade intersection for minor roadways; right-in/right-out and/or left-over or grade separation (no signalization for through traffic)
- Driveways right-in/right-out only; direct driveway access via service roads or other alternate connections

Boulevards

- Functional purpose moderate mobility; moderate access, moderate volume, medium speed
- Posted speed 30 to 55 mph
- Cross section two or more lanes with median breaks allowed for U-turns per current NCDOT Driveway Manual
- Multimodal elements bus stops, bike lanes (urban) or wide paved shoulders (rural), sidewalks (urban - local government

- option)
- Type of access control limited control of access, partial control of access, or no control of access
- Access management two lane facilities may have medians with crossovers, medians with turning pockets or turning lanes; use of acceleration/deceleration or right turning lanes is optional; for abutting properties, use of shared driveways, internal out-parcel access and crossconnectivity between adjacent properties is strongly encouraged
- Intersecting facilities at-grade intersections and driveways; interchanges at special locations with high volumes
- Driveways primarily right-in/right-out, some in combination with median leftovers; major driveways may be full movement when access is not possible using an alternate roadway

Other Major Thoroughfares

- Functional purpose balanced mobility and access, moderate volume, low to medium speed
- Posted speed 25 to 55 mph
- Cross section four or more lanes without median (U.S. and N.C. routes may have less than four lanes)
- Multimodal elements bus stops, bike lanes/wide outer lane (urban) or wide paved shoulder (rural), sidewalks (urban)
- Type of access control no control of access
- Access management continuous left turn lanes; for abutting properties, use of shared driveways, internal out-parcel access and cross-connectivity between adjacent properties is strongly encouraged
- Intersecting facilities intersections and driveways
- Driveways full movement on two-lane roadways with center turn lane as permitted by the current NCDOT Driveway Manual

Minor Thoroughfares

- Functional purpose balanced mobility and access, moderate volume, low to medium speed
- Posted speed 25 to 55 mph
- Cross section ultimately three lanes (no more than one lane per direction) or less without median
- Multimodal elements bus stops, bike lanes/wide outer lane (urban) or wide paved shoulder (rural), sidewalks (urban)
- ROW no control of access
- Access management continuous left turn lanes; for abutting properties, use of shared driveways, internal out-parcel access and cross-connectivity between adjacent properties is strongly encouraged
- Intersecting facilities intersections and driveways
- Driveways full movement on two lanes with center turn lane as permitted by the current NCDOT Driveway Manual

Other Highway Map Definitions

Existing - Roadway facilities that are not recommended to be improved.

Needs Improvement – Roadway facilities that need to be improved for capacity, safety, operations, or system continuity. The improvement to the facility may be widening, increasing the level of access control along the facility, operational strategies (including but not limited to traffic control and enforcement, incident and emergency management, and deployment of Intelligent Transportation Systems (ITS) technologies), or a combination of improvements and strategies. "Needs improvement" does not refer to the maintenance needs of existing facilities or the replacement or rehab of structures.

Recommended – Roadway facilities on new location that are needed in the future.

Interchange – Through movement on intersecting roads is separated by a structure. Turning movement area accommodated by on/off ramps and loops.

Grade Separation – Through movement on intersecting roads is separated by a structure. There is no direct access between the facilities.

Full Control of Access – Connections to a facility provided only via ramps at interchanges. No private driveway connections allowed.

Limited Control of Access – Connections to a facility provided only by ramps at interchanges (major crossings) and at-grade intersections (minor crossings and service roads). No private driveway connections allowed.

Partial Control of Access – Connections to a facility provided via ramps at interchanges, at-grade intersections, and private driveways. Private driveways connections are as a maximum of one connection per parcel, defined as one ingress and one egress point. These may be combined to form a two-way driveway (most common) or separated to allow for better traffic flow through the parcel. The use of shared or consolidated connections is highly encouraged.

No Control of Access – Connections to a facility provided by ramps at interchanges, atgrade intersections, and private driveways.

Public Transportation and Rail Map

Bus Routes – The primary fixed route bus system for the area. Does not include demand response systems.

Fixed Guideway – Any transit service that uses exclusive or controlled rights-of-way or rails, entirely or in part. The term includes heavy rail, commuter rail, light rail, monorail, trolleybus, aerial tramway, inclined plane, cable

car, automated guideway, and ferryboats.

Operational Strategies – Plans geared toward the non-single occupant vehicle. This includes but is not limited to HOV lanes or express bus service.

Rail Corridor – Locations of railroad tracks that are either active or inactive. These tracks were used for either freight or passenger service.

- Active rail service is currently provided in the corridor; may include freight and/or passenger service
- Inactive right of way exists; however, there is no service currently provided; tracks may or may not exist
- Recommended It is desirable for future rail to be considered to serve an area.

High Speed Rail Corridor – Corridor designated by the U.S. Department of Transportation as a potential high-speed rail corridor.

- Existing Corridor where higher speed rail service (over 79 mph) is provided or a corridor that is officially designated by Federal Railroad Administration to run higher speed trains in the future. There is currently one federally designated high speed rail corridor in North Carolina - The Southeast High Speed Rail Corridor.
- Recommended Proposed corridor for higher speed rail service.

Rail Stop – A railroad station or stop along the railroad tracks.

Multimodal Connector - A location where more than one mode of transportation meet such as where light rail and a bus route come together in one location. (NOTE - inter-modal refers to two or more modes that transfer the same cargo unit-like 40-foot shipping container from ship to train or truck); multimodal is the transfer of people/cargo between two or more modes

and in N.C. is used in public transit settings, i.e. Charlotte Multimodal Station)

Park and Ride Lot – A strategically located parking lot that provides commuters connections to transit or carpools.

Existing Grade Separation – Locations where existing rail facilities are physically separated from existing highways or other transportation facilities. These may be bridges, culverts, or other structures.

Proposed Grade Separation – Locations where rail facilities are recommended to be physically separated from existing or recommended highways or other transportation facilities. These may be bridges, culverts, or other structures.

Bicycle Map

On-Road, Existing – Conditions for bicycling on the highway facility are adequate to safely accommodate cyclists.

On-Road-Needs, mprovement – It is desirable for an existing highway facility to accommodate bicycle transportation; however, highway improvements are necessary to create safe travel conditions for the cyclists.

On Road, Recommended – It is desirable for a recommended highway facility to accommodate bicycle transportation. The highway should be designed and built to safely accommodate cyclists.

Off-Road, Existing – A facility that accommodates only bicycle transportation and is physically separated from a highway facility either within the right-of-way or within an independent right-of-way.

Off-Road Needs, Improvement – A facility that accommodates only bicycle transportation and is physically separated from a highway

facility either within the right-of-way or within an independent right-of-way that will not adequately serve future bicycle needs. Improvements may include but are not limited to widening, paving (not re-paving or other maintenance activities), and improved horizontal or vertical alignment.

Off-Road, Recommended – A facility needed to accommodate only bicycle transportation and is physically separated from a highway facility either within the right-of-way or within an independent right-of-way.

Multi-use Path, Existing – An existing facility physically separated from motor vehicle traffic that is either within the highway right-of-way or on an independent right-of-way that serves bicycle and pedestrian traffic. Sidewalks should not be designated as multi-use paths.

Multi-use Path, Needs Improvement – An existing facility physically separated from motor vehicle traffic that is either within the highway right-of-way or on an independent right-of-way that serves bicycle and pedestrian traffic that will not adequately serve future needs. Improvements may include but are not limited to widening, paving (not re-paving or other maintenance activities), and improved horizontal or vertical alignment. Sidewalks should not be designated as multi-use paths.

Multi-use Path, Recommended – A facility physically separated from motor vehicle traffic that is either within the highway right-of-way or on an independent right-of-way that is needed to serve bicycle and pedestrian traffic. Sidewalks should not be designated as multi-use paths.

Existing Grade Separation – Locations where existing "off road" facilities and "multi-use paths" are physically separated from existing highways, railroads, or other transportation facilities. These may be bridges, culverts, or

other structures.

Proposed Grade Separation – Locations where "off-road" facilities and "multi-use paths" are recommended to be physically separated from existing or recommended highways, railroads, or other transportation facilities. These may be bridges, culverts, or other structures.

Pedestrian Map

Sidewalk, Existing – Paved paths (including but not limited to concrete, asphalt, brick, stone, or wood) on both sides of a highway facility and within the highway right-of-way that are adequate to safely accommodate pedestrian traffic.

Sidewalk, Needs Improvement – Improvements are needed to provide paved paths on both sides of a highway facility. The highway facility may or may not need improvements. Improvements do not include re-paving or other maintenance activities but may include filling in gaps, widening sidewalks, or meeting Americans with Disabilities Act requirements.

Sidewalk-Recommended – It is desirable for a recommended highway facility to accommodate pedestrian transportation or to add sidewalks on an existing facility where no sidewalks currently exist. The highway should be designed and built to safely accommodate pedestrian traffic.

Off-Road, Existing – A facility that accommodates only pedestrian traffic and is physically separated from a highway facility usually within an independent right-of-way.

Off-Road, Needs Improvement – A facility that accommodates only pedestrian traffic and is physically separated from a highway facility usually within an independent right-of-way that will not adequately serve future pedestrian needs. Improvements may include but are not limited to widening, paving (not re-paving or other maintenance activities), improved horizontal or vertical alignment, and meeting

ADA requirements.

Off-Road, Recommended – A facility needed to accommodate only pedestrian traffic and is physically separated from a highway facility usually within an independent right-of-way.

Multi-use Path, Existing – An existing facility physically separated from motor vehicle traffic that is either within the highway right-of-way or on an independent right-of-way that serves bicycle and pedestrian traffic. Sidewalks should not be designated as multi-use paths.

Multi-use Path, Needs Improvement – An existing facility physically separated from motor vehicle traffic that is either within the highway right-of-way or on an independent right-of-way that serves bicycle and pedestrian traffic that will not adequately serve future needs. Improvements may include but are not limited to widening, paving (not re-paving or other maintenance activities), and improved horizontal or vertical alignment. Sidewalks should not be designated as multi-use paths.

Multi-use Path, Recommended – A facility physically separated from motor vehicle traffic that is either within the highway right-of-way or on an independent right-of-way that is needed to serve bicycle and pedestrian traffic. Sidewalks should not be designated as multi-use paths.

Existing Grade Separation – Locations where existing "off road" facilities and "multi-use paths" are physically separated from existing highways, railroads, or other transportation facilities. These may be bridges, culverts, or other structures.

Proposed Grade Separation – Locations where "off road" facilities and "multi-use paths" are recommended to be physically separated from existing or recommended highways, railroads, or other transportation facilities. These may be bridges, culverts, or other structures.

Appendix C CTP Inventory and Recommendations

Assumptions/ Notes

Local ID: The Local ID is a number used by the Transportation Planning Division to identify recommendations. If a STIP project number exists it is listed as the ID. Otherwise, the following system is used to create a code for each recommended improvement; the first four letters of the county name is combined with a four digit unique numerical code followed by "-H" for highway, "-T" for public transportation, "-R" for rail, "-B" for bicycle, "-M" for multi-use paths, or "-P" for pedestrian modes. If a different code is used along a route, it indicates separate projects will probably be requested. Also, upper case alphabetic characters (i.e. "A", "B", or "C") are included after the numeric portion of the code if it is anticipated that project segmentation or phasing will be recommended.

Jurisdiction: Jurisdictions listed are based on municipal limits, county boundaries, and Metropolitan Planning Area Boundaries, as applicable.

Existing Cross Section: Listed under "Total Width (ft)" is the approximate width of the roadway from edge of pavement to edge of pavement and under "Lane Width (ft)" is the approximate width of a single lane based on centerline/edge line markings. Listed under "Lanes" is the total number of lanes, with "D" if the facility is divided, and "OW" if it is a one-way facility.

Existing ROW: The estimated existing right-of-way is based on GIS estimates. These right-of-way amounts are approximate and may vary.

Existing and Proposed Capacity: The estimated capacities are given in vehicles per day (vpd) based on LOS D for existing facilities and LOS C for new facilities. These capacity estimates were developed based on the 2000 Highway Capacity Manual using the Transportation Planning Branch's LOS D Standards for

Systems Level Planning, as documented in Chapter 1.

Existing and Proposed Volumes: Given in vehicles per day (vpd), are estimates only based on a systems-level analysis. The "2040 Volume E+C" is an estimate of the volume in 2040 with only existing plus committed projects assumed to be in place, where committed is defined as projects programmed for construction in the 2018 - 2027 STIP. The "2040 Volume with CTP" is an estimate of the volume in 2040 with all proposed CTP improvements assumed to be in place. The "2040 Volume with CTP" is shown in bold if it exceeds the proposed capacity, indicating an unmet need. additional information about the assumptions and techniques used to develop the Annual Average Daily Traffic (AADT) volume estimates, refer to Chapter 1.

Proposed Cross section: The CTP recommended cross sections are listed by code; for depiction of the cross-section, refer to Appendix D. An entry of "ADQ" indicates the existing facility is adequate and there are no improvements recommended for the given mode as part of the CTP.

CTP Classification: The CTP classification is listed, as shown on the adopted CTP maps (see Figure 1). Abbreviations are F= freeway, E= expressway, B= boulevard, Maj= other major thoroughfare, Min= minor thoroughfare.

Tier: Tiers are defined as part of the North Carolina Multimodal Investment Network (NCMIN). Abbreviations are Sta= statewide tier, Reg= regional tier, Sub= subregional tier.

Proposals for Other Modes: If there is an improvement recommended for another mode of transportation that relates to the given recommendation, it is indicated by an alphabetic code (H= highway, T= public transportation, R= rail, B= bicycle, P= pedestrian, and M= multiuse path).

CTP INVENTORY AND RECOMMENDATIONS

				Í	HIGHWAY	>												
		Section	tion				20.	15 Exis	2015 Existing System	tem			2040 Pro	2040 Proposed System	stem			
Local ID	Facility	From	10	Jurisdiction	Dist.	Total Width (ft)	(ft) AtbiW ens.J	ROW (ft)	Speed Limit (mph)	Existing Capacity (vpd)	2015 Volume	2040 Volume E+C	2040 Volume with CTP	Proposed Capacity (vpd)	Cross-Section	ROW	CTP Classifi- cation	Proposals for Other Modes
	US 1	Lee Co	NC 24- 27	County	-	103 4D	Н	H	55	59,300	13,000	20,000	20,000	ADQ	ADQ	-	EXP	1
	US 1	NC 24- 27	Cranes Creek Rd. (SR 1825)	County	2.6 10	103 4D	12	100	22	59,300	14,000	19,000	19,000	ADQ	ADQ		EXP	
	US 1	Cranes Creek Rd.	NC 690	County, Vass	2.9 10	103 4D	12	100	55, 35	59,300	15,000	20,000	20,000	ADQ	ADQ		EXP	
	US 1			County, Vass		103 4D	12	100	35, 55	59,300	18,000	23,000	23,000	ADQ	ADQ		EXP	
	US 1		Camp Easter Rd. (SR 1853)	County	0.8 10	103 4D	12	100	22	45,200	21,000	23,400	23,400	ADQ	ADQ	-	BLVD	
MOOR0038-H US 1	US 1		Youngs Rd. (SR 2026)	County	2.5 10	100 4D	11	100	55	45,200	21,000	37,800	37,800	55,800	4A	100	BLVD	
MOOR0038-H US 1		~	N May St. (SR 2080)	County	0.9 10	100 4D	11	100- 130	55	45,200	21,000	38,400	38,400	55,800	4A	100	BLVD	
MOOR0038-H US 1		N May St. (SR 2080)	Valley View Rd.	County	8 8.0	84 4D	11	130	22	45,200	19,000	34,900	34,900	55,800	44	100	BLVD	
MOOR0038-H US	1		Southern Pines ECL	County	0.7 8	84 4D	-	130	22	40,500	19,000	34,900	34,900	55,800	4A	100	BLVD	
MOOR0038-H US 1	US 1	Southern Pines ECL	NC 2 (Midland Rd.)	Southern Pines	1.0 8	84 4D	11	120- 130	35	55,800	21,000	34,900	34,900	ADQ	4A	100	BLVD	
	US 1	d.)	W Pennsylvania Ave. (SR 1848)	Southern Pines	1.1	84 4D	12	120	35	55,800	21,000	36,100	36,100	ADQ	ADQ	-	BLVD	
	US 1	W Pennsylvania Ave. (SR 1848)	W Morganton Rd.	Southern Pines	8 8.0	84 4D	12	120	35	55,800	24,000	41,100	41,100	ADQ	ADQ	-	BLVD	
	US 1		Old US-1	Southern	0.4 10	104 4D	12	120	35	55,800	22,000	41,200	41,200	ADQ	ADQ	1	BLVD	
U-5815	US 1	Old US-1	Saunders Blvd. (SR 2053)	Southern Pines	0.1 8	86 6D	12	130	45	52,800	23,000	42,700	39,000	83,700	6A		BLVD	
U-5815	US 1	Saunders Blvd. (SR Pinehurst Ave. 2053)	Pinehurst Ave.	Southern Pines	0.4 6	68 5	13	100	45	27,600	31,000	42,700	39,000	83,700	6A	-	BLVD	
U-5815	US 1 (N Sandhills Blvd.)	lve.	US-15-501	Aberdeen	0.4		13	100	45	27,600	23,000	34,700	31,000	83,700	6A	-	BLVD	
U-5815	US 1 (N Sandhills Blvd.)	Peach Ave.	NC 5	Aberdeen		2 2	3 5	100	45	27.600	30,000	54.900	46,600	83.700	6 6A		BLVD	
U-5815	US 1 (N Sandhills Blvd.)		US 15-501/NC 211	Aberdeen	-	76 6D	11	+-	45, 35	47,700	29,000	54,200	41,800	83,700	6A		BLVD	
U-5815	US 1 (N Sandhills Blvd.)	US 15-501/NC 211	Roseland Rd.	Aberdeen	0.2 6	64 5	12		45, 35	26,000	16,000	32,600	28,800	83,700	6A	,	BLVD	
	US 1	Roseland Rd.	E Baltimore Ave.	County, Pinebluff	2.6 7	78 4D	7	79- 120	55, 35, 45	36,600	11,000	26,000	23,900	ADQ	ADQ		BLVD	
MOOR0002-H	MOOR0002-H US 1 (S Walnut St.)	E Baltimore Ave.	E Boston Ave.	Pinebluff	0.5 7	72 5	13	H	45	26,000	11,900	20,700	18,600	36,600	4F	100	BLVD	
MOOR0002-H	МООR0002-H US 1 (S Walnut St.)		Addor Rd. (SR 1100)	Pinebluff	1.2 13	125 4D	11	110	55, 35, 45	36,600	9,300	23,400	23,400	ADQ	ADQ	100	BLVD	
MOOR0002-H US-1		Addor Rd. (SR 1100)	Richmond Co	Pinebluff, County	2.0 13	128 4	7	110-	25	28,100	8,900	20,700	20,700	ADQ	ADQ	100	BLVD	
			NC 24- 27	County, Cameron	1.4	26 2	1	100	55, 35	14,600	920	1,400	1,400	ADQ	ADQ		MAJOR	
	US 1 BUS	NC 24- 27	Doby Rd.	County			12		35, 55,	11,200	1,100	1,900	1,900	ADQ	ADQ	-	MAJOR	
			Thurlow Lake Rd.	County	2.2	26 2	11	100	22	14,600	1,200	1,500	1,500	ADQ	ADQ	-	MAJOR	

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		Sec	Section				-	2015 E	2015 Existing System	ystem			2040 Pro	2040 Proposed System	stem			
Local ID	Facility	From	۴	Jurisdiction	Dist.	Total Width (ft)	Lanes Lane Width (ft)	Lane Width (ft)	Speed V Limit (mph)	Existing Capacity (vpd)	2015 Volume	2040 Volume E+C	2040 Volume with CTP	Proposed Capacity (vpd)	Cross-	ROW (#)	CTP Classifi- cation	Proposals for Other Modes
MOOR0008-H US 15-501	US 15-501	US 1	NC 211 (Raeford Rd.)	Aberdeen	0.3	09	5 1	12 150	45	27,600	13,000	29,500	27,200	36,600	4E	130	BLVD	
MOOR0008-H US 15-501	US 15-501	NC 211 (Raeford Rd.)	Pee Dee Rd. (SR 1848) (Aberdeen)	County	0.7	28	2	12 100	45	12,700	006'6	19,800	17,500	36,600	4E	130	BLVD	
MOOR0008-H US 15-501	US 15-501	Pee Dee Rd. (SR 1848) (Aberdeen)	Hoke Co	County	б	28	2 1	12 100	92	15,100	9,200	11,600	11,600	36,600	4E	130	BLVD	
					\vdash													
	NC 2 (Cherokee Rd. & Azalea Rd.)	NC 5	Village Green Rd.	Pinehurst		22		11 60	35	11,200	8,400	13,400	13,400	ADQ	ADQ		MAJOR	
	NC 2 (Palmetto Rd.)	Village Green Rd.	Page Rd.	Pinehurst	1 2	_		_		11,200	7,600	8,600	8,600	ADQ	ADQ		MAJOR	
100000M	MCC 2 (Midland Rd)	Page Kd.	US 15-501	Pinehurst	0.7	60 4	4D 1	10 120	35	31,600	7,100	8,900	8,900	ADG	ADG		MAJOR	
MOOR0019-H	MOOR0019-H NC 2 (Midland Rd)	Airbort Rd.	N Knoll Rd.	Pinehurst, County,					35		11.000	19.400	18.000	36.600	4 ₇		BLVD	
		_		Southern					22									
MOOR0019-H	MOOR0019-H NC 2 (Midland Rd)	N Knoll Rd.	W Pennsylvania Ave.	County, Southern Pines	1.	62 4	4D 1	10 120	35, 45,	31,600	11,000	19,400	18,000	36,600	4F		BLVD	
MOOR0019-H	MOOR0019-H NC 2 (Midland Rd)	W Pennsylvania Ave.	NC 22	Southern Pines	6.0	62 4	4D 1	10 120	35, 45	31,600	7,400	14,500	14,500	36,600	4F	-	BLVD	
W-5708B, MOOR0019-H	NC 2 (Midland Rd)	NC 22	US 1	Southern Pines	0.3	56 4	4D 8	9 120	35, 45	31,600	14,000	27,900	27,900	36,600	4F		BLVD	
MOOR0023-H	NC 5 (Buelah Hill Rd.)	NC 211	Linden Rd.	Pinehurst	0.7	25	2 1	11 60-	35	11,200	10,000	14,000	10,100	14,000	2B	-	MAJOR	
MOOR0023-H	MOOR0023-H NC 5 (Buelah Hill Rd.)	Linden Rd.	NC 2 (Cherokee Rd.)	Pinehurst	0.4	22	2 11	1 60	35	11,200	12,000	14,000	12,000	14,000	2B	-	MAJOR	
MOOR0023-H NC 5	NC 5	NC 2 (Cherokee Rd.)	Morganton Rd.	Pinehurst	0.5	56	2 1	11 60	35	11,200	18,000	22,700	16,200	14,000	2B		MAJOR	
MOOR0023-H NC 5	NC 5	Morganton Rd.	Pinehurst SCL	Pinehurst	ш	22	2 11	1 60	35, 55	11,200	14,000	21,600	16,200	14,000	2B	-	MAJOR	
U-5756	NC 5	Pinehurst SCL	Linden Rd.	Aberdeen, County	€ ∞	52	2	11 60	35	11,200	14,000	18,100	14,700	14,000	2A	09	MAJOR	
9575-U	NC 5	Linden Rd.	Sand Pit Rd. (SR 1103)	Aberdeen, County	1.1	56	2 1	11 60	35	11,200	12,000	18,100	14,700	14,000	2A	09	MAJOR	
U-5756	NC 5	Sand Pit Rd. (SR 1103)	W Saunders Ave.	Aberdeen	1.7	56	2 1	11 60	35, 45	12,300	000'6	17,000	13,500	14,000	2A	09	MAJOR	
	NC 5	inders Ave.	S Pinehurst St.	Aberdeen	\vdash			11 60	45, 35	Н	9,800	20,600	16,600	14,000	2A	9	MAJOR	
U-5756	NC 5	St.	US-1-15-501	Aberdeen	-			·		23,500	12,000	22,800	18,800	14,000	2A	09	MAJOR	
	NC 5 (W South St.)	_	S Poplar St.	Aberdeen	1.0	36	T	13 50	50	24,200	6,100	11,500	11,500	ADQ	ADQ		MAJOR	
	NC 5 (W Main St.)	W Main St.	Blue St.	Aberdeen	+		2	13 -	35	22.200	3.500	10.200	10.200	ADO	ADO		MAJOR	
	NC 5 (Blue St. & Bethesda Ave)		Bethesda Rd.	Aberdeen	+ +			09 6		20,000	2,800	6,900	006'9	ADQ	ADQ		MAJOR	
	NC 5 (Bethesda Ave.)	Bethesda Rd.	E L Ives Dr.	Aberdeen	0.5	18	2	9 30-60	35	20,000	2,300	6,700		ADQ	ADQ	٠.	MAJOR	

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		Sec	Section				2(15 Exis	2015 Existing System	me		•	2040 Pro	2040 Proposed System	tem			
Local ID	Facility	F 60	٩	Jurisdiction	Dist.	Total Width (ft)	Lane Width (ft)	ROW (ft)	Speed Limit (mph)	Existing Capacity (vpd)	2015 Volume	2040 Volume E+C	2040 Volume I with	Proposed Capacity (vpd)	Cross-Section	ROW	CTP Classifi- cation	Proposals for Other Modes
	NC 22	Chatham Co	George P Rd.	County	-		10	09	55	13,600	1,500	2,600	2,600	ADQ	ADQ		MAJOR	
	NC 22	George P Rd.	N Moore Rd.	County	1.8	20 2	10	09	55, 45	13,600	2,200	1,800	3,300	ADQ	ADQ	-	MAJOR	
	NC 22	N Moore Rd.	Putnam Church Rd.	County	2.1	20 2	10	09	22	13,600	1,800	2,100	2,900	ADQ	ADQ		MAJOR	
	NC 22	Putnam Church Rd.	Putnam-Glendon Rd.	County	2.0	20 2	10	09	55	13,600	1,300	2,600	2,600	ADQ	ADQ		MAJOR	
	NC 22	Putnam-Glendon Rd.	NC 24-27	County	2.8	20 2	10	09	55	13,600	1,600	2,700	2,700	ADQ	ADQ		MAJOR	
MOOR0010-H NC 22	NC 22	NC 24-27	Myrick Rd.	Carthage	-		12	09	22	14,600	7,800	9,300	11,800	36,600	44	130	MAJOR	
MOOR0010-H NC 22	NC 22	Myrick Rd.	White Oak Rd.	Carthage	2.1	26 2	12	H	22	14,600	7,200	9,300	11,800	36,600	4A	130	MAJOR	
MOOR0010-H NC 22	NC 22	White Oak Rd.	Glendon Rd.	Carthage	<u></u>	26 2	12	09	55, 35, 45	12,700	8,400	10,600	13,100	36,600	44	130	MAJOR	
	NC 22 (McReynolds St.)	Glendon Rd.	Pinecrest St.	Carthage	0.5		14	09	45	12,700	+	12,100	2,700	ADQ	ADQ		MAJOR	
	NC 22 (McReynolds St.)	Pinecrest St.	Martin St.	Carthage	0.3			H	45, 20	11,000	\vdash	11,700	2,700	ADQ	ADQ		MAJOR	
	NC 22 (Monroe St.)	Martin St.	N McNeill St.	Carthage	_	_		09	20	11,000	-	13,700	2,700	12,700	င္က	80	MAJOR	В, Р
	NC 22 (S McNeill St.)	N McNeill St.	Pinehurst Ave.	Carthage	_	40 2		+	20	11,000	4,600	7,500	3,000	ADQ	ADQ	T	MAJOR	
	NC 22 (S McNeill St.)	Pinehurst Ave.	US-15-501	Carthage	1.1	20 2	10	09	20, 45	11,000	5,100	7,000	2,900	ADQ	ADQ		MAJOR	
	NC 22	US-15-501	US-15-501	:	=	-		-		Concurrent with US-15-501	with US-	15-501						
MOOR0027-H NC 22	NC 22	US-15-501	Farm Life School Rd.	Carthage, County	1.7	26 2	11	09	55, 35	11,200	4,300	6,200	8,000	15,300	2A	09	MAJOR	
MOOR0027-H	NC 22	Farm Life School Rd.	McCaskill Rd.	Carthage, County	1.2	26 2	11	09	55, 35	11,200	4,600	6,700	8,000	15,300	2A	09	MAJOR	
MOOR0027-H NC 22	NC 22	McCaskill Rd.	Airport Rd.	County, Southern Pines	2.7	33 2	12	09	55, 35, 45	11,600	6,500	9,600	009'6	13,800	2A	09	MAJOR	
MOOR0027-H	MOOR0027-H NC 22 (Central Dr.)	Airport Rd.	Pee Dee Rd. (Southern Pines)	County, Southern Pines	1.6	30 2	12	09	45	12,700	10,000	13,000	13,000	13,800	82	09	MAJOR	
MOOR0027-H	NC 22	Pee Dee Rd. (Southern Pines)	NC 2 (Midland Rd.)	Southern Pines	1.2	24 2	12	09	35	11,600	6,500	12,300	12,300	12,600	2A	09	MAJOR	
					-													
MOOR0010-H NC 24	NC 24	Montgomery Co	McDuffie Rd.	County	2.7	26 2		100	22	15,100	4,000	6,300	6,300	36,600	4A	180	BLVD	
MOOR0010-H NC 24	NC 24	McDuffie Rd.	Wet Creek Ln.	County	_	_	12	100	\dashv	15,100	3,900	6,100	6,100	36,600	4 A	180	BLVD	
MOOR0010-H NC 24	NC 24	Wet Creek Ln.	Morgan Brown Rd.	County	2.4	24 2	12	100	55	15,100	4,000	5,700	5,700	36,600	4A	180	BLVD	
MOOR0010-H NC 24	NC 24	Morgan Brown Rd.	NC 705	County	1.8	24 2	12	100	22	15,100	4,300	6,300	6,300	36,600	4A	180	BLVD	
MOOR0010-H NC 24	NC 24	NC 705	Mount Carmel Rd.	County	1.2	26 2	11	09	55	14,100	5,800	8,400	8,400	36,600	4A	180	BLVD	
MOOR0010-H NC 24	NC 24	Mount Carmel Rd.	Hilltop Rd.	County		28 2		09	22	14,100	4,300	7,100	7,100	36,600	4A	180	BLVD	
MOOR0010-H NC 24 NC 24	NC 24 NC 24	Hilltop Rd. NC 22	NC 22 S McNeill St.	County	4.	28 2	11	09	22	14,100 Concurr	4,100 6,900 9,60 Concurrent with NC 22	9,600 C 22	9,600	36,600	4 A	180	BLVD	
U-3628	NC 24 (Monroe St.)	S McNeill St.	Isley St.	Carthage	0.5	40 3	11	09	45	12,300	10,000	00	12,600	36,600	3C	80	MAJOR	В, Р
U-3628	NC 24 (Monroe St.)	Isley St.	US-15-501	Carthage		_	11	\dashv	45, 35	12,300	12,000		12,600	36,600	3C		MAJOR	В, Р
	NC 24	US-15-501	NC 22-24					C	Ļ	-	WITH US-	15-501	0	0	0		00	T
	NC 24	US-15-501	Promise Ln.	County	1.3	28 2	12	09	22	14,600	2,100	3,500	3,500	ADQ	ADQ		MAJOR	7

				Ξ	HIGHWAY	_											
		Sec	Section				2015	2015 Existing System	System			2040 Pr	2040 Proposed System	stem			
Local ID	Facility	Fo E	٥	Jurisdiction	Dist. (ft) (ft)	Fanes	Lane Width (ft)	Speed Speed Limit (mph)	d Existing t Capacity	3 2015 Volume	2040 Volume E+C	2040 Volume with CTP	Proposed Capacity (vpd)	Cross- Section	ROW (#)	CTP CTP Cation Proposals for Proposals for	Offher Modes
	NC 24	Promise Ln.	Bryant Rd.	County			L	H	Ľ	H	L	3,900	ADQ	ADQ		MAJOR	
	NC 24	Bryant Rd.	Nickens Rd.	County	3.2 26		12 60		14,600		\vdash	3,900	ADQ	ADQ		MAJOR	
MOOR0033-H NC 24	1 NC 24	Nickens Rd.	US-1 BUS	County	-			5				3,700	14,000	3A	80	MAJOR	
	NC 24 (Carthage St.)	US-1 BUS	Carter St.	County, Cameron	0.5 26	6 2	12 60		11,600	1,200	3,600	3,600	ADQ	ADQ		MAJOR	
	NC 24 (Carthage St.)	Carter St.	US-1	County,	1.3 22	2	11 6	60 25, 35, 55	5, 11,200	3,000	4,000	4,000	ADQ	ADQ		MAJOR	
	NC 24	US-1	Bass Rd.	County	\perp	7 3	11 60		14,100	\vdash	H	10,100	ADQ	ADQ		MAJOR	
	NC 24	Bass Rd.	Harnett Co	County	2.5 24		11 6	60 55	14,100	2,000	009'6	9,600	ADQ	ADQ		MAJOR	
	NC 27	Montgomery Co	Harnett Co						Conc	Concurrent with NC 24	NC 24						
	NC 73	Montgomery Co	Derby Rd.	County	_			60 55	13,600	-		3,800	ADQ	ADQ	-	MAJOR	
	NC 73	Derby Rd.	Hotel St.	County	_	_		_	4	+	+	4,100	ADQ	ADQ	-	MAJOR	
	NC 73	Hotel St.	Gateway Dr.	County	2.8 20	0 6	10 60	60 55, 35	10,800	3,200	4,900	4,700	ADQ	ADQ		MAJOR	
R-5726	NC 73	NC 211	Mode Rd.	County	+				11.600	+	+	+	36.600	4	0	MAJOR	
	NC 73	Mode Rd.	Patton Rd.	County	 			36		-	-	-	ADQ	ADQ	1	MAJOR	
	NC 73	Patton Rd.	Beulah Hill Church Rd.	County	2.8 22	2 2	11 60	90 55	14,100	2,100	2,600	2,200	ADQ	ADQ		MAJOR	
	NC 73	Beulah Hill Church Rd.	Maplewood Ln.	County	2.3 22	2	11 6	60 55, 45	5 14,100	2,700	3,200	2,800	ADQ	ADQ	,	MAJOR	
	NC 73	Maplewood Ln.	US-15-501	County	1.3 22	2	11 6	60 45, 55	5 14,100	3,600	4,100	3,700	ADQ	ADQ		MAJOR	
R-2807	NC 73 Relocation	NC 73	NC 211	County								3,900	16,400	2A	09	MAJOR	
MOOR0014-H NC 211	H NC 211	Montgomery Co	Eagle Springs Rd.	County	2.2 28				14,600	-	_	8,100	36,600	4A	180	BLVD	
MOOR0014-H NC 211	H NC 211	Eagle Springs Rd.	Saw Grass Rd.	County	_	_			14,600	-		-	36,600	44	180	BLVD	
MOOR0014-H NC 211	1 NC 211	Saw Grass Rd.	NC 705	County	0.6 28	_	12 15	150 55	14,600	5,800	10,300	10,300	36,600	44 4.	180	BLVD	
MOOR0014-H NC 211	NC 211	Rd.	Holly Grove School	County	_	8 0		100 55	14,600			-	36,600	4 ¥	180	BLVD	
R-5726	NC 211	Holly Grove School Rd.	Seven Lakes Dr.	County	3.1	8	12 10	100 55, 45	14,600	7,300	14,100	14,100	36,600	4A	180	BLVD	
R-5726	NC 211	Seven Lakes Dr.	Patterson Ln.	County	1.1 40	8	12 10	100 45, 55, 35	5, 13,800	13,000	21,300	21,300	36,600	4A	180	BLVD	
R-5726	NC 211	Patterson Ln.	NC 73/Mode Rd.	County	0.9 26	6 2	11 10	100 35	11,200	13,000	19,400	19,400	36,600	4A	180	BLVD	
R-5726	NC 211	NC 73/Mode Rd.	NC 73				-		L	Concurrent with NC 73	NC 73						
	NC 211	NC 73	Hoffman Rd.	County	0.9 80	4	12 10	100 35, 45, 55	5, 36,600	15,000	18,700	17,900	ADQ	ADQ	1	BLVD	
	NC 211	Hoffman Rd.	Juniper Lake Rd.	County	3 80	0 4	12 10	100 55	40,500	13,000	28,000	25,000	ADQ	ADQ		BLVD	
	NC 211	Juniper Lake Rd.	Main St.	County, Taylortown	1.7 70	4	12 10	100 55, 35	5 40,500	18,000	34,300	34,200	ADQ	ADQ	-	BLVD	
	NC 211	Main St.	NC 5 (Beulah Hill Rd. N.)	Taylortown	0.3 70	4	12 10	100 55	40,500	16,000	39,600	39,600	ADQ	ADQ		BLVD	

				Ī	HIGHWAY	>												
		Sec	Section			-	2	015 Exis	2015 Existing System	tem			2040 Pro	2040 Proposed System	stem			
Local ID	Facility	From	ပ	Jurisdiction	Dist.	Total Width (ft) Lanes	(ft) AtbiW ensJ	ROW	Speed Limit (mph)	Existing Capacity (vpd)	2015 Volume	2040 Volume E+C	2040 Volume with CTP	Proposed Capacity (vpd)	Cross- Section	Row (#)	CTP Classifi- cation	Proposals for Other Modes
	NC 211 (Yadkin Rd.)	NC 5 (Beulah Hill Rd. N.)	Rattlesnake Tr.	Pinehurst	8.0	70 4	12	09	22	40,500	14,000	39,600	39,600	ADQ	ADQ		BLVD	
	NC 211 (Yadkin Rd.)	Rattlesnake Tr.	Page Rd.	Pinehurst		70 4		09	45	36,600	12,000	39,600	39,600	ADQ	ADQ	-	BLVD	
	NC 211 (Yadkin Rd.)	Page Rd.	US 15-501	Pinehurst	0.3	70 4	12	09	45	36,600	18,000	45,600	45,600	ADQ	ADQ	-	BLVD	
	NC 211 (Yadkin Rd.)	US 15-501	US 1							Concurrent with US 15-501	t with US	15-501						
	NC 211	US 1	US 15-501							Concurrent with US 1-15-501	with US '	15-501						
		100-01	Naciola Na.		F						e will oo	100-01			71			
R-5709	NC 211 (Raeford Rd.)	Raeford Rd.	E South St.	Aberdeen	9.0	26 2	7	100	45	12,300	4,300	6,500	5,700	36,600	Urban	100	BLVD	
R-5709	NC 211 (Raeford Rd.)	E South St.	E Indiana Ave.	Aberdeen, County	7	26 2	7	09	45	12,300	10,000	16,200	15,200	36,600	Urban, 4E Rural	100,	BLVD	
R-5709	NC 211 (Raeford Rd.)	E Indiana Ave.	Hoke Co	County	0.3	38 3	11	09	45	12,300	11,000	21,400	21,400	36,600	4E Rural	130	BLVD	
	NC 690 (Main St.)	US 1 BUS	US 1	Vass	0.7	25 2	10		35	10,800	5,300	3,500	6,500	ADQ	ADQ		MAJOR	
R-5824	NC 690 (Main St. & Lobelia Rd.)	US 1	Johnson Grove Rd.	Vass, County	8.0	25 2	7	09	35, 45, 55	11,600	8,000	11,500	11,500	15,100	2A	09	MAJOR	
R-5824	NC 690 (Lobelia Rd.)	Johnson Grove Rd.	Pats Rd.	County	1.7	25 2	10	09	55	10,800	7,800	11,200	11,200	15,100	2A	09	MAJOR	
R-5824	NC 690 (Lobelia Rd.)	Pats Rd.	Lakebay Rd.	County	2.6		10	09	22	10,800	6,900	9,700	9,700	15,100	2A		MAJOR	
R-5824	NC 690 (Lobelia Rd.)	Lakebay Rd.	McPherson Rd.	County	_			-	55, 45	14,100	4,700	10,100	10,100	15,100	2A	\dashv	MAJOR	
R-5824	NC 690 (Lobelia Rd.)	McPherson Rd.	Riverbend Dr.	County	_	22 2	ı	+	45, 55	14,100	4,900	6,700	6,700	15,100	ZA	7	MAJOR	
R-5824	NC 690 (Lobelia Rd.)	Riverbend Dr.	Cumberland Co	County	2.5	22 2	1	09	22	14,600	4,100	6,500	6,500	15,100	2A	09	MAJOR	
MOOR0035-H NC 705	NC 705	Randolph Co	Chrisco Rd.	County	1.9	22 2	1	09	55	14,600	2,800	4,200	4,200	15,100	2A	09	MAJOR	
MOOR0035-H	NC 705	Chrisco Rd.	In the Pines Rd.	County	2.4		11		55, 45	14,600	3,700	4,300	4,300	15,100	2A	09	MAJOR	
MOOR0035-H NC 705	NC 705	In the Pines Rd.	Acorn Ridge Rd.	County	-	22 2		-	45, 55	14,100	3,500	4,900	4,900	15,100	2A	\exists	MAJOR	
MOOR0035-H NC 705	NC 705	Acorn Ridge Rd.	Panter Dr.	County	1.3	22 2	7	09	22	14,600	4,900	6,500	6,500	15,100	2A	09	MAJOR	
MOOR0035-H NC 705	NC 705	Panter Dr.	N Middleton St.	County, Robbins		22 2			55, 45	14,100	4,900	6,500	6,500	15,100	2A		MAJOR	
MOOR0035-H	MOOR0035-H NC 705 (N Middleton St.)	N Middleton St.	E Salisbury St.	Robbins	-	40 2	12	_	45, 35	11,600	0,009	8,000	8,000	10,200	2A		MAJOR	
MOOR0035-H	MOOR0035-H NC 705 (E Salisbury St.)	E Salisbury St.	E Melton St.	Robbins	0.3	40 2	12	09	35, 20	11,600	2,600	7,100	7,100	10,200	2A	09	MAJOR	
MOOR0035-H NC 705	NC 705	E Melton St.	Simlin St.	County, Robbins	6.0	20 2	10	09	35, 45	10,800	5,600	7,100	7,100	10,200	2A	90	MAJOR	
MOOR0035-H NC 705	NC 705	Simlin St.	NC 24-27	County, Robbins	1	20 2	10	09	45	11,900	3,900	5,000	5,000	14,600	2A	09	MAJOR	
	NC 705	NC 24-27	Kennedy Rd.	County, Robbins	2.5	20 2	6	09	22	13,100	2,000	2,600	2,600	15,100	2A	09	MAJOR	
	NC 705	Kennedy Rd.	Oak Ridge Rd.	County		20 2	6	09	22	13,100	2,100	2,600	2,600	15,100	2A		MAJOR	
	NC 705	Oak Ridge Rd.	NC 211	County	2.5	22 2	=	09	22	13,100	1,600	2,400	2,400	15,100	ZA	09	MAJOR	
	Acorn Ridge Rd.	N Howard Mill Rd.	NC 705	County	0.5	16 2	ω	09	55	11,600	069			ADQ	ADQ		MINOR	

		Proposals for Other Modes																						
		CTP Classifi- cation	MINOR	MINOR	MINOR	MINOR			MINOR	MINOR	MINOR	MINOR	MINOR	MINOR	MINOR	MINOR	MINOR	MINOR	MINOR	MINOR	MINOR	MAJOR	MINOR	MINOR
		ROW (#)			٠	•	3	9 5	-	•		٠		09			-	,		,	09			,
	stem	Cross- Section	ADQ	ADQ	ADQ	ADQ	ļ	4 ⁴ r	ADQ	ADQ	ADQ	ADQ	ADQ	2A	ADO	ADQ	ADQ	ADQ	ADQ	ADQ	2A	ADQ	ADO	ADQ
	2040 Proposed System	Proposed Capacity (vpd)	ADQ	ADQ	ADQ	ADQ		36,600	ADQ	ADQ	ADQ	ADQ	ADQ	14,600	ADO	ADQ	ADQ	ADQ	ADQ	ADQ	10,200	ADQ	ADO	ADQ
	2040 Pr	2040 Volume with CTP	2,900	2,300	2,300	2,300	007	15,100	8,000	3,700	3,700	4,400	6,700	8,200	2.000	1,700	1,800	1,200	6,000	6,300	15,000		4.400	4,400
		2040 Volume E+C	2,900	2,300	2,300	2,300	77.	15,100	8,000	3,700	3,700	4,400	6,700	8,200	2.000	1,700	1,800	1,200	6,000	6,300		-	4.400	4,400
		2015 Volume	1,200	1,100	1,200	1,200		2,900	5,400	2,800	1,800	2,000	2,500	3,100	1.100	1,200	1,300	980	4,400	2,700			1.200	1,200
	stem	Existing Capacity (vpd)	10,900	10,900	12,500	12,000		10,900	11,300	12,000	12,500	12,500	12,000	10,900	12.000	12,000	12,000	9,500	10,000	10,000		22,700	14,100	14,100
	2015 Existing System	Speed Limit (mph)	45	45, 55	22	22	.,	4 7	45, 55, 35	55	52, 35	35	55, 45	45	55	55	22	55, 35	35, 20	20		35	55	55
	115 Exi	ROW (ft)			-		8	09	09					1			-							-
	20	Lane Width (ft)	10	10	11	10	9	0.	= ==	10	11	11	10	10	10	10	10	10	-01	-14 16	12	1	10	10
		rsues	2	7	7	2	(N C	7 2	2	7	2	2	2	2	2	2	2	1-2	-	2	4	2	2
VΑΥ		(ft) Midth (ft)	22	_	-	20		7 7		20		22	20	20	20		20	20	56	24- 30		09	20	-
HIGHWAY		Dist.	0.3	1.2	0.2	1.9	0	9.0	2.5	4.1	1.5	0.3	6.0	, 0.4	1.9	2.5	1.2	1.2	0.8	0.2		0.7	1.7	9.0
I		Jurisdiction	County	County	County	County	Pinehurst,	County	County, Whispering Pines	County	County	County	Southern Pines, County	Southern Pines, County, Aberdeen	County	County	County	County	Southern	Southern Pines	Aberdeen, Southern Pines	Southern Pines	County	County
	Section	욘	Ironwood Rd.	Hammond Rd.	Keith Ln.	Hoke Co		Midiand Dr.	Niagara-Carthage Rd.	Split Rail Rd.	Tall Oak Rd.	Camp Easter Rd.	Saunders Blvd. (SR 2053)	S Bethesda Rd.	Carthage Rd.	NC 73	Hardee Branch Rd.	Juniper Lake Rd.	E Connecticut Ave.	W Pennsylvania Ave.	Poplar St.	W Morganton Rd.	Red Hill Rd.	NC 24-27
	Sec	From	US 1	Ironwood Rd.	Hammond Rd.	Keith Ln.		NC Z (Midiand Rd.)	NC 22	Niagara-Carthage Rd.	Split Rail Rd.	Tall Oak Rd.	E L Ives Dr.	Saunders Blvd. (SR 2053)	Dowd Rd.	Carthage Rd.	NC 73	Hardee Branch Rd.	Midland Rd.	E Connecticut Ave.	Broad St.	US 15-501	US 15-501	Red Hill Rd.
		Facility	Addor Rd (SR 1102)	Addor Rd (SR 1102)	Addor Rd (SR 1100)	Addor Rd (SR 1100)		MOOKUUT-H Airport Ka (SK 1843)	Airport Rd (SR 1843)	Airport Rd (SR 1843)	Airport Rd (SR 1843)		Bethesda Rd (SR 2024)	MOOR0031-H Bethesda Rd (SR 2024)	Beulah Hill Church Rd (SR 1210)	Broad St (SR 2160)	Broad St (SR 2160)	MOOR0021-H 2055) Connection	Brucewood Rd.		Bryant Rd (SR 1814)			
		Local ID						MOOR0017-H						MOOR0031-H							MOOR0021-H			

		Proposals for Other Modes																										Ī	
		CTP Classifi- cation	MINOR	MINOR		YOUNG.	MINOR	MINOR	MINOR	GCIVIEV		MINOR	MINOR	MAJOR	MAJOR	MAJOR	MINOR	MINOR	MINOR	MINOR	MINOR	MINOR	MINOR						
		ROW (ft)	-	09										130	130	130	-	-											
	stem	Cross- Section	ADQ	2A	2	ADC:	ADG	ADQ	ADQ	0	Ž Ž	ADQ	ADQ	2E	2E	2E	ADQ	ADQ	ADQ	ADQ	ADQ	ADG	ADQ	ADQ	ADO	ADQ	ADQ	ADQ	ADQ
	2040 Proposed System	Proposed Capacity (vpd)	ADQ	14,600	0	ADG	ADQ	ADQ	ADQ	ADO.	DOC.	ADQ	ADQ	14,600	14,600	14,600	ADQ	ADQ	ADO	ADQ	ADQ	ADQ	ADQ						
	2040 Pro	2040 Volume with CTP	3,000	2,000	COL	nne		009		000	000	2,300	2,100	13,100	13,000	7,000	9,600	8,500	3,400	1,400	2,900		1,100	100	2.800	3,200	800	1,200	1,700
		2040 Volume E+C	1,700		002	nnc		009	-	000	000	2,300	2,100	-		-	9,600	8,500	3,400	1,400	2,900	-	1,100	100	2.800	3,200	800	1,200	1,700
		2015 Volume	1,700	-	250	000	-	480		000	080	1,600	1,700	-		-	2,900	3,500	1,300	620	950			099	2.000	1,500	700	520	-
	stem	Existing Capacity (vpd)	13,600			9,900	9,000	9,000	9,000	000	3,200	13,600	13,600	٠			10,200	006'6	9,900	13,100	13,100	13,100	13,600	13,600	14.100	13,600	13,600	13,600	13,600
	2015 Existing System	Speed Limit (mph)	45, 55		20	22	55	22	55	30	CC	55	22	-		-	20, 35	35	35, 55	55	55	22	55	55	55	55	55	55	55
	2015 E>	ROW (ft)	- (•	_	_	4	100	100			09	09 (•	'	-	-	-	•		4			-			8 8		
		Lanes Width (ft)	2 10	-		7		2 10	2 10	c		2 10	2 10			-	2 12	2 11	2 11	2 9	-	6 .X	2 10	2 10	2	2 10	2 10		
¥		(ft) AtbiW lstoT	20		5	74	22	22	22	9	0	20	20		,		40	22	22	20	20	28	20	20	22	22	50	20	22
HIGHWAY		Dist. (mi)	2.2	0.7	7	/: (7	1.1	1.5	c	5.5	2.5	6.0		,		0.2	1.1	1.9	1.3	1.1	.7	0.5	0.3	2	1.1	ר. ק	0.5	9.0
豆		Jurisdiction	County	County, Hoke	4	County	County	County	County	descend	Called	County	County	Carthage, County	Carthage, County	Carthage, County	Southern Pines	Southern Pines	County	County	County	County	County	County	County	County	County	County	County
	Section	То	Dead End	Quewhiffle Rd.	70	Uliver Ka.	Alston House Rd.	Harrington Rd.	Glendon-Carthage Rd.	NC 24 27	17-4-21	Beulah Hill Church Rd.	Howle Rd.	Summit Street	Glendon-Carthage Road (SR 1006)	NC 24/27	N May St.	N Bethesda Rd.	Hoke Co	Edmonds Rd.	US 1 BUS	Atkins Kd.	Boys Camp Rd.	Harnett Co	Davis Ln.	US 15-501	Lawhon Rd.	Carthage Rd.	Summer Hill Church Rd.
	Sec	From	NC 211	Carolina Rd.		Chatham Co	Oliver Rd.	Alston House Rd.	Harrington Rd.	110 4 10110	000	Seven Lakes Dr.	Beulah Hill Church Rd.	NC 22/24/27	Summit Street	Glendon-Carthage Road (SR 1006)	NW Broad St.	N May St.	N Bethesda Rd.	NC 24-27	Edmonds Rd.	US 1 BUS	Atkins Rd.	Boys Camp Rd.	Kandy Rd.		Mount Carmel Rd.	Peace Rd.	Zd.
		Local ID Facility	Carolina Rd. (SR 2077)	MOOR0025-H Carolina Rd. (SR 2077) Extension	(100) Ed material	Carbonton Rd (SR 1621)	Cortor Ct (CD 1007)	Callel St. (SN 1001)	Carthage Rd. (SR 1229)	Carthage Rd. (SR 1229)	MOOR0018-H Carthage Byway	MOOR0018-H Carthage Byway	MOOR0018-H Carthage Byway	Connecticut Ave (SR 2033)	Connecticut Ave (SR 2033)	Connecticut Ave (SR 2033)	Cranes Creek Rd (SR 1825)	Cranes Creek Rd (SR 1825)	Cranes Creek Kd (SK 1825)	Cypress Church Rd (SR 1825)	Cypress Church Rd (SR 1825)	Doubs Chapel Rd. (SR 1224)	Doubs Chapel Rd. (SR 1224)	Dowd Rd. (SR 1240)	Dowd Rd. (SR 1240)	Dowd Rd. (SR 1240)			

		Proposals for Other Modes																									1
		CTP Classifi- cation	MINOR	MINOR	MINOR	MINOR	MINOR	MINOR	MINOR	MINOR	MINOR	MINOR	MINOR	MINOR	MINOR	MINOR	MINOR	MINOR	MINOR	MINOR	MINOR	MINOR	MINOR	MINOR	MINOR	MINOR	NIIN C)
		ROW (ft)			-							09		-								-					
	tem	Cross-	ADQ	ADQ	ADQ	ADQ	ADQ	ADQ	ADQ	ADQ	ADQ	2A	ADQ	ADQ	ADQ	ADQ	ADO	ADQ	ADQ	ADQ	ADQ	ADQ	ADQ	ADO	ADQ	ADO	Z Z
	2040 Proposed System	Proposed Capacity (vpd)	ADQ	ADQ	ADQ	ADQ	ADQ	ADQ	ADQ	ADQ	ADQ		ADQ	ADQ	ADQ	ADQ	ADO	ADQ	ADQ	ADQ	ADQ	ADQ	ADQ	ADO	ADQ	ADO	300
	2040 Pro	2040 Volume with CTP	1,900	1,900	3,500	1,800	1,600	1,400	7,000	1,700	1,700	4,800	5,100	1,700	3,100	9,000	800	1,000	1,800	2,300	2,700	2,200	9,300	3 400	3,400	2 600	2,000
		2040 Volume E+C	1,900	1,900	3,500	1,800	1,600	1,400	2,000	1,700	1,700	4,800	5,100	1,700	3,300	4,500	800	1,000	1,800	2,300	2,700	2,700	4,300	3 400	3,400	5 000	0,000
		2015 Volume	1,200	1,200	1,800	1,900	1,400	1,200	5,100	430	340	3,100	2,800	1,700	1,700	2,000	200	006	940	1,600	1,700	2,000	3,300	1 300	1,300	3 100	3,100
	stem	Existing Capacity (vpd)	13,600	13,600	14,600	9,200	13,100	13,100	11,400	13,600	13,600	11,400	11,400	14,100	14,100	13,600	14,100	14,100	14,100	13,600	13,600	13,600	13,600	13 600	14,100	13 600	13,000
	2015 Existing System	Speed Limit (mph)	22	52, 35	35	35, 55	22	22	45	55	22	45	45, 55	22	55, 35	55, 35	55	22	55	22	22	22	52, 35	55	55	55	55
	015 Ex	ROW (ft)			-	09	09	09	09			09	09	09	09	09	100	100	100	100	100	100	100				
	2	Lane Width (ft)	10	10	12	6	6	6	10	6	6	10	10	11	10	10	10	10	10	10	10	10	10	10	1 2	1	2
		səuez	2	7	2	2	2	2	7	2	2	2	2	2	2	2	^	7	7	2	7	2	2	٥	1 0	٥	7
ΝΑΥ		Total Width (ft)	22	20		20	20		70	18	18	52	22	24	22	22	20		22	22	 	4	22	2		24	4
HIGHWAY		Dist. (mi)	1.6	-	9.0	0.8	_	2.4	0.7	2.1	2.1	0.8	9.0	1.7	1.9	1.9	4.0	2.2	3.8	2	2.6	1.1	0.7	c	0.7	17	-
_		Jurisdiction	County	County	County	Carthage, County	County	County	Southern Pines	County	County	Southern	Southern Pines, County	County	County	County	County	County	County	County	County	County	Carthage, County	County	Carthage, County	County	County
	Section	То	Connell Rd.	Pickney Rd.	NC 22-24-27	Farm Life Ln.	Bibey Rd.	McCaskill Rd.	W Morganton Rd.	Currie Mill Rd.	Mill Rd.	E Indiana Ave.(SR 2075)	McNeil Rd.	Hoke Co	Mary Jane Ln.	Linden Rd. (SR 1115)	Goldston Rd	Putnam-Glendon Rd.	Cool Springs Rd.	Strader Farms	Farmer Rd.	Stonegate Cir.	NC 24-27	Shaw Rd	Union Church Rd.	McDuffie I n	McDulle Li.
	Sec	From	Summer Hill Church Rd.	Connell Rd.	Pickney Rd.	Union Church Rd.	Farm Life Ln.	Bibey Rd.	Voit Gilmore Ln.	NC 211	Currie Mill Rd.	S Bethesda Rd. (SR 2074)	E Indiana Ave.(SR 2075)	McNeil Rd.	Hoffman Rd. (SR 1004)	Mary Jane Ln.	Chatham Co	Goldston Rd.	Putnam-Glendon Rd.	Cool Springs Rd.	Strader Farms	Farmer Rd.	Stonegate Cir.	NC 24-27	Shaw Rd.	NC 211	112 211
		Facility	Dowd Rd. (SR 1240)	Dowd Rd. (SR 1240)	Dowd Rd. (SR 1240)	Farm Life School Rd (SR 1831)	Farm Life School Rd (SR 1831)	Farm Life School Rd (SR 1831)	Felton Capel Lane (SR 1905)	Flowers Rd (SR 1137)	Flowers Rd (SR 1137)	Fort Bragg Rd (SR 2074)	Fort Bragg Rd (SR 2074)	Fort Bragg Rd (SR 2074)	Foxfire Rd (SR 1122)	Foxfire Rd (SR 1122)	Glendon-Carthage Rd (SR 1006)	Grady Rd (SR 1809)	Grady Rd (SR 1809)	Hoffman Rd (SR 1004)	ן אטוו אט (סה וסט בון חסן וואווואוו רע (סה ו						
		Local ID										MOOR0030-H															

		Proposals for Other Modes																					
-		CTP Classifi- cation	MINOR	MINOR	MINOR	MINOR	MINOR	MINOR	MINOR	MINOR		MINOR	MINOR	MINOR	Min	Min	MINOR	MINOR	MINOR	MINOR	MINOR	MINOR	MINOR
-		ROW (ft)	1	,								-		,	09	09	-		-	-	-	-	
	tem	Cross- Section	ADQ	ADQ	ADQ	ADQ	ADQ	ADQ	ADQ	ADQ		ADQ	ADQ	ADQ	2B	2B	ADQ	ADQ	ADQ	ADQ	ADQ	ADQ	ADQ
	2040 Proposed System	Proposed Capacity (vpd)	ADQ	ADQ	ADQ	ADQ	ADQ	ADQ	ADQ	ADQ		ADQ	ADQ	ADQ	13,800	13,800	ADQ	ADQ	ADQ	ADQ	ADQ	ADQ	ADQ
	2040 Pro	2040 Volume with CTP	1,300	3,400	200	200						5,900	8,000	7,800	7,600	7,600	1,900	1,900	2,100	2,400	1,800	1,800	2,100
		2040 Volume E+C	3,700	6,600	3,600	3,400						5,900	8,000	7,800	7,600	7,600	1,900	1,900	2,100	2,500	1,900	1,900	2,100
		2015 Volume	2,800	2,700	720	280	330	710	160			4,500	7,500	6,200	5,900	4,700	270	200	290	1,800	970	1,200	1,700
	tem	Existing Capacity (vpd)	13,600	13,600	14,100	14,100	11,000	11,000	13,100	14,100		9,500	006'6	10,900	10,900	10,900	13,100	13,600	13,600	006'6	9,500	9,500	14,100
	2015 Existing System	Speed Limit (mph)	55, 35	55, 35	22	55	45	45	55	55		35	35	45	45	45	55	22	55	45, 35	35	55	55
	15 Exi	ROW (ft)	ı	-				-		09		-	-			-	-	-	60	09	09	09	
	70	Lane Width (ft)	10	10	11	10	6	6	o	10		10	11	10	10	10	6	10	10	11	10	10	=
		ranes	7	2	2	7	2	2	7	2		2	2	2	2	2	2	2	2	2	2	2	2
VAY		(ft) Total Width (ft)	24	22	+	22	18		18	70		20	26	22	22	22	18	22	22	24	22	22	24
HIGHWAY		Dist. (mi)	 8.	2.3	1.1	2	0.2	0.1	0.3	0.3		0.4	0.8	9.0	1.2	y 1.4	0.4	3.7		0.9	1.1	1.8	0.7
_		Jurisdiction	County, Foxfire Village	County, Foxfire Village	County	County	County	County	County	County	;	Southern Pines	Southern Pines	Southern	County	Southern Pines, County	County	County	County	County	County	County	County
	tion	То	Tie Rd.	Roseland Rd.	Oakland Ln.	Richmond Co	NC 73	Mill Rd (SR 1126)	NC 73	Needham Grove Road (SR 1003)		E Morganton Rd.	N Bethesda Rd.	Fort Bragg Rd.	Strathmore Rd.	NC 211	Hotel St. (SR 1125)	Jones Rd.	Hoffman Rd. (SR 1004)	Beulah Hill Church Rd (SR 1210)	Murdocksville Rd (SR 1209)	US 15-501	Douglas Chapel Rd.
	Section	From	McDuffie Ln.	Tie Rd.	i.	Oakland Ln.	Jackson Springs Rd.		Mill Rd (SR 1126)	NC 705		S May St.	E Morganton Rd.	N Bethesda Rd.	Fort Bragg Rd.	Strathmore Rd.	NC 73	Hotel St. (SR 1125) Jones Rd.	Jones Rd.		Beulah Hill Church Rd (SR 1210)	Murdocksville Rd (SR 1209)	Howle Rd.
		Facility	Hoffman Rd (SR 1004)	Hoffman Rd (SR 1004)		Hoffman Rd (SR 1004)	Hotel St. (SR 1125)	Hotel St. (SR 1125)		Howard Mill Road (SR 1003)		Indiana Ave (SR 2075)	Indiana Ave (SR 2075)	Indiana Ave (SR 2075)	MOOR0029-H Indiana Ave (SR 2075)	MOOR0029-H Indiana Ave (SR 2075)	Jackson Springs Rd (SR 1122)	Jackson Springs Rd (SR 1122)	Jackson Springs Rd (SR 1122)	Juniper Lake Rd. (SR 1216)	Juniper Lake Rd. (SR 1216)	Juniper Lake Rd. (SR 1216)	Kanoy Rd (SR 1227)
		Local ID													MOOR0029-H	MOOR0029-H							

				HIC	HIGHWAY	Υ.												
		Sec	Section			-	7	015 Ex	2015 Existing System	stem			2040 Pro	2040 Proposed System	tem			
LocalID	Facility	From	٩	Jurisdiction	Dist.	Total Width (ft)	Lane Width (ft)	ROW (#)	Speed Limit (mph)	Existing Capacity (vpd)	2015 Volume	2040 Volume E+C	2040 Volume with CTP	Proposed Capacity (vpd)	Cross- Section	Row (ft)	CTP Classifi-	Proposals for Other Modes
	Knoll Rd	Airport Rd.	NC 2 (Midland Rd.)	Southern Pines	1.5	40 3	1	80	40	12,300		2,200	2,200	ADQ	ADQ		MINOR	
	Knoll Rd	NC 2 (Midland Rd.) Voit Gilmore	Voit Gilmore Ln.	County, Southern Pines	1.5	24 2	12	,	35	10,200	-	1		ADQ	ADQ	,	MINOR	
	Lakebay Rd. (SR 2023)	Youngs Rd.	Aiken Rd.	County	3.2	18	6		55	13,100	1,000	1,300	1,300	ADQ	ADQ	-	MINOR	
	Lakebay Rd. (SR 2023)	Aiken Rd.	NC 690 (Lobelia Rd.)	County	 				22	13,100	096	1,300	1,300	ADQ	ADQ		MINOR	
	Linden Rd (SR 1115)	NC 5 (Beulah Hill	Foxfire Rd. (SR	Pinehurst	2	20 2	10	09	35, 45	11,400	3,600	9,600	5,600	ADQ	ADQ		MINOR	
	Linden Rd (SR 1115)		Linden Pines PI.	County	8.0	22 2	1	09	45	11,800	N/A	4,000	5,600	ADQ	ADQ		MINOR	
	Linden Rd (SR 1115)	Linden Pines PI.	NC 5	County, Pinehurst	е	24 2	11	09	45, 55	11,800	1,900	4,000	3,200	ADQ	ADQ		MINOR	
OOR0036-H	MOOR0036-H Linden Rd. Extension	Linden Rd.	Western Connector	County		'	'	'					3,800	12,200	2A	09	MINOR	
	Main St. (SR 1210)	ake Rd.	NC 1283	Taylortown	ш	22 2		-	35	9,500	570	1,600	1,600	ADQ	ADQ	-	MINOR	
	Main St. (SR 1210)		Taylor Ave.	Taylortown	0.3				35	9,500	1,400	2,100	2,100	ADQ	ADQ	•	MINOR	
	Main St. (SR 1210)	Taylor Ave.	NC 211	Taylortown	_	22 2	9	٠	35	9,500	6,200	8,200	8,200	ADQ	ADQ	•	MINOR	
	Mav St. (SR 2080)	US 1	Vallev View Rd.	County	1.5	24	10	09	25	12.000	2.400	3.800	3.800	ADQ	ADQ		MINOR	
	May St. (SR 2080)	Valley View Rd.	Shields Rd.	County, Southern Pines	<u> </u>				55	12,000	4,000	6,800	6,800	ADQ	ADQ		MINOR	
	May St. (SR 2080)	Shields Rd.	E Delaware Rd.	Southern Pines	0.5	22 2	10	09	35, 55	9,500	4,400	7,100	7,100	ADQ	ADQ	'	MINOR	
	May St. (SR 2080)	E Delaware Rd.	E Connecticut Ave.	Southern Pines	0.5	30 2	15	09	35	10,200	7,600	8,600	8,600	ADQ	ADQ	,	MINOR	
	May St. (SR 2080)	We.	E Pennsylvania Ave.	Southern Pines	0.2	30 2	15	09	35	10,200	8,800	8,200	8,200	ADQ	ADQ	,	MINOR	
	May St. (SR 2080)	E Pennsylvania Ave.	E Indiana Ave.	Southern Pines	0.3	30 2	15	09	35	10,200	8,000	10,100	10,100	ADQ	ADQ	,	MINOR	
	May St. (SR 2080)	E Indiana Ave.	E Morganton Rd.	Southern Pines	0.3	30 2	15	09	35	10,200	5,800	4,000	4,000	ADQ	ADQ	-	MINOR	
	McCaskill Rd (SR 1838)	Farm Life School	Michael Rd	County	8.0	20	10	9	55	13.600	1.600	1.200	1 200	ADO	ADO		MINON MINON	
	(000) FO III-1-0-W	Kd. (SK 1831)	000	, ;	4	_		4	Ų		4 000	, ,		0				
MOOR0026-H	McCaskill Rd (SR 1838)	NC 22	US 15-501	County	1.8	24 2	9	09	55	13,600	2,900	2,200	2,200	12,200	2B	- 09	MINOR	
	McLauchlin Rd (SR 2014)	NC 690	Oak Grove Rd.	County	0.2	18 2	o		22	13,600	2,600	2,400	2,400	ADQ	ADQ	-	MINOR	

		Proposals for Other Modes																								
		CTP Classifi- cation	MINOR	MINOR	MINOR	MAJOR	MAJOR	MAJOR	MINOR	MINOR	MINOR	MINOR	MAJOR	MAJOR	MAJOR	MAJOR	MINOR	0014184		NINON IN		MINOR	MINOR	MINOR	MINOR	MINOR
		ROW (ft)	-			09	09					-		-		-	-					-	-		-	
	stem	Cross- Section	ADQ	ADQ	ADQ	2E	2E	ADQ	ADQ	ADQ	ADQ	ADQ	ADQ	ADQ	ADQ	ADQ	ADQ	004	ָ מַלְ	ADC	ADG	ADQ	ADQ	ADQ	ADQ	ADQ
	2040 Proposed System	Proposed Capacity (vpd)	ADQ	ADQ	ADQ	ADQ	ADQ	ADQ	ADQ	ADQ	ADQ	ADQ	ADQ	ADQ	ADQ	ADQ	ADQ	0	אַ עַ	ADC	ADG	ADQ	ADQ	ADQ	ADQ	ADQ
	2040 Pro	2040 Volume with CTP	1,000		009	6,100	6,500	5,800	2,000	2,300	15,600	20,500	24,700	17,800	18,900	13,400	11,600	4 000	1,000	2,500	7,500	1,600	1,800	3,900	3,900	4,600
		2040 Volume E+C	1,000		009	6,100	6,500	5,800	2,000	2,300	15,600	20,500	24,700	17,800	18,900	13,400	11,600	4 000	1,000	2,500	7,300	1,600	1,800	3,900	3,900	4,600
		2015 Volume	N/A	2.300	2,100	5,400	4,400	4,400	290	720	10,000	14,000	15,000	15,000	16,000	8,900	11,000	4 200	000,1	0/0	047	1,100	1,100	1,300	1,300	2,700
	stem	Existing Capacity (vpd)	13,600	14.100	11,400	26,200	26,200	26,200	13,600	13,100	10,800	12,300	27,600	27,600	26,000	24,300	12,700	42,400	13,100	13,100	13,100	13,100	13,100	13,600	13,600	13,600
	2015 Existing System	Speed / Limit (mph)	55	55	45, 55,	35	35	35	55	45	35	35, 45	45	35, 45	35	35	35	2.0	000	22	CC	55	22	22	55	55, 45
	015 E	ROW (ft)	-			80	80	80		•	99	06	70	•	09	09	100					09	09	09	09	09
	7	Lane Width (ft)	6	10	10-	6	6	6	6	6	9	7	12- 14	12	12- 15	12	12	c	n c	ກ່ວ	D .	6	6	10	10	10
		ranes	2	2	2	4D	4D	4D	2	2	2	2	9-9	4-6	4-6	3-6	3	c	7 0	7 0	7	2	2	2	2	2
٧A٧		(ft) Midth (ft)	18	20		28	58	26	18	18	24	24	62- 80	-07 80	64- 70	36- 76	36	_	2 6	_		20	ш	24	24	22
HIGHWAY		Dist.	2.8	1.5	1.2	0.5	0.2	0.1	1.2	0.4	1.	1.1	0.2	-	0.4	0.3	0.2	c	7.7	7.0 2.0	2.3	1.2	1.3	0.3	_	78
I		Jurisdiction	County	County	County, Robbins	Southern	Southern	Southern Pines	County	County	Pinehurst	Pinehurst, County	Southern	Southern Pines, County	Southern Pines	Southern Pines	Southern Pines	4	County	County	County	County	County	County	County	County
	ion	င	Cypress Church Rd.	Harnett Co	NC 705	Artillery Rd.	Clark St. (SR 2032)	NW Broad St. (SR 2160)	Currie Mill Rd.	Hotel St.	Monticello Dr.	US 15-501	Felton Capel Ln.	S Henley St.	US 1	SW Broad St.	S May St.			Peace Haven Ln.	DOWG NG.	Wood River Rd.	NC 73	Talbot Rd.	Hardee Branch Rd.	Juniper Lake Rd.
	Section	From	Oak Grove Rd.	NC 690	Talc Mine Rd.	US 1	Artillery Rd.	Clark St. (SR 2032)	Flowers Rd. (SR 1137)	Currie Mill Rd.	NC 5	Monticello Dr.	US 15-501	Felton Capel Ln.	S Henley St.	US 1	SW Broad St.	20 00 014	NO 24-27	Pirelane Rd.	reace navell LII.	Summer Hill Church Rd.	River Rd.	NC 73	Talbot Rd.	Hardee Branch Rd. Juniper Lake R
		Facility	McLauchlin Rd (SR 2014)	McPherson Rd (SR 2018)	Middleton St. (SR 1002)	Midland Rd. (SR 2035)	Midland Rd. (SR 2035)	Midland Rd. (SR 2035)	Mill Rd (SR 1126)	Mill Rd (SR 1126)	Morganton Rd. (SR 1205)	MOOR0039-H Morganton Rd. (SR 1205)	Morganton Rd. (SR 1205)	Morganton Rd. (SR 1205)	Morganton Rd. (SR 1205)	Morganton Rd. (SR 1205)	Morganton Rd. (SR 1205)	(0) (0) (0) (0)	Mount Carriel Rd (SR 1210)	Mount Carmel Rd (SR 1210)	Modifi Califiel Rd (SR 1210)	Murdocksville Rd (SR 1209)				
		Local ID				MOOR0019A-	MOOR0019A- H					MOOR0039-H														

				Ĭ	HIGHWAY	>												
		Sec	Section					2015 E.	2015 Existing System	rstem			2040 Pro	2040 Proposed System	stem			
Local ID	Facility	From	၉	Jurisdiction	Dist.	(ff) AbidVi (ff)	Lanes Lane Width (ft)	(u) unua (u) (ii)	Speed / Limit (mph)	Existing Capacity (vpd)	2015 Volume	2040 Volume E+C	2040 Volume with CTP	Proposed Capacity (vpd)	Cross- F	Row (ft)	CTP Classifi-	Proposals for Other Modes
	Murdocksville Rd (SR 1209)	Juniper Lake Rd.	Lincoln Rd.	County	9.0	24 2	10	09 0	45	11,400	2,700	4,500	4,500	ADQ	ADQ	-	MINOR	
	Murdocksville Rd (SR 1209)	Lincoln Rd.	NC 211	County		24 2	2 10	09 0	45	11,400	4,300	4,500	4,500	ADQ	ADQ	٠	MINOR	
	Muray Hill Rd. (SR 1204)	US 15-501	US 1	Southern Pines	0.7	7	2 10	09	35	9,500		15,600	15,600	ADQ	ADQ	,	MINOR	
		-	0						L	1	071	000	000	0	0		0	
	Needham Grove Rd (SR 1003) Needham Grove Rd (SR 1003)	Kandolph Co Cedar Hill Rd.	Cedar Hill Kd. Jasper Rd.	County	3.1	7 22	2 2		22	7,500	610	1,000	1,000	ADQ	ADO		MINOR	
	Needham Grove Rd (SR 1003)	Jasper Rd.	Oscar Rd.	County	+	<u> </u>	1	-	55	7,500	580	1,000	1,000	ADQ	ADQ	-	MINOR	
	Needham Grove Rd (SR 1003)	Oscar Rd.	N Howard Mill Rd.	County	9.0	22 2	2 9	-	22	7,500	089	1,000	1,000	ADQ	ADQ	-	MINOR	
	Niagara Carthage Rd (SR 1802)	Farm Life School	Vass-Carthage Rd. (SR 1803)	County	6:0	20	2 9	100	22	7,500	450	2,400	2,400	ADQ	ADQ	-	MINOR	
	Niagara Carthage Rd (SR 1802)	Vass-Carthage Rd. (SR 1803)	S Lakeshore Dr.	County, Whispering Pines	6.0	24 2	2 11	1 100	55	006'6	2,400	3,000	3,000	ADQ	ADQ	,	MINOR	
	Niagara Carthage Rd (SR 1802)	S Lakeshore Dr.	Airport Rd.	County, Whispering Pines	8.1	24 2	2 11	100	35, 45, 55	006'6	2,100	4,900	4,900	ADQ	ADQ	,	MINOR	
	Niagara Carthage Rd (SR 1802)	Airport Rd.	Camp Easter Rd.	County, Whispering Pines	1.3	24 2	2 11	100	55	006'6	1,900	4,900	4,900	ADQ	ADQ	,	MINOR	
	Niagara Carthage Rd (SR 1802)	Camp Easter Rd.	Park Hill Rd.	County	_	22 2	2 11	100			2,000	4,100	4,100	ADQ	ADQ	-	MINOR	
	Niagara Carthage Rd (SR 1802)	Park Hill Rd.	Valley View Rd.	County	0.3		6	100	45, 35	7,500	2,100	2,800	2,800	ADQ	ADQ	-	MINOR	
	North Moore Rd. (SR 1470)	NC 705	Carter Rd.	Robbins, County	1.3	26	2 11	-	35, 55	006'6	1,800	2,300	2,300	ADQ	ADQ	<u> </u>	MINOR	
	North Moore Rd. (SR 1470)	Carter Rd.	Lakey Siding Rd. (SR 1479)	County	1.3	26 2	2 10	- 0	22	9,000	1,600	2,100	2,100	ADQ	ADQ	'	MINOR	
MOOR0028-H	MOOR0028-H North Moore Rd. (SR 1470)	Lakey Siding Rd. (SR 1479)	Ricky Rd.	County	1.7	26 2	2 10	- (22	000'6	2,700	3,500	3,500	14,600	3A	80	MINOR	
	North Moore Rd. (SR 1470)	Ricky Rd.	NC 22	County	4.1	24 2	2 10	- 0	22	000'6	1,500	2,000	2,000	ADQ	ADQ	-	MINOR	
	Old US Hwy 1	Morganton Rd.	US 1	Southern Pines	0.5	20	3 12	80	35	12,700	10,000	10,600	10,600	ADQ	ADQ	-	MINOR	
	Page Rd (SR 1208)	Midland Rd.	NC 211 (Yadkin Rd.)	Pinehurst	0.5	22 2	2 11	09	35	006'6	4,400	7,500	7,500	ADQ	ADQ	<u>-</u>	MINOR	
	Page Rd (SR 1208)	NC 211 (Yadkin Rd.)	US 15-501	Pinehurst	9.0	38	3 12	2 60	20, 35	12,700	6,100	9,000	9,000	ADQ	ADQ	-	MINOR	
		4,770																
MOOR0024-H	MOOR0024-H Pee Dee Rd. (SR 2063) (Aberdeen)	NC 211 (Raeford Rd.)	Parkway Dr.	Aberdeen, County	0.1	24	2 9	09 6	45	10,500	1,400	2,600	5,400	14,600	2B	09	MINOR	
MOOR0024-H	MOOR0024-Н Рее Dee Rd. (SR 2063) (Aberdeen)	Parkway Dr.	Keyser St.	Aberdeen, County	0.7	21 2	2 9	09 6	45, 55	10,500	1,400	2,600	5,400	14,600	2B	60	MINOR	

				Ī	HIGHWAY	>												
		Sec	Section					2015 Ex	2015 Existing System	stem			2040 Pro	2040 Proposed System	tem			
Local ID	Facility	From	٩	Jurisdiction	Dist.	(ff) AtbiW lstoT	Lanes Lane Width (ft)	Row (ft)	Speed Limit (mph)	Existing Capacity (vpd)	2015 Volume	2040 Volume E+C	2040 Volume I with	Proposed Capacity (vpd)	Cross-Section	ROW (ft)	CTP Classifi- cation	Proposals for Other Modes
MOOR0024-H	MOOR0024-H Pee Dee Rd. (SR 2063) (Aberdeen)	Keyser St.	US 15-501	County	9.0		2 9		55	11,600	540	2,100	5,900		2B	09	MINOR	
	Pee Dee Rd. (SR 1848) (Southern Pines)	NC 22 (Central Dr.) NC 2 (Midland	NC 2 (Midland Rd.)	Southern Pines	-	24	2 10	09	45	11,400	4,000	6,500	6,500	ADQ	ADQ		MINOR	
	Pennsylvania Ave (SR 1848)	NC 2	N Glover St.	Southern	0.7	26- 50	2 10-	09	35	11,100	6,700	8,300	8,800	ADQ	ADQ		MINOR	
	Pennsylvania Ave (SR 1848)	N Glover St.	US 1	Southern Pines	9.0		2-3 12- 18	8	35	11,100	9,000	10,900	10,900	ADQ	ADQ		MINOR	
	Pennsylvania Ave (SR 1848)	US 1	NW Broad St.	Southern Pines	0.5	52 2-	2-3 12- 18	8	35, 20	11,100	3,700	2,600	2,600	ADQ	ADQ	-	MINOR	
	Pennsylvania Ave (SR 1848)	NW Broad St.	N May St.	Southern Pines	0.2	38 2	2 12	80	20	10,000	610	1,900	1,900	ADQ	ADQ	-	MINOR	
	Pinehurst Ave.	US 15-501	US 1	Southern	0.5	22- 40 2-	2-3 10-	-	35	12,300				ADQ	ADQ		MINOR	
	Plank Rd (SR 1477)	N Green St.	Lakey Siding Rd.	Robbins,	1.5	24	2 11	٠.	55	14,100	2,100	2,200	2,200	ADQ	ADQ		MINOR	
	Plank Rd (SR 1477)	Lakey Siding Rd.	Lonnie Rd.	County	0.5	24	2 11		55	14,100				ADQ	ADQ		MINOR	
	Plank Rd (SR 1477)		Cockman Rd.	County	4		2 11	٠	55	14,100	2,200	3,000	3,000	ADQ	ADQ	-	MINOR	
	Plank Rd (SR 1477)	کd.	Crabtree Rd.	County	2.4		2 11	-	22	14,100	-			ADQ	ADQ	-	MINOR	
	Plank Rd (SR 1477)		NC 24-27	County	6.0	24	2 11	٠	22	14,100	2,100	2,800	2,800	ADQ	ADQ		MINOR	
	Poplar St. (SR 2055)	US 1	5th St.	Aberdeen	9.0	30-	2-3 12	8	35	12,700	3,500	7,700	7,700	ADQ	ADQ		MINOR	
	Poplar St. (SR 2055)	5th St.	Montford St.	Aberdeen	0.8		2 11	09	35	9,900	099			ADQ	ADQ		MINOR	
	Poplar St. (SR 2055)	Montford St.	W Main St.	Aberdeen	-	30	2 12	ш	35	10,200	2,300	8,600	8,600	ADQ	ADQ		MINOR	
	Putnam-Glendon Rd (SR 1629)	NC 22	Spruell Rd.	County	4.	18	2 8		55	7.500	450	200	200	ADO	ADO		MINOR	
	Putnam-Glendon Rd (SR 1629)	Spruell Rd.	Cool Springs Rd.	County	4-	ļ		1	22	7,500	069	200	200	ADQ	ADQ		MINOR	
	Putnam-Glendon Rd (SR 1629)	Cool Springs Rd.	Glendon-Carthage Rd.	County	2	19 2	2 9	-	22	7,500	310	009	009	ADQ	ADQ	-	MINOR	
		1																
	Roseland Rd. (SR 1112)	Hoffman Rd. (SR 1004)	Roseland PI.	County	2.1	24	2 10	09	55	13,600	1,800	2,500	1,800	ADQ	ADQ	-	MINOR	
MOOR0003-H	MOOR0003-H Roseland Rd. (SR 1112)		Sand Pit Rd. (SR 1103)	County	3.4	24	2 10	09 (55	13,600	3,300	9,000	22,400	40,500	4E	130	MAJOR	
MOOR0003-H	MOOR0003-H Roseland Rd. (SR 1112)	Sand Pit Rd. (SR 1103)	Batchelor Farm Rd.	County	6.0	24	2 10	09	45	11,400	3,700	9,400	22,800	40,500	4E	130	MAJOR	
	Roseland Rd. (SR 1112)	Batchelor Farm Rd.	US 1 (Sandhills Blvd.)	County	1.6	24	2 10	09	45, 35	11,400	3,300	7,000	5,100	ADQ	ADQ	-	MINOR	
MOOR0037-H	MOOR0037-H Roseland Rd. Extension (SR 1112)	US 1	US 15-501 @ NC 211	Aberdeen	,	·		'	1	-	-	-		-	2A	60	MINOR	

		Proposals for Other Modes																									
		CTP Classifi- cation		MINOR	MINOR	MINOR	MINOR	MINOR	MINOR		MINOR		MINOR	MINOR	MINOR	MINOR	MINOR	MINIOR	MINOR	MINOR	MINOR	MINOR	MINOR	MINOR		MINOR	MINOR
		ROW (ft)			-		09	09			-					-	-		-		80	-		-			-
	stem	Cross- Section	01.	ADG	ADQ	ADQ	2A	2A	ADQ	0	ADG	0	ADQ	ADQ	ADQ	ADQ	ADQ	OUA OUA	ADQ	ADQ	3A	ADQ	ADQ	ADQ		ADQ	ADQ
	2040 Proposed System	Proposed Capacity (vpd)	0	ADQ	ADQ	ADQ	15,800	15,800	ADQ	0	ADG	0	ADQ	ADQ	ADQ	ADQ	ADQ	OUA	ADQ	ADQ	12,300	ADQ	ADQ	ADQ		ADQ	ADQ
	2040 Pro	2040 Volume with CTP		5,800	5,800	200	10,800	7,200	4,400			0	2,300	2,300	400	900	7,800	3 500	3,000	3,300	4,800	3,600	4,200	5,500		3,300	3,100
		2040 Volume E+C		5,600	5,600	7,300	10,800	7,200	4,400				2,300	2,300	400	006	7,800	3 500	3,000	3,300	4,800	3,600	4,200	5,500		3,300	3,100
		2015 Volume		780	4,200	2,400	8,000	4,400	6,600		•	000	1,200	770	1,000	-	0,600	2 700	3,000	2,800	3,600	2,200	2,400	3,100		1,800	1,300
	stem	Existing Capacity (vpd)		11,400	11,400	11,400	12,600	12,600	9,500		9,900		13,600	13,600	13,600	13,100	10,000	13 600	13,600	14,100	14,100	13,600	14,100	13,600		13,100	13,100
	2015 Existing System	Speed Limit (mph)		45	45	45, 35	35, 55	35, 55	35, 45	ı	35	i,	55	22	22	55	20, 35	35 55	55	55	55, 35	55, 35	22	52, 32		55, 35	55
	015 Ex	ROW (ft)			-	•	09	09						•			,		<u> </u>	,	,	,				1	-
	2	Lane Width (ft)		7	10	10	10	10	10		=		10	10	10	6	3 12-	10		7	1	10	11	10		6	6
\		Total Width (ft)		4	24 2	22 2	24 2	24 2	22 2		7 97		24 2	21 2	22 2	20 2	30- 46		24 2	26 2	25 2	24 2		24 2		22 2	22 2
HIGHWAY		(mi)		_	0.6	1.5	0.6 2	0.6	2.1 2		0.7		4.8	2.1	2.6 2	0.9	0.7	_	1.5	1.2 2	0.2 2	3	_	1.5		1.1	0.8
HIG		Jurisdiction		County	County	County, Pinebluff	Aberdeen, Southern Pines, County	Aberdeen, Southern Pines, County	Seven Lakes, County		Aberdeen		County	County	County	County	Southern	Carthada		County	County	Carthage, County	County	County, Vass		County	County
	Section	То		Sunshine Bivd.	Roseland Rd.	W Baltimore Ave.	Kensington Way	Bethesda Rd.	Carthage Rd.	NC 211 (Raeford	Rd.)	Pine Grove Church	Rd.		Talc Mine Rd.	Murdocksville Rd.	Morganton Rd.	Stade Rd	Lynch Rd.	Grady Rd. (SR 1803)	Farm Life School Rd. (SR 1831)	Henderson Rd.	Thurlow Lake Rd.	US 1 BUS		US 1	N May St.
	Sec	From	1	NCS	Sunshine Blvd.	Roseland Rd.	US 1	Kensington Way	NC 211	-	S Poplar St.		Montgomery Co	Pine Grove Church Rd.	Greenleaf Rd.	Dowd Rd.	E Pennsylvania Ave.	115 15-501	Stage Rd.	Lynch Rd.	Grady Rd. (SR 1803)	Farm Life School Rd. (SR 1831)	Henderson Rd.	Thurlow Lake Rd.	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	ıvlagara-Cartnage Rd.	US 1
		D Facility		Sand Pit Kd (SK 1103)	Sand Pit Rd (SR 1103)	Sand Pit Rd (SR 1103)	MOOR0032-H Saunders Blvd. (SR 2053)	MOOR0032-H Saunders Blvd. (SR 2053)	Seven Lakes Dr (SR 1239)		South St (SK 2064)		Spies Rd (SR 1002)	Spies Rd (SR 1002)	Spies Rd (SR 1002)	Summer Hill Church Rd	SW Broad St. (SR 2160)	Haion Church Rd (SR 1805)	Union Church Rd. (SR 1805)	Union Church Rd. (SR 1805)	MOOR0034-H Union Church Rd. (SR 1805)	Union Church Rd. (SR 1805)	Union Church Rd. (SR 1805)	Union Church Rd. (SR 1805)		Valley View Rd (SR 1857)	Valley View Rd (SR 1857)
		Local ID					MOOR003	MOOR003													MOOR003						

				至	HIGHWAY	≿												
		oes.	Section			-	-	2015 E	2015 Existing System	ystem			2040 Pro	2040 Proposed System	stem			
Local ID	Facility	From	၉	Jurisdiction	Dist.	(ft) AtbiW lstoT	ranes	Lane Width (ft)	Speed N Limit (mph)	Existing Capacity (vpd)	2015 Volume	2040 Volume E+C	2040 Volume with CTP	Proposed Capacity (vpd)	Cross- Section	ROW	CTP Classifi- cation	Proposals for Other Modes
	Vass Carthage Rd (SR 1803)	US 15-501	Westview Rd.	Carthage		22	H	Ľ	Н	Ľ	1,700	2,400	2,400	ADQ	ADQ	'	MINOR	
	Vass Carthage Rd (SR 1803)	Westview Rd.	Isabell Ln.	Carthage, County	2.4	24	2	11 100	25	14,100	1,500	1,700	1,700	ADQ	ADQ	1	MINOR	
	Vass Carthage Rd (SR 1803)	Isabell Ln.	Farm Life School Rd.	County	1.4	22	2	10 100	99 (13,600	1,600	1,800	1,800	ADQ	ADQ	•	MINOR	
	Vass Carthage Rd (SR 1803)	Farm Life School Rd.	Niagara-Carthage Rd. (SR 1802)	County	1.1	22	2	9 100) 55	13,100	2,000	2,300	2,300	ADQ	ADQ	•	MINOR	
	Vass Carthage Rd (SR 1803)		Heritage Farm Rd.	County	1.2	22	2	9 100	25	13,100	2,800	3,100	3,100	ADQ	ADQ	1	MINOR	
	Vass Carthage Rd (SR 1803)	n Rd.	McIntosh Rd.	County	1.4	24			-+	_	2,500	2,800	2,800	ADQ	ADQ	•	MINOR	
	Vass Carthage Rd (SR 1803) Vass Carthage Rd (SR 1803)	McIntosh Rd. Holly St.	Holly St. US 1 BUS	Vass, County Vass	2.2	22 48	2 2	10 100 24 100	35, 35	14,100	3,600	3,000	3,000	ADQ ADQ	ADQ		MINOR	
	Vass Rd (SR 1802)	NC 24-27	US 15-501	Carthage	0.8	24	2	9 100	35.45	9.200	2.300	4.300	4.300	ADQ	ADQ		MINOR	
	/			0														
	Voit Gilmore Ln (SR 1905)	US 15-501	Felton Capel Ln	Southern Pines	0.8	28	7	12 60	52	1,000	3,800	4,300	4,300	ADQ	ADQ	'	MINOR	
	Waynor Rd. (SR 1897)	Boling Way	NC 22	County	0.7	20	2	09	32	10,000	150			ADQ	ADQ	•	MINOR	
MOOR0003-H	MOOR0003-H Western Connector	NC 211	Foxfire Rd (SR 1122)	County, Pinehurst, Aberdeen, Foxfire	1		,	'	'	,	,	ı	14,100	55,800	44 4	180	MAJOR	B, P
MOOR0003-H	MOOR0003-H Western Connector	Foxfire Rd (SR 1122)	Linden Road Extension	County, Pinehurst, Aberdeen, Foxfire	1		,	1	'	,	1	ı	16,000	55,800	4A	180	MAJOR	В, Р
MOOR0003-H	MOOR0003-H Western Connector	Linden Road Extension	Roseland Rd (SR1112)	County, Pinehurst, Aberdeen, Foxfire	-			-	•			,	14,700	55,800	4A	180	MAJOR	В, Р
MOOR0003-H	MOOR0003-H Western Connector	Roseland Rd (SR1112)	Roseland Rd (SR1112)						Con	Concurrent with Roseland Road (SR 1112)	Roseland	Road (SR	1112)					
MOOR0003-H	MOOR0003-H Western Connector	Roseland Rd (SR1112)	US 1	County, Pinehurst, Aberdeen, Foxfire	1				,	,		,	22,700	55,800	4 4	180	MAJOR	В,
						H												
MOOR0020-H	MOOR0020-H Western Connector Extension	US 1	US 15-501	Aberdeen, County	•	,	,	'	'		,	٠.	9,600	14,600	2A	09	MINOR	

		Proposals for Other Modes		
		CTP / Classifi- cation	MINOR	MINOR
		Š €		
	tem	rd y Cross- ROW Section (ft)	ADQ	ADQ
	2040 Proposed System	Proposed Capacity (vpd)	ADQ	ADQ
	2040 Pro	2040 2040 Volume Volume With E+C CTP		1,200 1,200
			2,500	1,200
		2015 Volume	11,200 1,800 2,500 2,500	260
	stem	Existing Capacity (vpd)	11,200	11,200
	2015 Existing System	Speed Limit (mph)	35	2 11 60 35,45
)15 Ex	ROW (#)	2 11 60	09
	2(Lane Width (ft)	11	11
		səuez	2	2
ΑY		(ft) AbiW latoT	0.1 24	22
HIGHWAY		Dist. (mi)	0.1	5.2
Ī		Jurisdiction	Southern Pines, County	County
	Section	<u>٥</u>	N Ridge St.	Lakebay Rd.
	Sec	From	N May St.	N Ridge St.
		Facility	Youngs Rd. (SR 2026)	Youngs Rd. (SR 2026)
		Local ID		

Footnotes: (1) Undivided 4-lane with shoulder (2) Raised median 2 lane with 8 ft on-street parking both sides

Appendix D Typical Cross Sections

Cross section requirements for roadways vary according to the capacity and level of service to be provided. Universal standards in the design of roadways are not practical. Each roadway section must be individually analyzed and its cross section determined based on the volume and type of projected traffic, existing capacity, desired level of service, and available right-of-way. These cross sections are typical for facilities on new location and where right-of-way constraints are not critical. For widening projects and urban projects with limited right-of-way, special cross sections should be developed that meet the needs of the project.

The comprehensive planning and design "typical" highway cross sections, as depicted on the following pages, were updated on May 5, 2014 in response to the Strategic Transportation Investments² (STI) law (House Bill 817) and are also consistent with SPOTOnline (used for project prioritization³), NCDOT's GIS-based web application for providing automated, near real-time prioritization scores and project costs. This guidance establishes design elements that emphasize safety, mobility, complete streets4, and accessibility for multiple modes of travel. These "typical" highway cross sections should be used as guidelines for comprehensive transportation planning, project planning and project design activities. The specific and final cross section details and right of way limits for projects will be established through the preparation of the National Environmental Policy Act⁵ (NEPA) documentation and through final design preparation.

On all existing and proposed roadways delineated in the CTP, adequate right-of-way should be protected or acquired for the recommended cross sections. In addition to cross section and right-of-way recommendations for improvements, Appendix C may recommend ultimate needed right-of way for the following situations:

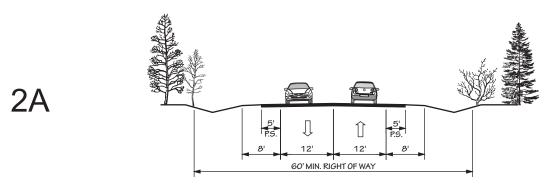
- Roadways that may require widening after the current planning period;
- Roadways which are borderline adequate and accelerated traffic growth could render them deficient:
- Roadways where an urban curb and gutter cross section may be locally desirable because of urban development or redevelopment, and
- Roadways that may need to accommodate an additional transportation mode.

²⁾ For more information on STI, go to: http://www.ncdot.gov/strategictransportationinvestments/.

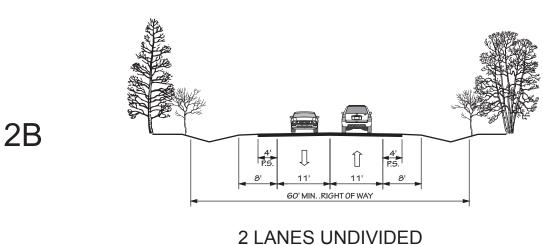
³⁾ For more information on prioritization, go to: https://connect.ncdot.gov/projects/planning/Pages/ StrategicPrioritization.aspx.

⁴⁾ For more information on Complete Streets, go to: http://www.completestreetsnc.org/.

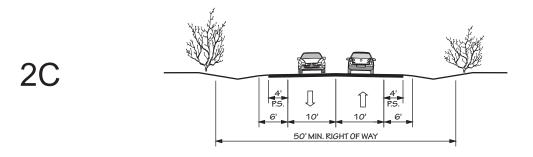
⁵⁾ For more information on NEPA, go to: http://ceq.hss. doe.gov/.



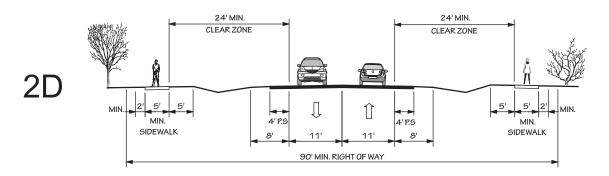
2 LANE UNDIVIDED WITH PAVED SHOULDERS POSTED SPEED 55 MPH



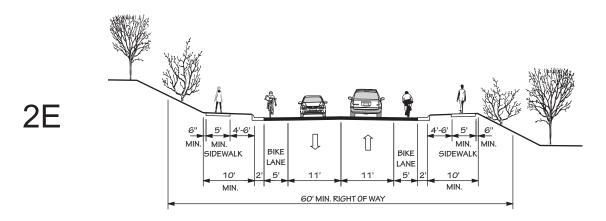
2 LANES UNDIVIDED POSTED SPEED 45 MPH OR LESS



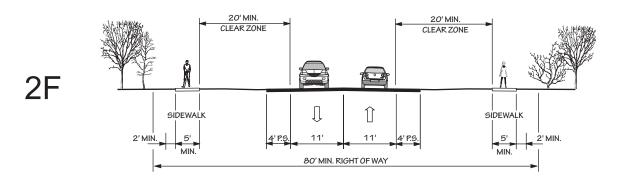
2 LANE UNDIVIDED WITH PAVED SHOULDERS POSTED SPEED 25 - 35 MPH



2 LANE UNDIVIDED WITH PAVED SHOULDERS AND SIDEWALKS POSTED SPEED 25-45 MPH

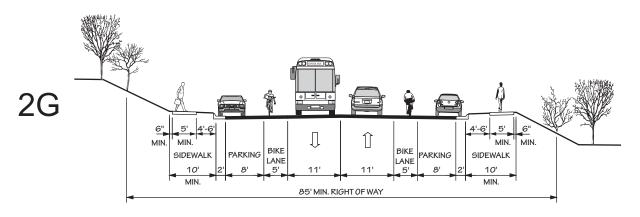


2 LANE UNDIVIDED WITH CURB & GUTTER, BIKE LANES, AND SIDEWALKS POSTED SPEED 25-45 MPH



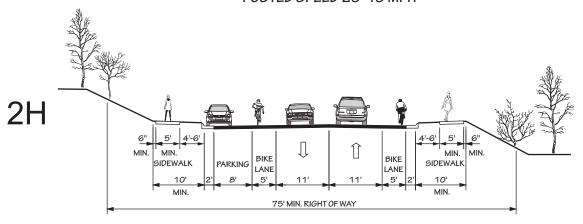
2 LANE UNDIVIDED WITH PAVED SHOULDERS AND SIDEWALKS IN CAMA COUNTIES

POSTED SPEED 25-45 MPH

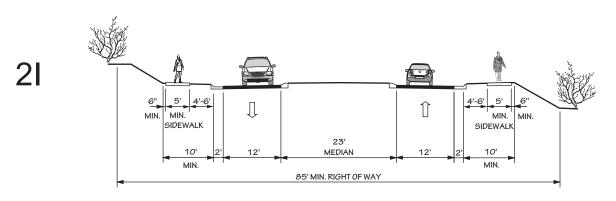


2 LANE UNDIVIDED WITH CURB & GUTTER, PARKING BOTH SIDES, BIKE LANES, AND SIDEWALKS

POSTED SPEED 25-45 MPH

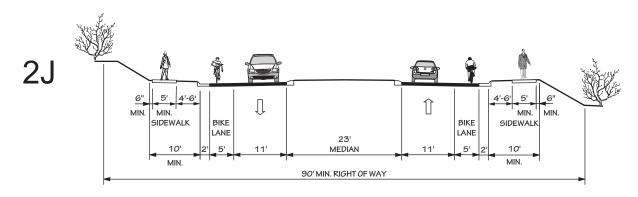


2 LANE UNDIVIDED WITH CURB & GUTTER, PARKING ONE SIDE, BIKE LANES, AND SIDEWALKS POSTED SPEED 25-45 MPH



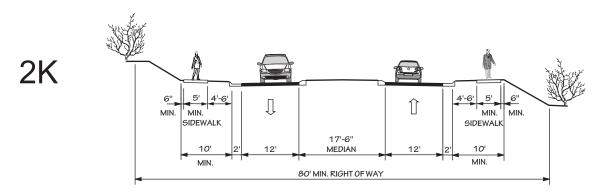
2 LANE DIVIDED (23' RAISED MEDIAN) WITH CURB & GUTTER AND SIDEWALKS

POSTED SPEED 25-45 MPH



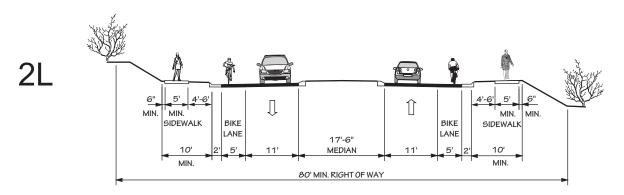
2 LANE DIVIDED (23' RAISED MEDIAN) WITH CURB & GUTTER, BIKE LANES, AND SIDEWALKS

POSTED SPEED 25-45 MPH



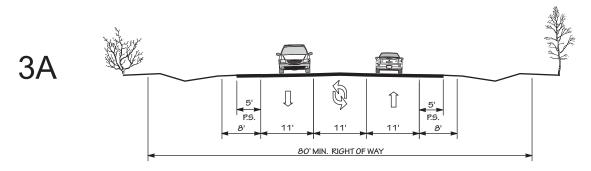
2 LANE DIVIDED (17'-6" RAISED MEDIAN) WITH CURB & GUTTER AND SIDEWALKS

POSTED SPEED 25-45 MPH

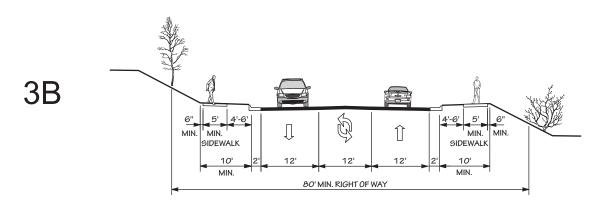


2 LANE DIVIDED (17'-6" RAISED MEDIAN) WITH CURB & GUTTER, BIKE LANES, AND SIDEWALKS

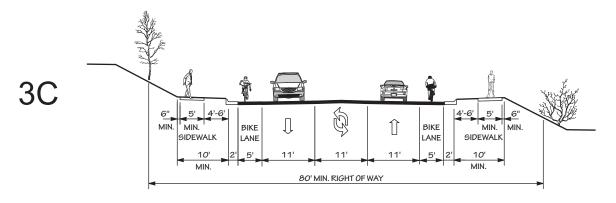
POSTED SPEED 25-45 MPH



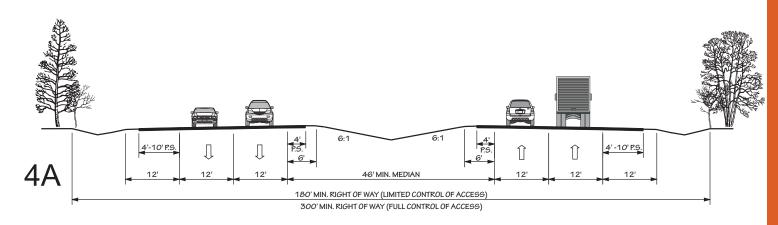
2 LANE WITH TWO WAY LEFT TURN LANE, AND PAVED SHOULDERS
POSTED SPEED 25-55 MPH



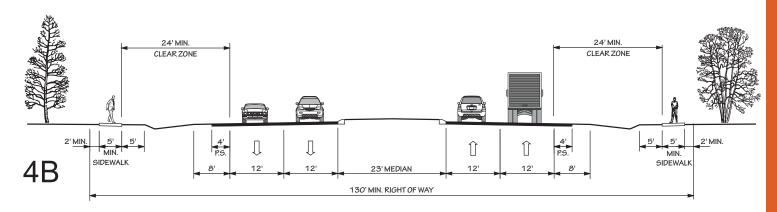
2 LANE WITH TWO WAY LEFT TURN LANE, CURB & GUTTER, AND SIDEWALKS POSTED SPEED 25-45 MPH



2 LANE WITH TWO WAY LEFT TURN LANE, CURB & GUTTER, BIKE LANES, AND SIDEWALKS POSTED SPEED 25-45 MPH

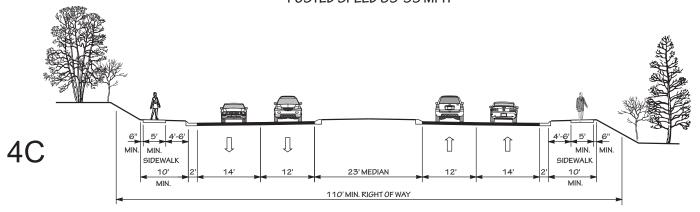


4 LANE DIVIDED (46' DEPRESSED MEDIAN) WITH PAVED SHOULDERS POSTED SPEED 45-70 MPH



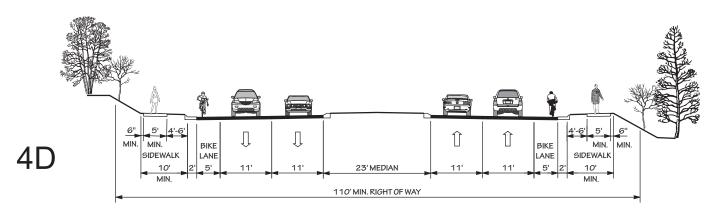
4 LANE DIVIDED (23' RAISED MEDIAN) WITH PAVED SHOULDERS AND SIDEWALKS

POSTED SPEED 35-55 MPH



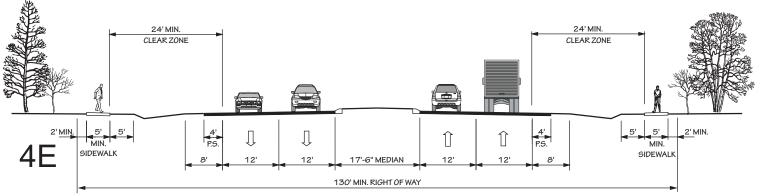
4 LANE DIVIDED (23' RAISED MEDIAN) WITH CURB & GUTTER, WIDE OUTSIDE LANES, AND SIDEWALKS

POSTED SPEED 35-45 MPH



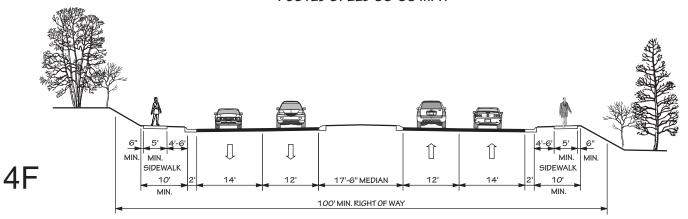
4 LANE DIVIDED (23' RAISED MEDIAN) WITH CURB & GUTTER, BIKE LANES AND SIDEWALKS

POSTED SPEED 35-45 MPH



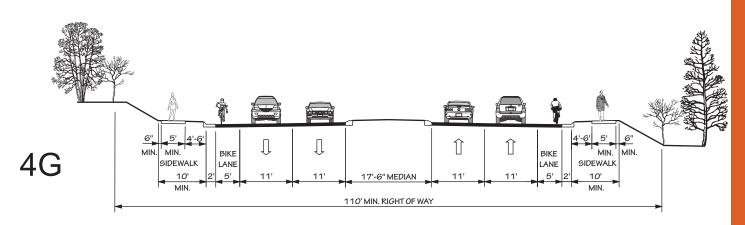
4 LANE DIVIDED (17'-6" RAISED MEDIAN) WITH PAVED SHOULDERS AND SIDEWALKS

POSTED SPEED 35-55 MPH



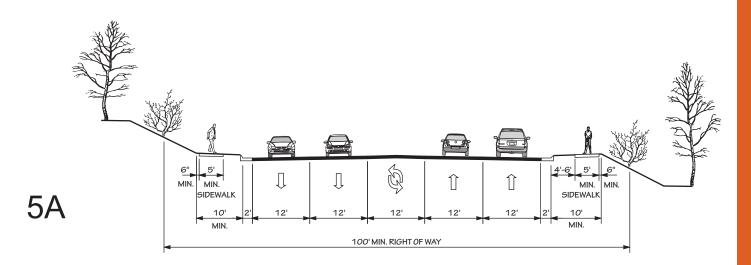
4 LANE DIVIDED (17'-6" RAISED MEDIAN) WITH CURB & GUTTER, WIDE OUTSIDE LANES AND SIDEWALKS

POSTED SPEED 35-45 MPH



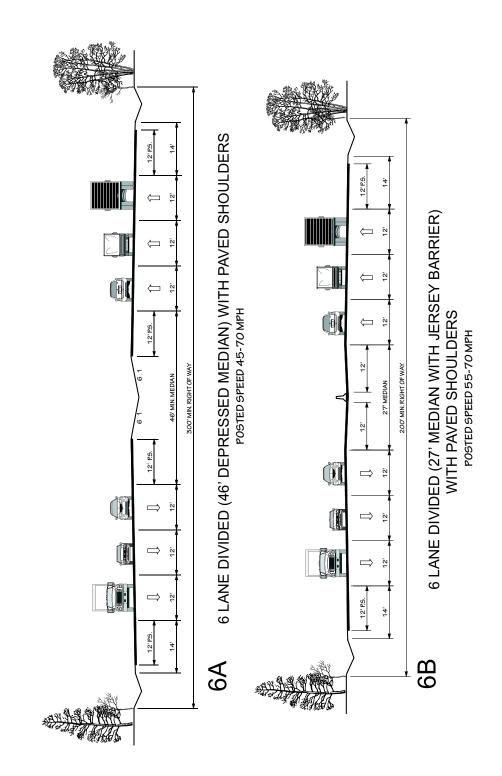
4 LANE DIVIDED (17'-6" RAISED MEDIAN) WITH CURB & GUTTER, BIKE LANES, AND SIDEWALKS

POSTED SPEED 35-45 MPH

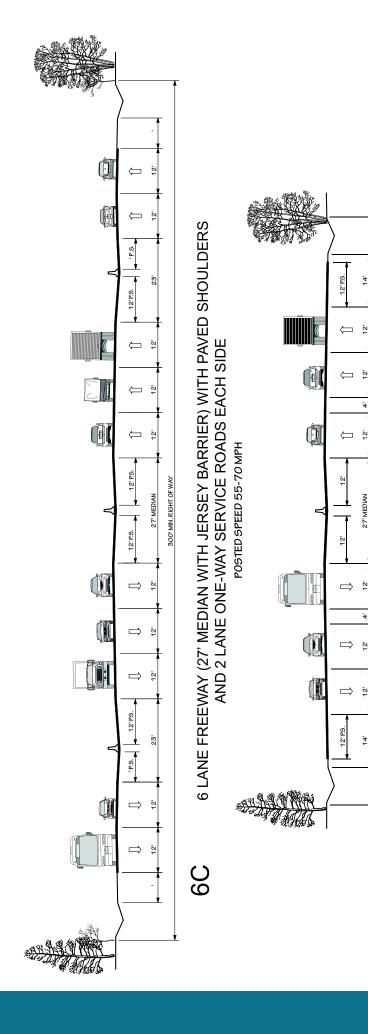


4 LANE WITH TWO WAY LEFT TURN LANE, CURB & GUTTER, AND SIDEWALKS

POSTED SPEED 35-45 MPH



D-10

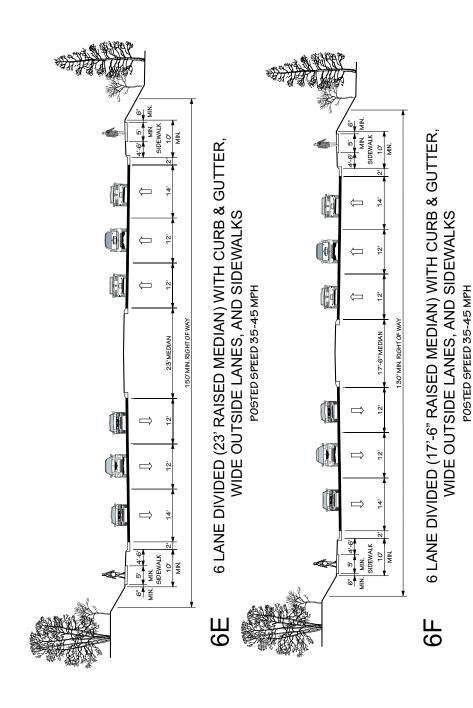


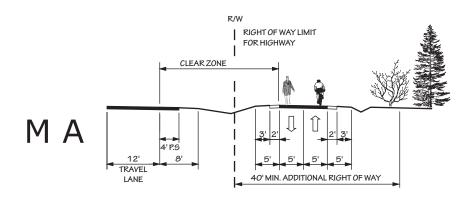
6 LANE FREEWAY (4 GENERAL PURPOSE LANES, 2 MANAGED LANES, AND 27' MEDIAN WITH JERSEY BARRIER) WITH PAVED SHOULDERS

200' MIN. RIGHT OF WAY

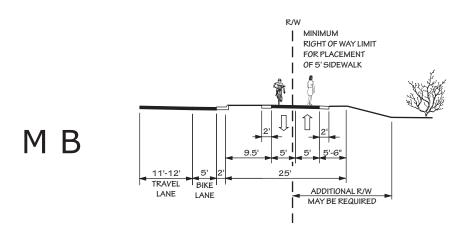
POSTED SPEED 55-70 MPH

6D





MULTI - USE PATH
ADJACENT TO RIGHT OF WAY OR SEPARATE PATHWAY



MULTI - USE PATH ADJACENT TO CURB AND GUTTER

Appendix E Level of Service Definitions

The relationship of travel demand compared to the roadway capacity determines the level of service (LOS) of a roadway. Six levels of service identify the range of possible conditions. Designations range from LOS A, which represents the best operating conditions, to LOS F, which represents the worst operating conditions.

Design requirements for roadways vary according to the desired capacity and level of service. LOS D indicates "practical capacity" of a roadway, or the capacity at which the public begins to express dissatisfaction. Recommended improvements and overall design of the transportation plan were based upon achieving a minimum LOS D on existing facilities and a LOS C on new facilities. The six levels of service are described below.

LOS A: Describes free-flow operations. Free Flow Speed (FFS) prevails and vehicles are almost completely unimpeded in their ability to maneuver within the traffic stream. The effects of incidents or point breakdowns are easily absorbed.



LOS A

LOS B: Represents reasonably free flowing operations, and FFS is maintained. The ability to maneuver within the traffic stream is only slightly restricted, and the general level of physical and psychological comfort provided

to drivers is still high. The effects of minor incidents and point breakdowns are still easily absorbed.



LOS B

LOS C: Provides for flow with speeds near the FFS. Freedom to maneuver within the traffic stream is noticeably restricted, and lane changes require more care and vigilance on the part of the driver. Minor incidents may still be absorbed, but the local

deterioration in service quality will be significant.

Queues may be expected to form behind any significant blockages.



LOS C

LOS D: The level at which speeds begin to decline with increasing flows, with density increasing more quickly. Freedom to maneuver within the traffic stream is seriously limited and drivers experience reduced physical and

psychological comfort levels. Even minor incidents can be expected to create queuing, because the traffic stream has little space to absorb disruptions.



LOS D

LOS E: Describes operation at capacity. Operations at this level are highly volatile because there are virtually no usable gaps within the traffic stream, leaving little room to maneuver within the traffic stream. Any disruption to the traffic stream, such as vehicles entering from a ramp or a vehicle changing lanes, can establish a disruption wave that propagates throughout the upstream traffic flow. At capacity, the traffic stream has no ability to dissipate even the most minor disruption, and any incident can be expected to produce a serious breakdown and substantial queuing. The physical and psychological comfort afforded to drivers is poor.



LOS E

LOS F: Describes breakdown, or unstable flow. Such conditions exist within queues forming behind bottlenecks.



LOSE

Appendix F Bridge Deficiency Assessment

The STIP development process for bridge projects involves consideration of several evaluation methods in order to prioritize needed improvements. A sufficiency index is used to determine whether a bridge is sufficient to remain in service, or to what extent it is deficient. The index is a percentage in which 100% represents an entirely sufficient bridge and zero represents an entirely insufficient bridge. Factors evaluated in calculating the index are listed below.

- Structural adequacy and safety
- Serviceability and functional obsolescence
- Essentiality for public use
- Type of structure
- Traffic safety features

The NCDOT Structures Management Unit inspects all bridges in North Carolina at least once every two years. A sufficiency rating for each bridge is calculated and establishes the eligibility and priority for replacement. Bridges having the highest priority are replaced as federal and state funds become available.

A bridge is considered deficient if it is either Structurally Deficient (SD) or Functionally Obsolete (FO). A Structurally Deficient bridge means there are elements of the bridge that need to be monitored and/or repaired. The fact that a bridge is "structurally deficient" does not imply that it is likely to collapse or that it is unsafe. It means the bridge must be monitored, inspected and repaired/replaced at an appropriate time to maintain its structural integrity. A Functionally Obsolete bridge is one that was built to standards that are not used today. These bridges are not automatically rated as structurally deficient, nor are they inherently unsafe. Functionally obsolete bridges are

those that do not have adequate lane widths, shoulder widths, or vertical clearances to serve current traffic demand or to meet the current geometric standards, or those that may be occasionally flooded.

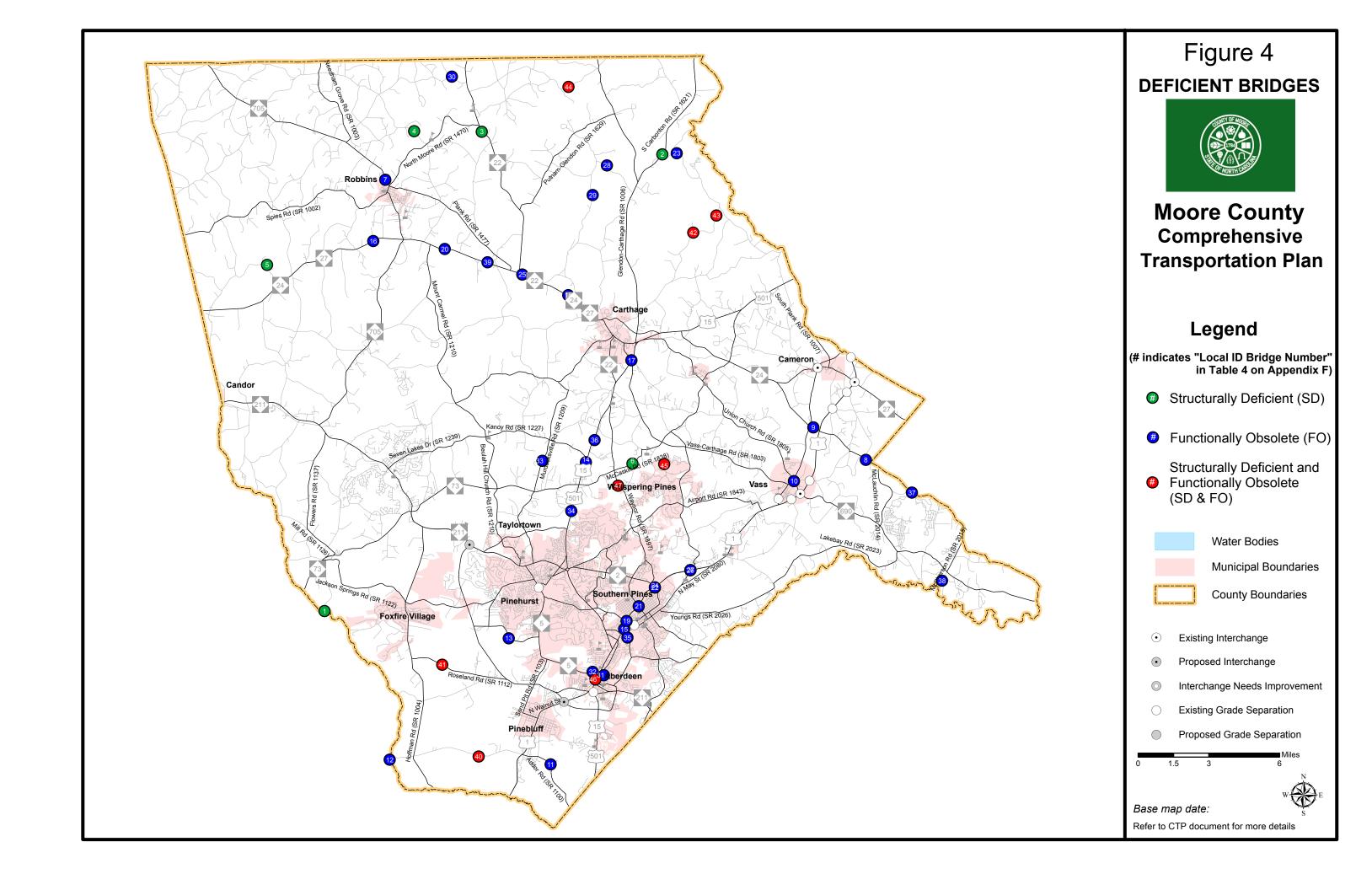
A bridge must be classified as deficient in order to qualify for federal replacement funds. Additionally, the sufficiency rating must be less than 50% to qualify for replacement or less than 80% to qualify for rehabilitation under federal funding. Deficient bridges located on roads evaluated as a part of the CTP are listed in Table 5, and Figure 4. For more details on deficient bridges within the planning area, contact the Structures Management Unit using the information in Appendix A.

Table 5 - Deficient Bridges

Local ID (Figure 5)	Bridge Number	Facility	Feature	Condition
1	620026	SR 1124	DROWNING CREEK	SD
2	620049	SR 1621	DEEP RIVER	SD
3	620063	NC 22	BUFFALO CREEK	SD
4	620076	SR 1419	BEAR CREEK	SD
5	620144	SR 1401	MILL CREEK	SD
6	620039	SR 1838 (CLOSED)	LITTLE RIVER	SD
7	620005	NC 705	BEAR CREEK	FO
8	620006	SR 1947	BEAVER CREEK	FO
9	620007	SR 1825	LITTLE CRAINS CREEK	FO
10	620009	NC 690	SEABOARD COASTLINE RR	FO
11	620013	SR 1102	ABERDEEN CREEK	FO
12	620016	SR 1102	DROWNING CREEK	FO
13	620021	SR 1115	HORSE CREEK	FO
14	620023	US 15 / 501	LITTLE RIVER	FO
15	620032	US NBL	SR 2080 WBL	FO
16	620034	NC 24, NC 27	SIMLIN CREEK	FO
17	620037	SR 1802	US 15 / 501	FO
18	620040	NC 22, NC 24 & NC 27	KILLETS CREEK	FO

Local ID (Figure 5)	Bridge Number	Facility	Feature	Condition
19	620041	SR 1309	US 1	FO
20	620042	NC 24, NC 27	MEADOW CREEK	FO
21	620044	SR 1848	US 1	FO
22	620045	US 1 NBL	NC 2 & NC 22	FO
23	620048	SR 1625	BIG GOVERNORS CREEK	FO
24	620050	US 1 SBL	NC 2, NC 22	FO
25	620054	NC 22, NC 24	RICHLAND CREEK	FO
26	620056	US 1 NBL	SR 1857 & SEABOARD RR	FO
27	620057	US 1 SBL	SR 1857 & SEABOARD RR	FO
28	620060	SR 1628	MCLENDONS CREEK	FO
29	620061	SR 1640	RICHLAND CREEK	FO
30	620086	SR 1461	CEDAR CREEK	FO
31	620093	SYCAMORE STREET	RAYS MILL CREEK	FO
32	620101	SHAMBURGER TRAIL	ABERDEEN LAKE DAM	FO
33	620118	SR 1209	LITTLE RIVER	FO
34	620185	SR 1285	NICK'S CREEK	FO
35	620187	SR 2053	SEABOARD COASTLINE RR	FO
36	620190	SR 1835	WADS CREEK	FO
37	620192	SR 1825	CRAINS CREEK	FO

Local ID (Figure 5)	Bridge Number	Facility	Feature	Condition
38	620198	SR 2018	CRAINS CREEK	FO
39	620214	SR 1493	BRANCH OF RICHLAND CREEK	FO
40	620014	SR 1102	HORSE CREEK	SD & FO
41	620019	SR 1112	DEEP CREEK	SD & FO
42	620046	SR 1658	MCINTOSH CREEK	SD & FO
43	620047	SR 1658	BIG GOVERNORS CREEK	SD & FO
44	620053	SR 1606	TYSONS CREEK	SD & FO
45	620087	S. LAKESHORE CLOSED	LITTLE RIVER	SD & FO
46	620097	LAKESHORE DRIVE	RAYS MILL CREEK	SD & FO
47	620024	NC 22	NICKS CREEK	SD & FO

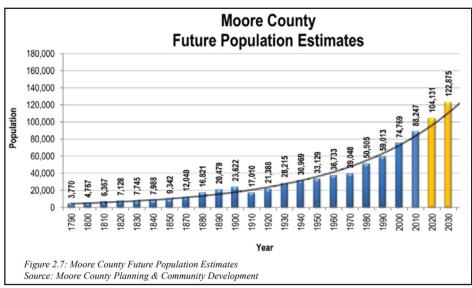


Appendix G Socio-Economic Data Forecasting Methodology

In the development of the Moore County CTP, existing and anticipated deficiencies were determined through an analysis of the transportation system looking at both current and future travel patterns. A travel demand model was constructed for the entire county for the years 2010, 2030, and 2040. The documentation, Moore County Travel Demand Model Development and Users Guide, covers the development of the model and socioeconomic data used in its development.

The 2013 Moore County Land Use Plan was used as the basis of growth expectations were used to further refine future growth rates and patterns.

Travel demand models are developed to replicate travel patterns on the existing transportation system as well as to estimate travel patterns for 2030 and 2040. Additionally, travel demand models require a broad range of socio-economic input data such as population and employment. These inputs are available from sources like the U.S. Census Bureau for the year 2010, but data for 2030 and 2040 is also required. The existing Land Use plan was projected to the year 2030, so 2040 projections extended the anticipated growth.



Future population estimates from the 2013 Moore County Land Use Plan, page 11.

The charrette was created to project the future growth of Moore County out 18 years to the year 2030. Based on a current population growth rate of 1.4%, to the year 2030, Moore County is projected to grow by over 28,000 people. This projection is based on the review of projections from Office of State Management and Budget (OSMB). Using the current rate of 2.35 persons per household, this would require a total of 12,000 new residential units by the year 2030. To maintain the growth rate, 9,400 new non-industrial jobs and 1,500 new industrial jobs would have to be created. The committee was divided into five (5) groups and given a map of Moore County, along with these pins. The groups were given an hour to develop their map, and then present the results to the LUPSC for comments and discussion. This charrette was useful in developing a first draft of the future land use map, based on a general consensus of the Moore County LUPSC. Further research into these projections since the charrette was conducted, has found that the population will increase by 34,000, with an 18% per decade growth rate, which is based on historical projections, TARPO and Office of State Management and Budget.

Excerpt from page 3 of the 2013 Moore County Land Use Plan, page 11. Notice the number of new residential units and jobs projected by 2030 The CTP Steering Committee worked with NCDOT to estimate population growth, economic development potential, and land use trends to determine the potential impacts on the transportation system in 2040.

The projections were made through a series of workshops with local staff to educate the various municipalities and the county on the expectations on the future estimates. The estimates were based on population and households by Transportation Analysis Zone (TAZ), which are units of geography for the purpose of tabulating traffic-related data.

Each TAZ in the county was projected to 2030 and 2040 based on the following:

- 2010 population
- 2030 expected growth infill (low, medium, high)
- Permitted development
- Access to water and sewer
- Critical watershed
- Voluntary agricultural district
- Density
- Zoning issues
- Any special generators

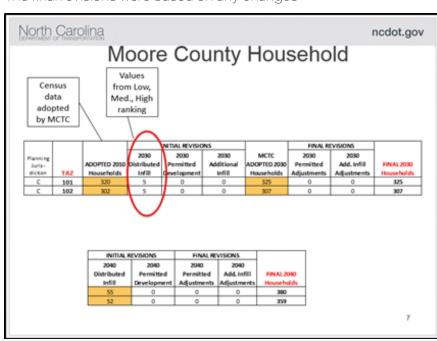
The final revisions were based on any changes

requested by the local planner and municipal leaders. The final totals were then presented to local municipalities for adoption/endorsement.

All municipalities and the county approved the projections, with the exception of Taylortown. Repeated attempts were made to meet with the town to approve their 2030 and 2040 projections.

On July 31, 2014, the Moore County Transportation Committee ultimately decided to move forward without Taylortown's approval and endorsed the future year data for the travel demand model.

The Moore County Travel Demand Model Development and Users Guide contains the final zonal totals for the model.



Slide from April 9, 2014 presentation to the Moore County Transportation Committee showing how projections were calculated

Appendix H Moore County Highway CTP Proposals

This appendix simply reproduces the draft Moore County Highway CTP Proposals that were approved by the Moore County Transportation Committee on June 28, 2017. The handout was edited for the April 2018 public meetings by adding a proposal ID.

On Aug. 29, 2018, the final version was approved with verbage of possible truck route.

This list is the basis for the highway element of the CTP.

These exact recommendations were discussed in Chapter 3.

The proposal ID column matches the recommendation on the CTP map and is not meant to imply a priority order.

2018 MOORE COUNTY CTP HIGHWAY PROPOSALS

Proposal ID	Name	Section	Description / Comment	Proposed Cross Section	СТР	Туре	Area
S	US 1 Synchronized Street	Roseland Road (SR 1112) - Old US 1	Project addresses a current and future congestion issue. Solution agreed-to as part of US 1 Focus Area. Funded TIP Project (U-5815), with construction scheduled for FY 2020	4 Lane Divided (short term) Synchronized Street, 6 Lane Divided Synchronized Street (long term)	Boulevard Needs Improvement	I >	Aberdeen Southern Pines
<u> </u>	US 1 (Pinebluff)	US 1 Alt (south of SR 1133) to Richmond County line	Add median to address safety and operational conerns and creates a consistent divided cross section on US 1 thoroughout the county.	4 Lane Divided Boulevard	Boulevard Needs Improvement	ÚI.	Pinebluff
<u> </u>	Western Connector	NC 211 - US 1	Multilane divided facility, part on new location and part using existing roads, connecting NC 211 west of Pinehurst to US 1 south of Aberdeen. Project provides relief to congested corridors on NC 5, NC 211, and US 15-501 by providing an alternate route. Project was discussed as part of Western Connector Focus Area discussions. Project was scored in STI Prioritization 4.0. Could be segmented when funded.	4 Lane Divided Expressway / Boulevard	Boulevard Needs Improvement, Expressway Recommended	(County Pinehurst Aberdeen Foxfire
L P	US 15-501 and Pinehurst Traffic Circle Improvements	Page Road (SR 1208) - Voit Gilmore Lane (SR 1905), including traffic circle	Improvements to traffic circle, approches, and intersections. Project scored in STI Prioritization 4.0 and included in draft funding list. U-5976 (draft)	4 Lane Divided Boulevard	Boulevard Needs Improvement	Œ.	County Pinehurst Southern Pines
3	US 15/501 Synchronized Street	US 1 - Brucewood Road	4 lane synchronized street, TIP Project (U-5814) with constuction in FY 2020	4 Lane Divided Synchronized Street	Boulevard Needs Improvement	Œ.	Aberdeen County Pinehurst Southern Pines
1	US 15/501	Page Road (SR 1208) - Carthage	Address current and future congestion. Scored in STI Prioritization 4.0	4 Lane Divided Boulevard	Boulevard Needs Improvement	(II	Carthage County Pinehurst
	US 15/501	Voit Gilmore Road (SR 1905) - Brucewood Road	Address current and future congestion. Fills short gap between projects U-5814 and U-5976. Includes intersection improvements with Morganton.	4 Lane Divided Boulevard	Boulevard Needs Improvement	Û	County Pinehurst Southern Pines
	US 15/501	US 1 - Hoke County	Address future congestion. Scored in STI Prioritization 4.0.	4 Lane Divided Boulevard	Boulevard Needs Improvement		Aberdeen County
	NC 5 Moderization	US1 - Pinehurst Limits	Add turn lanes and shoulders for congestion. Funded TIP Project (U-5756) with tentative schedule for FY 2025.	2-3 lanes	Major Thoroughfare Needs Improvement	Œ.	Aberdeen County Pinehurst

2018 MOORE COUNTY CTP HIGHWAY PROPOSALS

Proposal ID	S S S S S S S S S S S S S S S S S S S	Section	Description / Comment	Proposed Cross Section	CTP	Tvpe	Area
10	NC 24/27 Widening	Carthage Byway - Montgomery County	Improve access to Mega Park. Scored in STI Prioritization 4.0. Economic Development.	4 Lane Divided Boulevard	Boulevard Needs Improvement		Robbins Carthage County
11	NC 24/27 Widening (Monroe Street)	Carthage Circle - US 15/501	3 lane section with curb/gutter and bike/ped improvements. Funded TIP (U-3628) with construction in FY 2023.	3 lanes	Major Thoroughfare Needs Improvement	#	Carthage
12	NC 73 Realignment	At NC 211	Two lane relocation of NC 73 to eliminate offset intersections. Funded TIP (R-2807) with construction in FY 2020.	2 lanes	Major Thoroughfare Recommended	Œ.	County
13	NC 211 Widening	NC 73 -Holly Grove School Road (SR 1241)	Funded TIP Project (R-5726) scheduled for FY 2020.	4 Lane Divided Boulevard	Boulevard Needs Improvement	Œ	County
14	NC 211 Widening	Holly Grove School Road (SR 1241) - Montgomery County	Would complete gap in multilane section between funded project R-5726 and existing US 220 freeway. Project was scored in STI Prioritization 4.0.	4 Lane Divided Boulevard	Boulevard Needs Improvement	Û.	Candor
15	NC 211 Widening	US 15/501 - Hoke County	Address current and future capacity issue. Funded TIP Project (R-5709), with construction for FY 2025. Includes realignment of Indiana Avenue to Carolina Road.	4 Lane Divided Boulevard	Boulevard Needs Improvement	Ů.	Aberdeen County
16	NC 690 Moderization	US 1 - Cumberland County	Add turn lanes where needed, straighten some curves, intersection improvements. TIP Project R-5824.	2 lanes	Major Thoroughfare Needs Improvement	(1)	County Vass
17	Airport Road Widening	NC 2 - NC 22	Construct 4 lane divided boulevard	4 Lane Divided Boulevard	Boulevard Needs Improvement	Ú.	County Pinehurst
18	Carthage Byway	NC 22/24/27 - NC 24/27	Two lane facility on new location to remove through traffic from downtown Carthage, possibly built on a four-lane right-of-way. Focus area agreement.	2 lanes	Major Thoroughfare Recommended	(I)	Carthage County
19	NC 2 (Midland Road) Improvements	Traffic Circle - US 1	Various improvements including median, turn lane, intersection/interchange improvements, and address safety and operational issues. Improvements to US 1 interchange funded in TIP as W-5708B	4 Lane Divided Boulevard	Boulevard Needs Improvement	Œ	County Pinehurst Southern Pines
19A	NC 2 (Midland Road) Improvements	US 1 - Clark Street (SR 2032)	Road Diet, one lane each direction (divided) plus bike lanes	2 lanes with bike lanes	Boulevard Needs Improvement		Southern Pines

Proposal ID	Name	Section	Description / Comment	Proposed Cross Section	СТР	Туре	Area
	Western Connector Extension	US 1 - US 15/501 @ Pee Dee Road (SR 2063)	Construct 2 lane facility on new location to connect the Western Connector to NC 211 and US 15/501. Recommend reserving 4 lanes of right of way. The local preference is to build this after the Western Connector is constructed.	2 lanes	Minor Thoroughfare Recommended	ÓE.	Aberdeen County
	Broad Street (SR 2035) - Poplar Street (SR 2055) Connection	Broad Street (SR 2035) - Poplar Street (SR 2055)	Connection between Broad St in Southern Pines and Poplar St in Aberdeen, to allow local traffic an alternative to US 1. Uses some existing segments of old Broad Street.	2 lanes	Minor Thoroughfare Recommended		Aberdeen Southern Pines
	US 15/501	Carthage - Lee County Line	Improve to four lane divided boulevard	4 Lane Divided Boulevard	Boulevard Needs Improvement	Œ	Carthage County
	NC 5	Pinehurst Section	Intersection/turn lane Improvements	Intersections	Major Thoroughfare Needs Improvement		Pinehurst
	Pee Dee Road (SR 2063)	At sharp curve	Straighten sharp curve to improve safety for increased traffic. Will be needed after construction of Western Connector and Extension.	2 lanes	Minor Thoroughfare Recommended	ÚL.	Aberdeen County
	Carolina Road (SR 1214) - Quewhiffle Road (SR 2103/1235) Connection	Carolina Road (SR 1214) to Quewhiffle Road (SR 2103/1235)	Construct 2 lane facility. This recommendation is a potential emergency access that was identified through fire-rescue authorities, and will be beneficial to Hoke County. Hoke County just adopted a CTP, with NC Board of Transportation adoption on June 29. To add this recommendation to the CTP, Hoke County will need to admend their plan.	2 lanes	Minor Thoroughfare Recommended	OE.	Hoke County County
	McCaskill Road Realignment (SR 1838)	At 15/501	Realign with NC 73	2 lanes	Minor Thoroughfare Recommended		County
	NC 22	NC 2 - US 15/501	Add turn lanes where needed, modernization where needed due to development pressures.	2 lanes with turn lanes at major intersections	Major Thoroughfare Recommended	(ii)	Carthage County Southern Pines Whispering
	North Moore Road (SR 1470)	North Moore High School - Lakey Siding Road (SR 1479)	Add turn lanes to improve access and congestion when school is in session	3 lanes	Minor Thoroughfare Needs Imrpovement	(Robbins County

2018 MOORE COUNTY CTP HIGHWAY PROPOSALS

Proposal ID	Name	Section	Description / Comment	Proposed Cross Section	СТР	Туре	Area
29	Indiana Avenue (SR 2075)	NC 211 - Fort Bragg Road (SR 2074)	Modernization, truck traffic	2 lanes	Minor Thoroughfare Needs Imrpovement	Û.	Aberdeen Southern Pines County
30	Fort Bragg Road (SR 2074)	Indiana Avenue (SR 2075) - Bethesda Road (SR 2074)	Modernization, truck traffic	2 lanes	Minor Thoroughfare Needs Imrpovement	ÚĽ.	Aberdeen Southern Pines County
31	Bethesda Road (SR 2074)	Fort Bragg Road (SR 2074)- Saunders Boulevard (SR 2053)	Modernization, truck traffic	2 lanes	Minor Thoroughfare Needs Imrpovement	(II	Aberdeen Southern Pines County
32	Saunders Boulevard (SR 2053)	Bethesda Road (SR 2074) - US 1	Modernization, truck traffic	2 lanes	Minor Thoroughfare Needs Imrpovement	ÚĽ.	Aberdeen Southern Pines County
33	NC 24/27	Near Cameron Elementary School	Add turn lanes to improve access and congestion when school is in session	3 lanes	Minor Thoroughfare Needs Imrpovement	Œ	Cameron
34	Union Church Road (SR 1805)	Grady Road (SR 1803) - Viking Drive (west) (SR 1883)	Add tum lanes to improve access and congestion when Union Pines High School is in session	3 lanes	Minor Thoroughfare Needs Imrpovement	Œ	County
35	NC 705	NC 24/27 - Randolph County Line	Add turn lanes where needed. Economic Development	2 lanes	Major Thoroughfare Needs Imrpovement	Œ	County Robbins
36	Linden Road Extension	Western Connector (proposed) - Linden Road	Construct two lane connector on new location to provide local access to the Western Connector	2 lanes	Minor Thoroughfare Recommended	(County Pinehurst
37	Roseland Road Extension	US 1 - US 15/501 @ NC 211	Construct two lane connector on new location to elimiate dog-leg movement	2 lanes	Minor Thoroughfare Recommended		Aberdeen
38	US 1 Synchronized Street	NC 2 (Midland Road) - Camp Easter Road (SR 1853)	Construct synchronized street to improve safety and possible future delay in the area.	4 Lane Divided Synchronized Street	Major Thoroughfare Needs Imrpovement	Œ	County Southern Pines

Page 4

Proposal ID	Name	Section	Description / Comment	Proposed Cross Section	СТР	Туре	Area
39	Morganton Road Interchage	Morganton Road (SR 1205) @ US 15/501	Constuct interchage	Interchange	Proposed Interchange		Pinehurst

This number is a proposal ID. It corresponds to the Highway Map and does not imply a priority order

	-
Undefined	
ÚĽ.	
Undefined	
2 lanes	
Consider a different route other than or in addition to the Pinehurst Bypass and Western Connector to address truck traffic, may require coordination with adjoining local jurisdictions and Counties	adjoining road janoardia and a commerci.
NC 24/27 near Robbins to US 1 south of Pinebluff	
Western Truck Route	
40	

Note: Proposal #40 was added at the August 29, 2018 Moore County Transportation Committee Meeting and not shown on CTP maps

Definitions / Abbreviations:

Modes = 苇Highway improvement, 🕉 - Bicycle improvement, 🚍 🕉 Highway & Bicycle improvements, 🛱 - Public Transportation improvement,

V - Safety Improvements - Rail improvement, P- Pedestrian improvement, 🕅 - Bicycle & Pedestrian improvements,

Cross-Sections = A6 (Freeway), Modified F1 (Expressway/Boulevard), Modified E-2 (Expressway/Boulevard), B1 (Boulevard/Major Thoroughfare Inside Town), Modified B-1 (Bouldevard/Major Thoroughfare Outside Town), Modified H-1 (Minor Thoroughfare Inside Town),

Modified H-2 (Minor Thoroughfare Outside Town), B-3 (Minor Thoroughfare), B-4 (Minor Thoroughfare), K (Minor Thoroughfare)

COA = Control of Access - adjacent land access is not allowed; ROW = Rights-of-way

PAB =Planning Area Boundary (PAB N = PAB North, PAB S = PAB South)

Rd = Road; St = Street; Ave = Avenue; Blvd = Boulevard; Ln = Lane (usually 12 feet wide); Div = Divided (usually with a median)

Alt = Alternate route; Co = County; CL = City limits (NCL = North CL, SCL = South CL)

Freeway = Full control of access facility (no driveways) with entrances only at interchanges

Expressway = Limited/No driveway access encouraged with entrances at intersections or interchanges

Boulevard = Limited driveways allowed but access may be restricted to right-in/right-out, major driveways may be allowed full movements

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Appendix I Western Connector Scenarios

The purpose of this appendix is to briefly outline the scenarios studied for the Western Connector during the recent CTP process. Information about the final recommendation can be found in Appendix P, and history of the recommendation can be found in Appendix K.

The Western Connector is a proposal that has been considered for decades. It morphed from the 1987 Pinehurst Bypass. In 2008, after NCDOT conducted a feasibility study, Pinehurst hired a consultant to study some alternative solutions, which was summarized in the Western Connector Corridor Study Final Report. The study found the existing N.C. 5 corridor to be at capacity, but noted the difficulty in widening due to physical constraint and adjoining railroad right-of-way. Widening N.C. 5 would also impact the Village of Pinehurst as it would go through historic areas of the village. Ultimately, a new location corridor was recommended with both studies. The solutions shown had been compromised with development by 2010, when the CTP was resumed after several failed attempts. With the history of controversy, it was recognized that a different approach should be taken that would increase the probabilities of a successful plan. There was a decision to separate and study five focus areas, which included the Western Connector. The idea was to have a group consensus on the focus areas before any work was started on the CTP. More information on history of the transportation planning efforts of Moore County can be found in Appendix K.

The Western Connector area was covered in the 2011-2012 Charrettes (see *Moore County 2011 Charrette Report*), and participants were given the opportunity to solve transportation problems based on the local perspective of perceived transportation needs. The results showed:

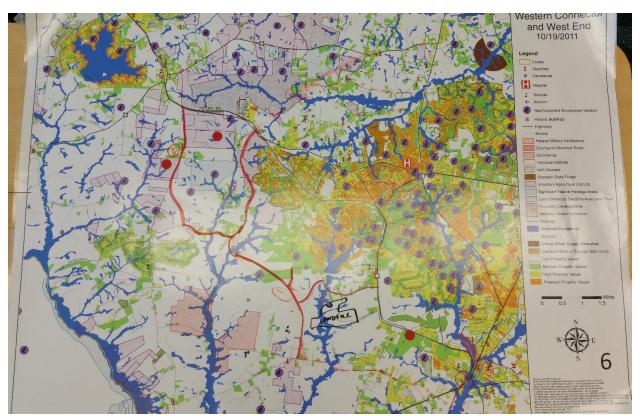


- 58% of participants provided solutions that remained entirely on Hoffman (SR 1004) and Roseland (SR 1112) Road.
- 26% of participants provided solutions that provided a combination of new location and existing roadway (partially on new location)
- 16% of participants provided a solution entirely on a new location

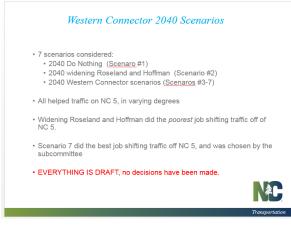
(Source: Moore County 2011 Charrette Report)

With the public's preference of widening Roseland Road and Hoffman Roads, the concept was tested with the travel demand model which showed this idea as an ineffective solution. The widenings did little to resolve the capacity concerns on N.C. 5. At the March 2015 public meetings, no alternative concepts were shown – instead there was a call for suggestions.

On April 19, 2016, the Moore County Transportation Committee (MCTC) formed a subcommittee to investigate the Western Connector area. They met on April 28, 2016 and May 25, 2016.



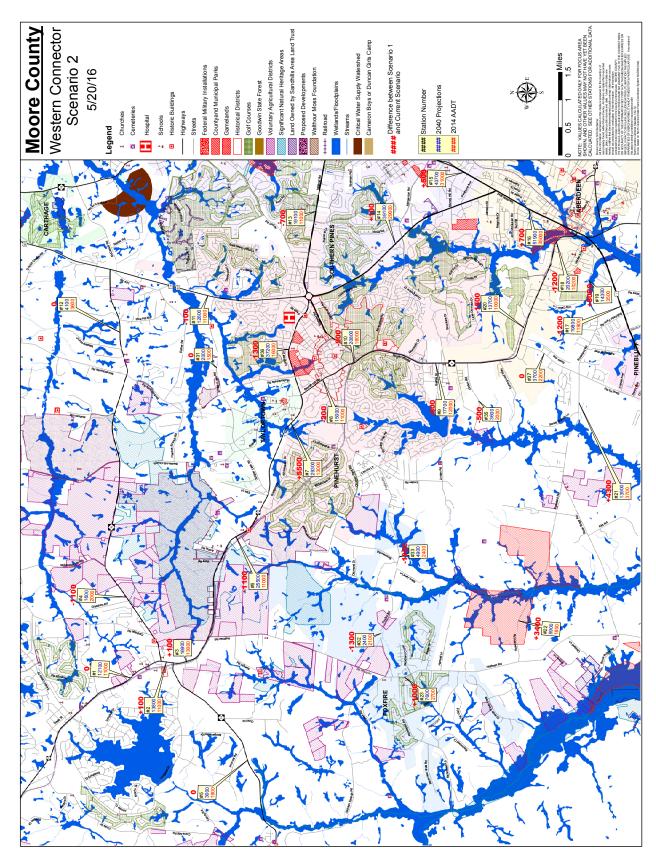
Snapshot of the map used in the April 28, 2016 Western Connector subcommittee meeting. This map was used to sketch out ideas for the area and drawn in red pen.



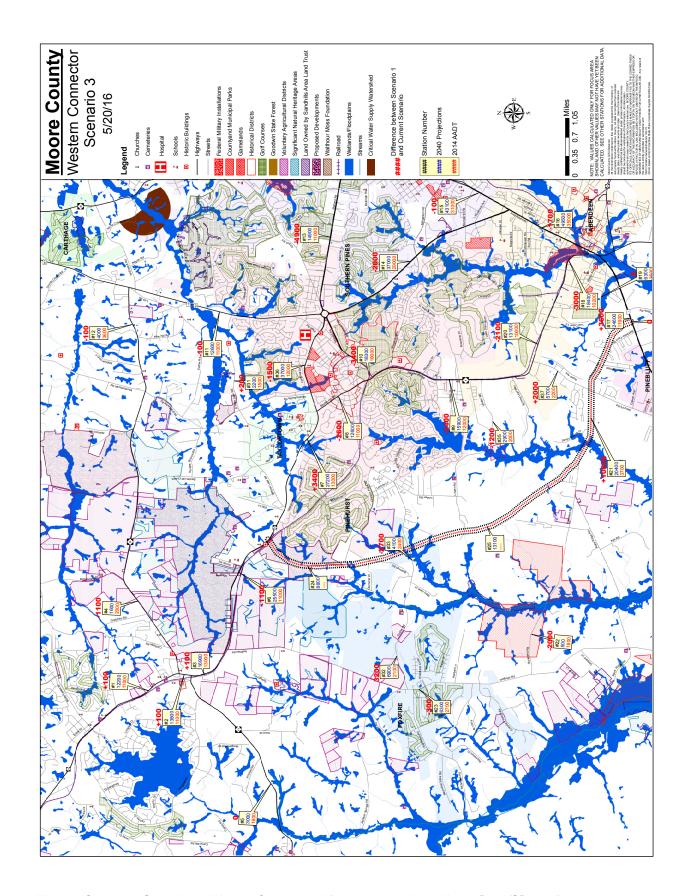
Slide from the June 29, 2016 presentation to the Moore County Transportation Committee about the Western Connector.

On May 25, 2016, seven scenarios were presented to the subcommittee concerning the Western Connector. The committee agreed on Scenario #7 and forwarded that decision to the MCTC. They were presented to the MCTC on June 29, 2016. Later discussions extended the Western Connector over to N.C. 211. This was called Scenario #7-revised and was the preferred solution and the committee recommendation.

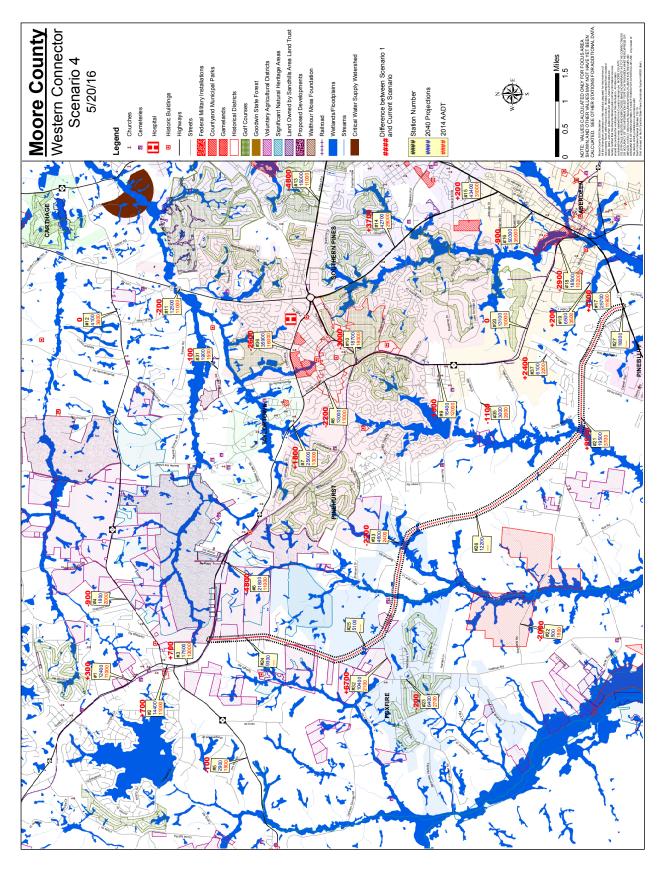
The same mapping as shown in the MCTC is shown on the following pages. Scenario #1 was the "do-nothing" scenario and is not shown.



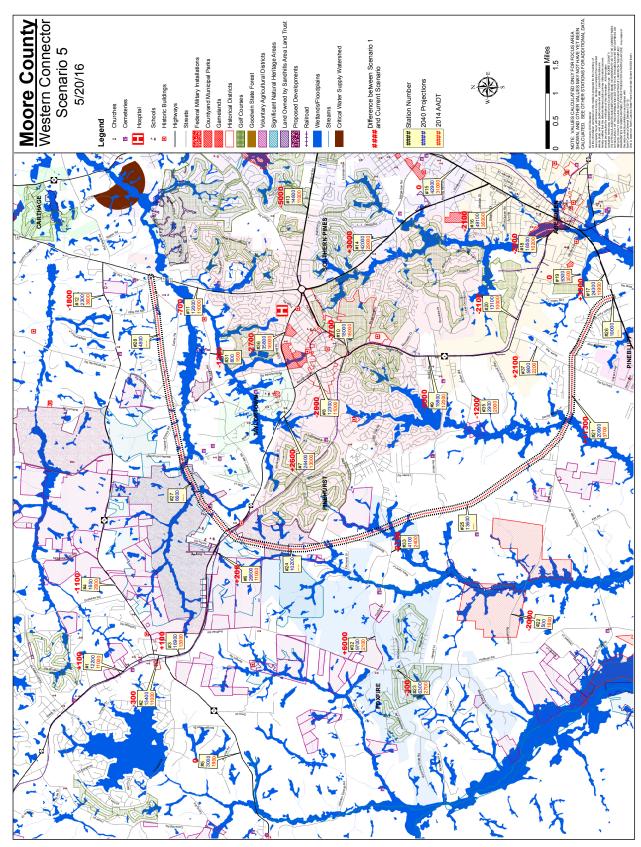
Western Connector Scenario #2, widening of Hoffman Road (SR 1004) and Roseland Road (SR 1112).



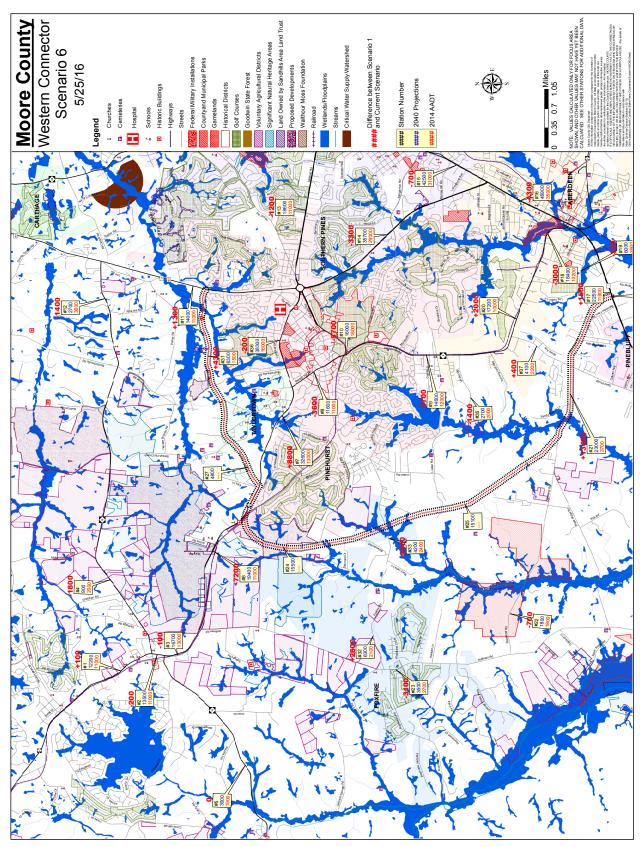
Western Connector Scenario #3, Western Connector without a connection to Linden Road (SR 1115).



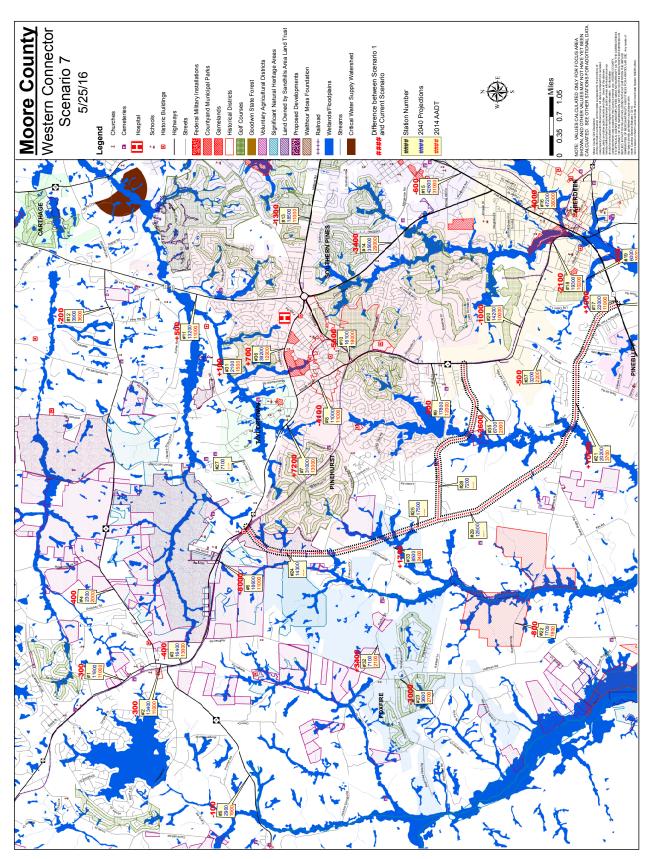
Western Connector Scenario #4, Western Connector on Hoffman Road (SR 1004), some on new location, and the remaining on Roseland Road (SR 1112).



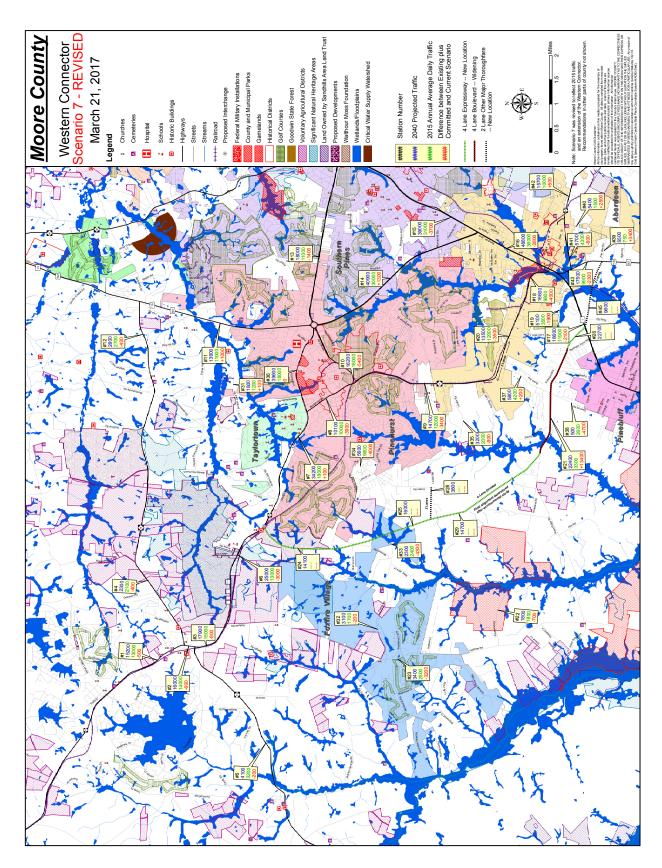
Western Connector Scenario #5, Western Connector extending north to US 15/501 on new location.



Western Connector Scenario #6, Western Connector extending north to Juniper Lake Road (SR 1216)



Western Connector Scenario #7, Western Connector with a connection to Linden Road (SR 1115). This alternative was the initial consensus choice, until it was revised on March 22, 2017 to extend over to N.C. 211 using Pee Dee Road (SR 1848).



Western Connector Scenario #7-revised. Western Connector preferred solution. Extends to N.C. 211 east using Pee Dee Road (SR 1848).

Appendix J Existing Transportation Plans

The following highway-only thoroughfare plans for areas within the county that were incorporated as a part of this plan are listed below. Refer to these reports for detailed descriptions of recommendations that were not documented as a part of this report.

Maps for many of the plans can be found on elsewhere in this appendix. A copy of the 1967 Robbins Throughfare Plan was unavailable.

Previous Thoroughfare Plan Adoptions

Moore County (except Southern Pines-Aberdeen-Pinehurst)

Moore County Adoption Oct. 5, 1987NCDOT Adoption Nov. 13, 1987

Southern Pines-Aberdeen-Pinehurst

•	Aberdeen Adoption	Nov.11, 1989
•	Moore County Adoption	Feb. 5, 1990
•	Pinehurst Adoption	Dec. 18, 1989
•	Southern Pines Adoption	Jan. 9, 1989
•	NCDOT Adoption	April 6, 1990

Carthage

•	Carthage Adoption	March 18, 1996
	NCDOT Adoption	May 3, 1996

Robbins

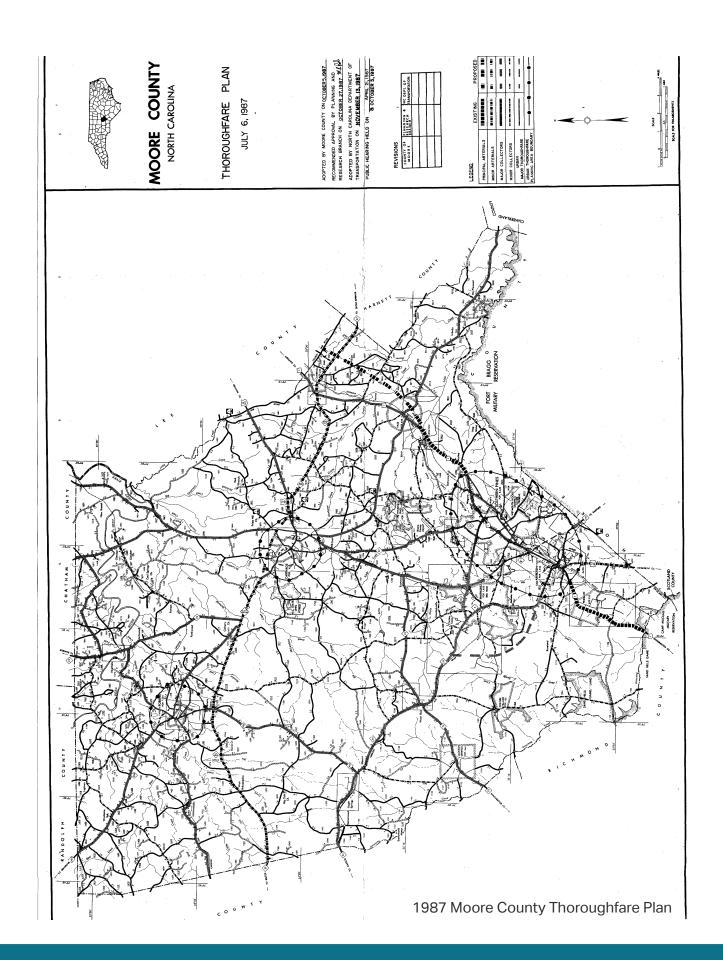
•	Robbins Adoption	March 6, 1967
•	NCDOT Adoption	April 7, 1967

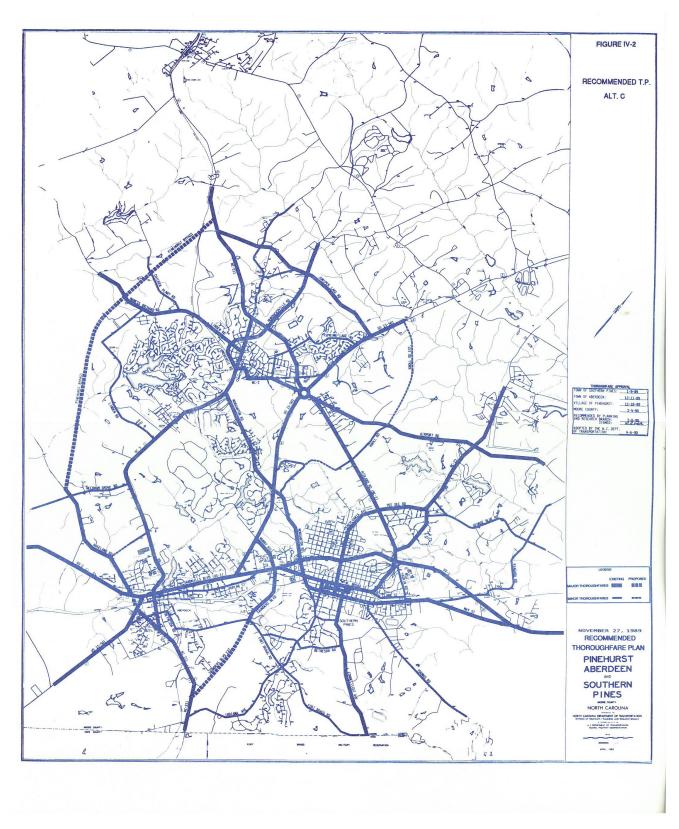
Local Transportation Plan Adoptions

Village of Pinehurst Throughfare Plan
 October 11, 2011

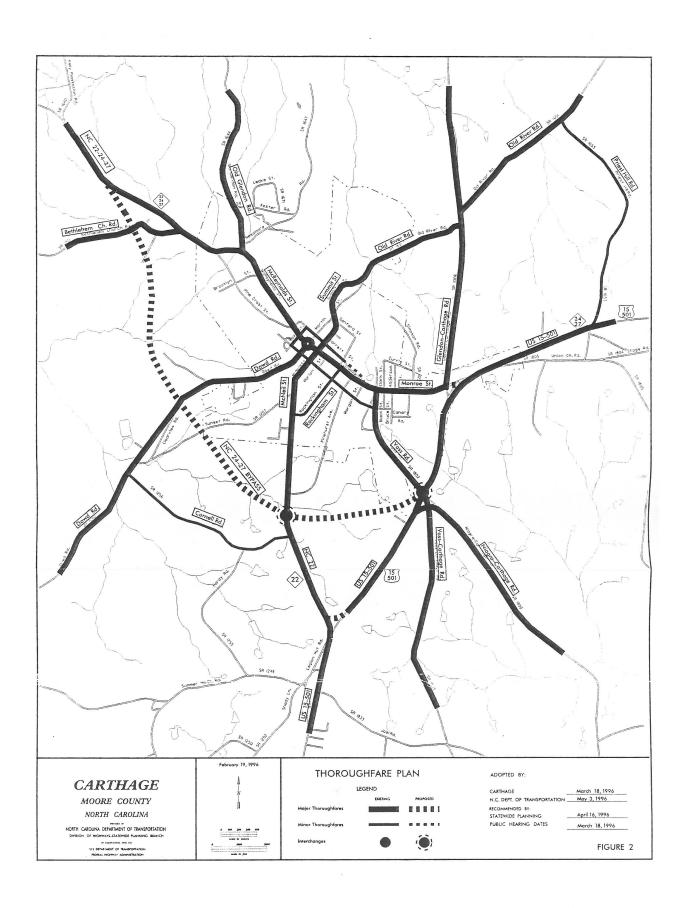
For the 1990 Southern Pines-Aberdeen-Pinehurst plan, there was a proposed Pinehurst Bypass. Development compromised that alignment, and over time it was shifted west and retitled the Western Connector.

For the 1996 Carthage Plan, there was a proposed N.C. 24-27 Bypass, south of town. There were two concerns with a southern bypass: its location with a critical watershed and the intersection with U.S. 15-501, which would make for a complex interchange.





1989 Pinehurst/Aberdeen/Southern Pines Throughfare plan

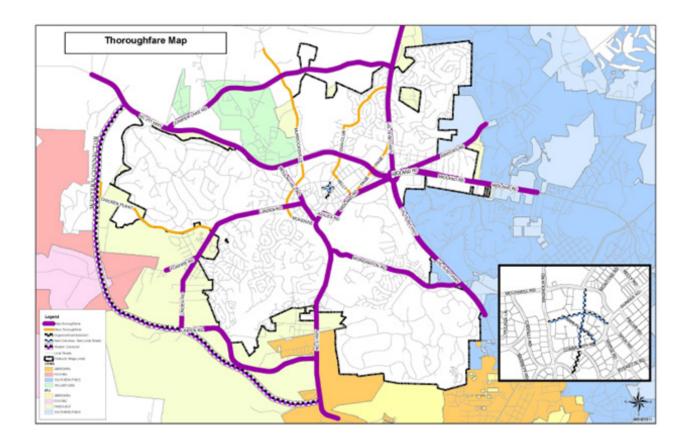


In 2011, the Village of Pinehurst created a thoroughfare plan for its major street system. It was not mutually adopted by the NCDOT since comprehensive transportation plans were the planning element for the department.

The local plan states that in 2003 there was the recommendation of a western bypass, which would later become the Western Connector.

The plan was adopted by the Village of Pinehurst on Oct. 11, 2011.

This plan be viewed at http://www.vopnc.org/Home/ShowDocument?id=5864



Taken From Village of Pinehurst Throughfare Plan, 2011

Appendix K Timeline of Events and Decisions

The discussion for the Moore County Comprehensive Transportation Plan started in 2010, however the history of the plan dates back to the 1970s. This chapter will briefly outline the history and events that led to the adoption of the 2019 Moore County CTP.

This chapter is not intended to outline every decision or every meeting - it is intended to highlight the most important events.

Prior to 1990

Highway-only thoroughfare plans were mutually adopted for the following areas:

- Carthage Adopted locally on April 28, 1975 and NC Board of Transportation (BOT) on June 13, 1975 (updated in 1996).
- Robbins Adopted locally on March 6, 1967 and by the BOT on April 7, 1967.
- Southern Pines-Aberdeen-Moore County Adopted locally between Jan. 9,1989 and Feb. 5, 1990 and by the BOT on April 6, 1990.
- Moore County (rural areas plus the municipalities not listed above).
 Adopted locally on Oct. 5, 1987 and by BOT Nov. 13, 1987. This plan did show a Pinehurst Bypass (later termed the Western Connector) and a median on U.S. 1.

June 5, 1991

Pinehurst requests a railroad relocation study

The Village of Pinehurst requested a study to investigate the possibility of relocating the Aberdeen Carolina and Western Railroad corridor. It currently travels through the town to an area which at that time was envisioned for the bypass. NCDOT responded on June 21, 1991: "Tying the relocation of the railroad to the construction of a bypass around Pinehurst could make the cost of the project prohibitive from a highway perspective." It also recommended discussing with the railroad company.

March 18, 1996

Carthage Thoroughfare Plan updated

The highway-only Carthage Thoroughfare Plan was updated and adopted locally on March 18, 1996 and by the BOT on May 3, 1996. A bypass is shown on the plan to the south of town.

June 1, 1998 Southern Moore and Moore County Thoroughfare Plan studies

The Moore County Commissioners passed a resolution to begin an update of the Moore County Thoroughfare Plan. On Dec. 7, 1998, NCDOT entered into a contract to do a study with Aberdeen, Pinehurst, Southern Pines, Taylortown, and Whispering Pines, called the Southern Moore Thoroughfare Plan. These areas paid NCDOT to develop the computer travel demand model used to develop the study. At the same time a separate Moore County study was initiated for the remainder of the county.

2000 Transportation plans stall

In early 2000, the southern Moore County model was completed, and some draft thoroughfare plan recommendations were proposed. They included a four lane U.S. 1 bypass on new location, N.C. 211 widening (R-2812, R-2591), N.C. 24-27 (R-2528), and multi-lane widening of U.S. 15-501, N.C. 22, and N.C. 705. However, at this point, the study was not able to move forward due to controversy of the recommendations.

Feb. 19, 2001 NCDOT letter to county about consultant

Moore County was considering hiring a consultant for a transportation plan to better integrate land use with the plan. NCDOT sent a letter stating that work will be deferred until clear direction from the county is received.

March 6, 2001 County hires consultant

Moore County had a desire to integrate a land use plan with a transportation plan. On March 6, 2001, NCDOT wrote a letter to Moore County concerning the county's plan to have a consultant to develop a transportation plan. Ultimately, Moore County hired Stantec to develop a Transportation Plan.

Over the next two months, it was decided that NCDOT would stop working on the Moore County plan and continue on the Southern Moore study. Stantec produced the Study Report for Moore County CTP, dated July 2003. That plan was not presented to NCDOT for mutual adoption.

May 19, 2003 N.C. 5 Feasibility Study Released

Prepared by a consultant, a feasibility study for the multi-lane widening of N.C. 5 (FS-0108B) was released. Page 10 of the study states: "Given the cultural and social impacts to the historic areas in the Village of Pinehurst, we anticipate that improvements to N.C. 5 in this area will pose significant planning and design challenges. Therefore, consideration should be given to performing additional studies of an urban bypass facility of N.C. 5." On Oct. 28, 2002, the Village of Pinehurst wrote a letter to NCDOT opposing the widening and supporting a "future N.C.-5 Connector."

Sept. 2, 2004 Adoption of Strategic Highway Corridors Policy

The Strategic Highway Corridor (SHC) Vision Plan was approved by the BOT on Sept. 2, 2004 as part of the Statewide Transportation Plan. It represented the future vision for a series of highways with statewide and regional significance. The SHC policy was also approved by then Department of Natural Resources, the governor, and the Department of Commerce. It was the tool used by the State of North Carolina to comply with federal mandates regarding long range planning and the key to NCDOT's implementation of both federal and state long-range planning laws.

Strategic Highway Corridors later became controversial to Moore County because in the SHC plan, U.S. 1 was designated as an access-controlled freeway, and N.C. 24-27 as an expressway. The SHC policy was replaced in 2015 as Strategic Transportation Corridors.

Nov. 17, 2005 Carthage Bypass (R-2212) concurrence agreement

The Carthage Bypass, once a STIP project (R-2212), received concurrence point 1 agreement. More discussion of the Carthage Bypass can be found elsewhere in this report.

Nov. 30, 2005 Conversion to CTP

With both the county and NCDOT recognizing the need for a plan, NCDOT attempted to revive the previously stalled plan. All the preliminary Southern Moore Thoroughfare Plan recommendations were converted to the new multi-modal CTP format. Meetings were held with local representatives on Nov. 30, 2005 and June 1, 2006.

After the June meeting, Southern Pines communicated by e-mail that it would not support a plan that showed a U.S. 1 bypass. The town's objection to a bypass was not discussed with the group as a whole. An additional meeting was scheduled to discuss the plan, but it was canceled locally and never rescheduled. There were no adoptions of the CTP. The maps used during this period, specifically showing a U.S. 1 bypass, would later cause confusion during the 2010 revival of the study.

Oct. 18, 2007 CTP requested

Moore County manager Cary McSwain sent a letter to NCDOT requesting a CTP study, discussions concerning the development of a plan would resume in 2010.

June 20, 2008 Plan closed

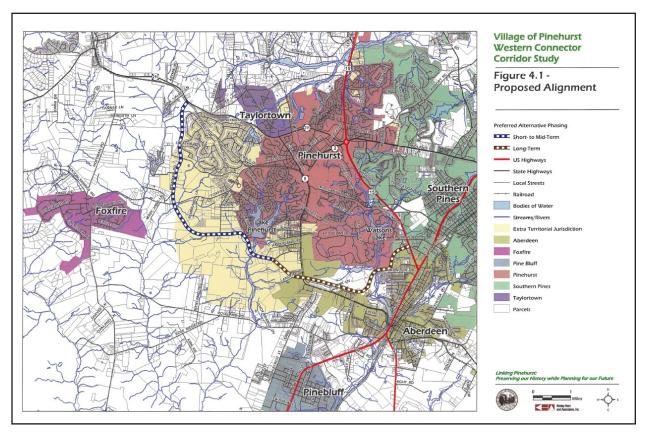
Since the southern Moore County study was not moving forward, NCDOT sent a letter that due to inactivity, the study would be closed.

August, 2008

Village of Pinehurst Western Connector Corridor Study

A consultant-produced Village of Pinehurst Western Connector Corridor Study was released, that was commissioned by the Village of Pinehurst. The effort followed a NCDOT Feasibility Study (FS-0108B), that concluded that N.C. 5 was at capacity and difficult to widen due to adjacent properties and railroad right-of-way. The study included multiple alternatives, public involvement, a preferred alternative, functional design, and suggestions for implementation.

A new location preferred alternative was locally chosen. However, after the study concluded, the right-of-way of the local preferred alternative was compromised by development. The figure shown below shows the preferred alternative of the study.



Early 2010

Study begins and Focus Areas created

Based on requests from Moore County representatives and TARPO, NCDOT agreed to restart the Moore County CTP.

With the past history of controversy, it was recognized that a different approach should be taken that would increase the probabilities of a successful plan. There was a decision to separate and study five focus areas. They were: 1) U.S. 1, 2) Western Connector Area, 3) N.C. 24-27 in

Carthage, 4) N.C. 24-27 in Cameron, and 5) West End. The idea was to have a group consensus on the focus areas before any work was started on the CTP.

July 15 and Aug. 17, In 2010

Initial meetings for the CTP

The Moore County Transportation Committee initial meetings were held on the CTP. The focus areas were explained and that this process would be different than the standard CTP study.

The August meeting is where the controversy started over U.S. 1 as a freeway Strategic Highway Corridor, and to a lesser extent, the N.C. 24-27 expressway near Carthage and Cameron. The main concern was that a possible US 1 Bypass, if improved to a freeway, would impact the Walthour-Moss Foundation and the area known as "Horse Country." By this time, the Carthage Bypass (R-2212) had been deferred in the STIP due to the controversy about a possible bypass to the north.

August, 2010

Carthage Bypass deferred

The Carthage Bypass (R-2212) was deferred and removed from the STIP due to local controversy.

Nov. 4, 2010

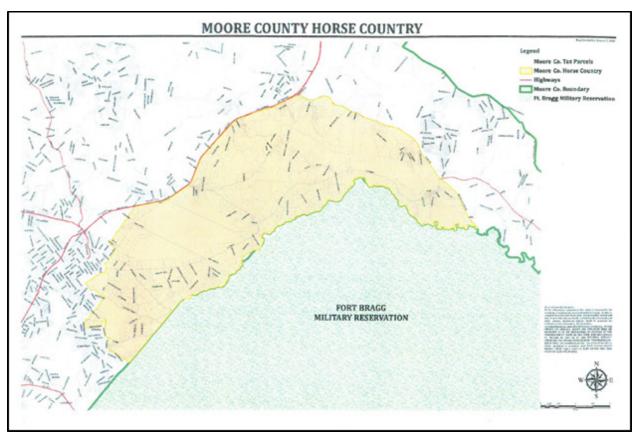
Meeting with Fort Bragg

NCDOT presented the CTP process, Strategic Highway Corridors, and the five focus areas to the Fort Bragg Transportation Division officers. Many residents felt any bypass should go through Fort Bragg property.

January 2011

Delineation of "Horse Country"

Many people were requesting that any potential bypass should avoid the area termed as "Horse Country". This area was not denoted on any map, so NCDOT requested that representatives clarify graphically the area termed "Horse Country" (See figure on next page).



Area agreed upon by local representatives that represents the area termed "Horse Country"

March 4, 2011 NCDOT letter to Walthour-Moss Foundation

NCDOT Secretary Gene Conti sent a letter to Horse Country representatives in response to their letter on Feb. 9, 2011. The reply stated that the bypass concerns were based on old mapping, there are no plans through the property, and encouraged them to be a part of the CTP development process. During the study, many letters were received from Horse Country representatives.

May 25, 2011 Moore County Transportation Committee

There were some local delays due to many staff changes, and illness of the MCTC chair. The May meeting started the preparations for the charrettes.

Oct.14, 2011 Misinformation spreads concerning US 1

NCDOT sends an email about a Sept. 9, 2011 article in The Pilot newspaper called "Bypass Routing At Issue" that contained multiple inaccuracies about U.S. 1 and the intention of the November charrettes. The misinformation contained in the press was largely based off old 2006 plan conversion maps that were never adopted locally and had since been abandoned. Locals also spread misinformation through meetings and fliers, which made public outreach more difficult.

Nov. 1-4, 2011 and Jan. 14, 2012

Charrettes

The seven Moore County charrettes were held on Nov. 1-4, 2011. On Jan. 14, 2012, the charrettes were presented to the NAACP and Midway Community Association joint meeting. There were 485 unique participants, with almost 300 of those from Southern Pines. See the *Moore County 2011 Charrette Report* for complete documentation.

December 2011

Resolutions opposing a U.S. 1 bypass

Multiple jurisdictions passed resolutions opposing the consideration of a U.S. 1 bypass in the development of a CTP. The main concern was that any U.S. 1 bypass would impact the Walthour-Moss Foundation.

The resolutions were passed by Aberdeen (Dec. 2, 2011), Pinebluff (Dec. 15), Pinehurst (Dec. 13), Southern Pines (Dec. 13), and Moore County (Dec. 5). Partners-In-Progress, a Moore County economic development organization, provided the resolutions to NCDOT on Dec. 28, 2011.

Jan. 30, 2012

Travel demand model work begins

Discussions on the development of the travel demand model began with Parsons-Brinckerhoff.

February-April 2012

Request to change U.S. 1 Strategic Highway Corridor

On Feb. 16, 2012, TARPO passed a resolution to support Moore County's request to reclassify U.S. 1's Strategic Highway Corridor designation to the 2012 cross sections, instead of the vision of a freeway.

On March 26, 2012, the Lumber River RPO passed resolutions against the reclassification of U.S. 1, opposing the Moore County position.

On April 10, 2012, NCDOT received a formal request form TARPO to change the Strategic Highway Designation of U.S. 1 from a freeway to a cross section to reflect existing conditions.

On April 10, 2012, both Hamlet and Rockingham (in Richmond County) passed resolutions against the reclassification of U.S. 1, opposing the Moore County position. Richmond County followed with its resolution on May 7, 2012.

April 30, 2012

First draft of charrette report received

NCDOT received the first draft of report on the Moore County charrettes from the consultant. The first draft was determined to be insufficient and required significant revisions. After several attempts, NCDOT finalized the report.

July 16, 2012 NCDOT response to Strategic Highway Corridor change request

NCDOT replied to the U.S. 1 Strategic Highway Corridor change request on July 16, 2012, stating that there was not sufficient information to make a decision to modify the Strategic Highway Corridor. The recommendation was that any decision should be deferred until the Moore County travel demand model and the Statewide 2040 Transportation Plan were complete.

August 2012 AirSage cell phone data

Discussions began with AirSage cell phone data to be used in the travel demand model. That data can be used to validate the model and help determine origins and destinations.

Sept. 18, Secretary Conti visits the county 2012

Based on concerns in several locally written letters, NCDOT Secretary Gene Conti visited the county and stressed four points: 1) NCDOT is not interested in forcing a community to accept a project for which there is strong local opposition, 2) There has never been a project that defined a U.S. 1 bypass, 3) Completing the CTP is called for by state statute, and 4) The county's request to reclassify U.S. 1 Strategic Highway Classification will be examined as part of the CTP process.

Oct. 1, 2012 Parsons-Brinckerhoff Scope and contract activated

Parsons-Brinckerhoff was hired to construct the travel demand model. The model was used to analyze deficiencies and identify needed improvements.

Oct. 24, 2012 MCTC meeting

The charrette report was delivered at this meeting. See the *Moore County* 2011 Charrette Report for complete documentation.

March 7, 2013 Workshop meeting to compile data

A staff subcommittee met to collect current and future (2030 and 2040) socio-economic data as it is an input for the travel demand model.

May 13, 2013 Receipt of the AirSage cell phone data for travel demand model

The AirSage cell phone was delivered that can be used to validate the model and help determine origins and destinations.

Aug. 5, 2013 Socio-economic data finalized

This was the last day for Moore County staff to change the 2030/2040 future year data. It was approved by local boards in October 2013 to March 2014 (see Appendix G), and forwarded to the consultant in April 9, 2014.

July 1, 2014 Received travel demand model

The completed travel demand model was received from Parsons Brinckerhoff.

July 31, 2014 MCTC Meeting

The MCTC ultimately decided to move forward without Taylortown's future year socio-economic data approval and endorsed the future year data for the travel demand model.

Sept. 10, 2014 MCTC meeting to present travel demand model information

Parsons-Brinkerhoff gave a presentation about the travel demand model to the MCTC.

March 5, 2015 Board of Transportation adopts Strategic Transportation Corridors

On March 5, 2015, the N.C. Board of Transportation revised the Strategic Highway Corridors (SHC) to the Strategic Transportation Corridors (STC). The STC identify a network of critical multimodal transportation corridors considered the backbone of the state's transportation system. The 25 corridors move most of North Carolina's freight and people, link critical centers of economic activity to international air and sea ports, and support interstate commerce.

This was a very important development for Moore County because the statewide SHC vision for the two corridors in the county, U.S. 1 and N.C. 24-27 was poorly received. This allowed flexibility as long as NCDOT maintained mobility on the corridors.

U.S. 1 was included in the STC plan, but no longer designated as a freeway. The improvement of U.S. 1 to a freeway was opposed by many Moore County citizens and would have been disruptive to implement. N.C. 24-27 goes through two of the focus areas: Carthage and Cameron. However, this route was not included as an STC. The Carthage Bypass (R-2122) was a funded project at one time and dropped due to controversy.

This state policy change was possibly the biggest development in helping make the Moore County CTP a reality.

March 23, 2015 Public officials meeting

A public officials meeting was held at the Moore County Agricultural Center. Since the BOT revised the Strategic Highway Corridors (SHC) to the Strategic Transportation Corridors (STC) this allowed flexibility in moving forward with Focus Area agreements.

Focus area topics addressed:

- Carthage model projections indicated 2040 congestion in Carthage.
 A "near-town" bypass was proposed.
- N.C. 24-27 in Cameron traffic projections did not indicate any congestion in 2040.
- Western Connector/West End 58% of the 2011 charrette participants preferred the widening of Roseland and Hoffman Roads instead of a Western Connector. Analysis showed it was not an effective solution. It did little to resolve the capacity concerns on N.C. 5. No alternative concepts were shown at the meeting, but there was a call for suggestions.
- U.S. 1 70% of the 2011 charrette participants preferred improvements on existing U.S. 1. Local resolutions prevented consideration of concepts east of U.S. 1. A synchronized street concept was proposed.

March 23-24, 2015 Public meetings

Public meetings were held during the second phase of public involvement, immediately after the public officials meeting discussed above.

- Monday, March 23: Moore County Agricultural Center from 5-8pm.
- Tuesday, March 24 meetings: Pinehurst TownHall 10 a.m.-1p.m.,
 Aberdeen Rec Center 3-6p.m, and Aberdeen Elementary 5-8p.m.

April 20, 2016 MCTC meeting

This meeting created a Western Connector subcommittee, and the first meeting was to be held on April 28, 2016. Carthage discussed they had been working with the Needmore community about the Carthage Bypass. See Appendix I for a discussion of the Western Connector scenarios discussed.

May 16, 2016 Carthage Byway Resolution

Local officials worked with Carthage residents to develop a solution to provide future congestion relief to Carthage. A local decision was made to rebrand the "Carthage Bypass" to the "Carthage Byway" as a two lane "near-town" bypass. The map dated April 4, 2016 was adopted by the town of Carthage on May 16, 2016.

May 25, 2016 Second Western Connector subcommittee

Seven scenarios were presented to the subcommittee concerning the

Western Connector. The committee agreed on Scenario #7 and forwarded that decision to the MCTC.

June 29, 2016 Western Connector agreement (first agreement)

Seven scenarios were presented to the MCTC concerning the Western Connector. The committee agreed on Scenario #7. At the time, there was agreement with all five focus area items that began in 2010.

Oct. 25, 2016 MCTC meeting

CTP recommendations were discussed. The Western Connector caused considerable discussion and it was decided to revisit the Western Connector concept.

Nov. 30, 2016 and Jan. 25, 2017

MCTC meetings

The main topic for both meetings was a discussion of the Western Connector concept.

March 20, 2017 Western Connector public meeting response released

On Feb. 21, 2017, the citizen's group growmooresmart.org gave a presentation opposing the Western Connector concept to the Village of Pinehurst. NCDOT prepared and released a document titled *Western Connector Public Meeting Response* to clarify and correct misinformation given at the February presentation.

March 22, 2017 MCTC meeting

After a presentation and many questions, the MCTC reaffirmed support of the Western Connector. Scenario #7 Revised was chosen as the locally preferred alternative for the Western Connector.

June 28, 2017 MCTC meeting

The MCTC agreed on the *Draft Moore County Highway CTP Proposals*, dated June 23, 2017, which is the basis for the recommendations in this report, and can be found in Appendix H. It also agreed to a final schedule.

Nov. 15, 2017 MCTC meeting

The MCTC finalized the list of 39 highway proposals by approving the latest *Draft Moore County Highway CTP Proposals*. It added four proposals: Linden Road Extension, Roseland Road Extension, U.S. 1 Synchronized Street (Between N.C. 2 (Midland Road) and Camp Easter Road), and the MorgantonRoad interchange. The decision to have seven public meeting locations was also made which was later extended to eight. The first draft of the CTP documentation was placed online for this meeting.

Jan.11, 2017 Moore County commissioners meeting

The draft CTP was presented at a work session of the county commissioners. No significant comments were received.

March 5-27, 2018 Draft CTP presented to municipalities

The draft CTP was presented to municipalities on these dates:

- March 5, 2018 Town of Candor
- March 8, 2018 Town of Robbins
- March 13, 2018 Village of Foxfire
- March 14, 2018 Town of Whispering Pines
- March 15, 2018 Town of Pinebluff
- March 19, 2018 Towns of Vass and Carthage
- March 26, 2018 Towns of Southern Pines and Aberdeen
- March 27, 2018 Village of Pinehurst, Town of Cameron

Multiple attempts were made to schedule a meeting with Taylortown, and a draft CTP presentation was never made. The meetings with Foxfire and Pinehurst contained many questions about the proposed Western Connector.

April 9-23, 2018 Public involvement meetings

Eight public involvement meetings were held about the draft CTP. A discussion of these events can be found in Chapter 2.

June 18, 2018 Public review of the draft plan begins

This draft report was made available for public review prior to the MCTC endorsing the draft CTP.

Aug. 29, 2018 MCTC endorsement.

The MCTC endorsed the draft CTP. They did, however, add some consideration of a truck route.

This verbage was included in the final motion by the committee: "Consider a different route other than or in addition to the Pinehurst Bypass and Western Connector to address truck traffic, may require coordination with adjoining local jurisdictions and Counties."

Sept. 10 – Nov. 27, Approval of the Moore County CTP 2018

After MCTC approval, the 12 municipalities and the county began to consider adoption of the CTP. All the areas had a brief presentation for their respective councils.

The land use plans of Aberdeen and Pinehurst were older than five years. To comply with the land development provision of State Statute 136-66.2, Aberdeen and Pinehurst reaffirmed their previous land use plans prior to adopting the CTP. The county also reaffirmed its land use plan prior to adoption. The county's 2013 Land Use Plan was close to being five years old.

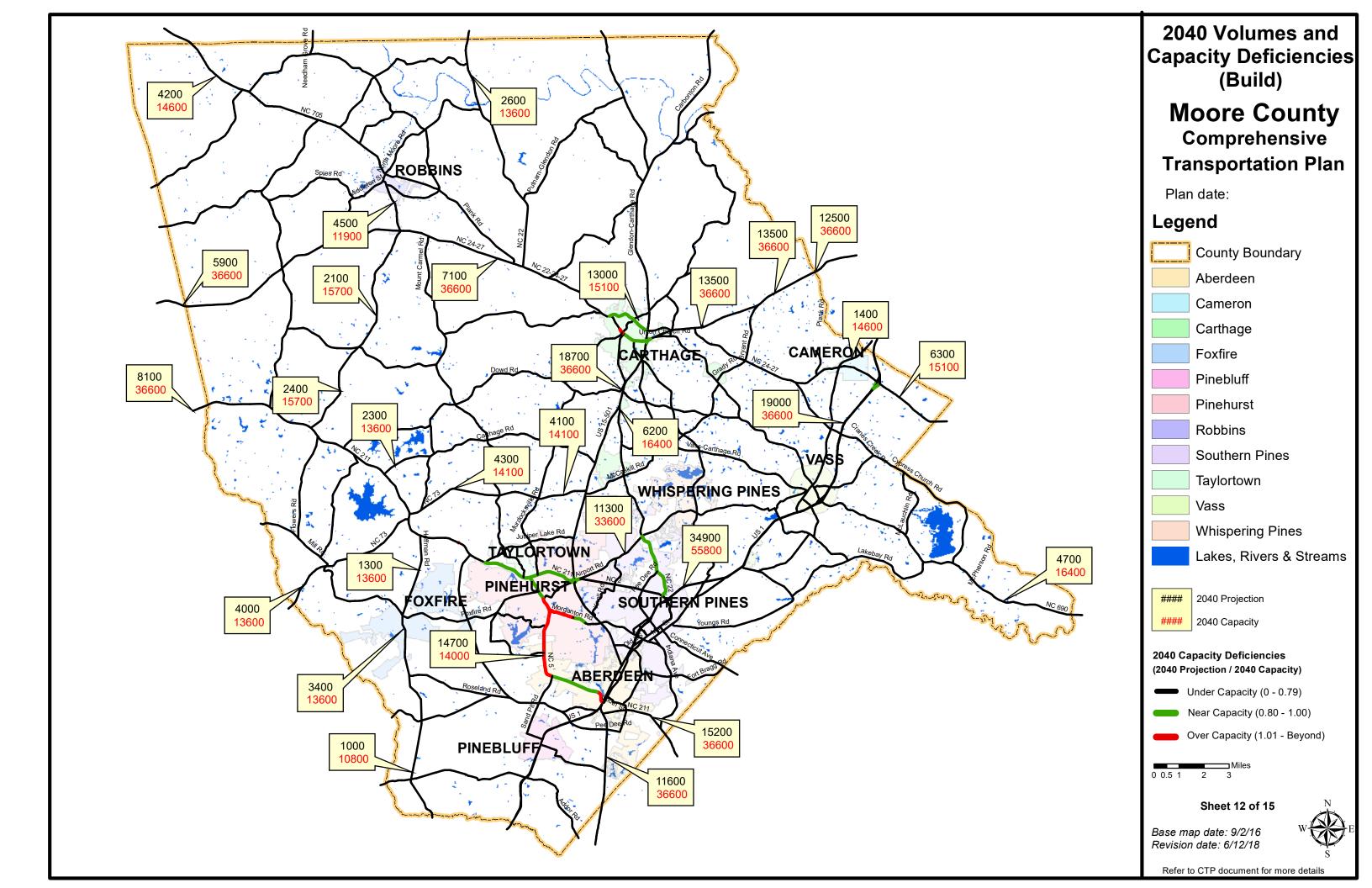
A table of presentations and adoptions can be found in apendix O.

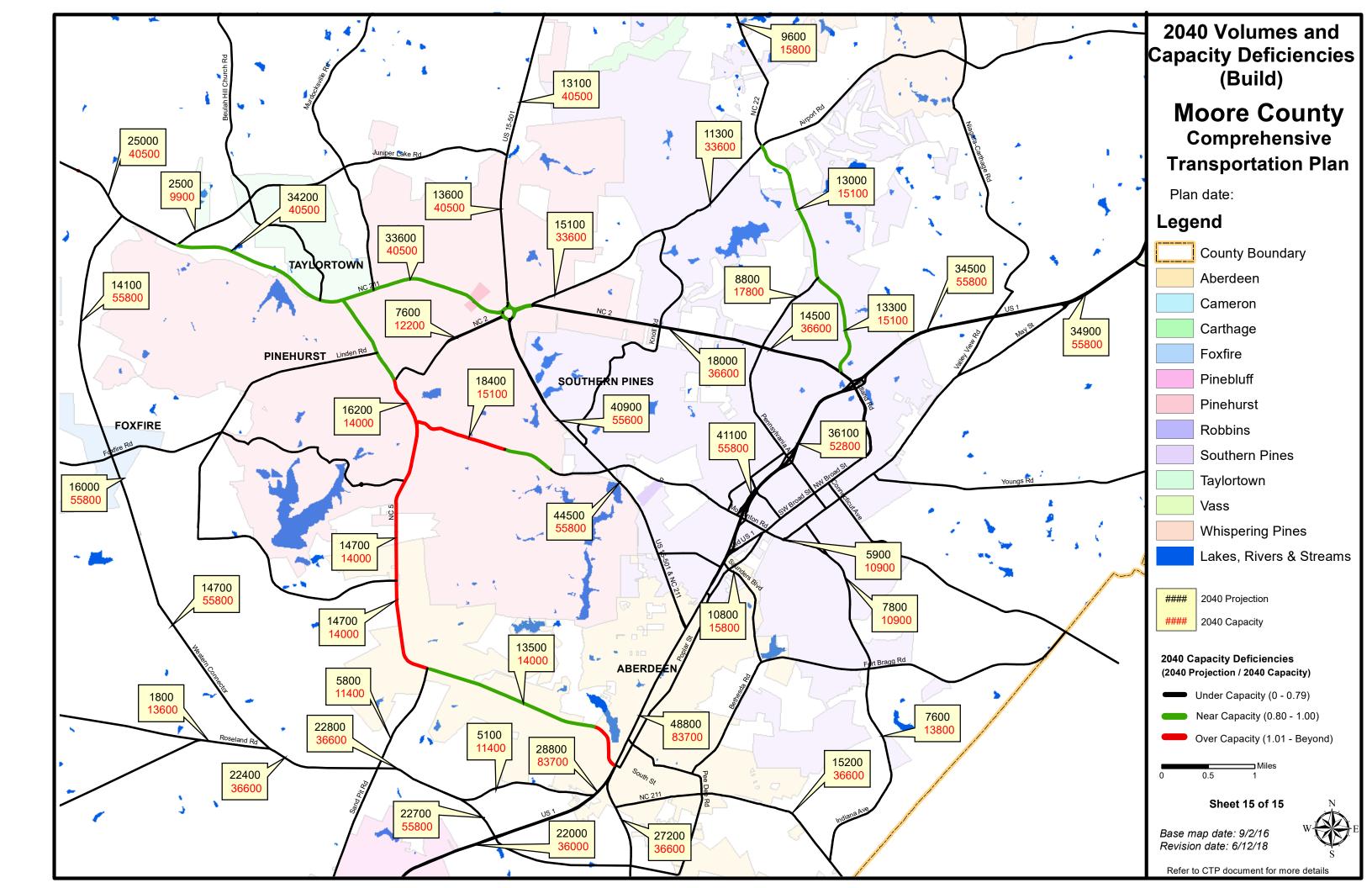
TARPO endorsed the plan on Dec. 13, 2018 and the BOT mutually adopted on Jan. 10, 2019.

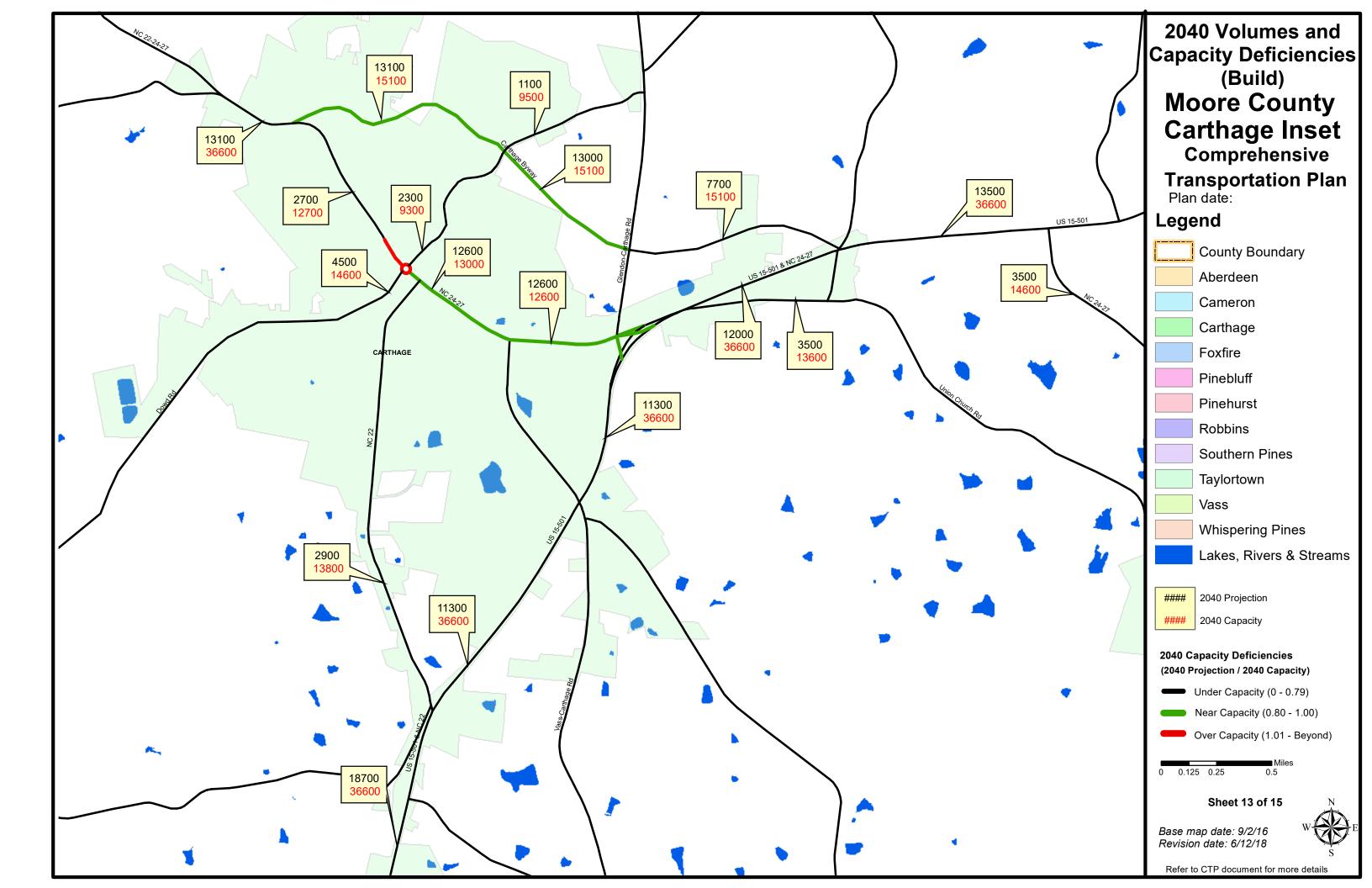
Appendix L Volume and Capacity Deficiencies

The three maps on the following pages show the 2040 volume and capacity deficiencies for the Moore County area, showing the 2040 Volume and Capacity Deficiencies, with the CTP recommendations added.

Under Capacity	•	Roadway Volume < 80% of Capacity
Near Capacity	•	Roadway Volume = 80 - 100% of Capacity
Over Capacity	•	Roadway Volume > 100% of Capacity



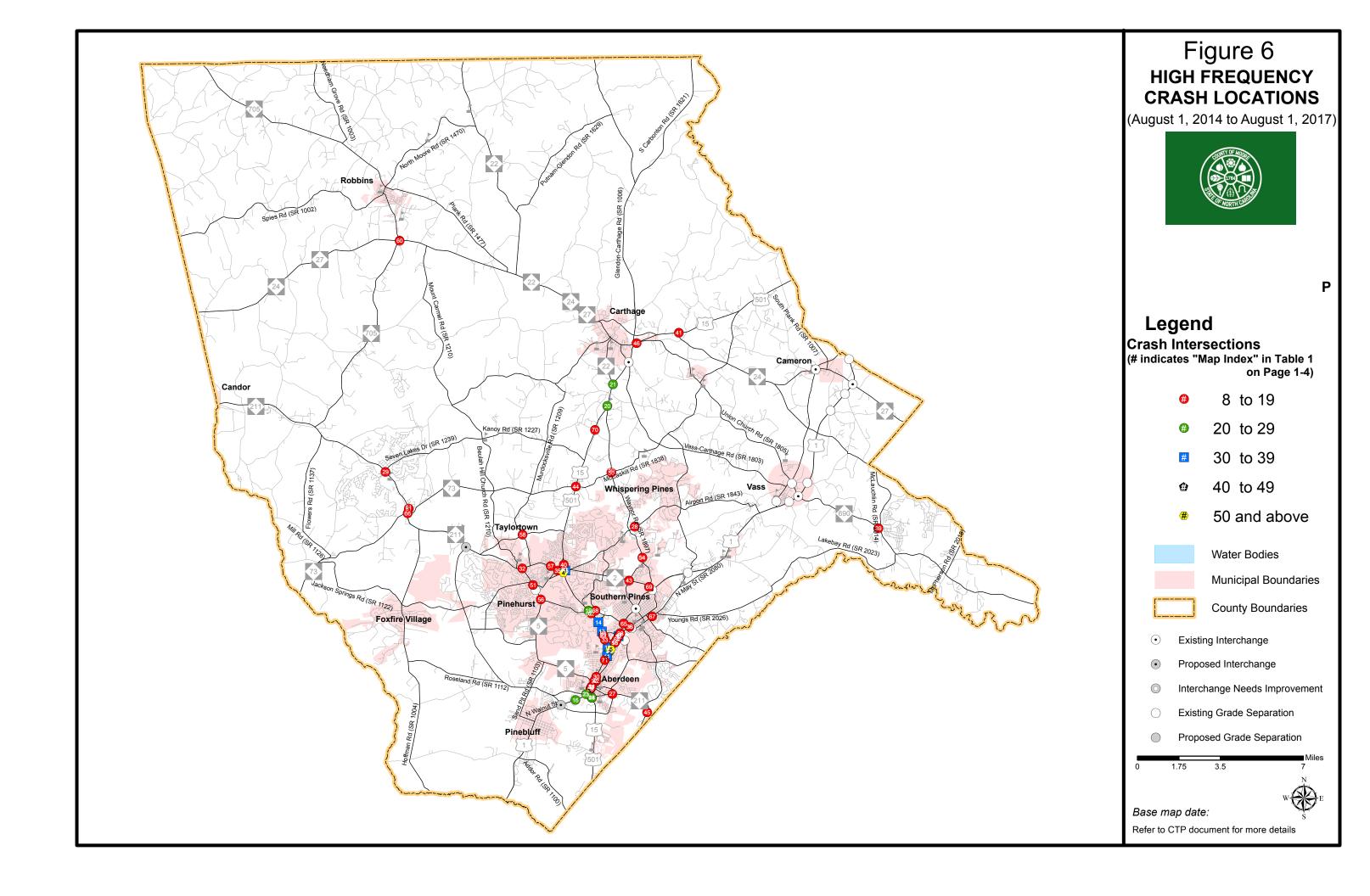


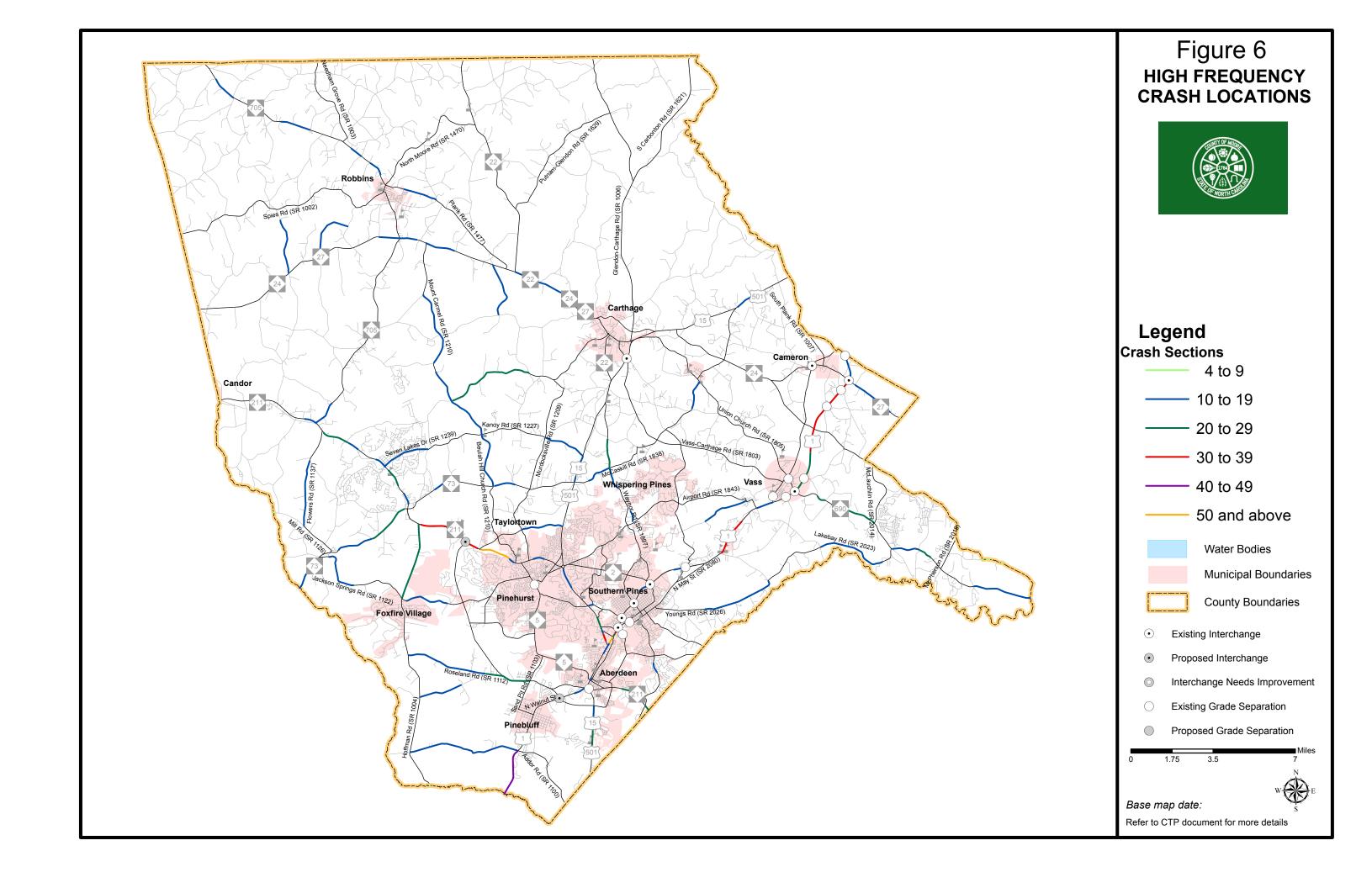


Appendix M High Frequency Crash Locations

Traffic crashes are often used as an indicator for locating congestion and roadway problems. Crash patterns obtained from an analysis of crash data can lead to the identification of improvements that will reduce the number of crashes.

The Traffic Safety Unit of NCDOT's Transportation Mobility and Safety Division identifies high frequency crashes at intersections and along roadway sections during a three year period. The following maps show these areas.





Appendix N Environmental Features Mapping

The following environmental maps were considered in the development of the Moore County CTP.

Table 1 – Environmental Features				
24k Hydro Lines	State Parks			
303D Streams	Unique Wetlands			
Airport Boundaries	Fish Nursery Areas			
Anadromous Fish Spawning Areas	Natural Heritage Element Occurrences			
APNEP - Submerged Aquatic Vegetation	State Natural and Scenic Rivers			
Beach and Waterfront Access	NCDOT Maintained Mitigation Sites			
Benthic Habitat	Railroads (1:24,000)			
Bicycle Routes	Trout Streams (DWQ)			
Boating Access	Regional Trails			
Churches and Cemeteries	Sanitary Sewer Systems - Treatment Plants			
Colleges and Universities (Points)	Schools (Public & Non-Public)			
Conservation Tax Credit Properties	Significant Natural Heritage Areas			
Critical Habitat for Threatened and Endangered	NC-CREWS: N.C. Coastal Region Evaluation of Wetland			
Species	Significance			
Emergency Operation Centers	Hydrography - 1:24,000-scale (polygons)			
National Wetlands Inventory (polygons)	Target Local Watersheds - EEP			
Hazard Substance Disposal Sites (points & polygons)	Recreation Projects - Land and Water Conservation Fund			
Hazardous Waste Facilities	Trout Waters WRC (arcs & polygons)			
High Quality Waters and Outstanding Resource	Landscape Habitat Indicator Guilds (LHIGs)Managed Areas			
Water Management				
Historic Resources – National Register and	Water Distribution Systems – Tanks & Treatment Plants			
Determined Eligible (points and polygons)				
Hospitals	Water Supply Watersheds			



Consideration of Natural and Human Environment

Environmental features are a key consideration in the transportation planning process.

Section 102 of the National Environmental Policy Act¹(NEPA) requires consideration of impacts on wetlands, wildlife, water quality, historic properties, and public lands. While a full NEPA evaluation was not conducted as part of the CTP, every effort was made to minimize potential impacts to

¹⁾ For more information on NEPA, go to: https://ceq.doe.gov/.

these features utilizing the best available data. Any potential impacts to these resources were identified as a part of the project recommendations in Chapter 3 of this report.

Prior to implementing transportation recommendations of the CTP, a more detailed environmental study would need to be completed in cooperation with the appropriate environmental resource agencies.

Archaeological sites were also considered but are not mapped due to restrictions associated with the sensitivity of the data.

Appendix O Stakeholder Involvement



Public Involvement

Public involvement is a key element in the transportation planning process. Adequate documentation of this process is essential for a seamless transfer of information from systems planning to project planning and design.

Moore County had an unprecedented public involvement plan to get citizen input and feedback throughout the study process. From the outset, three rounds of public involvement were planned for the study. This section gives a brief synopsis of the public involvement opportunities throughout the process.

For events that happened between the public involvement meetings, see Appendix K – Timeline of Events and Decisions.



Throughout the course of the study, the NCDOT Transportation Planning Branch cooperatively worked with the Moore County Transportation Committee (MCTC), which included a representative from each municipality, county staff, the local planning organization (TARPO), NCDOT Division Office, and others. The committee provided information on current local plans, expressed its transportation vision, discussed population and employment projections, and developed

proposed recommendations.

The MCTC used the concepts, as well as public feedback, to make final recommendations about the area's transportation infrastructure. This committee was advisory only, as the final adoptions and endorsements of the transportation plan would need to be approved by each municipality, Moore County, and TARPO All the final recommendations will still need to be locally approved, funded, and evaluated under a federal process to determine the final design details and location. The meetings were held periodically from 2010 to 2018, advertised, and were open to the public.

For more information on individual meetings where key decisions were made, see Appendix K – Timeline of Events and Decisions.

Moorechoices website (www.moorechoices.net)

A web page was solely dedicated to the Moore County Comprehensive Transportation Plan (CTP). It contained a vast amount of current and historic data for public review about the Moore County transportation planning process.

Charrettes (2011)

Early in the process, five "focus areas" were identified that should be collaboratively developed with a broad consensus before starting to work on the balance of the transportation plan. Each of the areas would have roadway improvements to accommodate the anticipated year 2040 traffic.



NCDOT and a private consultant, Neighborhood Solutions, tailored a planning exercise called Strings and Ribbons to engage residents in finding locally accepted solutions to important transportation decisions in these five focus areas.

The Core Objectives of the Moore County Charrettes:

- Enlisting early public involvement in the CTP study
- Safeguarding local priorities in the county's long-range transportation plan
- Providing a forum for Moore County's communities to participate in the planning process.

The data collected was used to help determine how the county will accommodate anticipated future traffic.

Seven public charrettes were held throughout the five focus areas Nov. 1-4, 2011, that concentrated on the transportation issues associated with the following roadway corridors and their adjacent communities:

- 1. N.C. 24-27 near Carthage,
- 2. N.C. 24-27 near Cameron,
- 3. U.S. 1 through Moore County

4. N.C. 73 and N.C. 211 near West End, and 5. A proposed southern route to connect the county's western communities with the amenities in the east.

Another charrette was held on Jan. 19, 2012 to specifically target Title VI communities.

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Participants in 2011 Charrettes

The methodology behind the development of the materials used in the charrettes, the data obtained, and the resulting conclusions can be found in the *Moore County November 2011* Charrette Report.



Public Meetings (2015)

On March 5, 2015, the N.C. Board of Transportation revised the Strategic Highway Corridors (SHC) to the Strategic Transportation Corridors (STC). This change in NCDOT policy allowed additional flexibility in identifying solutions for Focus Area agreements.

Additional meetings for resident input were then held in the second phase of public involvement. A local officials meeting was held on March 23, 2015, followed by public meetings:

 March 23, 2015: Moore County Agricultural Center 5-8 p.m. March 24 meetings: Pinehurst Village Hall 10 a.m.-1 p.m., Aberdeen Agricultural Center 3-6 p.m., and Aberdeen Elementary 5-8 p.m.

Overall, the feedback was positive, especially the idea of the U.S. 1 synchronized street instead of a bypass.

Focus area topics addressed in the 2015 meetings

- Carthage model projections indicated 2040 congestion in Carthage. A bypass to the north of town was proposed.
- N.C. 24-27 in Cameron traffic projections did not indicate sufficient congestion in 2040 to require improvements
- Western Connector/West End While some residents preferred widening Roseland Road (SR 1112) and Hoffman Road (SR 1004), a detailed traffic analysis showed it was not an effective solution. It did little to resolve the capacity concerns on N.C. 5. No additional concepts were displayed at the 2015 meetings, but a call for suggestions.
- U.S. 1- 70% of the 2011 Charrette participants preferred improvements on existing U.S. 1. Local resolutions prevented consideration of concepts east of U.S. 1. A synchronized street concept was proposed.

Public Meetings (2018) for draft CTP

In 2018, the third round of public involvement included eight public drop-in sessions to present the proposed draft CTP, and 67 residents attended. Comments for the draft CTP were accepted through May 7, 2018.

-	Table 2 2018 Public Meeting Information				
Date	Time	Location	# Attendees	# Comments	
April 9	2-4 p.m.	Carthage Agricultural Center	11	6	
April 11	10am- Noon	Vass Town Hall	16	6	
April 11	2-4 p.m.	Cameron Fire Department	1	0	
April 12	6-8 p.m.	Southern Pines Douglas Center	6	1	
April 17	3-5 p.m.	Aberdeen Lake Park	11	4	
April 17	6:30- 8:30pm.	Pinehurst Village Hall	15	6	
April 19	6-8 p.m.	Robbins North Moore High School	1	1	
April 23	6-8 p.m.	Aberdeen Elementary School	6	3	

Also, there was an online survey for those that wanted to submit comments later or were unable to attend any of the meetings. Fifteen residents responded to the survey by May 7, 2018, and one comment was mailed. There were five responses and one comment opposing the Western Connector concept.

Final Adoptions (2018)

On Aug. 29, 2018, the MCTC endorsed the draft CTP. They did, however, add some consideration of a truck route.

This verbiage was included in the final motion by the committee: "Consider a different route other than or in addition to the Pinehurst Bypass and Western Connector to address truck traffic, may require coordination with adjoining local jurisdictions and counties."

State Statute 136-66.2 requires that an area have a valid land development plan less than

five years old. To satisfy local land use plans that were older than five years, Aberdeen and Pinehurstreaffirmed their existing land use plans (Sept. 24, 2018 and Oct. 9, 2018, respectively) since it was used in the development of the Moore County CTP. Moore County also chose to reaffirm its plan on Nov. 6, 2018 since its plan was nearly five years old.

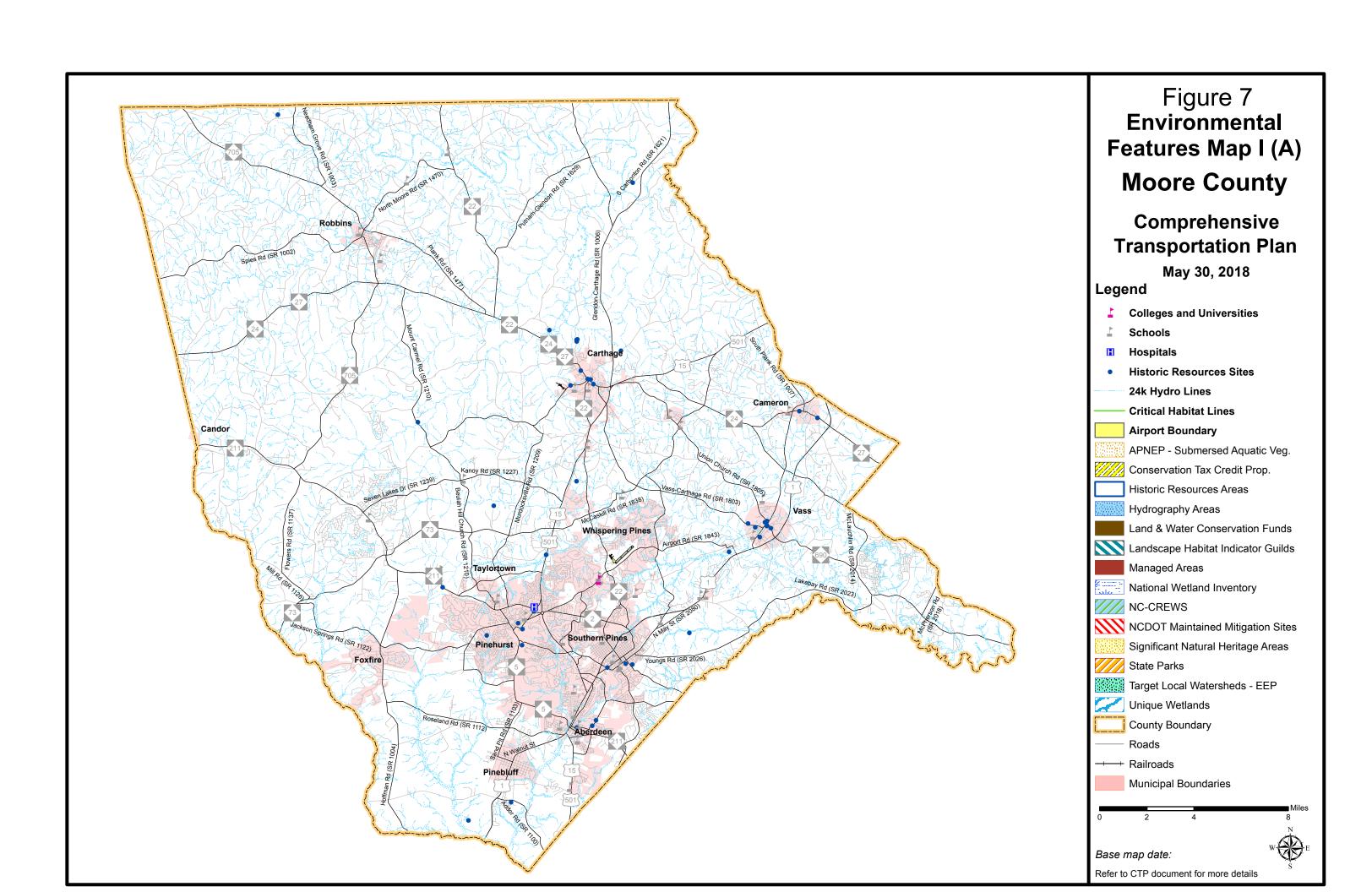
Moore County CTP Approvals

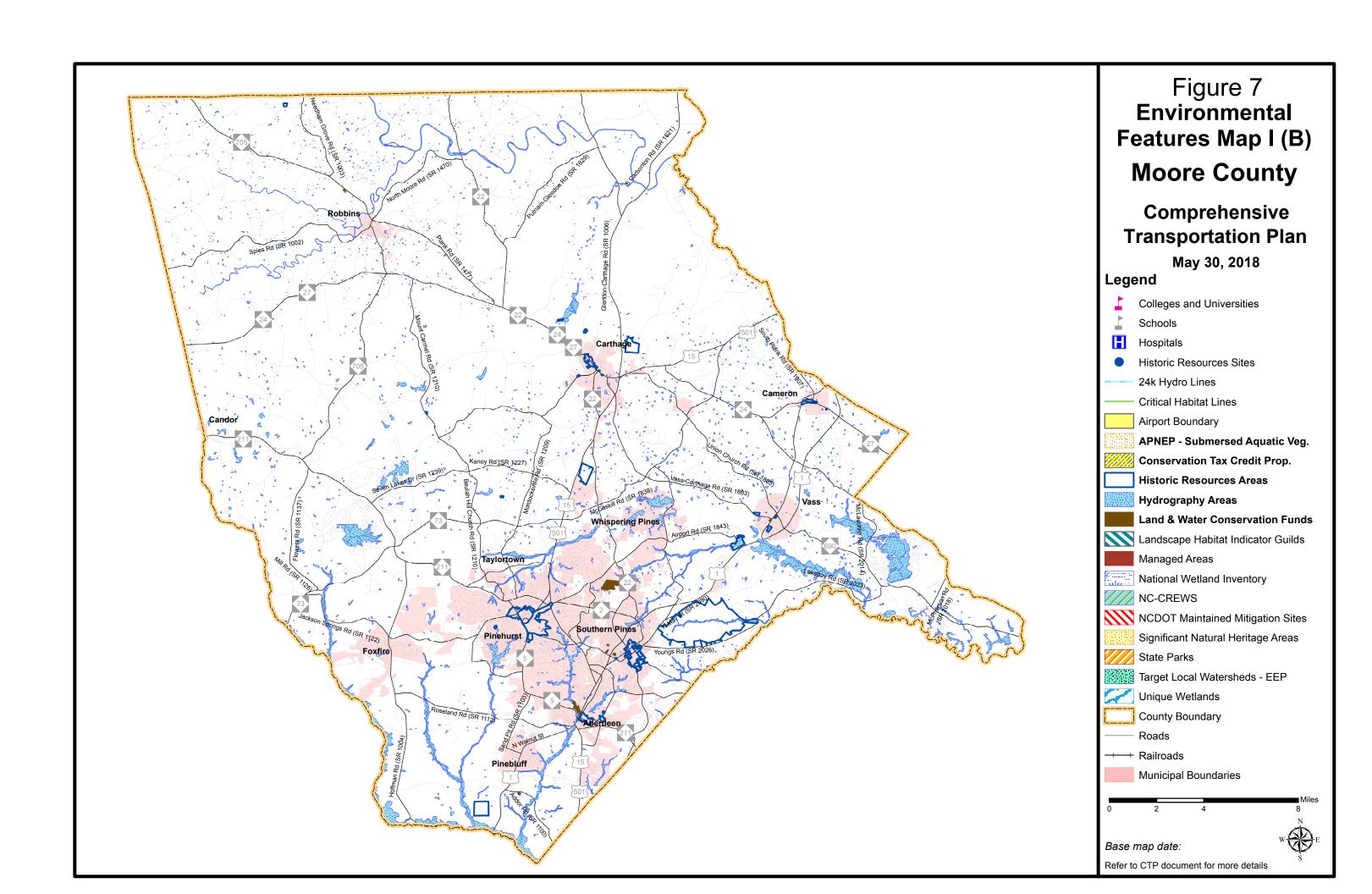
Moore County CTP Approvals					
Area	Initial Presentation	Adoption			
Aberdeen*	9/24/2018	9/24/2018			
Cameron	10/23/2018	10/23/2018			
Candor	10/1/2018	10/1/2018			
Carthage	10/15/2018	11/19/2018			
Foxfire	9/27/2018	11/13/2018			
Moore County*	11/6/2018	11/6/2018			
Pinebluff	10/18/2018	11/15/2018			
Pinehurst*	10/9/2018	10/23/2018			
Robbins	9/12/2018	9/12/2018			
Southern Pines	10/3/2018	10/9/2018			
Taylortown	9/25/2018	11/27/2018			
Vass	9/10/2018	9/10/2018			
Whispering Pines	10/10/2018	10/10/2018			

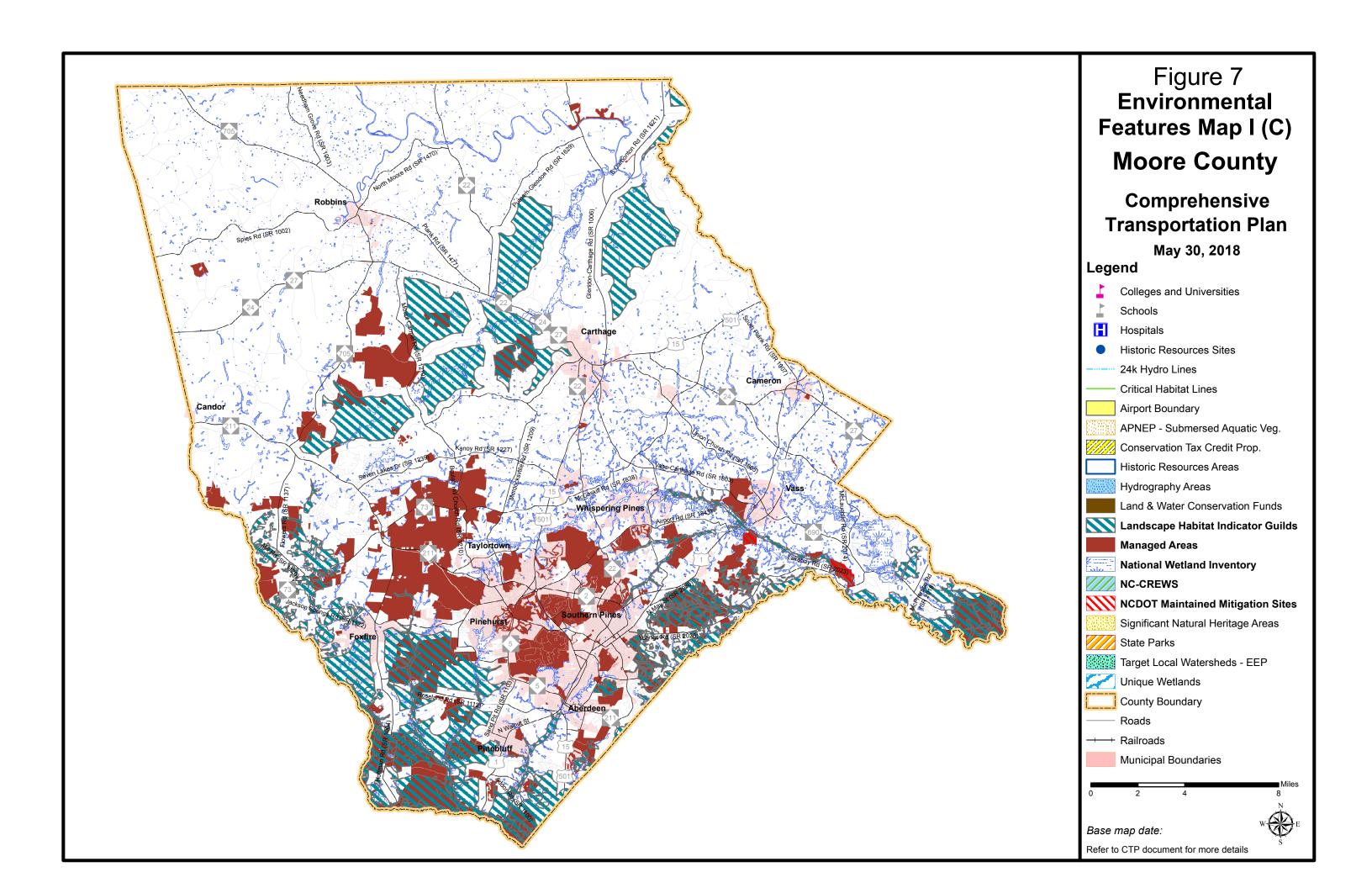
^{* =} Reaffirmed land use plan

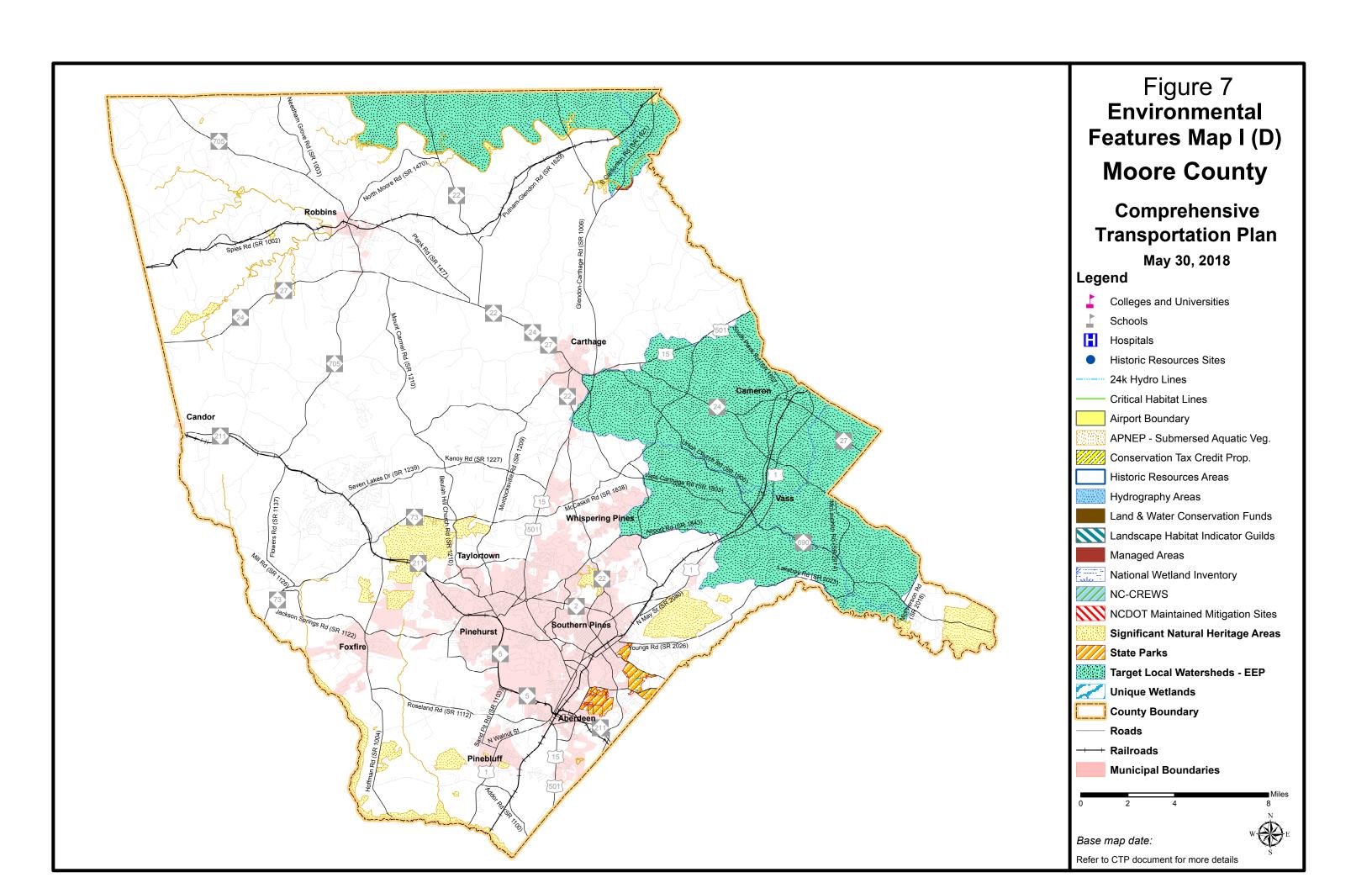
RPO/DOT Approvals

Triangle Area Rural Planning Organization	12/13/2018	12/13/2018
NC Department of Transportation, Board of Transportation	1/10/2018	1/10/2019









Appendix P Project Sheets

This appendix presents two new location recommendations in more detail, the proposed Western Connector and Carthage Byway. These pages supplement the recommendations in Chapter 3. These recommendations will need to be funded and evaluated under a federal process to determine the final design details and location.

Western Connector 2019 Moore County CTP

Western Connector

From N.C. 211 to US 1

Local ID: MOOR0003-H

Purpose: Congestion

Improvement: New Location

Identified Need

Congestion: Existing N.C. 5 is projected to be over capacity by 2040 between N.C. 211 to US 1. The purpose of any improvement is to reduce projected 2040 congestion on N.C. 5.

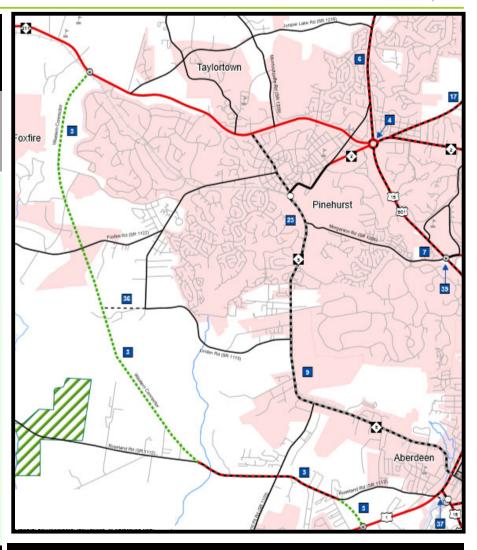
Recommendation

Multilane divided facility, mostly on new location and a portion on Roseland Road (SR 1112), connecting N.C. 211 west of Pinehurst to US 1 south of Aberdeen. This recommendation includes a multi-use path.

Note: Future traffic data assumes completion of U-5756, which is to construct paved shoulders and install left turn lanes along N.C. 5 from the Aberdeen Town Limits to the

Proposal At A Giano	e
Highway Class	Congestion / Mobility
Facility Type	Boulevard
Typical Section Options	4A, 4E
Estimated Cost	N/A
Length (miles)	9.4
Existing ROW (feet)	None—60'
Existing Crash Rate	N/A

Capacity Data:	<u>Year</u>
Facility (N.C. 5) will be Approaching Capacity (>80%)	Current
Facility (N.C. 5) will be Over Capacity (≥100%)	2024



Proposal Data:	2015 Base Year	2040 Fut	ure Year
N.C. 5	<u>Existing</u>	Without Proposal	With Proposal
Facility Type	Major	Major	Major
Travel Lanes	2	2-3	2-3
Volume (vpd)	9,800-18,000	17,000-21,600	12,000-18,000
Capacity (vpd)	11,200—12,300	12,300	12,300
Roseland Road	<u>Existing</u>	Without Proposal	With Proposal
Facility Type	Minor	Minor	Boulevard
Travel Lanes	2	2	4
Volume (vpd)	3,300	9,000	22,400
Capacity (vpd)	11,400—13,600	11,400—13,600	40,500
West. Connector	<u>Existing</u>	Without Proposal	With Proposal
Facility Type	-	-	Boulevard
Travel Lanes	-	-	4
Volume (vpd)	-	-	14,100-22,400
Capacity (vpd)	-	-	40,500—55,800

Western Connector 2019 Moore County CTP

Project History/ Linkage to Other Plans

Southern Pines-Aberdeen-Pinehurst Thoroughfare Plan (1987) - This plan included a Pinehurst Bypass.
Residential development compromised that alignment, and the concept was shifted west and retitled the Western Connector.

N.C. 5 Feasibility Study (FS 0108B) (2003) - This study found the existing N.C. 5 corridor to be at capacity and noted the difficulty to widening due to physical constraints and adjoining railroad right-of-way. The study recommended an alternate corridor be identified to relieve the congestion along the N.C. 5 corridor.

Village of Pinehurst Western Connector Corridor Study (2008) - The Town of Pinehurst funded this study, which included a preferred solution of a combination of two alternatives. Since the study, development has occurred in the preferred corridor, so other options should be considered.

Village of Pinehurst Thoroughfare Plan (2011) - The Town of Pinehurst created a thoroughfare plan for their major street system that was approved only by Pinehurst. A Western Connector concept was identified on the plan.

CTP Goal Analysis

The proposed Western Connector helps accomplish several goals related to the Comprehensive Transportation Plan. Goal #1—provide an efficient transportation system, Goal #6—preserve and protect the ambiance and heritage of Moore County. Since this study started in 2011, performance measures and targets were not created.

To meet Goal #1, the Western Connector is expected to reduce traffic on N.C. 5 and give opportunities for regional trips to avoid traveling through Pinehurst.

To meet Goal #6, the Western Connector is expected to avoid widening N.C. 5, which would be difficult through Pinehurst and near an adjacent railroad corridor.

Potential Impacts

The proposed alternative mostly on new location avoids substantial human impacts that the alternative of widening existing N.C. 5 through downtown Pinehurst would have caused. All alternatives considered are covered in Appendix I. Potential environment impacts of the CTP:

- Natural
 — Potential habitats for the Red-Cockaded Woodpecker (RCW), which is closely tied to the presence of Longleaf Pines, which the woodpecker requires for nesting and roosting.
- Natural

 Several streams and wetlands are in the study area. Although not directly impacting, the proposed corridor is near the county landfill.
- Human—Due to the length of the corridor, multiple residences and dozens of other properties are impacted.
- Human Areas that are greater than 10% minority can be found in the project area near N.C. 211 and an area greater than 10% Hispanic can be found near Roseland Road (SR 1112).
- Historical—The Lloyd-Howe House is a historic home in the project area, but not directly impacted by the proposal. Built in 1929, it is listed on the National Register of Historic Places.

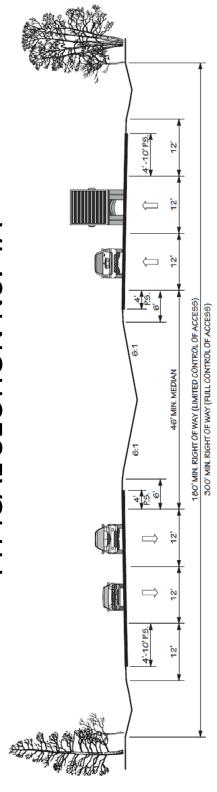
Other Information

Many citizens supported widening nearby Hoffman Road (SR 1004) and Roseland Road (SR 1112) instead of a Western Connector. (See Appendix O and the *Moore County November 2011 Charrette Report*).

Traffic analysis was based on travel demand modeling. This analysis indicated that the widening of those roads was not an effective solution. The greatest shift of traffic from N.C. 5 is when improvements, like a Western Connector, are located close to N.C. 5.

The Moore County Transportation Committee reached agreement on the a group of projects, which included the Western Connector in May 2106. After opposition by a local citizens group and additional study, they reaffirmed their support on March 22, 2017.

TYPICAL SECTION No. 4A



4 LANE DIVIDED (46' DEPRESSED MEDIAN) WITH PAVED SHOULDERS POSTED SPEED 45-70 MPH

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	

Carthage Byway 2019 Moore County CTP

Carthage Byway

From N.C. 24-27 to N.C. 24-27

Local ID: MOOR0018-H
Purpose: Congestion

Improvement: New Location

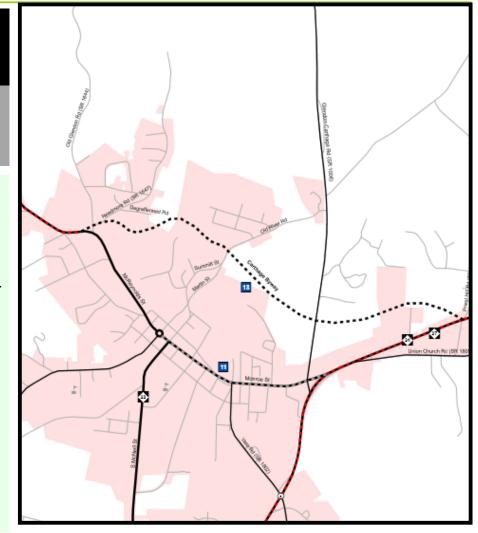
Identified Need

Congestion: Portions of N.C. 24-27 in Carthage are anticipated to be over capacity by 2040. The purpose of any improvement is to reduce congestion on N.C. 24-27 in Carthage.

Recommendation

Two lane facility on new location to remove through traffic from downtown Carthage, possibly built on a four-lane right-of-way. This recommendation includes a multi-use path.

Note: Future Year data on N.C. 24-27 assumes completion of project U-3628 through Car-thage



Proposal At A Glanc	e
Highway Class	Congestion
Facility Type	Major Thorough
Typical Section Options	2E
Estimated Cost	N/A
Length (miles)	2.7
Existing ROW (feet)	None
Existing Crash Rate	N/A

Capacity Data**:	<u>Year</u>
Facility (N.C. 24-27) will be Approaching Capacity (>80%)	Current
Facility (N.C. 24-27) will be Over Capacity	2037
(≥100%) Project Sheets	

Proposal Data:	2015 Base Year	2040 Futur	e Year**
N.C. 24-27	<u>Existing</u>	Without Proposal	With Proposal
Facility Type	Major	Major	Major
Travel Lanes	2-3	2-3	2-3
Volume (vpd)	10,000-12,000	13,400-15,400	12,600
Capacity (vpd)	12,300	15,100	15,100
	<u>Existing</u>	Without Proposal	With Proposal
Facility Type			
Travel Lanes			
Volume (vpd)			
Capacity (vpd)			
Carthage Ryway	Evicting	Without Proposal	With Proposal

Carthage Byway	<u>Existing</u>	Without Proposal	With Proposal
Facility Type	-	-	Boulevard
Travel Lanes	-	-	4
Volume (vpd)	-	-	7,700-13,100
Capacity (vpd)	-	-	15,100

4/24/2020

185

Appendix P

Carthage Byway 2019 Moore County CTP

Project History/ Linkage to Other Plans

Carthage Thoroughfare Plan (1996) - This highwayonly plan was adopted locally on March 18, 1996 and the N.C. Board of Transportation on May 3, 1996. A bypass is shown to the south of town.

Carthage Bypass (NCDOT STIP #R-2212) - An environmental document was created that studied a multilane facility around Carthage to meet the Strategic Highway Corridors policy at that time. There was considerable public input and controversy in response to the project as proposed. The Needmoor community, which was in the previous project corridor (north of Carthage), was very opposed to the project as proposed. In August 2010, the project was deferred and removed from the STIP.

Moore County Comprehensive Transportation Plan (Carthage Byway) - After reviewing previous work on a bypass, a near-town bypass with a smaller cross section was proposed in 2015. Then Carthage officials worked with local citizens (specifically the Needmoore community) to develop a solution to provide future congestion relief in Carthage, and renamed the facility the "Carthage Byway".

The Byway was approved locally on May 16, 2016 with the understanding that environmental and design considerations would determine the final alignment.

CTP Goal Analysis

The proposed Carthage Byway helps accomplish several goals related to the Comprehensive Transportation Plan. Goal #1—provide an efficient transportation system, Goal #6—preserve and protect the ambiance and heritage of Moore County. Since this study started in 2011, performance measures and targets were not created.

To meet Goal #1, the Carthage Byway is expected to reduce traffic on N.C. 24-27 and give opportunities for regional trips to avoid traveling through Carthage.

To meet Goal #6, the Byway is expected to reduce or avoid impacts to the Needmoore Community.

Potential Impacts

The proposed alternative on new location avoids substantial human impacts that the alternative of widening N.C. 24-27 through downtown Carthage would have caused. Potential environment impacts on new location:

- Natural

 Forested land.
- Natural—Various stream crossings.
- Human

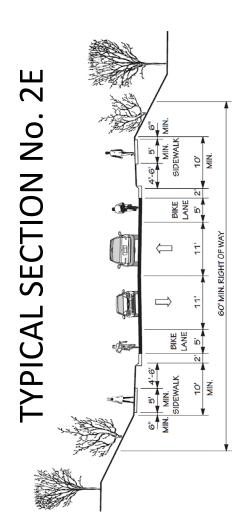
 Displacement and/or proximity to some residences near Title VI communities. The proposed alternative is south of the Needmoor Community.

Other Information

Traffic analysis based on travel demand modeling indicated that the greatest shift of traffic from N.C. 24-27 is when the Carthage Byway location is the closest to Carthage. Alternatives that are longer and farther out are not as effective in diverting traffic.

Substantial stakeholder involvement included the Carthage area throughout the Comprehensive Transportation Plan process. See Appendix O and the *Moore County November 2011 Charrette Report* for more informaiton.

Given the past controversial history of any new route near Carthage, a citizens group assisted the Town of Carthage in reaching consensus on a northern bypass, called the Carthage Byway. In the process, the citizen's group sketched a concept with tight horizontal curves that result in low design speeds. The final design speed will need to be higher than the CTP corridor, multiple alternatives will be considered, and that design considerations would help determine the final alignment.



2 LANE UNDIVIDED WITH CURB & GUTTER, BIKE LANES, AND SIDEWALKS POSTED SPEED 25-45 MPH

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	