



**North Carolina Department of Transportation
Transportation Planning Branch**

Comprehensive Transportation Plan



Caswell County

August 2009

Comprehensive Transportation Plan Study Report

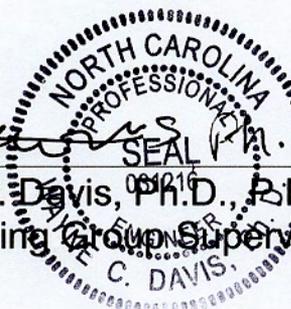
Caswell County

Prepared By: Transportation Planning Branch
North Carolina Department of Transportation

In Cooperation with: Caswell County
Piedmont Triad Rural Planning Organization
The Federal Highway Administration
U.S. Department of Transportation

August 2009


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Triad Planning Group Supervisor



Acknowledgements

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Executive Summary

In July of 2003, the Transportation Planning Branch of the North Carolina Department of Transportation and Caswell County began work on a Comprehensive Transportation Plan (CTP) for Caswell County which includes the Town of Yanceyville and the Town of Milton. The Comprehensive Transportation Plan shown in Figure 1 is the result of this cooperative effort. The recommendations included in this plan were developed from an analysis of transportation needs, application of standard transportation planning principles, and public input.

This report documents the findings of this study, along with recommendations for improvements that were developed. In addition, this report presents cross-section recommendations, roadway conditions, land use information, and environmental features found in the study area.

The recommendations for improvements are listed below. A more detailed discussion of these recommendations can be found in Chapter 2.

- US 29 (Future I-785)

It is recommended that US 29 (Future I-785) be upgraded to Interstate standards from the Virginia State Line to the Rockingham County Line in accordance with the Strategic Highway Corridors (SHC) Initiative. The total length is approximately 6 miles.

- US 158:

US158, from the Rockingham County line to the Person County line, is a SHC and is recommended to be improved to an expressway. The recommended improvements include:

- widening the existing two and three lane-lane facility to four-lane divided facility (includes portions of TIP Projects R-2586 and R-2575);
- constructing a four-lane divided bypass facility on new location from SR 1321 (Forest Road) to NC 86;
- and constructing interchanges at the intersections of US 158/NC 86 and NC 62 and NC 86 and the proposed US 158 Bypass.

The total length of the project is approximately 24 miles.

- NC 86:
NC 86 is a SHC and is recommended to be improved to an expressway. This recommendation includes widening the existing two lane facility to a four-lane divided facility from the Virginia State Line to US 158 (north of Yanceyville) and from US 158 (south of Yanceyville) to the Orange County Line. The total length of the project is approximately 21 miles.
- NC 87:
NC 87, from the Alamance County Line to Rockingham County Line, is a SHC and is recommended that it be upgraded to a boulevard. The total length of the project is approximately 2 miles. This segment of NC 87 is part of TIP Project R-2560 which includes widening NC 87 to a multi-lane facility from SR 1547 in Alamance County to US 29 in Reidsville.
- NC 62 Bypass:
It is recommended that a two-lane bypass be constructed east of the existing location of NC 62 from SR 1745 (Moorefield Road) to US 158/NC 86. Constructing the bypass is expected to improve safety by routing through traffic, especially trucks, around the residential and school area in the vicinity of Main Street and NC 62.

The following new location minor thoroughfares are recommended to improve connectivity within the Town of Yanceyville.

- SR 1123 (Hatchet Road Extension): It is recommended that SR 1123 be extended from US 158 to the proposed US 158 Bypass and from SR 1156 (Badget Sisters Pkwy) to SR 1746 (Harrelson Road).
- SR 1787 (School Drive Extension): It is recommended that SR1787 be extended from SR 1739 (Dillard School Road) to SR 1743 (Oak Tree Street).
- Oakwood Drive Extension: It is recommended that Oakwood Drive be extended from SR 1589 (Fire Tower Road) to the US 158/NC 86.

The following routes do not have capacity issues, but are recommended to be upgraded to 12-foot wide lanes with 2-foot paved shoulders to improve safety.

- NC 700: It is recommended that NC 700 be widened from two 10-foot lanes to two 12-foot lanes from Rockingham County Line to US 29.
- NC 150: It is recommended that NC 150 be widened from two 10-foot lanes to two 12-foot lanes from Rockingham County Line to US 158.
- NC 119: It is recommended that NC 119 be widened from two 10-foot lanes to two 12-foot lanes from Alamance County Line to the Virginia State Line.

- NC 62: It is recommended that NC 62 be widened from two 10-foot lanes to two 12-foot lanes from the Alamance County Line to SR 1745 (Moorefield Road) and from US 158 /NC 86 to the Virginia State Line.
- NC 57: It is recommended that NC 57 be widened from two 10-foot lanes to two 12-foot lanes from NC 62 to Person County Line.
- SR 1001 (Baynes Road): It is recommended that SR1001 be widened from two 9-foot lanes to two 12-foot lanes from NC 62 to Alamance County Line.
- SR 1100 (Kerr's Chapel Road): It is recommended that SR 1100 be widened from two 9-foot lanes to two 12-foot lanes from SR 1001(Baynes Road) to Rockingham County Line.
- SR 1133 (Cherry Grove Road): It is recommended that SR 1133 be widened from two 10-foot lanes to two 12-foot lanes from NC 62 to Rockingham County Line.
- SR 1146 (Camp Springs Road): It is recommended that SR 1146 be widened from two 9-foot lanes to two 12-foot lanes from SR 1133 (Cherry Grove Road) to NC 150
- SR 1155 (Ashland Road): It is recommended that SR 1155 be widened from two 10-foot lanes to two 12-foot lanes from NC 150 to US 158.
- SR 1360 (Shady Grove Road): It is recommended that SR 1360 be widened from two 10-foot lanes to two 12-foot lanes from US 29 to NC 86.
- SR 1503 (Walter's Mill Road): It is recommended that SR 1503 be widened from two 10-foot lanes to two 12-foot lanes from NC 86 to SR 1500 (Old NC 86).
- SR 1521 (Slade Road): It is recommended that SR 1521 be widened from two 10-foot lanes to two 12-foot lanes from SR 1572 (County Home Road) to NC 62.
- SR 1554 (Yarborough Mill Road): It is recommended that SR 1554 be widened from two 9-foot lanes to two 12-foot lanes from NC 62 to US 57.
- SR 1572 (Country Home Road): It is recommended that SR 1572 be widened from two 10-foot lanes to two 12-foot lanes from NC 86 to SR 1521 (Slade Road).
- SR 1589 (Fire Tower Road): It is recommended that SR 1589 be widened from two 9-foot lanes to two 12-foot lanes from US 158/NC 86 to SR 1572 (Country Home Road).
- SR 1739 (Dillard School Road): It is recommended that SR 1739 be widened from two 10-foot lanes to two 12-foot lanes from SR 1787 (School Drive) to SR 1163 (Main Street).

The adopted Comprehensive Transportation Plan (CTP) and this report are the result of coordinated effort involving staff and appointed members of the Piedmont Triad Rural Planning Organization Technical Coordinating Committee (TCC) and Transportation Advisory Committee (TAC), as well as staff and elected officials from Caswell County, the Town of Yanceyville, the Town of Milton and the North Carolina Department of Transportation (NCDOT). In addition to various TAC and TCC briefings, two public involvement workshops were conducted in Yanceyville in August of 2007. The County Commissioners adopted the Caswell County Comprehensive Transportation Plan on October 7, 2009; the Town of Yanceyville adopted the CTP on October 6, 2009; the Town of Milton adopted the CTP on January 6, 2009. The Piedmont Triad Rural Planning Organization endorsed the CTP on December 17, 2008; and the North Carolina Department of Transportation adopted the CTP on February 5, 2009.

Beyond adoption, implementation of this plan rests largely with the policy boards and citizens of Caswell County. Given the expectation that transportation needs in North Carolina will continue to exceed available funding, must take an active role in pursuing funding for desired projects, and making their priorities known to NCDOT.

Adopted by:

Caswell County
Date: October 7, 2008

Town of Yanceyville
Date: October 6, 2008

Town of Milton
Date: January 6, 2009

NCDOT
Date: February 5, 2009

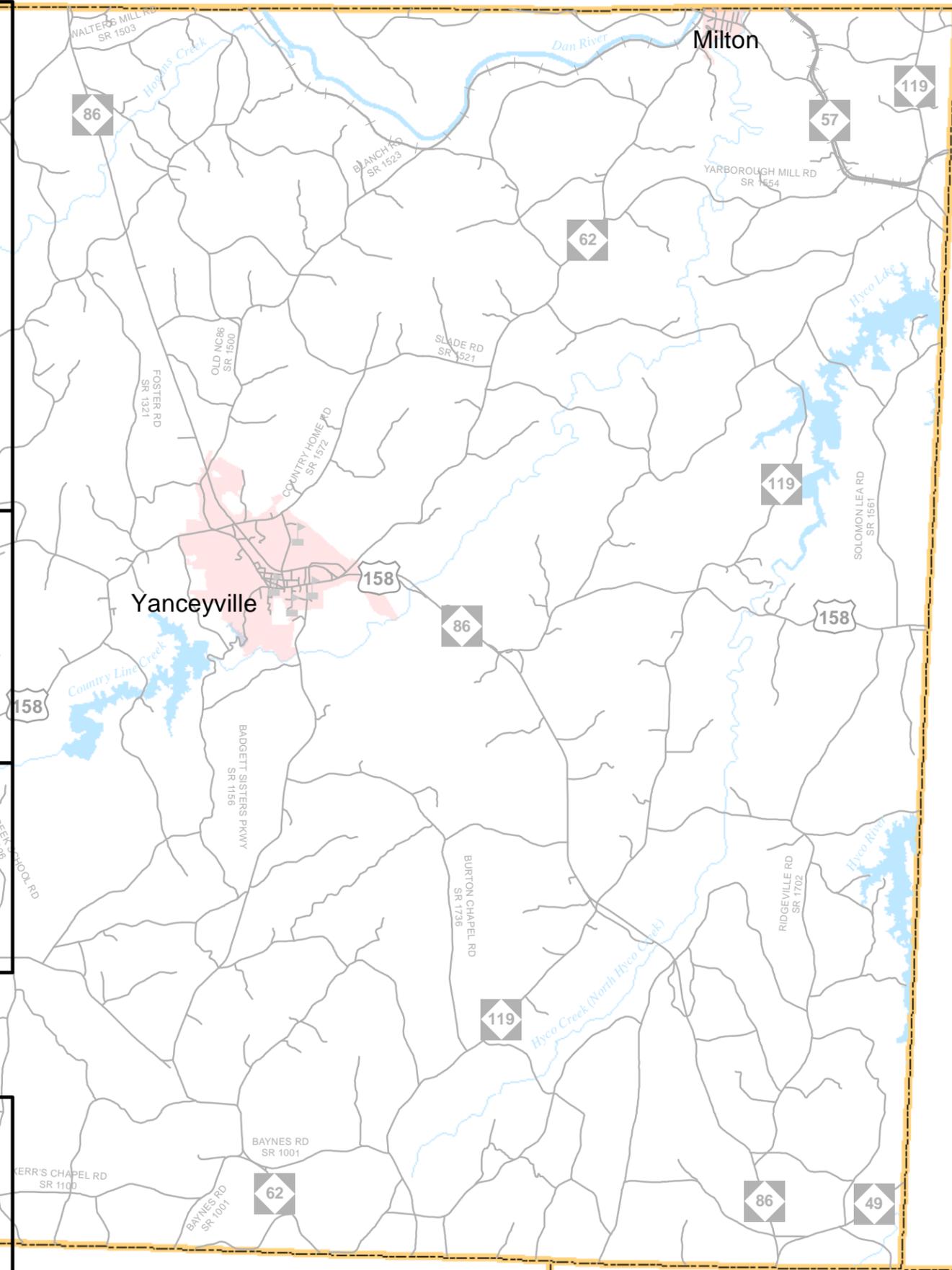
Endorsed by:
Piedmont Triad RPO
Date: December 17, 2008

Recommended by:
Transportation Planning Branch
Date: December 29, 2008

NOTES:

Sheet 5:
Pedestrian map was not included in this study

STATE OF VIRGINIA



Caswell County
North Carolina

Comprehensive
Transportation Plan

Plan Date: August 8, 2008

- Sheet 1 **Adoption Sheet**
- Sheet 2 **Highway Map**
- Sheet 3 **Public Transportation and Rail Map**
- Sheet 4 **Bicycle Map**
- Sheet 5 **Pedestrian Map**

Legend

- Schools
- Roads
- Railroads
- Rivers and Streams
- County Boundary
- City Boundary
- Water Areas



Figure 1 - Sheet 1 of 5

Base map date: May 2006
Refer to CTP document for more details

Highway Map

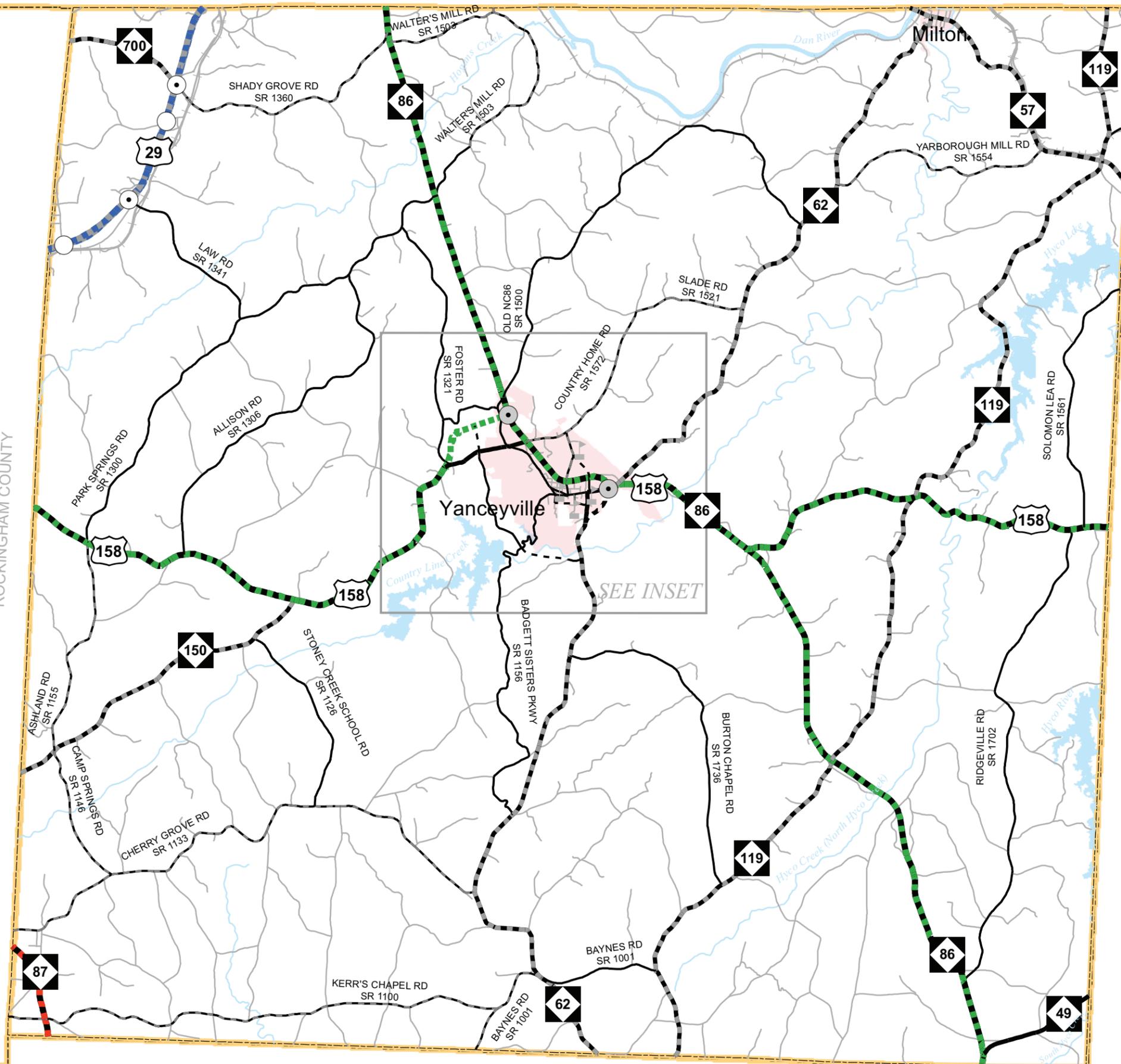


Caswell County North Carolina Comprehensive Transportation Plan

Plan Date: August 8, 2008

ROCKINGHAM COUNTY

PERSON COUNTY



- Freeways**
 - Existing
 - Needs Improvement
 - Recommended
- Expressways**
 - Existing
 - Needs Improvement
 - Recommended
- Boulevards**
 - Existing
 - Needs Improvement
 - Recommended
- Other Major Thoroughfares**
 - Existing
 - Needs Improvement
 - Recommended
- Minor Thoroughfares**
 - Existing
 - Needs Improvement
 - Recommended
- Interchanges**
 - Existing Interchange
 - Proposed Interchange
- Grade Separations**
 - Existing Grade Separation
 - Proposed Grade Separation

0 1 2 3 Miles

Figure 1 - Sheet 2 of 5



Base map date: May 2006

Refer to CTP document for more details

GUILFORD COUNTY

ALAMANCE COUNTY

ORANGE COUNTY

Highway Map



Caswell County North Carolina Comprehensive Transportation Plan (INSET)

Plan Date: August 8, 2008

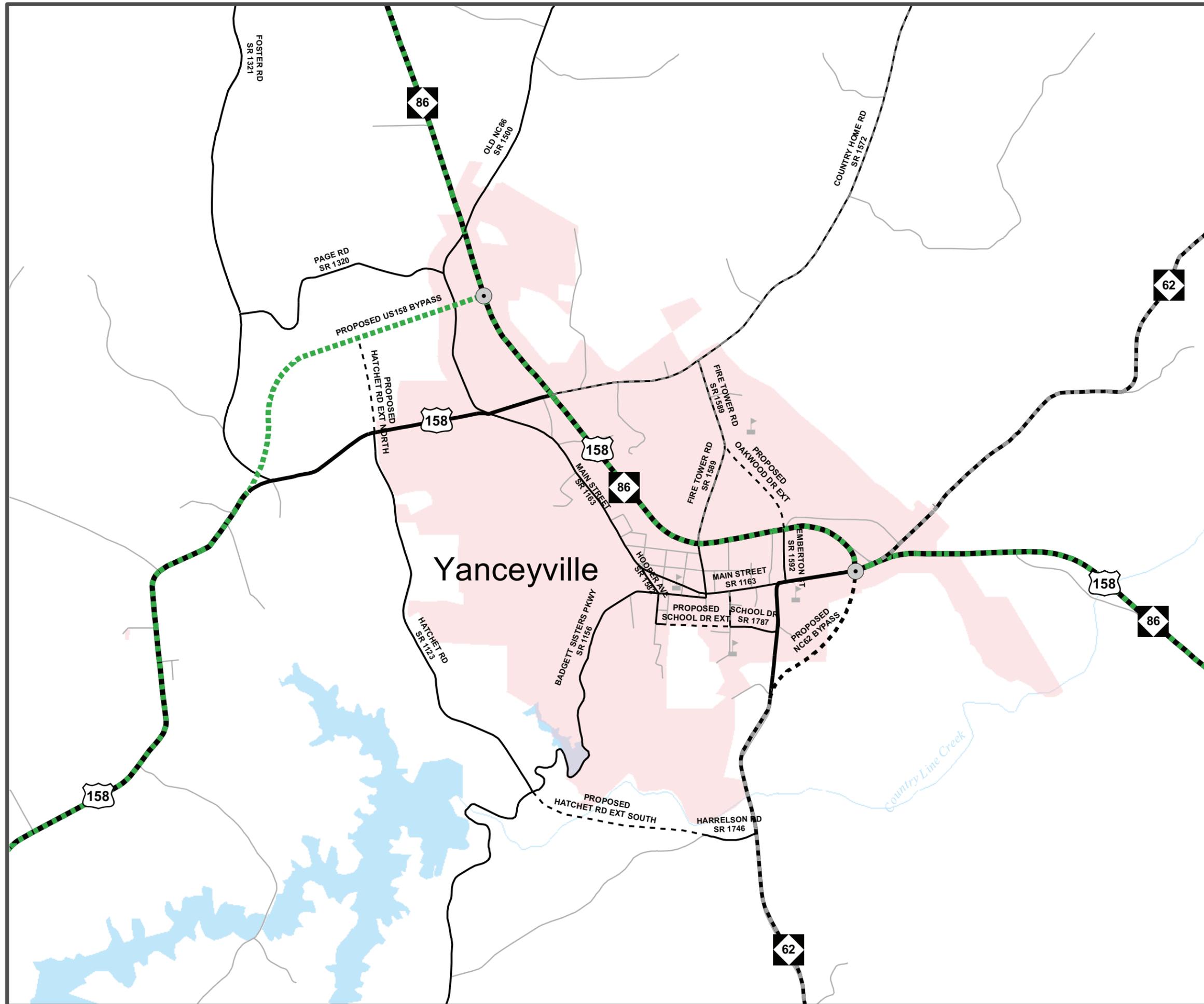
- Freeways**
 - Existing
 - Needs Improvement
 - Recommended
- Expressways**
 - Existing
 - Needs Improvement
 - Recommended
- Boulevards**
 - Existing
 - Needs Improvement
 - Recommended
- Other Major Thoroughfares**
 - Existing
 - Needs Improvement
 - Recommended
- Minor Thoroughfares**
 - Existing
 - Needs Improvement
 - Recommended
- Existing Interchange
- Proposed Interchange
- Existing Grade Separation
- Proposed Grade Separation



Figure 1 - Sheet 2A of 5

Base map date: May 2006

Refer to CTP document for more details



Public Transportation and Rail Map



Caswell County North Carolina

Comprehensive Transportation Plan

Plan Date: August 8, 2008

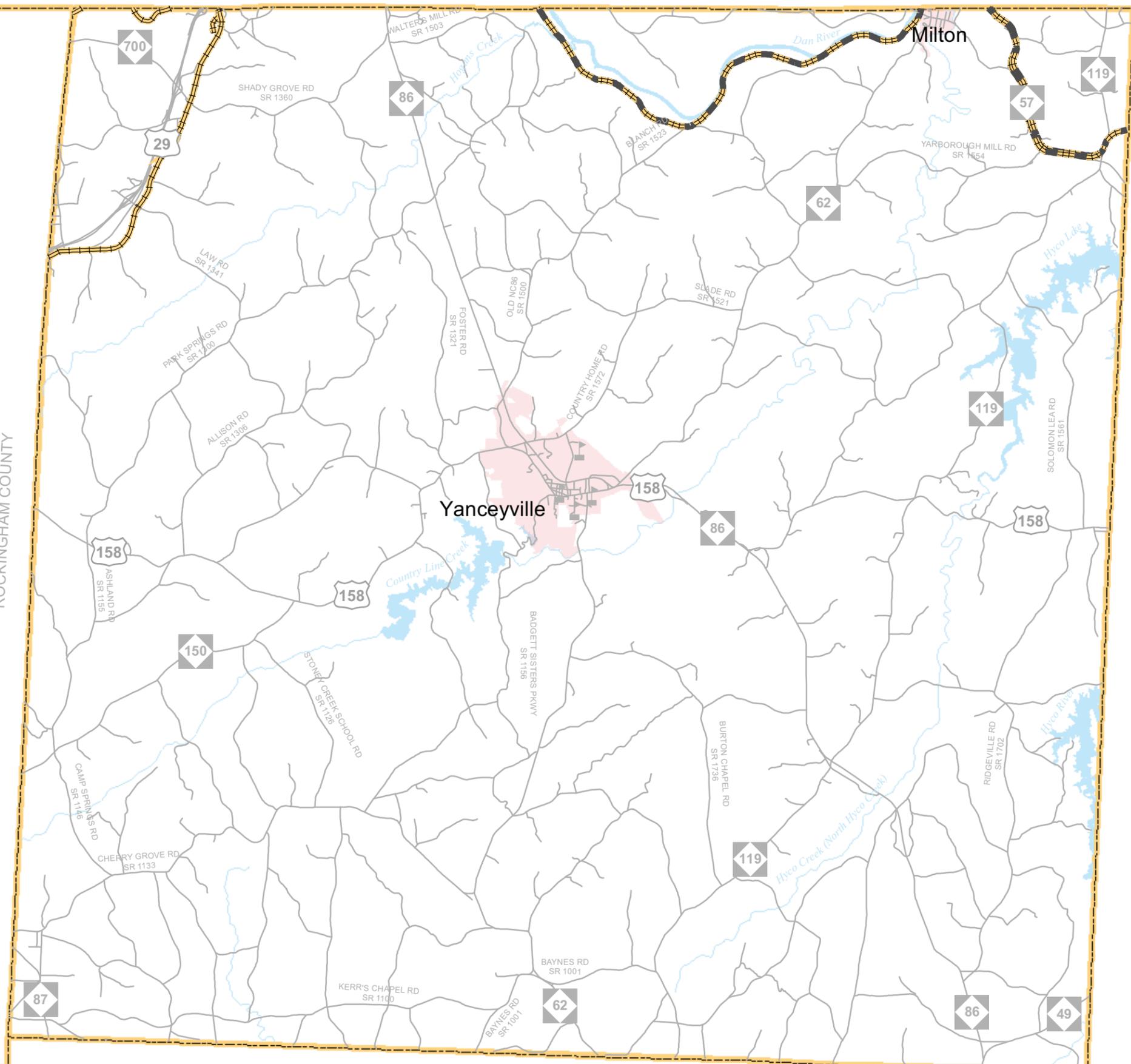
ROCKINGHAM COUNTY

PERSON COUNTY

GUILFORD COUNTY

ALAMANCE COUNTY

ORANGE COUNTY



- Bus Routes**
 - Existing
 - Needs Improvement
 - Recommended
- Fixed Guideway**
 - Existing
 - Needs Improvement
 - Recommended
- Operational Strategies**
 - Existing
 - Needs Improvement
 - Recommended
- Rail Corridor**
 - Active
 - Inactive
 - Recommended
- High Speed Rail Corridor**
 - Existing
 - Recommended
- Rail Stops**
 - Existing
 - Recommended
- Intermodal Connector**
 - Existing
 - Recommended
- Park and Ride Lot**
 - Existing
 - Recommended

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I. Introduction

An area's transportation system is its lifeline, contributing to its economic prosperity and social well being. The importance of a safe and efficient transportation infrastructure cannot be overstressed. This system provides a means of transporting people and goods from one place to another quickly conveniently, and safely. A well-planned system will meet the existing travel demands, as well as keep pace with the growth of the region.

Officials of Caswell County and the Piedmont Triad Rural Planning Organization (PTRPO) requested that the North Carolina Department of Transportation (NCDOT) Transportation Planning Branch cooperatively develop a comprehensive Transportation Plan for Caswell County.

Caswell County is located in northern North Carolina. The County is adjacent to the State of Virginia and is bordered by Person, Orange, Alamance and Rockingham Counties. The geographical location is shown in Figure 2.

This report documents the development of the 2009 Caswell County Comprehensive Transportation Plan (CTP) shown in Figure 1. In addition, this report presents recommendations for each relevant mode of transportation in the County.

A comprehensive transportation plan is developed to ensure that the transportation system will progressively meet the needs of the planning area. It will serve as an official guide, providing a well-coordinated, efficient, and economical transportation system that utilizes all modes of transportation. This document will be used by local officials to ensure that planned transportation facilities reflect the needs of the public, while minimizing the disruption to local residents, businesses and the environment.

The purpose of a CTP is to examine current and future transportation needs of the area. The plan recommends improvements that are necessary to provide a safe, convenient and efficient transportation system within the 2007 – 2035 planning period. The recommended cross-sections outlined in Appendix D for these improvements are based on existing and projected conditions.

Initiative for implementing the CTP rests predominantly with the policy boards and citizens of the County. Caswell County, its municipalities, and the North Carolina Department of Transportation share the responsibility for the implementation of the recommended projects. As transportation needs throughout the State exceed the available funding, it is imperative that the local planning area aggressively pursue funding for the desired projects.

The proposed CTP is based on the projected growth for the planning area as coordinated with the County Officials. 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 development of some recommendations found within this plan. Some portions of the plan may require revisions in order to accommodate unexpected changes in development. Any changes made to one element of the CTP should be consistent with other elements.

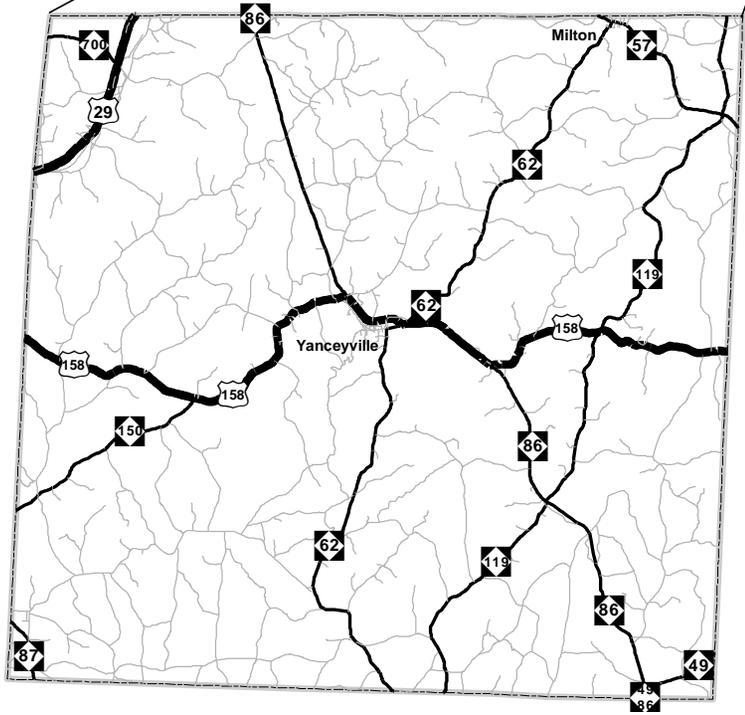
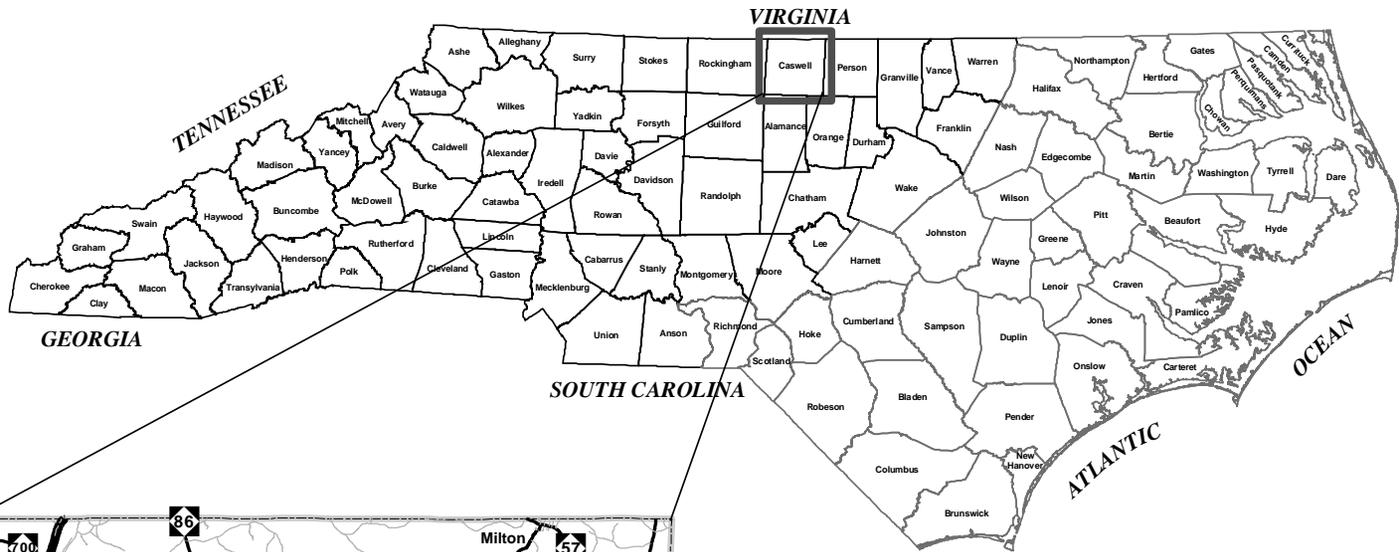


Figure 2

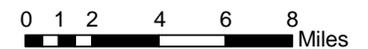
GEOGRAPHIC LOCATION



**CASWELL COUNTY
NORTH CAROLINA**

PREPARED BY THE
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION PLANNING BRANCH

IN COOPERATION WITH THE
U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION



Base map date: May 2006

II. Recommendations

This chapter contains recommended improvements based on the ability of the existing roadway network to serve current and anticipated travel demand as the area continues to grow. The recommended plan represents a system of transportation elements including highways, rail and bicycle facilities, which will serve the anticipated traffic and land development needs of the county. The primary objective of this plan is to reduce traffic congestion and improve safety by eliminating both existing and projected deficiencies in the transportation system.

HIGHWAY MAP

The recommended highway element of the Comprehensive Transportation Plan (CTP) for Caswell County is presented in Figure 1. This plan includes roadways within the county that fall into five general categories: freeways, expressways, boulevards, other major thoroughfares, and minor thoroughfares. See Appendix B for more detailed description of each category and Appendix C for an inventory of the existing and recommended highway attributes.

The process of determining and evaluating recommendations for those roads in the transportation plan involves many considerations including the goals and objectives of the public in the area, existing roadways and properties, identified roadway deficiencies, environmental impacts and both existing and future land development. Consideration of these factors led to the cooperative development of the recommended improvements. A description of each recommendation is given below.

Major Improvements

US 29 (Future I-785)

- Project Recommendation: It is recommended that US 29 (Future I-785) be upgraded to Interstate standards from the Virginia State Line to the Rockingham County Line in accordance with the Strategic Highway Corridors (SHC) Initiative.
- Transportation Demand: US 29 is functionally classified as a principal arterial and serves both intrastate and interstate travel. This facility is expected to improve the north-south travel between Danville, Virginia and the Triad region in North Carolina. It provides residents of Caswell County with access to Greensboro, the Triad region, I-40 and I-85.

- Roadway Capacity and Deficiencies: The 2007 Average Annual Daily Traffic (AADT) on US 29 ranged between 16,200 vehicles per day (vpd), near the Rockingham County Line, and 20,200 vpd near the Virginia State Line. This facility has a current capacity of this 56,600 and operates at Level of Service (LOS) B. The 2035 projected traffic volumes are expected to range between 27,300 and 34,000 vpd.
- Social Demands and Economic Development: The proposed recommendation will improve intrastate and interstate travel and access to North Carolina. The route's designation as future interstate in the Strategic Highway Corridor Plan and its linkage to other interstates all contribute to its great economic and social value.
- System Linkage: The primary purpose of the North Carolina Strategic Highway Corridors is to provide a network of high-speed, safe, reliable highways throughout the State. US 29 (Future I-785) is a major corridor between Greensboro and Danville, Virginia. It intersects US 158 and NC 87 in Reidsville area, before reaching I-85/I-40 in Greensboro, all of which are part of the Strategic Highway Corridor network.
- Relationship to Other Plans: The recommendations made for the US 29 are consistent with the North Carolina Strategic Highway Corridor Plan that designates this facility as a freeway. The CTP for Rockingham County is currently being developed. Any recommendations should be coordinated with this plan.

US 158

Project Recommendation: US158, from the Rockingham County line to the Person County line, is a SHC and is recommended to be improved to an expressway. The recommended improvements include:

- widening the existing two and three-lane facility to a four-lane divided facility (includes portions of TIP Projects R-2586 and R-2575);
- constructing a four-lane divided bypass facility on new location from SR 1321 (Forest Road) to NC 86;
- and constructing interchanges at the intersections of US 158/NC 86 and NC 62 and NC 86 and the proposed US 158 Bypass.

The total length of the project is approximately 24 miles.

- Transportation Demand: US 158 is functionally classified as a principal arterial and serves intra-state travel. This facility begins at US 64/NC12 in Dare County at the coast, runs westward across the northern Counties and terminates at US 64 in Mocksville, Davie County.

- Roadway Capacity and Deficiencies: The current AADT on US 158 across the County ranges from 1,700 to 9,800 vpd. The capacity of the roadway also varies from 6,000 to 9,600 vpd. The projected 2035 AADT of 2,700 to 17,800 vpd will result in some sections of the roadway being near or over capacity. US 158 is currently operating between levels of service (LOS) B and E. Without improvements, portions of this facility will be operating at LOS E by the year 2035.
- Safety Issues: 106 crashes occurred along US 158 in Caswell County between January 1, 2005 and December 31, 2007. Of the 106 crashes, seven occurred at the intersection of US 158 and NC 86, with an average severity index of 3.11. Crash locations are listed in Table 3 and shown visually on Figure 3.
- Social Demands and Economic Development: This facility primarily serves east-west travel across the northern counties of North Carolina. In Caswell County, US 158 serves as the primary connection linking the Town of Yanceyville to the City of Reidsville in Rockingham County and the Town of Roxboro in Person County. Within Yanceyville, it is concurrent with NC 86 along a corridor that has considerable amount of commercial developments. The businesses along the corridor have a significant reliance on the commuters using US 158/NC 86 through Yanceyville.
- System Linkage: Improving US 158 to an expressway will enhance its efficiency and linkage to other facilities in serving inter-county travel across the northern North Carolina counties. US 158 intersects most of the NC routes in Caswell County in addition to being concurrent with NC 86 through the Town of Yanceyville. It also intersects US 15/501 in Person County and US 29 in Rockingham County.
- Relationship to Other Plans: Transportation Improvement Program (TIP) projects R-2575 and R-2586 will widen US 158 to a multi-lane facility across Caswell County. US 158 also extends east into the Person County and west into Rockingham County planning areas. The Comprehensive Transportation Plans (CTP) for Person County as well as that for Rockingham County are currently being developed. Any recommendations should be coordinated with this plan.

NC 86

- Project Recommendation: NC 86 is a SHC and is recommended to be improved to an expressway. This recommendation includes widening the existing two lane facility to a four-lane divided facility from the Virginia State Line to US 158 (north of Yanceyville) and from US 158 (south of Yanceyville) to the Orange County Line. The total length of the project is approximately 21 miles.
- Transportation Demand: NC 86 is functionally classified as a minor arterial and serves intra-state travel. This facility begins at the North Carolina/Virginia state line, runs southward into the Triangle region.

- Roadway Capacity and Deficiencies: The current AADT along NC 86 ranges from 5,200 to 9,800 vpd. The capacity of the roadway varies from 9,600 to 9,800 vpd. The projected 2035 AADT of 9,100 to 17,800 vpd will result in certain segments of the roadway being near or over capacity. NC 86 is currently operating between a level of service LOS B and E. Without improvements, portions of this facility will be operating at LOS E by the year 2035.
- Safety Issues: Between January 1, 2005 and December 31, 2007, five crashes occurred at the intersection of NC86 & SR1300 (Park Springs Road), seven crashes occurred at the intersection of NC 86 & US 158, and seven crashes occurred at the intersection of US 158/NC 86 & NC 62. Crash locations are listed in Table 3 and shown visually in Figure 3.
- Social Demands and Economic Development: This facility primarily serves north-south travel between Danville, VA and the Triangle area, across Caswell and Orange Counties. Within Yanceyville, NC 86 is concurrent with US 158. Caswell County commuters use this facility to get to the Triangle area and to Danville, VA.
- System Linkage: Improving NC 86 to a multi-lane divided facility will improve access and efficiency between Caswell County and the Triangle Region. NC 86 interests US 158, NC 62, NC 119 and NC 49 within Caswell County.

NC 87

- Project Recommendation: NC 87, from the Alamance County Line to Rockingham County Line, is a SHC and it is recommended that it be upgraded to a boulevard. The total length of the project is approximately 2 miles. This segment of NC 87 is part of TIP project R-2560 which includes widening NC 87 to a multi-lane facility from SR 1547 in Alamance County to US 29 in Reidsville.
- Transportation Demand: NC 87 is functionally classified as a minor arterial and serves intra-state travel. This facility extends southward from the Virginia State Line to South Port.
- Roadway Capacity and Deficiencies: The current AADT along NC 87 is 5,500 vpd. The capacity of the roadway is 6,800 vpd. The projected 2035 AADT of 9,200 vpd will result in this segment of the roadway being over capacity. Without improvements, this segment of the facility will be operating at LOS E by the year 2035.
- Social Demands and Economic Development: This facility primarily serves north-south travel, connecting various activity centers across several counties. It is the most direct link between Reidsville and Burlington, crossing the southwestern part of Caswell County.

- System Linkage: Improving N C87 will provide a direct and efficient link between US 29 (Future I-785) in Reidsville and I-85 in Burlington.
- Relationship to Other Plans: The 2009-2035 Burlington-Graham MPO Long Range Transportation Plan (LRTP) designates NC 87 as a major thoroughfare. The MPO is currently developing a CTP. The recommendations should be coordinated with this plan. The Comprehensive Transportation Plan (CTP) for Rockingham County is currently being developed. Any recommendations should be coordinated with this plan.

NC 62 Bypass

- Project Recommendation: It is recommended that a two-lane bypass be constructed east of the existing location of NC 62 from SR 1745 (Moorefield Road) to US 158/NC 86. This bypass is expected to improve safety by routing through traffic, especially trucks, around the residential and school area in the vicinity of Main Street and NC 62.
- Roadway Capacity: The proposed capacity of NC 62 Bypass is 9,600 vpd. The current capacity of existing NC 62 is 6,800 vpd. The projected volumes range between 2,900 and 3,400 vpd in 2007 and 4,900 and 5,700 vpd in 2035. Without the construction of the bypass, portions of the facility will be operating over its capacity limits by 2035.
- Safety Issues: This recommendation will improve safety and mobility, especially for trucks, at the intersection of NC 62 and SR 1163 (Main Street).

Connectivity Recommendations

The following new location minor thoroughfares are recommended to improve connectivity within the Town of Yanceyville.

- SR 1123 (Hatchet Road Extension): It is recommended that SR 1123 be extended from US 158 to the proposed US 158 Bypass and from SR 1156 (Badget Sisters Parkway) to SR 1746 (Harrelson Road).
- SR 1787 (School Drive Extension): It is recommended that SR 1787 be extended from SR 1739 (Dillard School Road) to SR 1743 (Oak Tree Street).
- Oakwood Drive Extension: It is recommended that Oakwood Drive be extended from SR 1589 (Fire Tower Road) to the US 158/NC 86.

Minor Widening Recommendations

The following routes do not have capacity issues, but are recommended to be upgraded to 12-foot lanes with 2-foot paved shoulder to improve safety.

- NC 700: It is recommended that NC 700 be widened from two 10-foot lanes to two 12-foot lanes from Rockingham County Line to US 29.
- NC 150: It is recommended that NC 150 be widened from two 10-foot lanes to two 12-foot lanes from Rockingham County Line to US 158.
- NC 119: It is recommended that NC 119 be widened from two 10-foot lanes to two 12-foot lanes from Alamance County Line to the Virginia State Line.
- NC 62: It is recommended that NC 62 be widened from two 10-foot lanes to two 12-foot lanes from Alamance County Line to SR 1745 (Moorefield Road) and from US 158/NC 86 to the Virginia State Line.
- NC 57: It is recommended that NC 57 be widened from two 10-foot lanes to two 12-foot lanes from NC 62 to Person County Line.

Safety Issues: The Town of Milton residents expressed concerns that ground vibrations and noise from truck traffic through town may be compromising the structural stability of buildings along NC 57 corridor. Therefore it is recommended that truck traffic through the Town of Milton be restricted.

- SR 1001 (Baynes Road): It is recommended that SR 1001 be widened from two 9-foot lanes to two 11-foot lanes from NC 62 to Alamance County Line.
- SR 1100 (Kerr's Chapel Road): It is recommended that SR 1100 be widened from two 9-foot lanes to two 12-foot lanes from SR 1100 (Baynes Road) to Rockingham County Line.
- SR 1133 (Cherry Grove Road): It is recommended that SR 1133 be widened from two 10-foot lanes to two 11-foot lanes from NC 62 to Rockingham County Line.
- SR 1146 (Camp Springs Road): It is recommended that SR 1146 be widened from two 9-foot lanes to two 11-foot lanes from SR 1133 (Cherry Grove Road) to NC 150.
- SR 1155 (Ashland Road): It is recommended that SR 1155 be widened from two 10-foot lanes to two 11-foot lanes from NC 150 to US 158.

- SR 1360 (Shady Grove Road): It is recommended that SR 1360 be widened from two 10-foot lanes to two 12-foot lanes from US 29 to NC 86.
- SR 1503 (Walter's Mill Road): It is recommended that SR 1503 be widened from two 10-foot lanes to two 11-foot lanes from NC 86 to SR 1500 (Old NC 86).
- SR 1521 (Slade Road): It is recommended that SR 1521 be widened from two 10-foot lanes to two 11-foot lanes from SR 1572 (County Home Road) to NC 62.
- SR 1554 (Yarborough Mill Road): It is recommended that SR 1554 be widened from two 9-foot lanes to two 10-foot lanes from NC 62 to US 57.
- SR 1572 (Country Home Road): It is recommended that SR 1572 be widened from two 10-foot lanes to two 11-foot lanes from NC 86 to SR 1521 (Slade Road).
- SR 1589 (Fire Tower Road): It is recommended that SR 1589 be widened from two 9-foot lanes to two 12-foot lanes from US 158/NC 86 to SR 1572 (Country Home Road).
- SR 1739 (Dillard School Road): It is recommended that SR 1739 be widened from two 10-foot lanes to two 11-foot lanes from SR 1787 (School Drive) to SR 1163 (Main Street).

PUBLIC TRANSPORTATION AND RAIL MAP

The Public Transportation and Rail Element of the transportation plan is a way to consider other modes of transportation and give the public other options of traveling from one place to another. At this time, there are no fixed route public transportation services available in the County.

Currently, there is one active rail line that extends from the Virginia State Line to the Rockingham County Line. The Carolina and Northwestern Railways operates the rail. There are no improvements planned for the existing rail system in the planning area.

The public transportation and rail map for the planning area is presented on Sheet 3 of Figure 1. See Appendix B for a more detailed description of each category.

BICYCLE MAP

The NCDOT envisions that all citizens of North Carolina and visitors to the state should be able to walk and bicycle safely and conveniently to their chosen destinations with reasonable access to roadways. Information on events, funding, maps, policies, projects, and processes dealing with these modes of transportation can be accessed at

the Division of Bicycle and Pedestrian Transportation website. Refer to Appendix A for Contact information.

The bicycle element of the Comprehensive Transportation Plan (CTP) for Caswell County Planning Area is presented in Figure 1, Sheet 4.

Other proposed bicycle facilities and recommended improvements were identified in the 2005 Piedmont Triad RPO Bicycle study for the region, which includes the CTP study area. These improvements are included in Appendix H of this report.

PEDESTRIAN MAP

There is no pedestrian element included in this plan.

III. Implementation

Implementation is one of the most important aspects of the comprehensive transportation plan and should be an integral part of this process. Effective implementation justifies the effort and expense of developing the transportation plan. Several tools are available for use by the County and the Towns to assist in the implementation of the CTP. They are described in detail in this chapter.

State-County Adoption of the CTP

Caswell County, the Town of Yanceyville, the Town of Milton and the North Carolina Department of Transportation mutually approved the CTP shown in Figure 1. The mutually adopted plan serves as a guide for the Department of Transportation in the development of transportation system in the County. The approval of this plan by the County and the Towns will also enable standard road regulations and land use controls to be used effectively in the implementation of this plan. As part of the plan, the County and the Department of Transportation shall reach an agreement on the responsibilities for existing and proposed streets and highways. Facilities which are designated state responsibility will be constructed and maintained by the Department of Transportation.

Methods Used to Protect the Adopted CTP

Subdivision Regulations

Subdivision regulations require every sub divider to submit to the County Planning Board a plan of any proposed subdivision. It also requires that subdivisions be constructed to meet certain standards. Through this process, it is possible to require the subdivision streets to conform to the CTP and to reserve or protect necessary right-of-way for proposed roads and highways that are a part of the CTP.

The construction of subdivision streets to adequate standards reduces maintenance costs and simplifies the transfer of streets to the State Highway System. Appendix E outlines the recommended subdivision design standards as they pertain to road construction.

Zoning Ordinances

A zoning ordinance can be beneficial to transportation planning by designating appropriate locations of various land use and allowable densities of residential development. This provides a degree of stability on which to make future traffic projections and to plan streets and highways.

Other benefits of good zoning ordinance are: (1) the establishment of standards of development which will aid traffic operations on major thoroughfares and (2) the minimization of strip commercial development which creates traffic friction and increases the traffic accident potential.

Future Street Line Ordinances

A municipality with legislative approval may amend its charter to be empowered to adopt future street line ordinances. This ordinance, enacted for selected streets, is particularly beneficial for planned future improvements, such as roadway widening. Through a metes-and-bounds description of a street's future right-of-way requirements, the municipality may prohibit new construction or reconstruction of structures within the future right-of-way. This approach requires specific design hearings to be held as an opportunity for affected property owners to obtain information about what to expect and to make necessary adjustments without undue hardship.

Roadway Corridor Official Maps

A Roadway Corridor Official Map (Official Map) is a document adopted by the North Carolina Board of Transportation which allows the reservation of roadway corridors as provided by General Statutes 136-44.50 through 136-44.54. Official Maps place temporary restrictions on private property rights by prohibiting the issuance of a building permit or the approval of a subdivision on property within an adopted alignment, for up to a three-year period beginning when a request for development is denied. The Official Map in effect serves as notice to developers that the State or Municipality intends to acquire specific property. This process is a beneficial tool in directing development so those sites can be reserved for public improvements in anticipation of actual need.

Development Reviews

The District Engineer's Office and the Traffic Management Unit of the North Carolina Department of Transportation review driveway access to any state-maintained road. In addition, any development expected to generate large volumes of traffic (e.g., shopping centers, fast food restaurants, or large industries) should be comprehensively studied by the Traffic Management Unit, the Project Development and Environmental Analysis Branch, and/or the Roadway Design Unit of NCDOT. If reviewed at an early stage, it is often possible to significantly improve the development's accessibility while preserving the integrity of the CTP.

Funding Sources

Capital Improvements Program

A capital improvement program makes it easier to build a planned transportation system. It consists of two lists of projects. The first is a list of highway projects that are designated as a municipal responsibility and are to be implemented with municipal

funds. The second is a list of local projects designated as State responsibility to be included in the State's Transportation Improvement Program.

Transportation Improvement Program

North Carolina's Transportation Improvement Program (TIP) is a document that lists all major transportation projects, and their funding sources, planned by the NCDOT for a seven-year period. Every two years, when the TIP is updated, completed projects are removed, programmed projects are advanced, and new projects are added.

Local areas should work within their respective Rural Planning Organization (RPO) to develop local and regional project priorities. The RPO submits these regional needs to NCDOT's Strategic Planning Office of Transportation (SPOT). Refer to Appendix A for contact information for NCDOT's SPOT Office.

In addition to highway construction and widening, TIP funds are available for bridge replacement, highway safety projects, public transit projects, railroad projects and bicycle facilities.

Industrial Access Funds

If certain economic conditions are met, Industrial Access Funds are available for construction of access roads for industries that plan to develop property that does not have access to any state-maintained road. The NCDOT Secondary Roads Office should be contacted for information on Industrial Access Funds.

Small Urban Funds

Small Urban Funds are annual discretionary funds that are made available to municipalities with qualifying projects on the state system. The maximum amount is one million dollars per year per highway division. Requests for Small Urban Fund assistance should be directed to the Division Engineer or to the Program Development Branch of NCDOT.

Implementation Recommendations

The following table gives recommendations for the most suitable funding sources and methods of implementation for the major project proposals of the Caswell County CTP.

Table 1 - Funding Sources and Recommended Methods of Implementation									
Projects	Funding Sources				Methods of Implementation				
	Local Funds	TIP Funds	Indust. Access	Small Urban	CTP	Subdiv. Ord.	Zoning Ord.	Future Street Lines	Develop Review
US 158 Widening		X			X		X	X	X
US 158 Bypass		X			X	X	X	X	X
NC 86 Widening		X			X		X	X	X
NC 87 Widening		X			X		X	X	X
NC 62 Bypass		X			X	X	X	X	X
SR 1123 (Hatchet Rd Ext) - North	X		X	X	X		X	X	X
SR 1123 (Hatchet Rd Ext.) – South	X		X	X	X		X	X	X
SR 1781 (School Dr Ext)	X		X	X	X		X	X	X
Oakwood Dr Ext.	X		X	X	X		X	X	X

IV. Population, Land Use and Traffic

In order to fulfill the objectives of an adequate CTP, reliable forecasts of future travel patterns must be achieved. Such forecasts depend on careful analysis of the following items: historic and potential population changes, significant economic trends, character and intensity of land development and the ability of the transportation system to meet existing and future travel demand. Secondary items that influence forecasts include the effects of legal controls such as zoning ordinances and subdivision regulations, availability of public utilities and transportation facilities, and other physical features of the area.

Population

Since the volume of traffic on a roadway is related to the size and distribution of the population that it serves, population data is used to aid the development of the CTP. Future population estimates typically rely on the observance of past population trends and counts. Table 2 presents the population trends for Caswell County and North Carolina as established by the North Carolina Office of State Budget and Management.

Location	1970	1980	1990	2000	2010	2020	2030
North Carolina	5,084,411	5,880,095	6,632,448	8,046,491	9,502,904	10,966,956	12,465,478
Caswell County	19,055	20,705	20,662	23,501	23,453	23,416	23,234

Land Use

Land use refers to the physical patterns of activities and functions within an area. Traffic demand in a given area often can be attributed to adjacent land use. For example, a shopping center generates larger traffic volumes than a residential area. The spatial distribution of different types of land uses is a predominant determinant of when, where, and to what extent traffic congestion occurs. The travel demand between different land uses and the resulting impact on traffic conditions varies depending on the size, type, intensity, and spatial separation of development. Even commercial and residential traffic generation patterns have different peaks based on the time of day and the day of the week. For transportation planning purposes, land use is divided into the following categories:

- **Residential:** All land is devoted to the housing of people, with the exception of hotels and motels.

- Commercial: All land is devoted to retail trade including consumer and business services and their offices; this may be further stratified into retail and special retail classifications. Special retail would include high-traffic establishments, such as fast food restaurants and service stations; all other commercial establishments would be considered retail.
- Industrial: All land is devoted to the manufacturing, storage, warehousing, and transportation of products.
- Public: All land is devoted to social, religious, educational, cultural, and political activities; this would include the office and service employment establishments.
- Agricultural: All land is devoted to the use of buildings or structures for the raising of non-domestic animals and/or growing of plants for food and other production.

Vision for Future Land Use

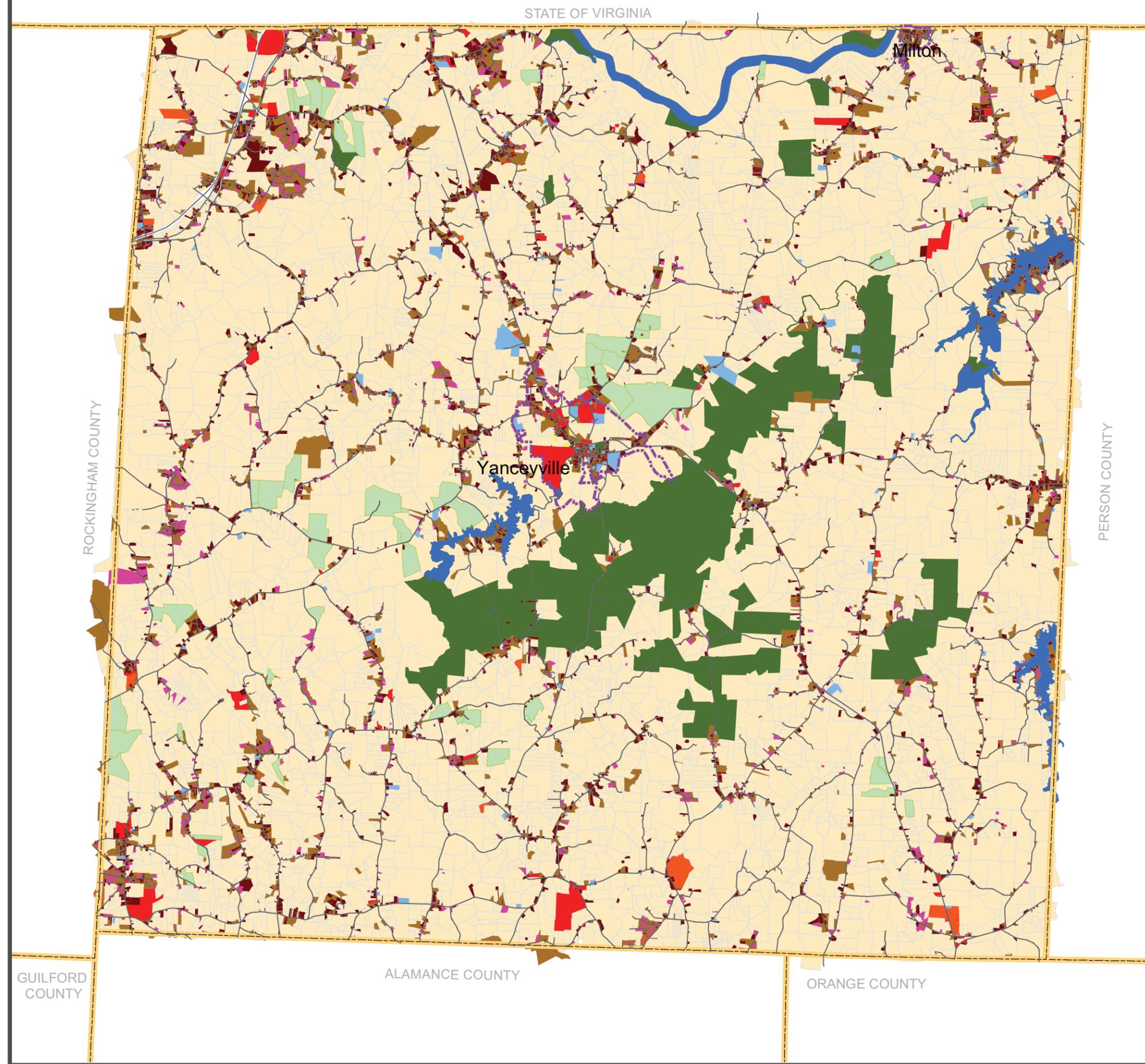
During the development of the CTP, Caswell County was working to complete a Land Use Plan. The County views its land use, current and future, as primarily agricultural. Residential, commercial and industrial are the secondary current and future land uses for the planning area. Substantial growth is not expected throughout the area. The County expects past trends of a slow rate of growth and development to continue and follow existing land use and development patterns in the future.

The existing land use for the Caswell County is shown in Figure 3.

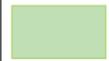
Figure 3

Existing Land Use Map

Caswell County
North Carolina



Legend

-  Farm Preservation
-  Water
-  Open Space & Recreation
-  Agricultural / Forestry / Openland
-  Commercial
-  Exempt
-  Manufacture
-  MH Parks
-  Multi Family
-  Residential
-  Vacant
-  Municipal Boundary
-  County Boundary
-  Roads



Map Date: January 2006

Roadway System

An important stage in the development of a CTP is the analysis of the existing roadway system and its ability to serve the area's travel desires. Emphasis is placed not only on detecting the existing deficiencies, but also on understanding the causes of these deficiencies. Roadway deficiencies may result from inadequacies such as pavement widths, intersection geometry, or intersection controls. Deficiencies may also result from system problems, such as the need to construct missing travel links, bypass routes, loop facilities, or additional radial routes.

An analysis of the roadway system looks at both current and future travel patterns and identifies existing and anticipated deficiencies. This is usually accomplished through a traffic crash analysis, roadway capacity deficiency 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 of the future system.

Traffic Crash Analysis

Traffic crashes are often used as an indicator for locating congestion and roadway problems. While often the result of driver error or vehicle malfunction, crashes may also be a result of the physical characteristics of the roadway. Deficiencies such as poor design and obstructions, traffic conditions, limited sight distance and inadequate signing may all lead to a crash. Crash patterns obtained from an analysis of crash data can lead to the identification of improvements that will reduce the number of crashes.

A crash analysis performed for the Caswell County CTP factored crash frequency, crash type, and crash severity. Crash frequency is the total number of reported collisions and contributes to the ranking of the most problematic intersections. These high crash intersections are illustrated in Figure 4. Crash type provides a general description of the crash and allows the identification of any trends that may be correctable through roadway or intersection improvements. Crash severity is the crash rate based upon injuries and property damage incurred.

The severity of every accident is measured with a series of weighting factors developed by the NCDOT Traffic Safety Unit. These factors define a fatal or incapacitating crash as 47.7 times more severe than one involving only property damage, and an accident resulting in minor injury is 11.8 times more severe than one with only property damage. In general, a higher severity index indicates more severe accidents. Listed below are levels of severity for various severity index ranges.

<u>Severity</u>	<u>Severity Index</u>
low	< 6.0
average	6.0 to 7.0
moderate	7.0 to 14.0
high	14.0 to 20.0
very high	> 20.0

Table 3 depicts a summary of the crashes occurred in the planning area between January 1, 2005 and December 31, 2007. The data represents locations with 5 or more crashes and/or a severity average greater than that of the state's 4.87 index. The "Total" column indicates the total number of accidents reported within 150-ft of the intersection during the study period. The severity listed is the average crash severity for that location

Table 3: Crash Locations			
Map Index	Location	Average Severity	Total Collisions
1	US 158 and NC 86	3.11	7
2	NC 57 and NC 119	6.29	7
3	NC 62 and NC 86	4.17	7
4	US 29 and NC 700	1.00	5
5	NC 86 and SR 1300 (Park Springs Rd)	1.00	5

The NCDOT is actively involved with investigating and improving many of these locations. To request a more detailed analysis for any of the locations listed in Table 3, or other intersections of concern, contact the Division Traffic Engineer. Contact information for the Division Traffic Engineer is included in Appendix A.

Figure 4

Crash Locations

January 1, 2005 to December 31, 2007

Legend

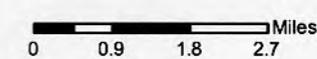
- ① Crash Locations
- Network Roads
- Roads
- Rivers and Streams
- WaterAreas
- City Boundary
- County Boundary



CASWELL COUNTY NORTH CAROLINA

PREPARED BY THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION TRANSPORTATION PLANNING BRANCH

IN COOPERATION WITH THE U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION



Base map date: May 2006



GUILFORD COUNTY

ALAMANCE COUNTY

ORANGE COUNTY

ROCKINGHAM COUNTY

PERSON COUNTY

Bridge Conditions

Bridges are a vital and unique element of a highway system. First, they represent the highest unit investment of all elements of the system. Second, any inadequacy or deficiency in a bridge reduces the value of the total investment. Third, a bridge presents the greatest opportunity of all potential highway failures for disruption of community welfare. Finally, and most importantly, a bridge represents the greatest opportunity of all highway failures for loss of life. For these reasons, it is imperative that bridges be constructed to the same design standards as the system of which they are a part.

The Transportation Improvement Program (TIP) 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 percent represents an entirely sufficient bridge and zero represents an entirely insufficient or deficient 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 Bridge Maintenance 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 or functionally obsolete. A bridge that is at least ten years old is considered structurally deficient if it is in relatively poor structural condition or has an insufficient load-carry capacity due to either the original design or to deterioration. A bridge is considered functionally obsolete if it is narrow, has inadequate under-clearances, has insufficient load-carrying capacity, is poorly aligned with the roadway, and/or can no longer adequately serve existing traffic.

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 within the planning area are listed in Table 4; the locations of the functionally obsolete and structurally deficient bridges are shown in Figure 5.

Table 4: Deficient Bridges				
Bridge Number	Route	Feature	Condition	CTP Project
2	SR 1543	UT CREEK	Structurally Deficient	
5	SR 1723	PANTHER BRANCH CREEK	Structurally Deficient	
6	SR 1722	PANTHER CREEK	Functionally Obsolete	B-4726
8	SR 1785	LYNCH CREEK	Structurally Deficient	
12	SR 1554	COUNTRY LINE CREEK	Structurally Deficient	B-4725
17	SR 1769	BRANCH N. HYCO CREEK	Structurally Deficient	
26	SR 1139	GRAY'S BRANCH	Structurally Deficient	
27	SR 1103	GRAY'S BRANCH CRE	Functionally Obsolete	B-5162
35	SR 1523	N.FORK RATTLESNAK	Structurally Deficient	B-4057
39	SR 1503	HOGAN'S CREEK	Structurally Deficient	
46	SR 1303	MOON CREEK	Structurally Deficient	
47	SR 1301	HOGAN'S CREEK	Structurally Deficient	
53	SR 1527	TRIB. OF DAN RIVER	Structurally Deficient	
60	NC 86	MOON CREEK	Functionally Obsolete	
61	NC 86	HOGAN'S CREEK	Structurally Deficient	
78	SR 1531	CREEK	Structurally Deficient	
84	SR 1315	PRONG MOON CREEK	Functionally Obsolete	
102	SR 1717	SUGAR TREE CREEK	Structurally Deficient	
106	SR 1156	BURKES CREEK	Structurally Deficient	
108	SR 1156	COUNTRY LINE CREEK	Structurally Deficient	
109	SR 1156	FULLERS CREEK	Functionally Obsolete	
117	SR 1780	COUNTRY LINE CREEK	Structurally Deficient	

Roadway Capacity Deficiencies

Capacity deficiencies occur when the traffic volume of a roadway is eighty percent or more of a roadway's capacity. Travel volumes are based on the total number of vehicles that use a roadway on a typical day. These volumes are based on annual average daily traffic (AADT) counts taken annually by the NCDOT Traffic Survey Group.

Capacity is the maximum number of vehicles which have a "reasonable expectation" of passing over a given section of roadway, during a given time period under prevailing roadway and traffic conditions. Many factors contribute to the capacity of a roadway including the following:

- Geometry of the road, including number of lanes, horizontal and vertical alignment, and proximity of perceived obstructions to safe travel along the road;
- Typical users of the road, such as commuters, recreational travelers, and truck traffic;
- Access control, including streets and driveways, or lack thereof, along the roadway;
- Development of the road, including residential, commercial, agricultural, and industrial developments;
- Number of traffic signals along the route;
- Peaking characteristics of the traffic on the road;
- Characteristics of side-roads feeding into the road; and
- Directional split of traffic or the percentages of vehicles traveling in each direction along a road at any given time.

2007 Traffic Capacity Analysis

A comparison of the 2007 travel demand volumes for the major roadways in the planning area and their respective capacities identified several existing deficiencies for the Caswell County planning area. These existing roadway deficiencies are summarized in Table 5 and shown in Figures 6 and 7.

2035 Traffic Capacity Analysis

The capacity deficiency analysis for the 2035 design year is based upon a "no build" scenario; which means that none of the recommended improvements are implemented by 2035. This analysis revealed several roadways within the planning area that will exceed capacity by the design year. Table 6 and Figures 8 and 9 present the capacity deficiencies for the design year. Complete recommendations for these facilities are included in Chapter 2 of this report.

Table 5: 2007 Capacity Deficiencies	
Roadway / Description	Deficiency
US 158/NC 86 From SR 1572 (Country Home Rd) to SR 1589 (Fire Tower Rd) From NC 62 to US 158/NC 86 Split	Over Capacity Near Capacity
NC 86 From VA State Line to SR 1300 (Park Springs Rd) From SR 1300 (Park Springs Rd) to SR 1572 (Fire Tower Rd) From NC 49 to Orange County Line	Over Capacity Near Capacity Near Capacity
NC 87 From Rockingham County Line to Alamance County Line	Near Capacity

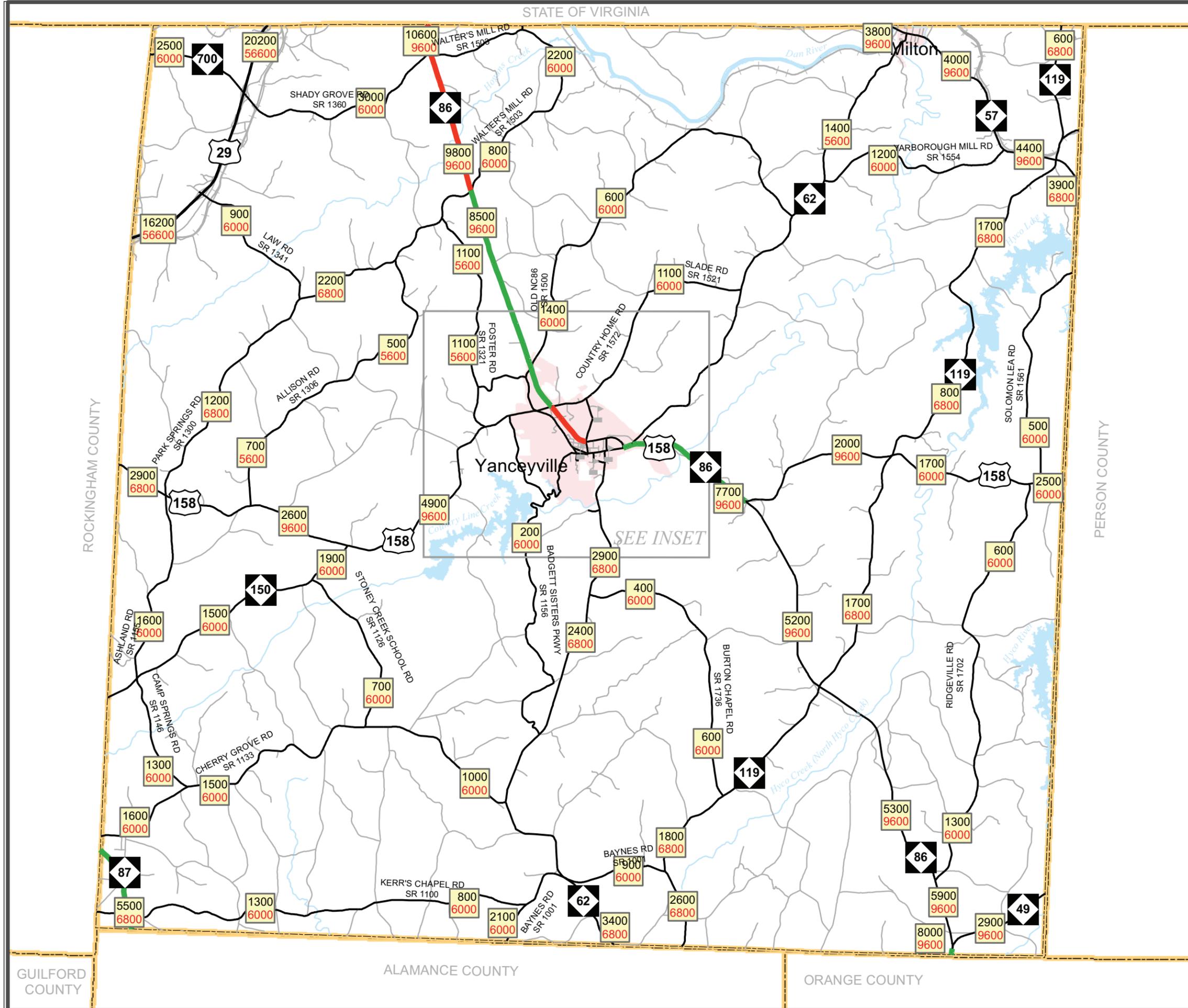
Table 6: 2035 Capacity Deficiencies	
Roadway / Description	Deficiency
US 158 From NC 150 to NC 86	Near Capacity
US 58/NC 86 From SR 1572 (Country Home Rd) to US 158/NC 86 Split	Over Capacity
NC86 From VA State Line to SR 1572 (Country Home Rd) From US 158/NC 86 Split to SR 1702 (Ridgeville Rd) From SR 1702 (Ridgeville Rd) to Orange County Line	Over Capacity Near Capacity Over Capacity
NC 87 From Rockingham County Line to Alamance County Line	Over Capacity
NC 62 From SR 1133 (Cherry Grove Rd) to Alamance County Line From SR 1163 (Main Street) to US 158/NC 86	Near Capacity Over Capacity
NC 57 From NC 119 to Person County Line	Near Capacity
NC 700 From Rockingham County Line to US 29	Over Capacity
SR 1360 (Shady Grove) From US 29 to NC 86	Over Capacity
SR 1572 (Country Home Rd) From NC 86 to SR 1573 (Pat Williamson Rd)	Over Capacity

Figure 6

2007 ROADWAY DEFICIENCIES

Legend

-  Schools
 -  NEAR CAPACITY
 -  OVER CAPACITY
 -  Network Roads
 -  Roads
 -  Rivers and Streams
 -  County Boundary
 -  City Boundary
 -  Water Areas
- 7700** 2007 Average Daily Volume
9600 Existing Roadway Capacity



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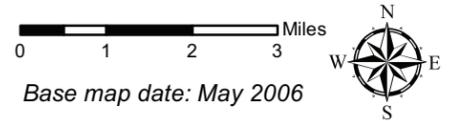
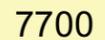


Figure 7
2007 ROADWAY DEFICIENCIES
 (INSET)

Legend

-  Schools
 -  NEAR CAPACITY
 -  OVER CAPACITY
 -  Network Roads
 -  Roads
 -  City Boundary
 -  Rivers and Streams
 -  Water Areas
-
-  7700 2035 Average Daily Volume
 -  9600 Existing Roadway Capacity

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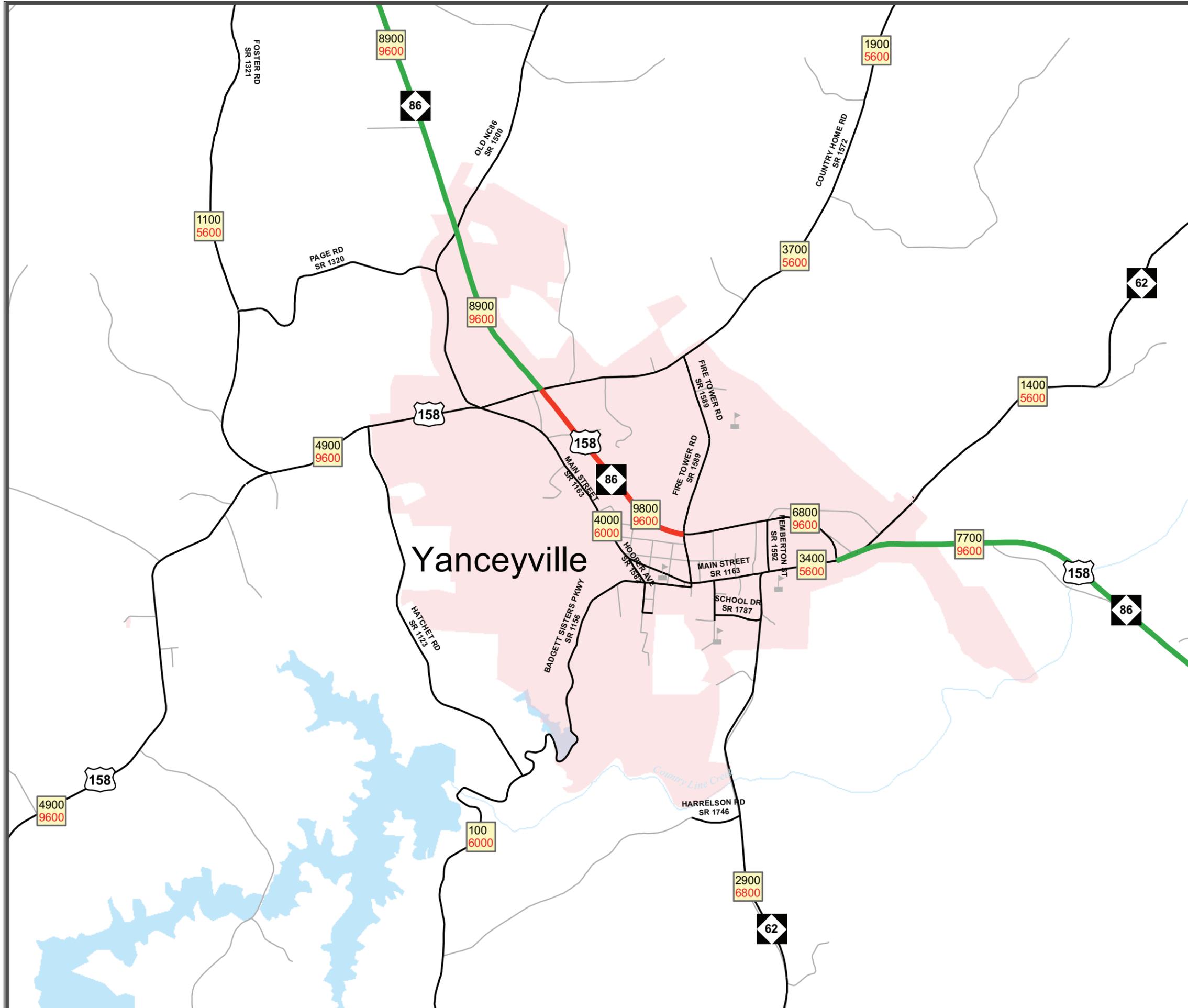
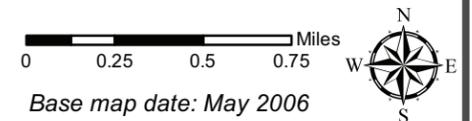


Figure 9

2035 ROADWAY DEFICIENCIES

(INSET)

Legend

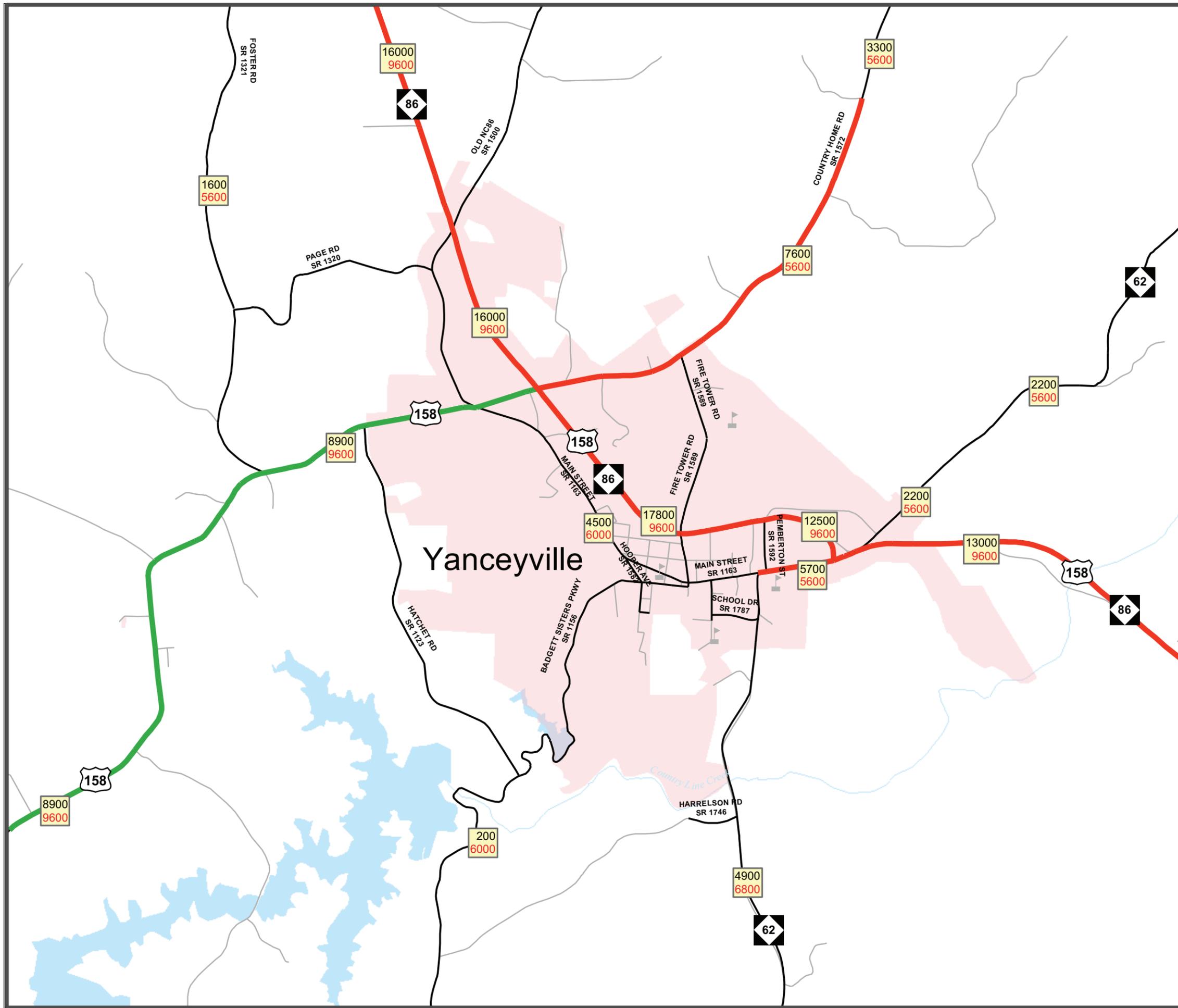
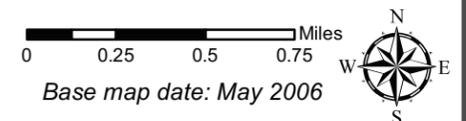
- Schools
- NEAR CAPACITY
- OVER CAPACITY
- Network Roads
- Roads
- City Boundary
- Rivers and Streams
- Water Areas

13000 2035 Average Daily Volume
9600 Existing Roadway Capacity

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Level of Service (LOS)

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 and illustrated in Figure 10.

- **LOS A**: LOS A describes free-flow operations. Free-flow speeds prevail. Vehicles are almost completely unimpeded in their ability to maneuver within the traffic stream. The effects of incidents or point breakdowns are easily absorbed at this level.
- **LOS B**: represents reasonably free flow, and free-flow speeds are 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 C**: provides for flow with speeds at or near the free flow speed of the freeway. 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 will be substantial. Queues may be expected to form behind any significant blockage.
- **LOS D**: is the level at which speeds begin to decline slightly with increasing flows and density begins to increase somewhat more quickly. Freedom to maneuver within the traffic stream is more noticeably limited, and the driver experiences 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 E**: describes operation at capacity. Operations at this level are volatile, because there are virtually no usable gaps in the traffic stream. Vehicles are closely spaced, leaving little room to maneuver within the traffic stream. Any disruption of 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 with extensive queuing. Maneuverability within the traffic stream is extremely limited, and the level of physical and psychological comfort afforded the driver is poor.
- **LOS F**: describes breakdowns in vehicular flow; and with such stop-and-go conditions, it is difficult to predict a flow rate. These conditions generally exist within

queues forming behind breakdown points. Breakdowns occur when the ratio of existing demand to actual capacity or of forecast demand to estimated capacity exceeds 1.00. The various reasons for these breakdowns (as identified in the HCM) include traffic incidents, which can cause a temporary reduction in the capacity of a short segment; and points of recurring congestion, such as merge or weaving segments and lane drops.

Figure 10 - Level Of Service Illustrations

Level of Service A



Driver Comfort: High

Maximum Density:

12 passenger cars per mile per lane

Level of Service B



Driver Comfort: High

Maximum Density:

20 passenger cars per mile per lane

Level of Service C



Driver Comfort: Some Tension

Maximum Density:

30 passenger cars per mile per lane

Level of Service D



Driver Comfort: Poor

Maximum Density:

42 passenger cars per mile per lane

Level of Service E



Driver Comfort: Extremely Poor

Maximum Density:

67 passenger cars per mile per lane

Level of Service F



Driver Comfort: The lowest

Maximum Density:

More than 67 passenger cars per mile per lane

Source: 2000 Highway Capacity Manual

V. Environmental Screening

In recent years, the environmental considerations associated with transportation infrastructure development have taken the center stage in the planning process. Section 102 of the National Environmental Policy Act (NEPA) requires the completion of an Environmental Impact Statement (EIS) for projects that have a significant impact on the environment. The EIS includes impacts on wetlands, wildlife, water quality, historic properties, and public lands. While this report does not cover the environmental concerns in as much detail as an EIS would, consideration for many of these factors was incorporated into the development of this transportation plan. These factors were also incorporated into the recommended improvements. Environmental features found in Caswell County Planning Area are shown in Figures 11 and 12.

Wetlands

Wetlands are those lands where saturation with water is the dominant factor in determining the nature of soil development and the types of plant and animal communities living in the soil and on its surface. Wetlands are crucial ecosystems in our environment. They help regulate and maintain the hydrology of our rivers, lakes, and streams by storing and slowly releasing floodwaters. Wetlands help maintain the quality of water by storing nutrients, reducing sediment loads, and reducing erosion. They are also critical to fish and wildlife populations by providing an important habitat for approximately one-third of the plant and animal species that are federally listed as threatened or endangered.

The National Wetland Inventory showed several wetlands throughout the study area. Wetland impacts have been avoided or minimized to the greatest extent possible while preserving the integrity of the transportation plan.

Threatened and Endangered Species

The Threatened and Endangered Species Act of 1973 allows the U.S. Fish and Wildlife Service to impose measures on the Department of Transportation to mitigate the environmental impacts of a transportation project on endangered animal and plant species, as well as critical wildlife habitats. Locating any rare species that exist within the planning area during this early planning stage will help to avoid or minimize impacts.

A preliminary review of the Federally Listed Threatened and Endangered Species in the area was completed to determine what effects, if any, the recommended improvements may have on wildlife. Mapping from the N.C. Department of Environment and Natural Resources revealed occurrences of threatened or endangered plant and/or animal species in the area which are summarized in Table 7. Some threatened or endangered species may adversely be impacted by improving US 158 and NC 86 to an expressway.

A detailed field investigation is recommended prior to construction of any highway project in this area.

Table 7: Threatened or Endangered Species		
Species	Common Name	Major Group
Cambarus davidi	Carolina Ladle Crayfish	Fish
Autochton cellus	Golden Banded-Skipper	Butterfly
Erynnis martialis	Mottled Duskywing	Butterfly
Fixsenia favonius ontario	Northern Oak Hairstreak	Butterfly
Alasmidonta undulata	Triangle Floater	Mollusk
Fusconaia masoni	Atlantic Pigtoe	Mollusk
Strophitus undulatus	Creeper	Mollusk
Hypentelium roanokense	Roanoke Hog Sucker	Fish
Etheostoma podostemone	Riverweed Darter	Fish
Eupatorium godfreyanum	Godfrey's Thoroughwort	Plant
Gnaphalium helleri var. micradenium	Small Rabbit Tobacco	Plant
Baptisia minor var. aberrans	Prairie Blue Wild Indigo	Plant
Lotus helleri	Carolina Birdfoot-trefoil	Plant
Carex jamesii	James's Sedge	Plant
Isoetes virginica	Virginia Quillwort	Plant

Historic Sites

Section 106 of the National Historic Preservation Act requires the Department of Transportation to identify historic properties listed in, as well as eligible for, the National Register of Historic Places (NRHP). The NCDOT must consider the impacts of transportation projects on these properties and consult with the Federal Advisory Council on Historic Preservation.

N.C. General Statute 121-12(a) requires the NCDOT to identify historic properties listed on the National Register, but not necessarily those that are eligible to be listed. The NCDOT must consider the impacts and consult with the State Historic Preservation Office (SHPO), but is not bound by their recommendations.

The location of historic sites within the planning area was investigated to determine any possible impacts resulting from the recommended improvements. This investigation identified the following properties listed on the NRHP: Bartlett Yancey House, Caswell County Court House, Graves House, Milton State Bank, Union (Yellow) Tavern, Longwood, Woodside (Richmond) House, Garland-Buford House, Moore (Annie Y Gwynn) House, Rose Hill (Bedford Brown) House and Brown Graves (Brown's Store) House.

Of the historic sites, Bartlett Yancey House is likely to be impacted by improving US 158 to an expressway. To avoid the impact, it is recommended that the US 158 Bypass be built on new location north of the existing alignment.

Educational Facilities

The locations of educational facilities in the Caswell County Planning area were considered during the development of the transportation plan and are depicted in Figure 11. No proposed facilities or improvements shall displace any school or other educational facility.

VI. Public Involvement

Overview

Since the passage of the federal Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA), the emphasis on public involvement in the development of transportation infrastructure has taken on a new role. Although public participation has been an element of long range transportation planning in the past, these regulations call for a much more proactive approach. The NCDOT's Transportation Planning Branch has a long history of making public involvement a key element in the development of any long-range transportation plan, regardless the size of the planning area. This chapter is designed to provide an overview of the public involvement elements implemented into the development of the transportation plan for Caswell County.

Plan Development

In 2005, the North Carolina Department of Transportation, in cooperation with Caswell County, the Town of Milton and the Town of Yanceyville embarked on a comprehensive transportation plan covering all three jurisdictions.

During the course of the study, the Transportation Planning Branch met with the Caswell County Commissioners, including officials from the Towns of Yanceyville and Milton, to provide plan information, discuss population and employment projections, and to discuss the proposed recommendations.

As part of the public involvement process, a goals and objective survey was conducted in the later part of 2006. The survey was mailed out to Caswell County residents with their monthly water bills and was also available online on Piedmont Triad RPO's website. The results of this survey are located in Appendix G.

Two public drop-in sessions were held in Yanceyville to present the proposed Comprehensive Transportation Plan to the public and solicit comments. The first meeting was held on October 11, 2006 at Piedmont Community College; the second meeting was held on May 19, 2008 at the Municipal Services Building. Each session was publicized in the local newspaper and was held from 6pm to 9pm.

Three public hearings were held during County Commissioners and Town Officials meetings to discuss the plan recommendations and to solicit further input from the public. The plan was adopted by the County Commissioners on October 7, 2008, Yanceyville Town Officials on October 6, 2008 and Milton Town Officials on January 6, 2009.

The Piedmont Triad RPO voted unanimously to endorse the CTP on December 17, 2008. The North Carolina Department of Transportation mutually adopted the Caswell County CTP on February 5, 2009.

A p p e n d i c e s

Appendix A

Resources and Contacts

North Carolina Department of Transportation

Customer Service Office
1-877-DOT4YOU
(1-877-368-4968)

Secretary of Transportation
1501 Mail Service Center
Raleigh, NC 27699-1501
(919) 733-2520

*Board of Transportation Member**

Current contact information for the Board of Transportation may be accessed from the NCDOT homepage below or by calling the Customer Service Office.

<https://apps.dot.state.nc.us/dot/directory/authenticated/UnitPage.aspx?id=30>

*Highway Division Engineers**

Division specific contact information can be found at

<https://apps.dot.state.nc.us/dot/directory/authenticated/ToC.aspx>

Contact Whom, When?

Division Engineer

Contact the Division Engineer with general questions concerning NCDOT activities within each Division; information on Small Urban Funds.

Division Construction Engineer

Contact the Division Construction Engineer for information concerning major roadway improvements under construction.

Division Traffic Engineer

Contact the Division Traffic Engineer for information concerning high- collision locations.

District Engineer

Contact the District Engineer for information regarding Driveway Permits, Right of Way, Encroachments, and Development Reviews.

County Maintenance Engineer

Contact the County Maintenance Engineer regarding any maintenance activities, such as drainage.

Transportation Planning Branch (TPB)

Contact the Transportation Planning Branch with long-range planning questions.

1554 Mail Service Center

Raleigh, NC 27699-1554

(919) 733-4705

<https://apps.dot.state.nc.us/dot/directory/authenticated/UnitPage.aspx?id=3234>

Secondary Roads Office

Contact the Secondary Roads Office for information regarding the Industrial Access Funds Program.

P.O. Box 25201

Raleigh, NC 27699

(919) 733-3250

<https://apps.dot.state.nc.us/dot/directory/authenticated/UnitPage.aspx?id=135>

Program Development Branch

Contact the Program Development Branch for information concerning Roadway Official Corridor Maps and the Transportation Improvement Program (TIP).

1534 Mail Service Center

Raleigh, NC 27699-1534

(919) 733-2039

<https://apps.dot.state.nc.us/dot/directory/authenticated/UnitPage.aspx?id=632>

Project Development & Environmental Branch (PDEA)

Contact PDEA for information on environmental studies for projects that are included in the TIP.

1548 Mail Service Center

Raleigh, NC 27699-1548

(919) 733-3141

<https://apps.dot.state.nc.us/dot/directory/authenticated/UnitPage.aspx?id=3212>

Highway Design Branch

Contact the Highway Design Branch for information regarding alignment for projects that are included in the TIP.

1584 Mail Service Center
Raleigh, NC 27699-1584
(919) 250-4001

<https://apps.dot.state.nc.us/dot/directory/authenticated/UnitPage.aspx?id=659>

Public Transportation Division

Contact the Public Transportation Division for information public transit systems.

1550 Mail Service Center
Raleigh, NC 27699-1550
(919) 733-4713

<https://apps.dot.state.nc.us/dot/directory/authenticated/UnitPage.aspx?id=3366>

Other NCDOT Departments

Contact information for other departments within the NCDOT not listed here are available by calling the Customer Service Office or by visiting the NCDOT homepage at <https://apps.dot.state.nc.us/dot/directory/authenticated/ToC.aspx>

Other State Government Offices

Division of Community Assistance

Contact the Division of Community Assistance for information regarding the Community Planning Program. You may find their contact information at:

<http://www.nccommerce.com/en/CommunityServices/>

Strategic Planning Office of Transportation (SPOT)

Contact SPOT for information regarding strategic planning and prioritization.

1501 Mail Service Center
Raleigh, NC 27699-1501
(919) 715-0951

<https://apps.dot.state.nc.us/dot/directory/authenticated/UnitPage.aspx?id=11054>

Division of Bicycle and Pedestrian Transportation (DBPT)

Contact DBPT for information regarding Bicycle and Pedestrian planning

1552 Mail Service Center
Raleigh, NC 27699-1552
(919) 807-0777

<http://www.ncdot.org/transit/bicycle/>

Division 7, District 3 Contacts (Caswell County)

Board Member

Mr. J. Douglas Galyon
PO Box 14996
Greensboro, NC 27415

District 3 Engineer

Mr. Paul Ingram, PE
PO Box 2513
920 Montgomery St.
(336)634-5644
pingram@ncdot.gov

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Division Construction Engineer

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ewthomas@ncdot.gov

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hcockburn@ptcog.org

NCDOT Piedmont Triad RPO Coordinator

Ms Vernia Wilson
1554 Mail Service Center
Raleigh, NC 27699-1554
(919) 733-4705
vrwilson1@ncdot.gov

Appendix B

Comprehensive Transportation Plan Definitions

Highway Map

- **Freeways**

- Functional purpose – high mobility, high volume, high speed
- Posted speed – 55 mph or greater
- Cross section – minimum four lanes with continuous median
- Multi-modal elements – High Occupancy Vehicles (HOV)/High Occupancy Transit (HOT) lanes, busways, truck lanes, park-and-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 1,000ft or for 350ft plus 650ft 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
- Multi-modal 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; at-grade 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 (median breaks allowed for U-turns per current NCDOT *Driveway Manual*)
- Multi-modal 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 cross-connectivity 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 right-in/right-out 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
 - Multi-modal 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 roadway 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 45 mph
 - Cross section – ultimately three lanes (no more than one lane per direction) or less without median
 - Multi-modal 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 lane with center turn lane as permitted by the current NCDOT *Driveway Manual*
- **Existing** – Roadway facilities that are not recommended to be improved.
- **Needs Improvement** – Roadway facilities that need to be improved for capacity, safety, or system continuity. The improvement to the facility may be widening, other operational strategies, increasing the level of access control along the facility, or a combination of improvements and strategies. “Needs improvement” does not refer to the maintenance needs of existing facilities.
- **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 via 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 driveway connections shall be defined as a maximum of one connection per parcel. One connection is 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 via ramps at interchanges, at-grade 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, included plane, cable car, automated guideway transit, 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 tracks. 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 high speed rail service is provided (there are currently no existing high speed corridor in North Carolina).
 - Recommended – Proposed corridor for high speed rail service.
- **Rail Stop** – A railroad station or stop along the railroad tracks.
- **Intermodal Connector** – A location where more than one mode of public transportation meet such as where light rail and a bus route come together in one location or a bus station.

- **Park and Ride Lot** – A strategically located parking lot that is free of charge to anyone who parks a vehicle and commutes by transit or in a carpool.

Bicycle Map

- **On Road-Existing** – Conditions for bicycling on the highway facility are adequate to safely accommodate cyclists.
- **On Road-Needs Improvement** – At the systems level, it is desirable for the highway facility to accommodate bicycle transportation; however, highway improvements are necessary to create safe travel conditions for the cyclists.
- **On Road-Recommended** – At the systems level, 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 bicycle transportation (may also accommodate pedestrians, eg. greenways) and is physically separated from a highway facility usually on a separate right-of-way.
- **Off Road-Needs Improvement** – A facility that accommodate bicycle transportation (may also accommodate pedestrians, e.g. greenways) and is physically separated from a highway facility usually on a separate right-of-way that will not adequately serve future bicycle needs. Improvements may include but are not limited to, widening, paving (not re-paving), improved horizontal or vertical alignment.
- **Off Road-Recommended** – A facility needed to accommodate bicycle transportation (may also accommodate pedestrians, eg. greenways) and is physically separated from a highway facility usually on a separate right-of-way. This may also include greenway segments that do not necessarily serve a transportation function but intersect recommended facilities on the highway map or public transportation and rail map.

Pedestrian Map

Pedestrian Map was not included in this study.

Appendix C

Street Tabulation and Recommendations

This appendix includes a detailed tabulation of all streets identified as elements of the Caswell County Comprehensive Transportation Plan. The table includes a description of the roads by sections, as well as the length, cross section, and right-of-way for each section. Also included is the existing and projected average daily traffic volumes, roadway capacity, and the recommended ultimate lane configuration. Due to space constraints, these recommended cross sections are given in the form of an alphabetic code. A detailed description of each of these codes and an illustrative figure for each can be found in Appendix D.

The following index of terms may be helpful in interpreting the table:

SR – Secondary Road
N/A – Not Available
RDWY – Roadway
ROW – Right-of-way
vpd – Vehicles Per Day

Caswell County Transportation Plan
Appendix C: Current and Future Roadway Inventory

Facility and Section	2007 Conditions						2035 RECOMENDATIONS					Rec. Cross Section
	DIST	RDWY	ROW	Number OF	CURRENT CAPACITY	2007 AADT	RDWY	ROW	Number OF	PROPOSED CAPACITY	2035 AADT	
	MI	FT	FT	LANES	(VPD)	(VPD)	FT	FT	LANES	(VPD)	(VPD)	
<u>FREEWAYS</u>												
US 29/Future I-785												
Rockingham Co to SR 1341	1.90	48	300	4	56,600	16,200	48	ADQ	4	56,600	27,300	ADQ
SR 1341 to NC 700	2.46	48	260-300	4	56,600	18,600	48	ADQ	4	56,600	32,500	ADQ
NC 700 to VA Stateline	1.62	48	260	4	56,600	20,200	48	ADQ	4	56,600	34,000	ADQ
<u>EXPRESSWAYS</u>												
US 158												
Rockingham Co. to SR 1155	1.26	24	60	2	9,600	2,900	48	150	4	56,600	4,900	A
SR 1155 to NC 150	4.44	24	60	2	9,600	2,600	48	150	4	56,600	4,200	A
NC 150 to SR 1317	2.24	24	60	2	9,600	4,900	48	150	4	56,600	8,900	A
SR 1317 to SR 1311	1.72	24	60	2	9,600	4,900	48	150	4	56,600	8,900	A
SR 1311 to SR 1321	0.79	24	60	2	9,600	4,900	48	150	4	56,600	8,900	F
US 158/NC 86												
NC 86 to SR 1589	1.11	44	150	3	9,600	9,800	48	ADQ	4	56,600	17,800	E
SR 1589 to NC 62	1.01	24	150	2	9,600	6,800	48	ADQ	4	56,600	12,500	E
NC 62 to Country Line Crk	1.28	24	60-200	2	9,600	7,700	48	ADQ	4	56,600	13,000	F
County Line Crk to NC86	1.91	24	60-200	2	9,600	7,700	48	ADQ	4	56,600	13,000	A
US 158												
NC 86 to NC 119	3.50	20-24	60	2	9,600	2,000	48	150	4	56,600	3,100	A
NC 119 to SR 1702	3.35	20	60	2	6,000	1,700	48	150	4	56,600	2,700	A
SR 1702 to Person Co.	0.77	20	60	2	6,000	2,500	48	150	4	56,600	4,000	A
US 158 Bypass (Proposed)												
SR 1321 to NC 86	1.82						48	150	4	56,000	5,600	F
NC 86												
VA Stateline to SR 1500	1.27	24	150	2	9,600	10,600	48	ADQ	4	56,600	17,500	A
SR 1500 to SR 1518	4.71	24	150	2	9,600	9,800	48	ADQ	4	56,600	17,000	A
SR 1518 to Day Lily Ln	0.98	24	150	2	9,600	8,900	48	ADQ	4	56,600	16,000	A
Day Lily Ln to US 158	2.03	24	150	2	9,600	8,900	48	ADQ	4	56,600	16,000	F
See US 158/NC 86 above												
US 158 to SR 1730	3.50	24	60	2	9,600	5,200	48	150	4	56,600	9,100	A
SR 1730 to SR 1719	6.29	24	60-200	2	9,600	5,300	48	ADQ	4	56,600	9,200	A
SR 1719 to NC 49	1.79	24	80	2	9,600	5,900	48	150	4	56,600	10,600	A
NC 49 to Orange Co.	0.14	24	60-80	2	9,600	8,000	48	150	4	56,600	13,700	A
<u>BOULEVARDS</u>												
NC 87												
Rockingham Co. to Alamance Co.	1.99	22	60	2	6,800	5,500	48	150	4	56,600	9,200	F

Caswell County Transportation Plan
Appendix C: Current and Future Roadway Inventory

Facility and Section	2007 Conditions						2035 RECOMENDATIONS						Rec. Cross Section
	DIST	RDWY	ROW	Number OF	CURRENT CAPACITY	2007 AADT	RDWY	ROW	Number OF	PROPOSED CAPACITY	2035 AADT		
	MI	FT	FT	LANES	(VPD)	(VPD)	FT	FT	LANES	(VPD)	(VPD)		
OTHER MAJOR THOROUGHFARES													
US 158													
SR 1321 to SR 1163	1.22	24	60	2	9,600	4,900	24	ADQ	2	9,600	3,300	B-3	
SR 1163 to NC 86	0.28	24	60	2	9,600	4,900	24	ADQ	2	9,600	3,300	H	
NC 700													
Rockingham Co. to US 29	2.42	20	60	2	6,000	2,500	24	100	2	9,600	6,300	K	
NC 150													
Rockingham Co. to SR 1129	3.32	20	60	2	6,000	1,500	24	100	2	6,800	2,400	K	
SR 1129 to US 158	3.27	20	60	2	6,000	1,900	24	100	2	6,800	3,200	K	
NC 119													
Alamance Co. to SR 1001	1.79	22	60	2	6,800	2,600	24	100	2	9,600	4,000	K	
SR 1001 to NC 86	5.63	22	60	2	6,800	1,800	24	100	2	9,600	2,600	K	
NC 86 to US 158	5.62	22	60	2	6,800	1,700	24	100	2	9,600	2,600	K	
US 158 to SR 1564	4.88	22	60-100	2	6,800	800	24	100	2	9,600	1,200	K	
SR 1564 to SR 1562	0.83	22	60	2	6,800	1,700	24	100	2	9,600	2,200	B-4	
SR 1562 to NC 57	0.83	22	60	2	6,800	1,700	24	100	2	9,600	2,200	K	
NC 57 to SR 1549	1.36	22	60	2	6,800	2,200	24	100	2	9,600	3,200	K	
SR 1549 to VA Stateline	1.72	22	60	2	6,800	600	24	100	2	9,600	1,300	K	
NC 62													
Alamance Co. to SR 1759	2.96	22	60	2	6,800	3,400	24	100	2	9,600	5,800	K	
SR 1759 to SR 1751	3.18	18	60	2	5,600	3,400	24	100	2	9,600	5,800	K	
SR 1751 to SR 1776	4.54	22	150	2	6,800	2,400	24	ADQ	2	9,600	3,900	K	
SR 1776 to SR 1163	2.32	22	60-150	2	6,800	2,900	24	ADQ	2	9,600	4,900	H	
SR 1163 to NC 86	0.57	22	60	2	6,800	3,400	24	100	2	9,600	5,700	B-3	
NC 86 to SR 1594	1.65	22	60	2	6,800	1,400	24	100	2	9,600	2,200	B-3	
SR 1594 to SR 1597	2.62	22	60	2	5,600	1,400	24	100	2	9,600	1,900	B-4	
SR 1597 to SR 1531	5.68	22	60	2	6,800	1,400	24	100	2	9,600	1,900	K	
SR 1531 to NC 57	1.94	18-22	60	2	6,800	1,400	24	80	2	9,600	1,900	H	
NC 57 to VA State Line	0.45	24	100	2	9,600	3,800	24	80	2	9,600	6,200	H	
NC 57													
NC 62 to SR 1552	2.89	22-24	60	2	9,600	4,000	24	70	2	9,600	6,100	H	
SR 1552 to SR 1554	0.64	22-24	60	2	6,800	4,000	24	100	2	9,600	6,100	K	
SR 1554 to NC 119	1.19	22	60	2	6,800	4,400	24	100	2	9,600	6,800	K	
NC 119 to Person Co.	0.63	22	60	2	6,800	3,900	24	100	2	9,600	6,400	K	
NC 49													
NC 86 to Person Co	2.47	24	60	2	9,600	2,900	24	100	2	9,600	5,100	ADQ	

Caswell County Transportation Plan
Appendix C: Current and Future Roadway Inventory

Facility and Section	2007 Conditions						2035 RECOMENDATIONS						Rec. Cross Section
	DIST	RDWY	ROW	Number OF	CURRENT CAPACITY	2007 AADT	RDWY	ROW	Number OF	PROPOSED CAPACITY	2035 AADT		
	MI	FT	FT	LANES	(VPD)	(VPD)	FT	FT	LANES	(VPD)	(VPD)		
<u>MINOR THOROUGHFARES</u>													
SR 1001 (Baynes Rd)													
NC 119 to NC 62	2.37	20	60	2	6,000	900	20	ADQ	2	6,000	1,500	ADQ	
NC 62 to Alamance Co.	2.19	20	60	2	6,000	2,100	24	100	2	9,600	3,400	K	
SR 1100 (Kerr's Chapel Rd)													
SR 1001 to SR 1106	3.43	20	60	2	6,000	800	24	100	2	9,600	1,300	K	
SR 1106 to Rockingham Co.	5.89	18-20	60	2	6,000	1,300	24	100	2	9,600	2,500	K	
SR 1123 (Hatchet Rd)													
SR 1156 to US158	2.21	20	60	2	6,000	400	20	ADQ	2	6,000	700	ADQ	
Prop. SR 1123 Ext. (Hatchet Rd)													
SR 1746 to SR 1156	1.00						20	ADQ	2	6,000	700	K	
US 158 to US 158 Bypass (prop)	0.50						20	ADQ	2	6,000	700	K	
SR 1126 (Stoney Creek School Rd)													
NC 150 to SR 1133	7.83	20	60	2	6,000	700	20	ADQ	2	6,000	1,100	ADQ	
SR 1133 (Cherry Grove Rd)													
NC 62 to SR 1126	3.82	22	60	2	6,000	1,000	24	100	2	9,600	1,900	K	
SR 1126 to SR 1146	4.90	20-22	60	2	6,000	1,500	24	100	2	9,600	2,700	K	
SR 1146 to Rockingham Co.	2.39	20	60	2	6,000	1,600	24	100	2	9,600	2,300	K	
SR 1146 (Camp Springs Rd)													
NC 150 to SR 1133	2.79	18	60	2	6,000	1,300	24	100	2	9,600	2,400	K	
SR 1155 (Ashland Rd)													
NC 150 to US 158	4.41	20	60	2	6,000	1,600	24	100	2	9,600	2,700	K	
SR 1156 (Badgett Sisters Pkwy)													
NC 62 to SR 1746	5.35	18	60	2	5,600	200	18	ADQ	2	5,600	400	ADQ	
SR 1746 to SR 1582	3.35	18	60	2	5,600	200	18	ADQ	2	5,600	500	ADQ	
SR 1156 (W Main Street)													
SR 1582 to SR 1741	0.25	18	60	2	5,600	200	18	ADQ	2	5,600	500	ADQ	
SR 1163 (Main St)													
US 158 to SR 1582	1.20	22	60	2	6,800	4,000	22	ADQ	2	6,800	4,500	B-3	
SR 1582 to NC 62	0.74	22	60	2	6,800	4,000	22	ADQ	2	6,800	4,500	B-3	

Caswell County Transportation Plan
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	DIST	RDWY	ROW	Number OF	CURRENT CAPACITY	2007 AADT	RDWY	ROW	Number OF	PROPOSED CAPACITY	2035 AADT		
	MI	FT	FT	LANES	(VPD)	(VPD)	FT	FT	LANES	(VPD)	(VPD)		
MINOR THOROUGHFARES CONTINUE													
SR 1300 (Park Springs Rd)													
US 158 to SR 1301	1.25	22	60	2	6,800	1,200	22	ADQ	2	6,800	1,700	B-4	
SR 1301 to SR 1341	4.39	22	60	2	6,800	1,200	22	ADQ	2	6,800	1,800	ADQ	
SR 1341 to NC 86	5.01	22	60	2	6,800	2,200	22	ADQ	2	6,800	3,500	ADQ	
NC 86 to SR 1500	1.21	20	60	2	6,000	800	22	ADQ	2	6,000	1,400	ADQ	
SR 1306 (Allison Rd)													
US 158 to SR 1315	2.86	18	60	2	5,600	700	18	ADQ	2	5,600	1,300	ADQ	
SR 1315 to SR 1300	4.91	18	60	2	5,600	500	18	ADQ	2	5,600	700	ADQ	
SR 1320 (Page Rd)													
SR 1321 to SR 1500	1.36	20	60	2	6,000	100	20	ADQ	2	6,000	300	ADQ	
SR 1321 (Foster Rd)													
US 158 to Blackwell Rd	2.15	18	60	2	5,600	1,100	18	ADQ	2	6,800	1,600	ADQ	
Blackwell Rd to SR 1300	5.16	18	60	2	5,600	1,100	18	ADQ	2	6,800	1,600	ADQ	
SR 1341 (Law Rd)													
US 29 to SR 1353	0.45	24	60-150	2	9,600	600	24	ADQ	2	9,600	1,100	ADQ	
SR 1353 to SR 1300	3.26	20	80	2	6,000	900	20	ADQ	2	6,000	1,500	ADQ	
SR 1360 (Shady Grove Rd)													
US 29 to NC 86	5.23	20	60	2	6,000	3,000	24	100	2	9,600	6,000	K	
SR 1500(Old NC86)													
US 158 to SR 1518	2.23	20	60	2	6,000	1,400	20	ADQ	2	6,000	1,600	ADQ	
SR 1518 to SR 1523	1.50	20	60	2	6,000	1,400	20	ADQ	2	6,000	1,600	ADQ	
SR 1503 (Walter's Mill Rd)													
NC 86 to SR 1500	5.79	20	60	2	6,000	2,200	24	100	2	9,600	3,400	K	
SR 1521 (Slade Rd)													
SR 1572 to NC 62	2.17	20	60	2	6,000	1,100	24	100	2	9,600	2,000	K	
SR 1523 (Blanch Rd)													
SR 1500 to SR 1511	3.06	20	60	2	6,000	600	20	ADQ	2	6,000	800	ADQ	
SR 1511 to NC 62	4.94	20	60	2	6,000	500	20	ADQ	2	6,000	700	ADQ	
SR 1553 (Cunningham Rd)													
NC 119 to Person Co Line	0.41	18	60	2	6,000	1,200	18	ADQ	2	6,800	1,800	ADQ	

Caswell County Transportation Plan
Appendix C: Current and Future Roadway Inventory

Facility and Section	2007 Conditions						2035 RECOMENDATIONS					Rec. Cross Section
	DIST	RDWY	ROW	Number OF	CURRENT CAPACITY	2007 AADT	RDWY	ROW	Number OF	PROPOSED CAPACITY	2035 AADT	
	MI	FT	FT	LANES	(VPD)	(VPD)	FT	FT	LANES	(VPD)	(VPD)	
<u>MINOR THOROUGHFARES CONTINUE</u>												
SR 1554 (Yarborough Mill Rd)												
NC 62 to NC 57	4.66	18	60	2	6,000	1,200	24	100	2	9,600	1,800	K
SR 1561 (Solomon Lea Rd)												
US 158 to Person Co.	5.29	20	60	2	6,000	500	20	ADQ	2	6,000	600	ADQ
SR 1572 (Country Home Rd)												
US 158/NC 86 to SR 1574	2.00	18	60	2	5,600	3,700	24	100	2	9,600	7,600	K
SR 1574 to SR 1521	1.71	18	60	2	5,600	1,900	24	100	2	9,600	3,300	K
SR 1582 (Hooper Ave)												
SR 1156 to SR 1163	0.16	22	60	2	6,800	400	22	ADQ	2	6,800	900	ADQ
SR 1589 (North Ave)												
SR 1156 to US 158	0.26	24	60	2	9,600	1,100	24	ADQ	2	9,600	2,300	ADQ
SR 1589 (Fire Tower Rd)												
US 158 to prop. Oakwood Dr Ext.	0.56	20	60	2	6,000	1,100	24	100	2	9,600	2,300	K
Prop. Oakwood Dr Ext. to SR 1572	0.44	20	60	2	6,000	1,100	24	100	2	9,600	2,300	K
Prop. Oakwood Dr Ext												
SR 1589 to US 158	0.56						20	100	2	6,000	1,300	K
SR 1592 (Pemberton St)												
US 158 to NC 62	0.28	20	60	2	6,000	600	20	100	2	6,000	1,300	ADQ
SR 1702(Ridgeville Rd)												
US 158 to SR 1710	3.62	20	60	2	6,000	600	20	ADQ	2	6,000	1,100	ADQ
SR 1710 to SR 1723	3.35	20	60	2	6,000	500	20	ADQ	2	6,000	1,000	ADQ
SR 1723 to NC 86	2.86	20	60	2	6,000	1,300	20	ADQ	2	6,000	2,100	ADQ
SR 1736 (Burton Chapel Rd)												
NC 62 to SR 1730	3.13	20	60	2	6,000	400	20	ADQ	2	6,000	600	ADQ
SR 1730 to NC 119	3.55	20	60	2	6,000	600	20	ADQ	2	6,000	800	ADQ
SR 1739 (Dillard School Rd)												
SR 1787 to SR 1163	0.18	20	50	2	6,000	1,200	24	100	2	9,600	2,300	K
SR 1743 (Oak Tree St)												
SR 1171 to SR 1156	0.16	20	60	2	6,000	500	20	ADQ	2	6,000	1,100	ADQ

Appendix D

Typical Transportation 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.

On all existing and proposed roadways delineated on 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 which may require widening after the current planning period,
- roadways which are borderline adequate and accelerated traffic growth could render them deficient, and
- roadways where an urban curb and gutter cross section may be locally desirable because of urban development or redevelopment.

Recommended design standards relating to grades, sight distances, degree of curve, superelevation, and other considerations for roadways are given in Appendix E. The typical cross sections are described below.

A: Four Lanes Divided with Median - Freeway

Cross section "A" is typical for four-lane divided highways in rural areas that may have only partial or no control of access. The minimum median width for this cross section is 46 feet, but a wider median is desirable.

B: Seven Lanes - Curb & Gutter

Cross section "B" is typically not recommended for new projects. When the conditions warrant six lanes, cross section "D" should be recommended. Cross section "B" should be used only in special situations such as when widening from a five-lane section where right-of-way is limited. Even in these situations, consideration should be given to converting the center turn lane to a median so that cross section "D" is the final cross section.

C: Five Lanes - Curb & Gutter

Typical for major thoroughfares, cross section "C" is desirable where frequent left turns are anticipated as a result of abutting development or frequent street intersections.

D: Six Lanes Divided with Raised Median - Curb & Gutter**E: Four Lanes Divided with Raised Median - Curb and Gutter**

Cross sections "D" and "E" are typically used on major thoroughfares where left turns and intersection streets are not as frequent. Left turns would be restricted to a few selected intersections. The 16-ft median is the minimum recommended for an urban boulevard-type cross section. In most instances, monolithic construction should be utilized due to greater cost effectiveness, ease and speed of placement, and reduced future maintenance requirements. In certain cases, grass or landscaped medians result in greatly increased maintenance costs and an increase danger to maintenance personnel. Non-monolithic medians should only be recommended when the above concerns are addressed.

F: Four Lanes Divided - Boulevard, Grass Median

Cross section "F" is typically recommended for urban boulevards or parkways to enhance the urban environment and to improve the compatibility of major thoroughfares with residential areas. A minimum median width of 24 ft is recommended, with 30 ft being desirable.

G: Four Lanes - Curb and Gutter

Cross section "G" is recommended for major thoroughfares where projected travel indicates a need for four travel lanes but traffic is not excessively high, left turning movements are light, and right-of-way is restricted. An additional left turn lane would likely be required at major intersections. This cross section should be used only if the above criteria are met. If right-of-way is not restricted, future strip development could take place and the inner lanes could become de facto left turn lanes.

H: Three Lanes - Curb and Gutter

In urban environments, thoroughfares that are proposed to function as one-way traffic carriers would typically require cross section "H".

I: Two Lanes – Curb and Gutter, Parking both sides**J: Two Lanes – Curb and Gutter, Parking one side**

Cross section "I" and "J" are usually recommended for urban minor thoroughfares since these facilities usually serve both land service and traffic service functions. Cross-section "I" would be used on those minor thoroughfares where parking on both sides is needed as a result of more intense development.

K: Two Lanes - Paved Shoulder

Cross section "K" is used in rural areas or for staged construction of a wider multilane cross section. On some thoroughfares, projected traffic volumes may indicate that two travel lanes will adequately serve travel for a considerable period of time. For areas that are growing and future widening will be necessary, the full right-of-way of 100 ft should be required. In some instances, local ordinances may not allow the full 100-ft. In those cases, 70 ft should be preserved with the understanding that the full 70-ft will be preserved by use of building setbacks and future street line ordinances.

L: Six Lanes Divided with Grass Median - Freeway

Cross section "L" is typical for controlled access freeways. The 46-ft grass median is the minimum desirable width, but variation from this may be permissible depending upon design considerations. Right-of-way requirements are typically 228 ft or greater, depending upon cut and fill requirements.

M: Eight Lanes Divided with Raised Median - Curb and Gutter

Also used for controlled access freeways, cross section "M" may be recommended for freeways going through major urban areas or for routes projected to carry very high volumes of traffic.

N: Five Lanes with Curb & Gutter, Widened Curb Lanes**O: Two Lanes/Shoulder Section****P: Four Lanes Divided with Raised Median – Curb & Gutter, Widened Curb Lanes**

If there is sufficient bicycle travel along the thoroughfare to justify a bicycle lane or bikeway, additional right-of-way may be required to contain the bicycle facilities. The North Carolina Bicycle Facilities Planning and Design Guidelines should be consulted for design standards for bicycle facilities. Cross sections "N", "O" and "P" are typically used to accommodate bicycle travel.

General

The urban curb and gutter cross sections all illustrate the sidewalk adjacent to the curb with a buffer or utility strip between the sidewalk and the minimum right-of-way line. This permits adequate setback for utility poles. If it is desired to move the sidewalk farther away from the street to provide additional separation for pedestrians or for aesthetic reasons, additional right-of-way must be provided to insure adequate setback for utility poles.

The right-of-way shown for each typical cross section is the minimum amount required encompassing the street, sidewalks, utilities, and drainage facilities. Cut and fill requirements may require either additional right-of-way or construction easements. Obtaining construction easements is becoming the more common practice for urban roadway construction.

Bicycle Cross Sections

Cross sections B-1, B-2, B-3, B-4, and B-5 are typical bicycle cross sections. Contact the NCDOT Division of Bicycle and Pedestrian Transportation for more information regarding these cross-sections.

B-1: Four Lanes Divided with Wide Outside Lanes

B-2: Five Lanes with Wide Outside Lanes

A widened outside lane is an effective way to accommodate bicyclists riding in the same lane with motor vehicles. With a wide outside lane, motorists do not have to change lanes to pass a bicyclist. The additional width in the outside lane also improves sight distance and provides more room for vehicles to turn onto the roadway. Therefore, on roadways with bicycle traffic, widening the outside lane can improve the capacity of that roadway. Also, by widening the outside lane by a few extra feet both motorists and bicyclists have more space in which to maneuver. This facility type is generally considered for use in urban, suburban, and occasionally rural conditions on roadways where there is a curb and gutter. Wide outside lanes can be applied to several different roadway cross sections.

B-3: Bicycle Lanes on Collector Streets

Bicycle lanes may be considered when it is desirable to delineate road space for preferential use by cyclists. Streets striped with bicycle lanes should be part of a connected bikeway system rather than being an isolated feature. Bicycle lanes function most effectively in mid-block situations by separating bicyclists from overtaking motor vehicles. Integrating bicyclists into complicated intersection traffic patterns can sometimes be problematic. Strip development areas, or roadways with a high number of commercial driveways, tend to be less suitable for bicycle lanes due to frequent and unpredictable motorist turning movements across the path of straight-through cyclists. Striped bike lanes can be effective as a safety treatment, especially for less experienced bicyclists. Two-lane residential/collector streets with lower traffic volume, low-posted speed limit, adequate roadway width for both bike lanes and motor vehicle travel lanes, and an absence of complicated intersections. A median-divided multi-lane roadway with lower traffic volumes and a low volume of right and left turning traffic would be a more appropriate location for bicycle lanes than a high traffic volume undivided multi-lane roadway with a continuous center turn lane. Most bicyclists will choose a route that combines direct access with lower traffic volumes. An origin and destination of less than 4 miles is desirable to generate usage on a facility.

B-4: Wide Paved Shoulders

On urban streets with curb and gutter, wide outside lanes and bicycle lanes are usually the preferred facilities. Shoulders for bicycle use are not typically provided on roadways with curb and gutter. On rural roadways where bicycle travel is common, such as roads in coastal resort areas, wide paved shoulders

are highly desirable. On secondary roadways without curb and gutter where there are few commercial driveways and intersections with other roadways, many bicyclists prefer riding on wide, smoothly paved shoulders.

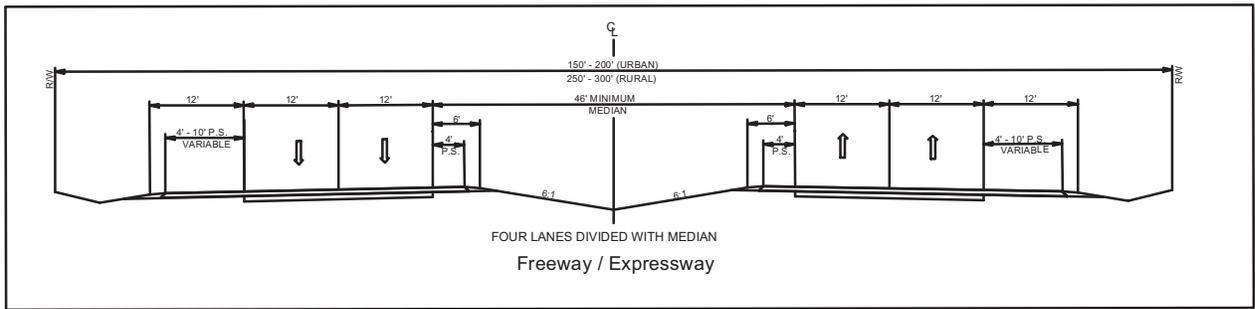
B-5: Multi-use Pathway

When properly located, multi-use pathway can be a safer type of facility for novice and child bicyclists because they do not have to share the path with motor vehicles. The design standards used for this cross section provides adequate width for two-directional use by both cyclists and pedestrians, provisions of good sight distance, avoidance of steep grades and tight curves, and minimal cross-flow by motor vehicles. A multi-use pathway can serve a variety of purposes, including recreation and transportation. This pathway should not be located immediately adjacent to a roadway because of safety considerations at intersections with driveways and roads. Sidewalks should never be used as a multi-use pathway.

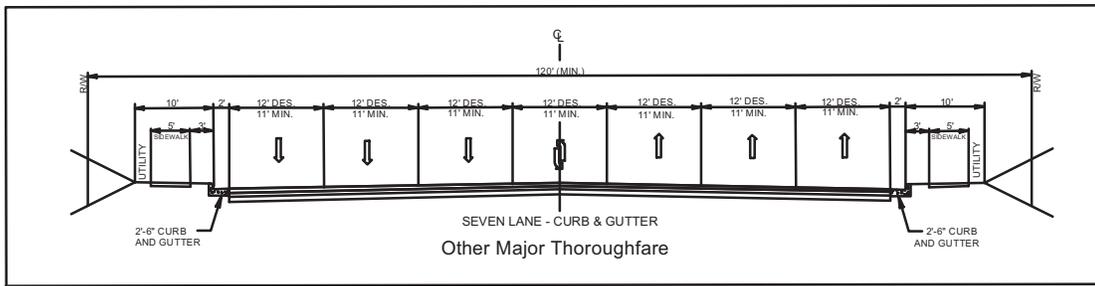
Appendix D

TYPICAL HIGHWAY CROSS SECTIONS

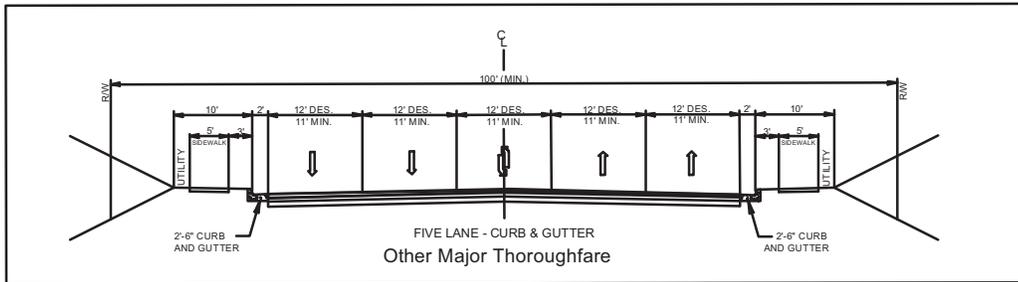
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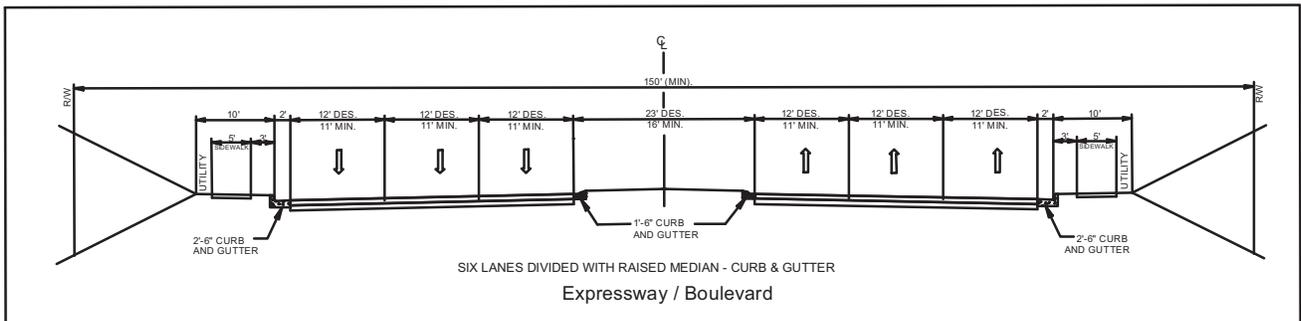
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C

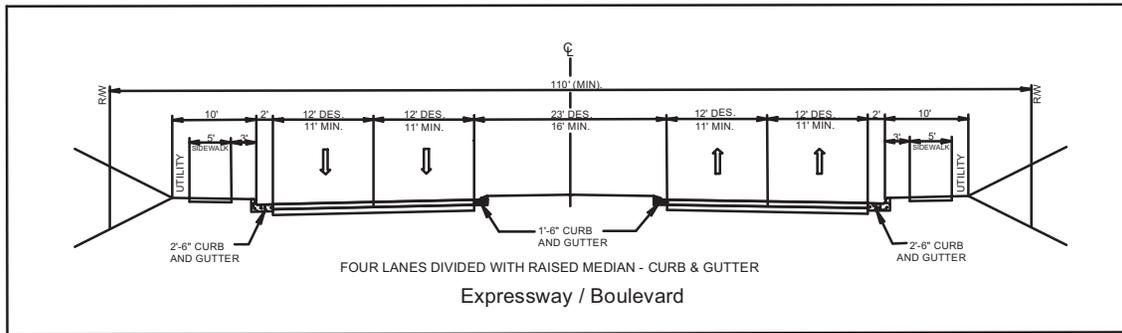


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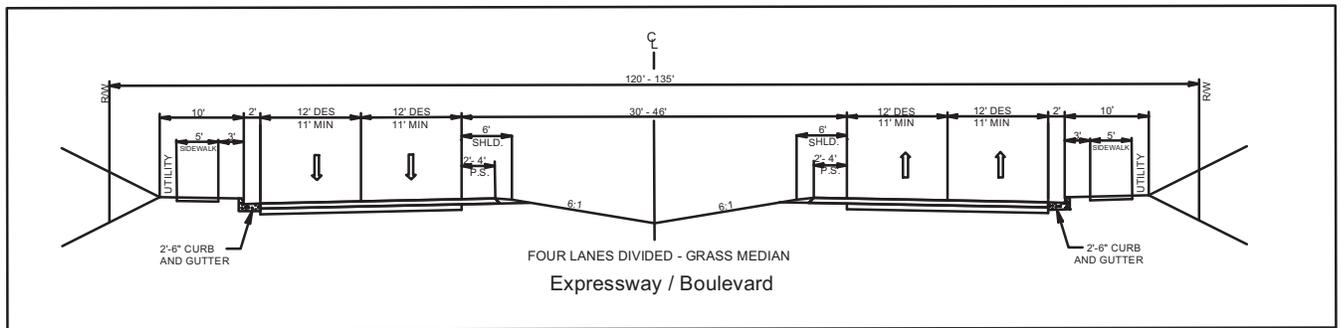


TYPICAL HIGHWAY CROSS SECTIONS

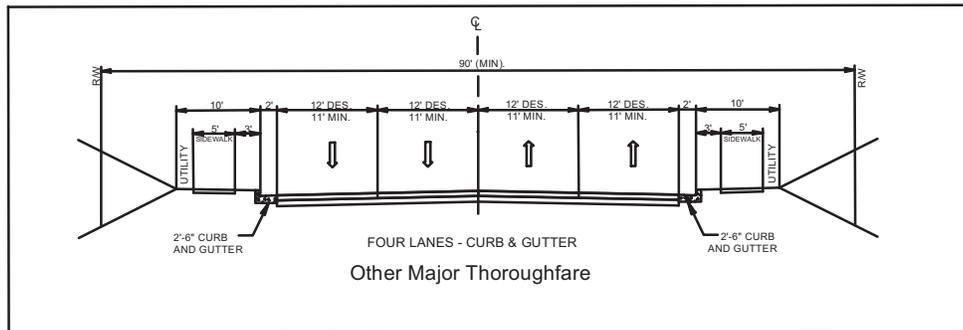
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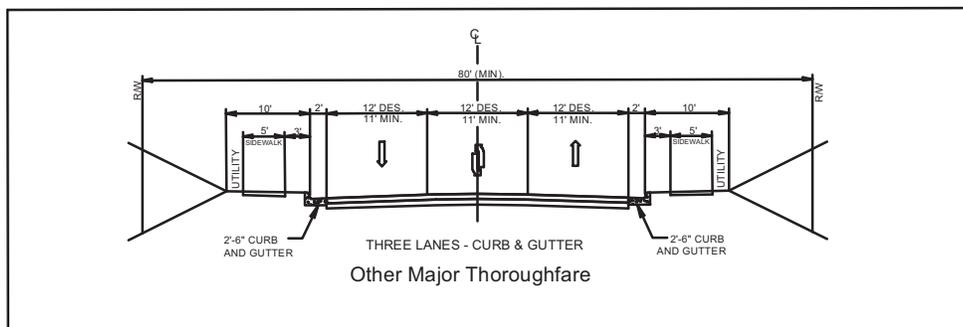
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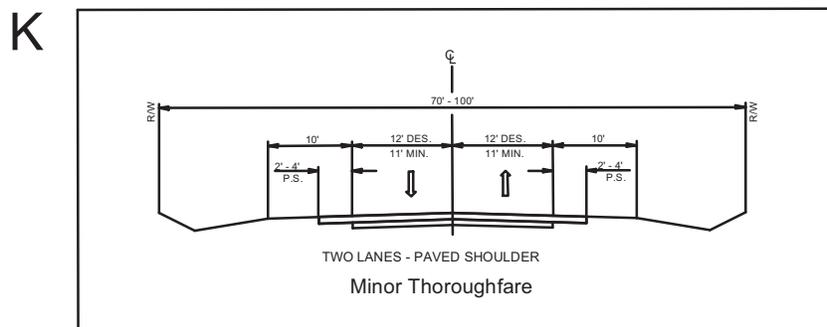
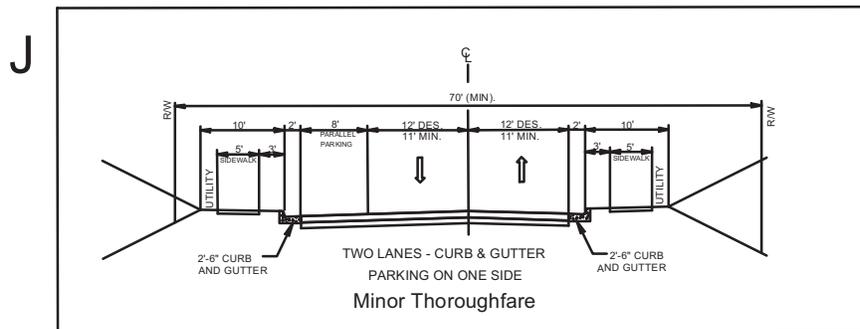
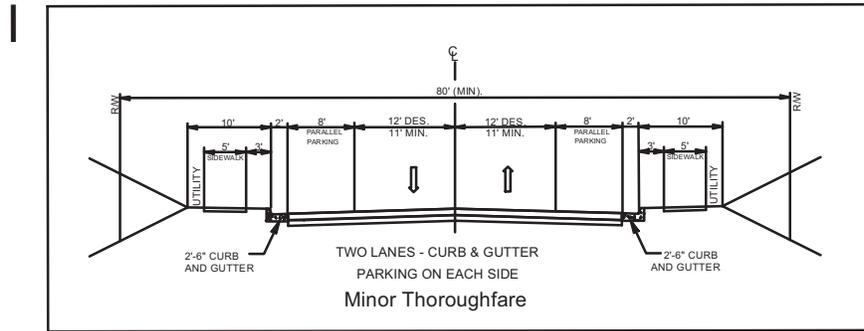
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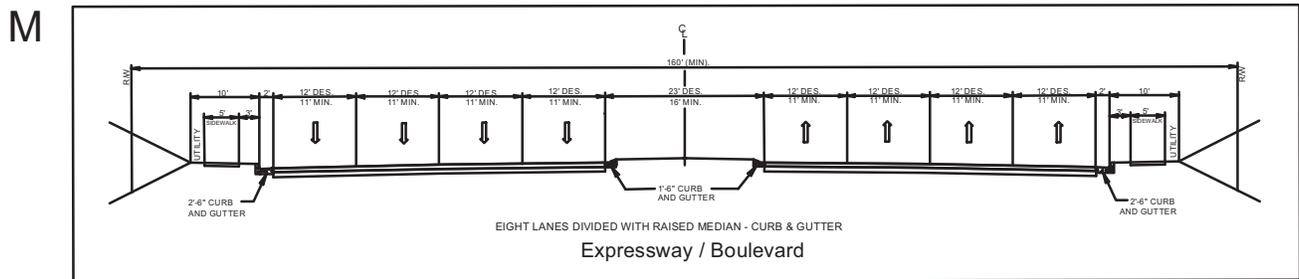
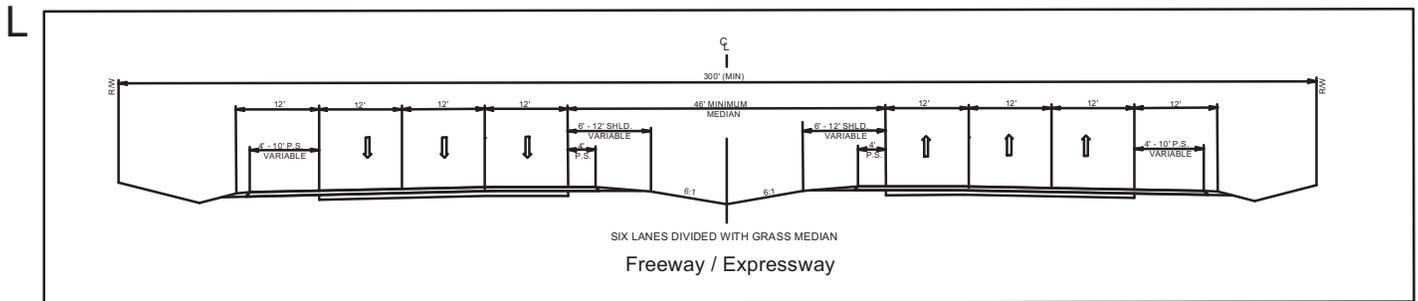
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TYPICAL HIGHWAY CROSS SECTIONS



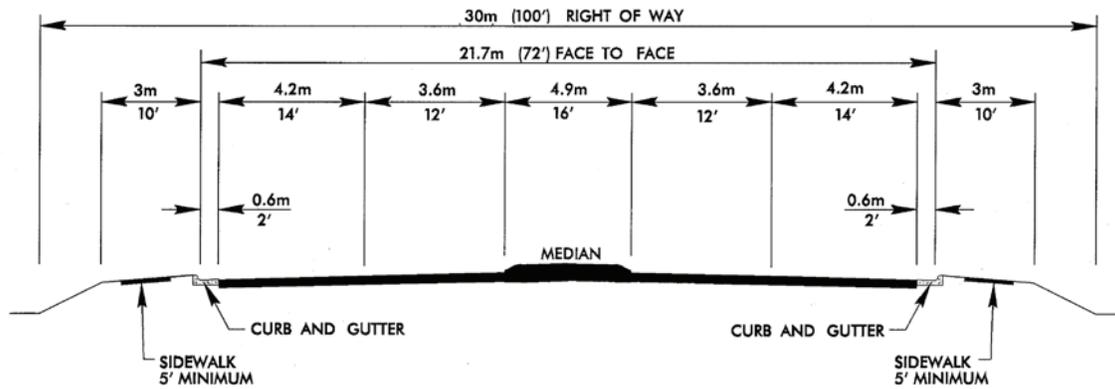
TYPICAL HIGHWAY CROSS SECTIONS



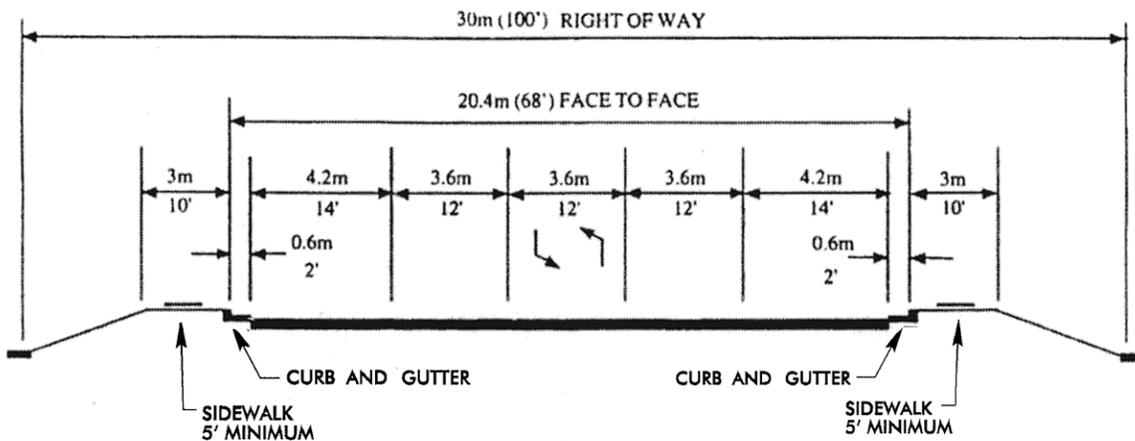
Typical Bicycle Cross Sections

WIDE CURB LANES

B-1 4-LANE MEDIAN DIVIDED TYPICAL SECTION With Wide Outside Lanes



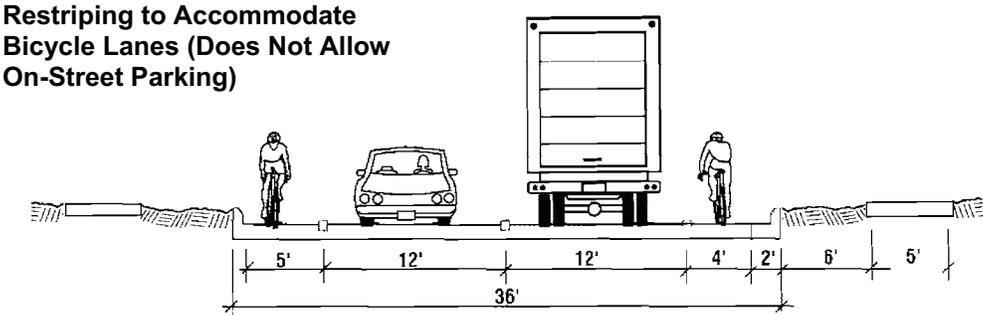
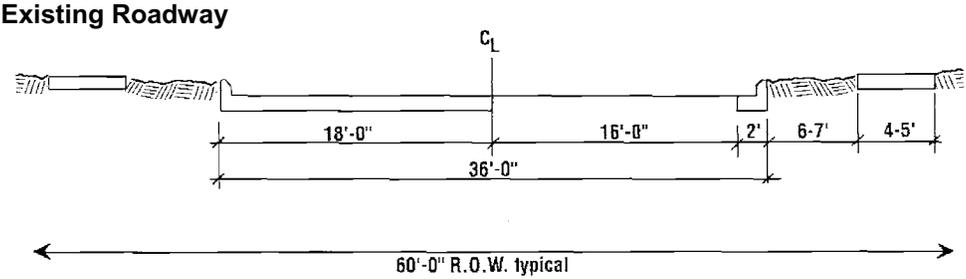
B-2 5-LANE TYPICAL SECTION With Wide Outside Lanes



D-11

Typical Bicycle Cross Sections

B-3 BICYCLE LANES ON COLLECTOR STREETS

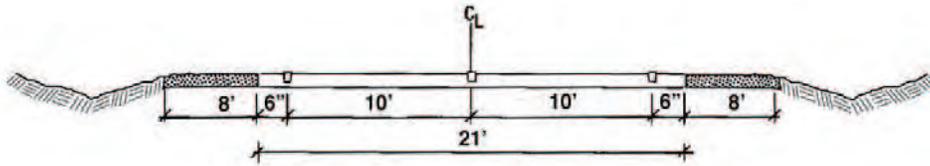


Typical Bicycle Cross Sections

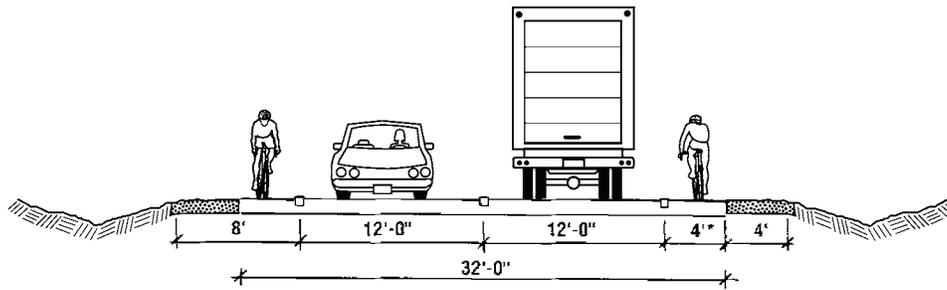
B-4

WIDE PAVED SHOULDERS

Existing Roadway



**Roadway Retrofitted with
4-Ft Paved Shoulders**

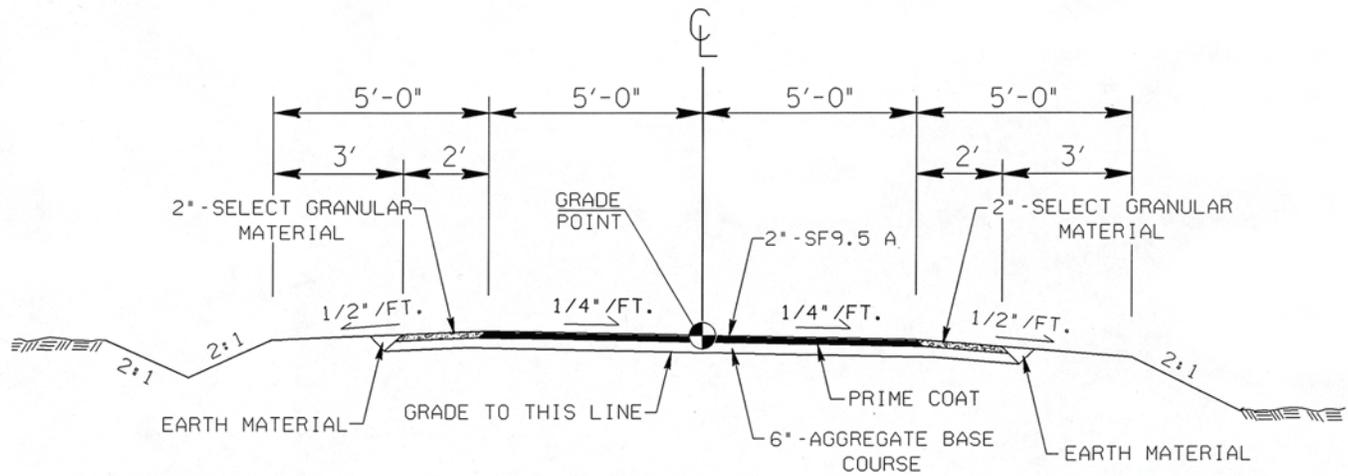


* If speeds are higher than 40 mph,
shoulder widths greater than 4' are
recommended.

D-13

Typical Bicycle Cross Sections

B-5 RECOMMENDED TYPICAL SECTION OF 10-FT ASPHALT PATHWAY With 2-Ft Select Material Shoulder



Appendix E

Recommended Subdivision Ordinances

Definitions

Rural Roads

- *Principal Arterial* - A rural link in a highway system serving travel, and having characteristics indicative of substantial statewide or interstate travel and existing solely to serve traffic. This network would consist of Interstate routes and other routes designated as principal arterials.
- *Minor Arterial* - A rural roadway joining cities and larger towns and providing intra-state and inter-county service at relatively high overall travel speeds with minimum interference to through movement.
- *Major Collector* - A road that serves major intra-county travel corridors and traffic generators and provides access to the arterial system.
- *Minor Collector* - A road that provides service to small local communities and traffic generators and provides access to the major collector system.
- *Local Road* - A road that serves primarily to provide access to adjacent land over relatively short distances.

Urban Streets

- *Major Thoroughfares* - Major thoroughfares consist of inter-state, other freeway, expressway, or parkway roads, and major streets that provide for the expeditious movement of high volumes of traffic within and through urban areas.
- *Minor Thoroughfares* - Minor thoroughfares perform the function of collecting traffic from local access streets and carrying it to the major thoroughfare system. Minor thoroughfares may be used to supplement the major thoroughfare system by facilitating minor through traffic movements and may also serve abutting property.
- *Local Street* - A local street is any street not on a higher order urban system and serves primarily to provide direct access to abutting land.

Specific Type Rural or Urban Streets

- *Freeway, expressway, or parkway* - Divided multilane roadways designed to carry large volumes of traffic at high speeds. A *freeway* provides for continuous flow of vehicles with no direct access to abutting property and with access to selected crossroads only by way of interchanges. An *expressway* is a facility with full or partial control of access and generally with grade separations at major intersections. A *parkway* is for non-commercial traffic, with full or partial control of access.

- *Residential Collector Street* - A local street which serves as a connector street between local residential streets and the thoroughfare system. Residential collector streets typically collect traffic from 100 to 400 dwelling units.
- *Local Residential Street* - Cul-de-sacs, loop streets less than 2,500 feet in length, or streets less than 1.0 mile in length that do not connect thoroughfares, or serve major traffic generators, and do not collect traffic from more than 100 dwelling units.
- *Cul-de-sac* - A short street having only one end open to traffic and the other end being permanently terminated and a vehicular turn-around provided.
- *Frontage Road* - A road that is parallel to a partial or full access controlled facility and provides access to adjacent land.
- *Alley* - A strip of land, owned publicly or privately, set aside primarily for vehicular service access to the backside of properties otherwise abutting on a street.

Property

- *Building Setback Line* - A line parallel to the street in front of which no structure shall be erected.
- *Easement* - A grant by the property owner for use by the public, a corporation, or person(s), of a strip of land for a specific purpose.
- *Lot* - A portion of a subdivision, or any other parcel of land, which is intended as a unit for transfer of ownership or for development or both. The word "lot" includes the words "plat" and "parcel".

Subdivision

- *Subdivider* - Any person, firm, corporation or official agent thereof, who subdivides or develops any land deemed to be a subdivision.
- *Subdivision* - All divisions of a tract or parcel of land into two or more lots, building sites, or other divisions for the purpose, immediate or future, of sale or building development and all divisions of land involving the dedication of a new street or change in existing streets. The following shall not be included within this definition nor subject to these regulations:
 - the combination or re-combination of portions of previously platted lots where the total number of lots is not increased and the resultant lots are equal to or exceed the standards contained herein
 - the division of land into parcels greater than 10 acres where no street right-of-way dedication is involved
 - the public acquisition, by purchase, of strips of land for the widening or the opening of streets
 - the division of a tract in single ownership whose entire area is no greater than 2 acres into not more than three lots, where no street right-of-way dedication is involved and where the resultant lots are equal to or exceed the standards contained herein.

- *Dedication* - A gift, by the owner, of his property to another party without any consideration being given for the transfer. The dedication is made by written instrument and is completed with an acceptance.
- *Reservation* - Reservation of land does not involve any transfer of property rights. It constitutes an obligation to keep property free from development for a stated period of time.

Design Standards

The design of all roads within the Planning Area shall be in accordance with the accepted policies of the North Carolina Department of Transportation, Division of Highways, as taken or modified from the American Association of State Highway and Transportation Officials (AASHTO) manual.

The provision of street rights-of-way shall conform and meet the recommendations of the transportation plan, as adopted by the municipality. The proposed street layout shall be coordinated with the existing street system of the surrounding area. Normally the proposed streets should be the extension of existing streets if possible.

Right-of-way Widths

Right-of-way widths shall not be less than the following and shall apply except in those cases where right-of-way requirements have been specifically set out in the transportation plan.

The subdivider will only be required to dedicate a maximum of 100 feet of right-of-way. In cases where over 100 feet of right-of-way is desired, the subdivider will be required only to reserve the amount in excess of 100 feet. On all cases in which right-of-way is sought for a fully controlled access facility, the subdivider will only be required to make a reservation. It is strongly recommended that subdivisions provide access to properties from internal streets, and that direct property access to major thoroughfares, principle and minor arterials, and major collectors be avoided. Direct property access to minor thoroughfares is also undesirable.

A partial width right-of-way, not less than 60 feet in width, may be dedicated when adjoining undeveloped property that is owned or controlled by the subdivider; provided that the width of a partial dedication be such as to permit the installation of such facilities as may be necessary to serve abutting lots. When the said adjoining property is sub-divided, the remainder of the full required right-of-way shall be dedicated. Minimum right-of-way requirements are shown in Table E-1.

Table E-1

Minimum Right-of-way Requirements		
Area Classification	Functional Classification	Minimum ROW
Rural	Principal Arterial (Freeway)	350 feet
	Principal Arterial (Other)	200 feet
	Minor Arterial	100 feet
	Major Collector	100 feet
	Minor Collector	80 feet
	Local Road (see note #1)	60 feet
Urban	Major Thoroughfare	90 feet
	Minor Thoroughfare	70 feet
	Local Street	60 feet
	Cul-de-sac (See note #2)	varies

1) The desirable minimum right-of-ways is 60 feet. If curb and gutter is provided, 50 feet of ROW is adequate on local residential streets.

2) The ROW dimension will depend on the radius used for vehicle turn-a-around. Distance from edge of pavement of turn-a-around to ROW should not be less than distance from edge of pavement to ROW on street approaching turn-a-around.

Street Widths

Widths for street and road classifications other than local shall be as recommended by the transportation plan. Width of local roads and streets shall be as follows:

- *Local Residential*
 - Curb and Gutter section - 26 feet, face to face curb
 - Shoulder section - 20 feet to edge of pavement, 4 feet for shoulders
- *Residential Collector*
 - Curb and Gutter section - 34 feet, face to face of curb
 - Shoulder section - 20 feet to edge of pavement, 6 feet for shoulders

Geometric Characteristics

The standards outlined below shall apply to all subdivision streets proposed for addition to the State Highway System or Municipal Street System. In cases where a subdivision is sought adjacent to a proposed thoroughfare corridor, the requirements of dedication and reservation discussed under right-of-way shall apply.

- *Design Speed* - The design speed for a roadway should be a minimum of 5 mph greater than the posted speed limit. The design speeds for subdivision type streets are shown in Table E-2.
- *Minimum Sight Distance* - In the interest of public safety, no less than the minimum sight distance applicable shall be provided. Vertical curves that connect each change in grade shall be provided and calculated using the parameters set forth in Table E-3.
- *Superelevation* - Table E-4 shows the minimum radius and the related maximum superelevation for design speeds. The maximum rate of roadway superelevation (e) for rural roads with no curb and gutter is 0.08. The maximum rate of superelevation for urban streets with curb and gutter is 0.06, with 0.04 being desirable.
- *Maximum and Minimum Grades* - The maximum grades in percent are shown in Table E-5. Minimum grade should not be less than 0.5%. Grades for 100 feet each way from intersections (measured from edge of pavement) should not exceed 5%.

Table E-2

Facility Type	Design Speed (mph)		
	Desirable	Minimum Level	Rolling
<i>Rural</i>			
Minor Collector Roads (AADT Over 2000)	60	50	40
Local Roads ¹ (AADT Over 400)	50	*50	*40
<i>Urban</i>			
Major Thoroughfares ²	60	50	40
Minor Thoroughfares	40	30	30
Local Streets	30	**30	**20

*Based on AADT of 400-750. Where roads serve limited area and small number of units, reduce minimum design speed. **Based on projected ADT of 50-250. (Refer to NCDOT Roadway Design Manual page 1-1B)

¹ Local Roads including Residential Collectors and Local Residential.

² Major Thoroughfares other than Freeways or Expressways.

Table E-3

Sight Distance						
Design Speed (mph)	Stopping Sight Distance (feet)		Minimum K ¹ Values (feet)		Passing Sight Distance (feet)	
	Desirable	Minimum	Crest Curve	Sag Curve	For 2-lanes	
30	200	200	30	40	1100	
40	325	275	60	60	1500	
50	475	400	110	90	1800	
60	650	525	190	120	2100	

Note: General practice calls for vertical curves to be multiples of 50 feet. Calculated lengths shall be rounded up in each case. (Reference NCDOT Roadway Design Manual page 1-12 T-1)

¹K is a coefficient by which the algebraic difference in grade may be multiplied to determine the length of the vertical curve, which will provide the desired sight distance. Sight distance provided for stopped vehicles at intersections should be in accordance with "A Policy on Geometric Design of Highways and Streets, 1990".

Table E-4

Superelevation						
Design Speed (mph)	Minimum Radius of Maximum e ¹			Maximum Degree of Curve		
	e=0.04	e=0.06	e=0.08	e=0.04	e=0.06	e=0.08
30	302	273	260	19 00'	21 00'	22 45'
60	573	521	477	10 00'	11 15'	12 15'
80	955	955	819	6 00'	6 45'	7 30'
100	1,637	1,432	1,146	3 45'	4 15'	4 45'

¹ e = rate of roadway superelevation, foot per foot

Note: (Reference NCDOT Roadway Design Manual page 1-12 T-6 thru T-8)

Table E-5

Maximum Vertical Grade				
Facility Type and Design Speed (mph)	Minimum Grade in Percent			
	Flat	Rolling	Mountainous	
RURAL				
Minor Collector Roads*				
20	7	10	12	
30	7	9	10	
40	7	8	10	
50	6	7	9	
60	5	6	8	
70	4	5	6	
Local Roads* ¹				
20	-	11	16	
30	7	10	14	
40	7	9	12	
50	6	8	10	
60	5	6	-	
URBAN				
Major Thoroughfares ²				
30	8	9	11	
40	7	8	10	
50	6	7	9	
60	5	6	8	
Minor Thoroughfares*				
20	9	12	14	
30	9	11	12	
40	9	10	12	
50	7	8	10	
60	6	7	9	
70	5	6	7	
Local Streets*				
20	-	11	16	
30	7	10	14	
40	7	9	12	
50	6	8	10	
60	5	6	-	

Note: *For streets and roads with projected annual average daily traffic less than 250 or short grades less than 500 ft long, grades may be 2% steeper than the values in the above table. (Reference NCDOT Roadway Metric Design Manual page 1-12 T-3)

¹ Local Roads including Residential Collectors and Local Residential.

² Major Thoroughfares other than Freeways or Expressways.

Intersections

1. Streets shall be laid out so as to intersect as nearly as possible at right angles, and no street should intersect any other street at an angle less than sixty-five (65) degrees.
2. Property lines at intersections should be set so that the distance from the edge of pavement, of the street turnout, to the property line will be at least as great as the distance from the edge of pavement to the property line along the intersecting streets. This property line can be established as a radius or as a sight triangle. Greater offsets from the edge of pavement to the property lines will be required, if necessary, to provide sight distance for the stopped vehicle on the side street.
3. Offset intersections are to be avoided. Intersections that cannot be aligned should be separated by a minimum length of 200 feet between survey centerlines.

Cul-de-sacs

Cul-de-sacs shall not be more than 500 feet in length. The distance from the edge of pavement on the vehicular turn around to the right-of-way line should not be less than the distance from the edge of pavement to right-of-way line on the street approaching the turn around. Cul-de-sacs should not be used to avoid connection with an existing street or to avoid the extension of an important street.

Alleys

1. Alleys shall be required to serve lots used for commercial and industrial purposes except that this requirement may be waived where other definite and assured provisions are made for service access. Alleys shall not be provided in residential subdivisions unless necessitated by unusual circumstances.
2. The width of an alley shall be at least 20 feet.
3. Dead-end alleys shall be avoided where possible, but if unavoidable, shall be provided with adequate turn around as may be required by the planning board.

Permits for Connection to State Roads

An approved permit is required for connection to any existing state system road. This permit is required prior to any construction on the street or road. The application is available at the office of the District Engineer of the Division of Highways.

Offsets To Utility Poles

Poles for overhead utilities should be located clear of roadway shoulders, preferably a minimum of at least 30 feet from the edge of pavement. On streets with curb and gutter, utility poles shall be set back a minimum distance of 6 feet from the face of curb.

Wheel Chair Ramps

All street curbs being constructed or reconstructed for maintenance purposes, traffic operations, repairs, correction of utilities, or altered for any reason, shall provide wheelchair ramps for the physically handicapped at intersections where both curb and gutter and sidewalks are provided and at other major points of pedestrian flow.

Horizontal Width on Bridge Deck

The clear roadway widths for new and reconstructed bridges serving two-lane, two-way traffic should be as follows:

- shoulder section approach:
 - * under 800 ADT design year - minimum 28 feet width face to face of parapets, rails, or pavement width plus 10 feet, whichever is greater,
 - * 800 - 2000 ADT design year - minimum 34 feet width face to face of parapets, rails, or pavement width plus 12 feet, whichever is greater,
 - * over 2000 ADT design year - minimum width of 40 feet, desirable width of 44 feet width face to face of parapets or rails;
- curb and gutter approach:
 - * under 800 ADT design year - minimum 24 feet face to face of curbs,
 - * over 800 ADT design year - width of approach pavement measured face to face of curbs,
 - * where curb and gutter sections are used on roadway approaches, curbs on bridges shall match the curbs on approaches in height, in width of face to face curbs, and in crown drop; the distance from face of curb to face of parapet or rail shall be a minimum of 1.5 feet, or greater if sidewalks are required.

The clear roadway widths for new and reconstructed bridges having 4 or more lanes serving undivided two-way traffic should be as follows:

- shoulder section approach - width of approach pavement plus width of usable shoulders on the approach left and right. (shoulder width 8 feet minimum, 10 feet desirable)
- curb and gutter approach - width of approach pavement measured face to face of curbs.

Appendix F

Existing Transportation Plans

There are currently two existing transportation plans within Caswell County, they are as follows:

- | | |
|-------------------------|--------------------------------|
| The Caswell County | – Completed 1992 (Not adopted) |
| The Town of Yanceyville | – Completed 1992 (Not adopted) |



FIGURE 9
THOROUGHFARE PLAN
CASWELL COUNTY
NORTH CAROLINA

PREPARED BY THE
 NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS-PLANNING AND ENVIRONMENTAL BRANCH
 IN COOPERATION WITH
 U.S. DEPARTMENT OF TRANSPORTATION
 FEDERAL HIGHWAY ADMINISTRATION
JULY 9, 1992

LEGEND

ROADWAY CLASSIFICATION	EXISTING	PROPOSED
PRINCIPAL ARTERIALS		
MINOR ARTERIALS		
MAJOR COLLECTORS		
MINOR COLLECTORS		
URBAN MAJOR THOROUGHFARE		
INTERCHANGE		
URBAN THOROUGHFARE PLANNING AREA BOUNDARY		

LEGEND

	ROAD		ROAD THROUGH MOUNTAIN PASS
	4-LANE UNDIVIDED HIGHWAY		MINOR BRIDGE
	DIVIDED HIGHWAY		GRADE OVER JO BRIDGE
	INTERSTATE HIGHWAY		UNDERPASS
	U.S. NUMBERED HIGHWAY		RAILROAD TUNNEL
	STATE HIGHWAY		FOOD
	SECONDARY ROAD NUMBER		STATE LINE
	RAILROAD, ANY NUMBER OF TRACKS		COUNTY LINE
	RAILROAD, ONE TRACK OPERATING COMPANY		5 FT. LIGHTS
	RAILROAD, TWO TRACKS OPERATING COMPANIES		REGISTRATION OR TOWN BOUNDARY
	RAILROAD, ONE TRACK, ONE OPERATING COMPANY		COUNTY MEET
	RAILROAD, ONE TRACK, ONE OPERATING COMPANY, ONE TRACK UNDER CONSTRUCTION		UTILITY TOWER AND TOWER
	RAILROAD STATION		TRAMWAY STATION
	RAILROAD CROSSING		CLIFF
	UNDERPASS		PAVE SURFACES OF PAVEMENT COURSE
	DITCH		POWER PLANT
	RAILROAD TUNNEL		POWER SUBSTATION
	RAILROAD, ONE TRACK, ONE OPERATING COMPANY, ONE TRACK UNDER CONSTRUCTION		SCHOOL
	RAILROAD, ONE TRACK, ONE OPERATING COMPANY, ONE TRACK UNDER CONSTRUCTION		POST OFFICE
	RAILROAD, ONE TRACK, ONE OPERATING COMPANY, ONE TRACK UNDER CONSTRUCTION		WATER TOWER
	RAILROAD, ONE TRACK, ONE OPERATING COMPANY, ONE TRACK UNDER CONSTRUCTION		CHURCH
	RAILROAD, ONE TRACK, ONE OPERATING COMPANY, ONE TRACK UNDER CONSTRUCTION		COLLEGE OR UNIVERSITY
	RAILROAD, ONE TRACK, ONE OPERATING COMPANY, ONE TRACK UNDER CONSTRUCTION		HOSPITAL
	RAILROAD, ONE TRACK, ONE OPERATING COMPANY, ONE TRACK UNDER CONSTRUCTION		ARMORY
	RAILROAD, ONE TRACK, ONE OPERATING COMPANY, ONE TRACK UNDER CONSTRUCTION		MUNICIPAL HALL
	RAILROAD, ONE TRACK, ONE OPERATING COMPANY, ONE TRACK UNDER CONSTRUCTION		LIBRARY, POST OFFICE
	RAILROAD, ONE TRACK, ONE OPERATING COMPANY, ONE TRACK UNDER CONSTRUCTION		PAVE SURFACES OF PAVEMENT COURSE
	RAILROAD, ONE TRACK, ONE OPERATING COMPANY, ONE TRACK UNDER CONSTRUCTION		RAILROAD, ONE TRACK, ONE OPERATING COMPANY, ONE TRACK UNDER CONSTRUCTION



ADOPTED BY:
 CASWELL COUNTY

RECOMMENDED FOR APPROVAL BY:
 NC DEPARTMENT OF TRANSPORTATION
 STATEWIDE PLANNING BRANCH

ADOPTED BY:
 NC DEPARTMENT OF TRANSPORTATION

PUBLIC HEARING:
 CASWELL COUNTY JUNE 18, 1992

TOWN OF YANCEYVILLE

CASWELL COUNTY
NORTH CAROLINA

PREPARED BY THE
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS PLANNING AND ENVIRONMENTAL BRANCH
U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
March 2, 1992



LEGEND		
HIGHWAY CLASSIFICATION	EXISTING	PROPOSED
MAJOR THOROUGHFARE		
MINOR THOROUGHFARE		
INTERCHANGE		

RECOMMENDED THOROUGHFARE PLAN



Appendix G Public Involvement

As part of the public involvement process, a goals and objective survey was conducted in the later part of 2006. The survey was mailed out to Caswell County residents with their monthly water bills and was also available online. The survey results are summarized below.

Goal	Very Important	Important	Not Important	Response Total
Increase Transportation Choices	76 41.3%	68 37.0%	40 21.7%	184
Increase Public Transportation Options	79 42.7%	57 30.8%	49 26.5%	185
Faster Automobile Travel Times	53 28.2%	58 30.9%	77 41.0%	188
Preserve Community and Rural Character	122 64.2%	56 29.5%	12 6.3%	190
Protect the Environment	128 68.4%	50 26.7%	9 4.8%	187
Support Economic Growth	114 61.0%	55 29.4%	18 9.6%	187
Improve Services for Special Needs	95 50.8%	78 41.7%	14 7.5%	187

Strategy	Very Important	Important	Not Important	Response Total
Build additional traffic lanes	62 38.3%	55 34.0%	45 27.8%	162
Control the frequency and location of driveways and cross-streets accessing the road	57 31.5%	86 47.5%	38 21.0%	181
Make improvements to intersections and signal timing	86 46.5%	76 41.1%	23 12.4%	185

Desired Access to Activity Centers and Major Roads	Very Desirable			Less Desirable		Response Total
	1	2	3	4	5	
Triangle Area	60 41.1%	34 23.3%	27 18.5%	17 11.6%	8 5.5%	146
Triad Area	42 28.4%	43 29.1%	41 27.7%	14 9.5%	8 5.4%	148
Danville Virginia	64 42.4%	38 25.2%	27 17.9%	16 10.6%	6 4.0%	151
Reidsville North Carolina	23 16.1%	28 19.6%	35 24.5%	42 29.4%	15 10.5%	143
US 29	45 34.6%	25 19.2%	23 17.7%	32 24.6%	5 3.8%	130
NC 86	81 60.9%	26 19.5%	23 17.3%	2 1.5%	1 0.8%	133
US 158	41 31.3%	34 26.0%	39 29.8%	13 9.9%	4 3.1%	131
NC 119	23 18.9%	20 16.4%	33 27.0%	35 28.7%	11 9.0%	122

Appendix H

Local Initiative Bike Route Map

In 2005, the Piedmont Triad RPO completed their RPO Bicycle Study for the region, which includes the CTP study area. Copies of the maps and the description of the routes are included in this appendix.

Caswell County Bike Routes

Caswell County's sparse rural population makes it a wonderful place to bicycle with little traffic congestion and much scenic beauty. Caswell County has more 18th and 19th century dwellings and structures ranging from the Grandeur of 18th century tobacco plantations to early settler log cabins and farm buildings. You'll find that the Caswell County automobile drivers will "share the road" with cyclists and usually move over to pass cyclists in the opposite lanes of travel. We hope you will enjoy your cycling adventures in Caswell County and will come back often.

Route 1 – Bright Leaf Loop – 19.6 Miles (Route 1 - Bright Leaf Loop - 19.6 Miles)

This route takes riders past the historic Slade Hill farm and the discovery site of the Bright Leaf tobacco curing process. The route has many long hills and should be considered difficult for novice cyclists.

Route 2 – Milton Loop – 20.8 miles

This route takes riders through historic Milton. Incorporated in 1796, Milton is one of the oldest towns in Caswell County. Just into Virginia is the Virginia International Raceway (VIR), which is one of the best automotive road racing courses in North America and host to many sports car and Rolex series races. Just south of Semora on Highway 19 is Red House Presbyterian Church, which was founded in 1756. General Cornwallis ransacked much of this community after chasing General Nathaniel Greene to the Dan River in February of 1781. Along this route, riders will find many 19th century homes and farm buildings. Overall, this route is fairly flat with only a few hills, mainly from Milton to VIR, the Snatchburg Road and Longs Mill Road.

Route 3 – Hyco Lake Loop – 22.0 miles

This route takes riders through historic Leasburg, the original county seat when Caswell County was formed in 1777. Riders will find many 19th century homes in Leasburg. Also along the route riders will pass by historic Griers Presbyterian Church, founded in by Hugh McAden in 1753. The existing church building was constructed in 1856. This pleasant route is generally easy, smooth riding with a few long hills along Griers Church Road, NC 119 near Hyco Lake and the Osmond Road crossing Hyco Lake.

Route 4 – Cherry Grove Loop – 22.3 miles

This route takes riders through some of the best and most productive farmland in Caswell County and the historic Camp Springs Community. The route is relatively easy with very few steep hills.

Route 5 – Milesville Loop – 18.2 miles

This route takes rider past historic Locust Hill. The armies of both General Greene and General Cornwallis passed by this location during the "Race to the Dan" in February 1781. Brown's Store, built in 1780, is located at the intersection of Wagon Wheel Road and NC 150. The store served as a stage stop, country store and post office and is one of the oldest remaining commercial structures in North Carolina. This route is moderate with a few long hills mainly along Wagon Wheel Road and Stoney Creek School Road.

Route 6 – Game Lands Loop – 18.4 miles

On this route rider will experience the old and the new in highway construction. Badgett Sister's Parkway is "old NC 62" and features two (2) one lane bridges built in 1922 over Country Line

Creek. This section of the route runs through the Caswell Game Lands with many tight turns and steep hills that will make some riders think they're in the mountains. The route also passes by the historic Courthouse in Yanceyville. Recently renovated and listed in the National Register of Historic Places, the courthouse was constructed between 1857 and 1861 and is one of the most beautiful Italianate-Victorian Courthouses remaining in North Carolina. The Badgett Sisters Parkway is hilly and steep with many sharp curves and should be considered difficult for novice cyclists.

Route 7 – Park Springs Loop – 19.8 miles

This route travels along some of the highest points in the County and offers riders many beautiful views of the county. Along this route, riders will pass by many 19th century plantation homes. The route is moderate with a few long hills.

Route 8 – Pelham Loop – 15.8 miles

The Route features a stop at the Piedmont Triad Visitors Center, one of the best travel and tourism information centers in the state. Except for Park Spring Road section, this route has many long hills over the rough terrain typical of this rather isolated section of northwest Caswell County. Even into the early 20th Century, this area was a sparsely populated “frontier” country and the area still maintains much of that character. This route should be considered difficult for novice cyclists.

Connectors

The connectors serve as link between the various routes in the county enabling riders to customize their cycling routes for longer distances. By using the connectors, it is possible to circle the entire county.

Baynes Store Connector -10.7 miles

This connector links the Hyco Lake Loop (Route 3) to the Cherry Grove Loop (Route 4). The connector follows NC 119 to Baynes Store and follows Baynes Road to NC 62. The connector then crosses NC 62 and connects with Union Ridge Road on the Cherry Grove Loop. This connector is very easy with few hills.

Casville Connector – 10.7 miles

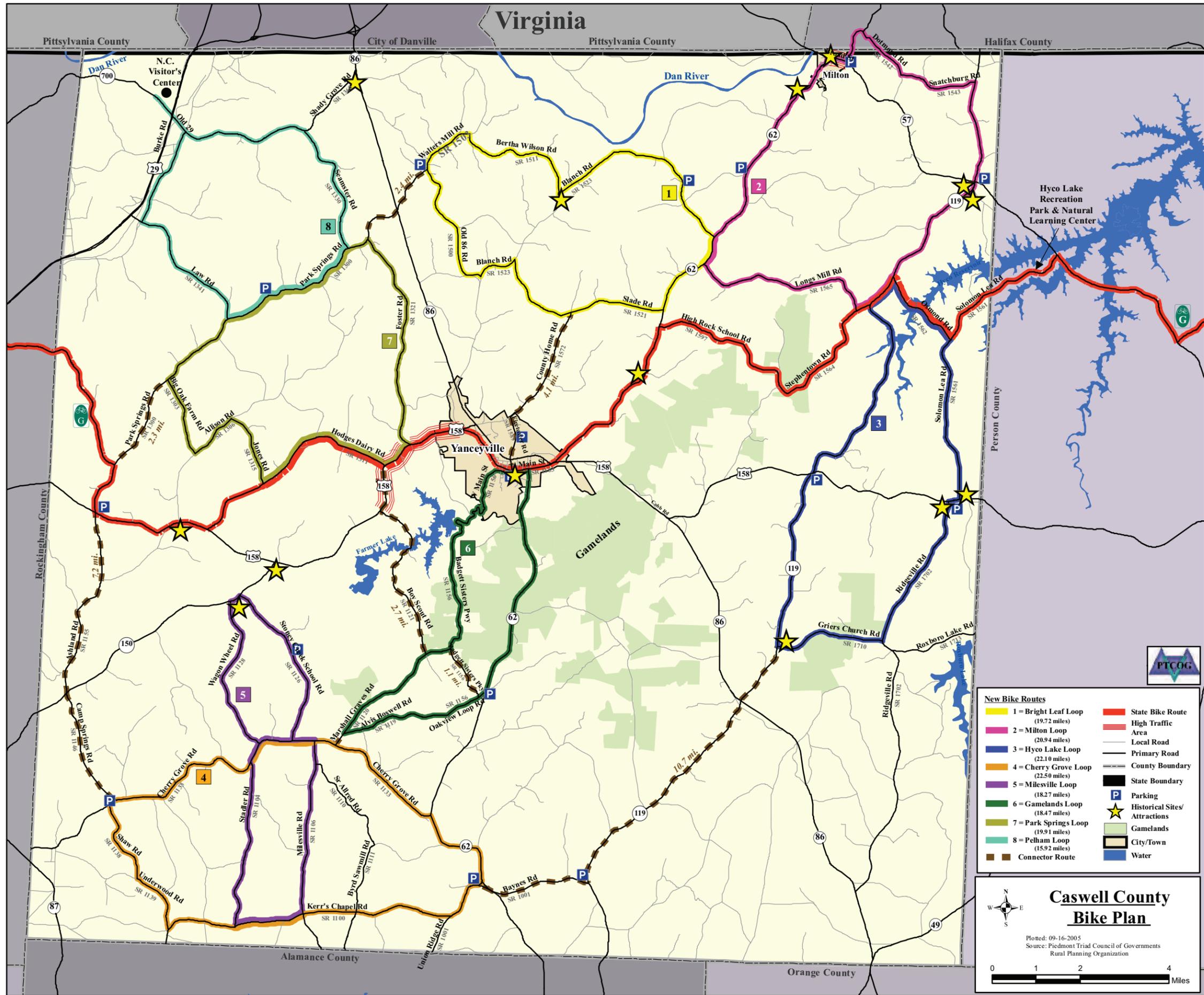
This connector links the Cherry Grove Loop (Route 4) to the Park Springs Loop (Route 7). The route runs from the Cherry Grove Road at Camp Springs along the Camp Springs Road to Ashland and then follows the Ashland Road to the Park Springs Road/US 158 intersection in Casville. Continue north on the Park Springs to Big Oak Farm Road where it connects to the Park Springs Loop (Route 7). It also connects with the Pelham Loop (Route 8) at Law Road. The route is very easy with few hills.

Park Springs Connector – 2.4 miles

This connector links the Park Springs Loop (Route 7) to the Bright Leaf Loop (Route 1) at the Providence Community. This connector is short, but hilly.

County Home Connector – 4.1 miles

This connector links the “Courthouse Square” in Yanceyville and the Gamelands Loop (Route 6) to the Bright Leaf Loop (Route 1). The route is very easy with one only hill going up Firetower Road to the County Home Road.

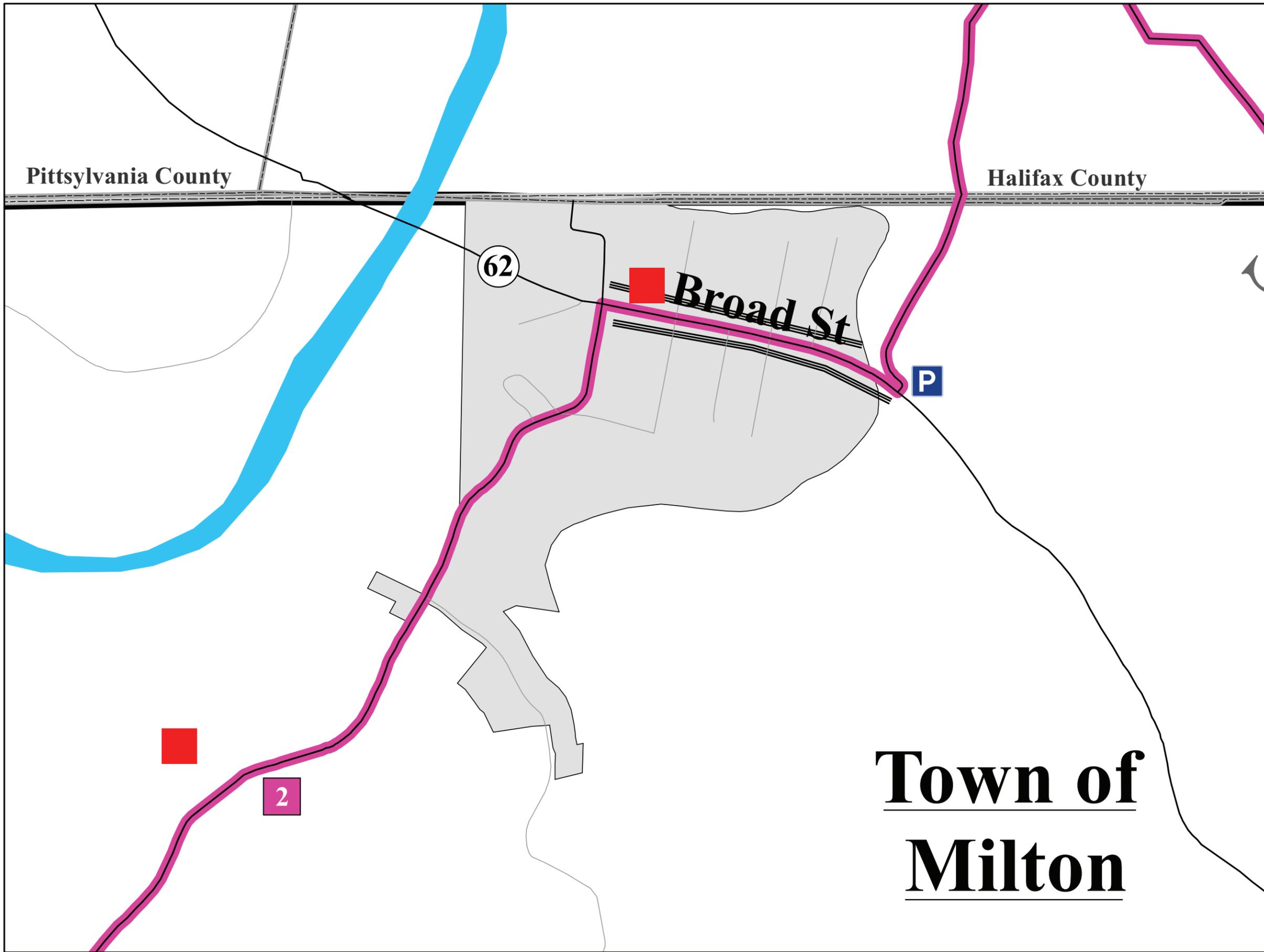


New Bike Routes

1 = Bright Leaf Loop (19.72 miles)	State Bike Route
2 = Milton Loop (20.94 miles)	High Traffic Area
3 = Hyco Lake Loop (22.10 miles)	Local Road
4 = Cherry Grove Loop (22.50 miles)	Primary Road
5 = Milesville Loop (18.27 miles)	County Boundary
6 = Gamelands Loop (18.47 miles)	State Boundary
7 = Park Springs Loop (19.91 miles)	Parking
8 = Pelham Loop (15.92 miles)	Historical Sites/Attractions
Connector Route	Gamelands
	City/Town
	Water


Caswell County
Bike Plan
 Plotted: 09-16-2005
 Source: Piedmont Triad Council of Governments
 Rural Planning Organization


 0 1 2 4 Miles



Pittsylvania County

Halifax County

62

Broad St

P

2

Town of
Milton

Town of Yanceyville

