



Comprehensive Transportation Plan



Rockingham County

October 2010

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In Cooperation with:

Rockingham County
City of Eden
Town of Madison
Town of Mayodan
City of Reidsville
Town of Stoneville
Town of Wentworth
Piedmont Triad Rural Planning Organization

October 2010



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Executive Summary

In July of 2008, the Transportation Planning Branch of the North Carolina Department of Transportation and Rockingham County initiated a study to cooperatively develop the Rockingham County Comprehensive Transportation Plan (CTP), which includes the City of Eden, the Town of Madison, the Town of Mayodan, the City of Reidsville, the Town of Stoneville, and the Town of Wentworth. This study is a long range multi-modal transportation plan that covers transportation needs through 2035. Modes of transportation evaluated as part of this plan include: highway, public transportation and rail, bicycle, and pedestrian. This transportation plan does not cover standard bridge replacements, routine maintenance, or minor operations issues. Refer to Appendix A for contact information on these types of issues.

Findings of this CTP study were based on an analysis of the transportation system, environmental screening, and public input. Refer to Figure 1 for the CTP maps, which were mutually endorsed/adopted by: Rockingham County, the municipalities of Eden, Madison, Mayodan, Reidsville, Stoneville, and Wentworth, the Piedmont Triad Rural Planning Organization, and the North Carolina Board of Transportation in 2010. Implementation of the plan is the responsibility of Rockingham County, its municipalities, and NCDOT. Refer to Chapter 1 for information on the implementation process.

This report documents the recommendations for improvements that are included in the Rockingham County CTP. The major recommendations for improvements are listed below. More detailed information regarding these and other recommendations can be found in Chapter 1.

HIGHWAY

- **US 29 (Future I-785):** Widen to a six-lane divided interstate from US 29 Business south of Reidsville to the Guilford County Line. Upgrade to interstate standards from Caswell County to US 29 Business south of Reidsville.
- **US 29 Business:** Widen to a four-lane divided major thoroughfare from US 158/NC 87 to US 29.
- **US 158:** Widen to a four-lane divided boulevard from Guilford County to US 29 Business/NC 87. Resign US 158 onto NC 87 from the US 158/US 29 Business Interchange southeast to the US 29 interchange, then along US 29 to the US 29/US 158-NC 14 Interchange. An interchange is recommended at US 29 Business. Upgrade US 158 to boulevard standards from the recommended US 29 Business interchange to the US 29 interchange. Widen to a four-lane divided expressway from US 29 to the Caswell County Line.

- **US 220 (Future I-73):** Widen to a four-lane divided interstate from NC 68 to the Guilford County Line. Upgrade to interstate standards from Virginia to NC 68. Interchanges are recommended at Sardis Church Road (SR 1128), NC 68, and NC 65.
- **NC 14:** Upgrade to boulevard standards from Bethlehem Church Road (SR 2039) to US 158 by adding a median.
- **NC 65:** Widen to a five-lane major thoroughfare with a center left-turn lane from County Home Road (SR 2371) to NC 87.
- **NC 68:** Widen to a four-lane divided boulevard from US 220 to the Guilford County Line.
- **NC 87 (Wentworth):** Widen to a three-lane facility with a center left-turn lane from Ashley Loop Road (SR 2203) to High School Road (SR 2082).
- **NC 87 (Eastern Rockingham County):** Widen to a four-lane divided boulevard from US 29 to the Caswell County Line.
- **NC 65-87:** Widen to a four-lane divided major thoroughfare from NC 87 in Wentworth to US 29 Business in Reidsville.
- **Baggage Road Connector (SR 2319):** Construct a new two-lane minor thoroughfare from existing Baggage Road (SR 2319) to the recommended interchange at US 220 and Sardis Church Road (SR 1128).

PUBLIC TRANSPORTATION

- **Rockingham County PART Route 1** – It is recommended that a fixed-route bus service route be developed through the Piedmont Authority for Regional Transportation (PART) on US 220 between the US 220/NC 135 Interchange near Mayodan to the Guilford County Line with service continuing into Guilford County. It is also recommended that park-and-ride lots be constructed near the US 220/NC 135 interchange (Mayodan) and near the proposed interchange at US 220 and SR 1128 (Sardis Church Road).
- **Rockingham County PART Route 2** – It is recommended that a fixed-route bus service route be developed through PART on US 29 between the US 29-US 158/NC 14 Interchange east of Reidsville to the Guilford County Line with service continuing into Guilford County. It is also recommended that park-and-ride lots be constructed near the US 29/US 158-NC 14 Interchange east of Reidsville and the US 29/NC 87 Interchange south of Reidsville.

During the development of the CTP, a need was identified for the Rockingham County Public Access Transportation, a private non-profit group operating under the Rockingham County Council of Aging, Inc., to pursue development of a flexible fixed route service throughout the county to connect with the proposed Rockingham County PART route stops.

BICYCLE

State designated bicycle route #4 runs east-to-west in the northern part of Rockingham County. The 2005 Regional Bicycle Study, published by the Piedmont Triad Rural Planning Organization, has identified five county bicycle routes throughout the county as well as connector routes. Also, the 2010 Eden Comprehensive Pedestrian Plan, published by the Piedmont Triad Council of Governments, has identified recommended greenways for bicycles and pedestrians throughout the City of Eden.

In addition to facilities identified in the aforementioned plans, the following on-road bicycle facilities have been identified as needing improvement in the Rockingham County CTP.

- NC 65-87 from SR 1998 (Wentworth Street) to SR 1001 (Sandy Cross Road)
- NC 87 from SR 2203 (Ashley Loop Road) to SR 2371 (County Home Road)
- SR 1001 (Sandy Cross Road) from SR 2409 (Boyd Road) to SR 2380 (Baker Cross Road)
- SR 1991 (Berrymore Road) from SR 2203 (Shepard Road) to NC 14
- SR 1998 (Wentworth Street) from NC 65-87 to the SR 2041 (Parkland Road)
- SR 2009 (Camp Dan Valley Road) from SR 2203 (Ashley Loop Road) to SR 1998 (Wentworth Street)
- SR 2203 (Ashley Loop Road) from Eden PAB to SR 2009 (Camp Dan Valley Road)
- SR 2363 (Vernon Road) from SR 2371 (County Home Road) to SR 2380 (Baker Cross Road)
- SR 2371 (County Home Road) from NC 87 to SR 2363 (Vernon Road)
- SR 2380 (Baker Cross Road) from NC 65 to SR 1001 (Sandy Cross Road)

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

- Curb & gutter sections require at minimum 4-ft bike lanes or 14-ft wide outside lanes.
- Shoulder sections require a minimum 4-ft paved shoulder.
- All bridges along roadways where bike facilities are recommended shall be equipped with 54" railings.

PEDESTRIAN

While there are no pedestrian recommendations in the rural part of the Rockingham County CTP, the Town of Wentworth does have recommended sidewalks for pedestrians. All pedestrian facilities, fall within the urban planning areas as shown on the pedestrian map. These facilities were identified in the Rockingham County Sidewalk Inventory and the City of Eden Comprehensive Pedestrian Plan completed by the Piedmont Triad Council of Governments, as well as the 2001 Madison-Mayodan and 2001 Reidsville Thoroughfare Plans.

The following facilities in the Town of Wentworth are recommended to have sidewalks.

- NC 65: from SR 2460 (Tyre Dobson Road) to NC 87
- NC 87: from SR 2203 (Ashley Loop Road) to NC 65
- NC 65-87: from NC 87 to SR 2374 (Peachtree Road)
- High School Road (SR 2082): from NC 87 to Rockingham County Middle School
- County Home Road (SR 2371): (County Home Road) from NC 87 to 0.2 miles southwest of the Rockingham Community College Entrance
- Wrenn Memorial Road: from NC 65 to the Rockingham Community College Campus
- High School Road Entrance: from NC 65-87 to Rockingham County Senior High School

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I. Recommendations

A Comprehensive Transportation Plan (CTP) is developed to ensure that the progressively developed transportation system will meet the needs of the region for the planning period. The CTP serves as an official guide to providing a well-coordinated, efficient, and economical transportation system for the future of the region. This document should be utilized by the 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.

This report documents the development of the 2010 Rockingham County CTP as shown in Figure 1, Sheets 1 through 5. This chapter presents recommendations for each mode of transportation in Rockingham County. Refer to Appendix I for recommendations from existing plans that were incorporated as part of this CTP. Refer to Appendix J for documentation of project alternatives and scenarios that were studied, but are not included in the adopted CTP.

The following pages contain problem statements for each recommendation, organized by CTP modal element.

Implementation

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

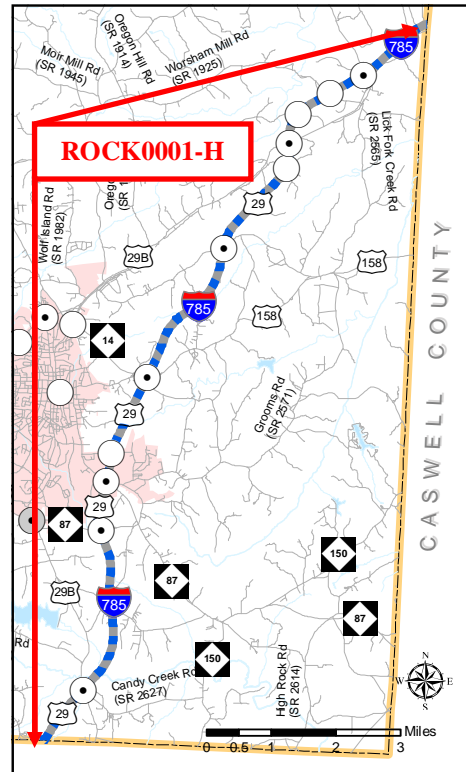
Initiative for implementing the CTP rests predominately with the policy boards and citizens of Rockingham County and its municipalities. As transportation needs throughout the State exceed available funding, it is imperative that the local planning area aggressively pursue funding for priority projects. Projects should be prioritized locally and submitted to the Piedmont Triad RPO for regional prioritization and submittal to NCDOT. Refer to Appendix A for contact information on funding. Local governments may use the CTP to guide development and protect corridors for the recommended projects. It is critical that NCDOT and local government coordinate on relevant land development reviews and all transportation projects to ensure proper implementation of the CTP. Local governments and the North Carolina Department of Transportation share the responsibility for access management and the planning, design and construction of the recommended projects.

Problem Statements

HIGHWAY ELEMENT

US 29 (Future I-785) Proposed improvements from the Guilford County Line to the Caswell County Line

Local ID: ROCK0001-H
Last Updated: 10/20/2010



Identified Problem

Existing US 29 (Future I-785) is projected to be over capacity by 2035 in the Reidsville area south to the Guilford County Line. The primary purpose of improving US 29 (Future I-785) is to relieve congestion on the existing facility such that a minimum of Level of Service (LOS) D can be achieved.

Justification of Need

US 29 is a major north-south corridor in Rockingham County, connecting the City of Reidsville with rural areas in the eastern half of the county. The facility is a vital artery in moving people and goods through North Carolina, connecting two major urban areas, Danville, Virginia and Greensboro, and ultimately connecting South-Central Virginia to Central North Carolina.

US 29 is currently a 4-lane freeway from the Guilford County Line to the Caswell County Line. US 29 is designated as a freeway on the SHC Vision Plan and is signed Interstate 785, a spur Interstate connecting Greensboro with Danville, Virginia. Its purpose is to improve regional and statewide mobility and connectivity. It is part of the statewide tier of the NC Multimodal Investment Network (NCMIN).

By 2035 the facility is projected to be near or over capacity from the Reidsville area south to the Guilford County Line based on the capacity of providing a LOS D. South of Reidsville, traffic is projected to increase from 32,000 vehicles per day (vpd) in 2009 to 65,000 vpd in 2035, compared to a capacity of 53,300 vpd. From Reidsville north to the Caswell County Line, the recommended designation of this route to Interstate 785 will require US 29 to be upgraded to Interstate standards.

Community Vision and Problem History

Due to Rockingham County's close proximity to Greensboro and the rest of the greater Triad area, population along this corridor is expected to increase at a greater rate than the rest of the county. It is expected that the greatest residential and commercial growth will be from the City of Reidsville south to the Guilford County line along this corridor.

Currently, US 29 is a four-lane freeway from the Caswell County Line to Guilford County Line. Residents who live in and around Reidsville use this facility to access jobs and other amenities in the Greensboro area. Many of these residents use the US 29 Business Interchange to access this facility, thereby creating future congestion problems into Greensboro from Rockingham County.

CTP Project Proposal

Project Description and Overview

The proposed project (Local ID ROCK0001-H) is to widen US 29 from a 4-lane to a 6-lane freeway from the Guilford County Line to the US 29 Business Interchange south of Reidsville. The proposed project also is to upgrade US 29 from the Guilford County Line to the Caswell County Line to Interstate standards per the Strategic Highway Corridors (SHC) Vision Plan.

The proposed improvements to US 29 will help reduce congestion between Reidsville and Guilford County. The CTP recommendation would provide for a LOS D or better along US 29 from the US 29 Business Interchange to Guilford County. Additionally, it will fulfill the SHC Vision Plan, which recommends US 29 be upgraded to interstate standards and signed I-785 from the Greensboro MPO to Danville, Virginia.

Linkages to Other Plans and Proposed Project History

The improvement proposal for US 29 is an important link to many of the recommendations in the Rockingham County CTP. It directly connects to proposed improvements of US 158, NC 14, and NC 87. Proposed improvements to US 29 have been identified in the statewide SHC Vision Plan to improve connectivity and mobility. According to the 2035 Greensboro MPO LRTP, US 29 is scheduled to be widened to a 6-lane divided freeway and upgraded to Interstate standards by the year 2025 from north of Hicone Road (SR 2565) in Guilford County to the Rockingham County Line. According to the 2009 Caswell County CTP, US 29 is recommended to be upgraded to Interstate standards from the Virginia State Line to Rockingham County.

Land Use Patterns

The Rockingham County 2025 Land Use Plan indicates this currently rural area (outside of the Reidsville Planning Area) will be in rural to urban transition by 2025. Primarily residential and agricultural development is expected along this corridor. Within the Reidsville Planning Area, mixed use development is expected to occur along this corridor. Mobility on the facility is already maximized by limiting driveway access. For the proposed improvement, access will only occur at fully controlled access interchanges. Future land use plan amendments and land use decisions should consider the mobility of this corridor.

Natural & Human Environmental Context

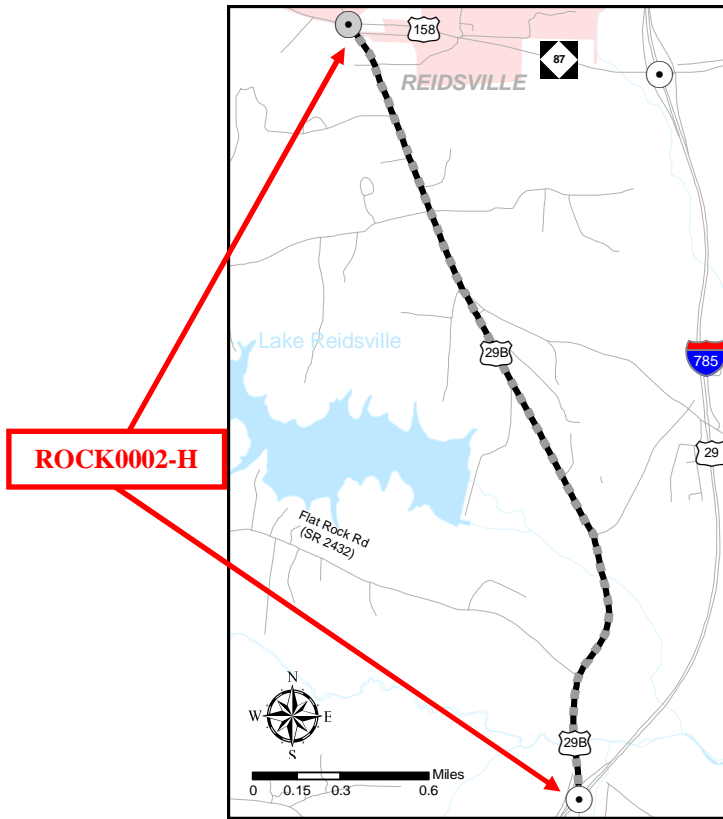
Based on available GIS data, there are occurrences of wetlands along this project and it is near public water supply water sources.

Multi-modal Considerations

The Piedmont Authority for Regional Transportation (PART) has a planned bus route from Guilford County to Rockingham County, using US 29 to connect between the two counties. Park-and-ride lots have been recommended near the US 29/US 158 Interchange and US 29/NC 87 Interchange. These recommended park-and-ride lots will allow citizens who live in eastern Rockingham County to access the Greensboro Urban Area by transit, rather than automobile. However, this multi-modal feature will not significantly impact the traffic demand along this corridor.

Public/ Stakeholder Involvement

No significant issues associated with this project were identified during the public/stakeholder involvement process.



Identified Problem

Existing US 29 Business is projected to be over capacity by 2035 from NC 87 to US 29. The primary purpose of improving US 29 Business is to relieve congestion on the existing facility such that a minimum of Level of Service (LOS) D can be achieved.

Justification of Need

US 29 Business is a major north-south corridor in Rockingham County, connecting the City of Reidsville with rural areas in the eastern half of the county. The facility is a vital artery in moving people and goods through the county, connecting Reidsville with Greensboro and the rest of the Triad Region.

US 29 Business is currently a 2-lane major thoroughfare from NC 87 to US 29, connecting Reidsville with US 29 and areas south, including Greensboro. It is part of the regional tier of the NCMIN.

By 2035, the facility is projected to be over capacity from the Reidsville area south to US 29 based on a LOS D. South of Reidsville, traffic is projected to increase from 7,400 vpd in 2009 to 18,500 vpd in 2035, compared to a capacity of 12,600 vpd.

Community Vision and Problem History

Due to Rockingham County's close proximity to Greensboro and the rest of the greater Triad area, population along this corridor is expected to increase at a greater rate than the rest of the county. It is expected that the greatest residential and commercial growth will be from the City of Reidsville south to the US 29 Interchange along this corridor.

Currently, US 29 Business is 2-lane major thoroughfare from NC 87 in Reidsville to US 29. Residents who live in and around Reidsville use this facility to access jobs and other amenities in the Greensboro area. Many of these residents use US 29 Business to access Greensboro, thereby causing future congestion problems.

CTP Project Proposal

Project Description and Overview

The proposed project (Local ID ROCK0002-H) is to widen US 29 Business from a 2-lane to a 4-lane major thoroughfare from NC 87 to the US 29 Business Interchange south of Reidsville.

The proposed improvements to US 29 Business will help to reduce congestion between Reidsville and US 29. The CTP recommendation would provide for a LOS D or better along US 29 Business from NC 87 to the US 29 Interchange.

Linkages to Other Plans and Proposed Project History

The proposed project for US 29 Business is an important link to two recommendations in the Rockingham County CTP. It directly connects to proposed improvements of US 29 and NC 87. In the 2001 Reidsville Thoroughfare Plan, this section of US 29 Business was recommended to be widened to multi-lanes.

Land Use Patterns

The Rockingham County 2025 Land Use Plan indicates this currently rural area (outside of the Reidsville Planning Area) will be in rural to urban transition by 2025. Mostly residential development is expected along this corridor. Within the Reidsville Planning Area, this area is expected to be fully developed with mixed use development along this corridor. Mobility on this recommended 4-lane facility can be maximized by limiting driveway access. Future land use plan amendments and land use decisions should consider the functionality of this corridor.

Natural & Human Environmental Context

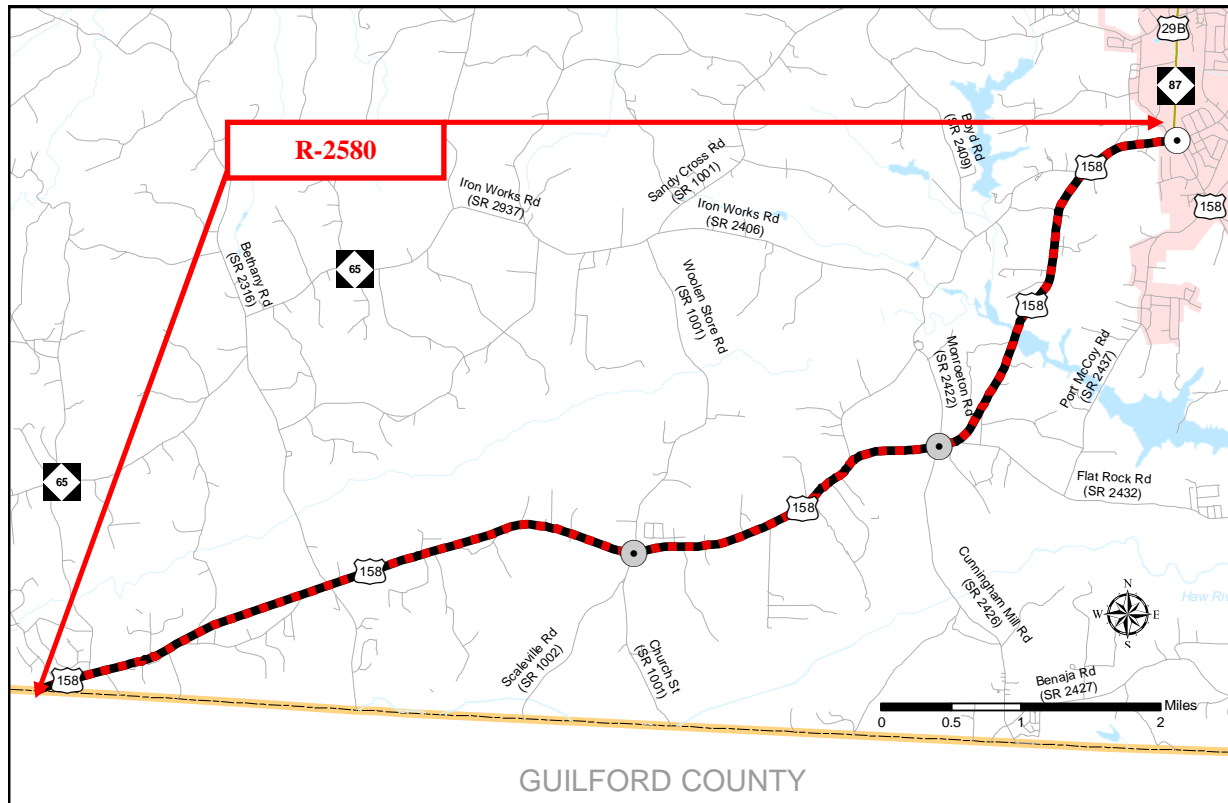
Based on available GIS data, this project is within the non-critical water supply watershed.

Multi-modal Considerations

There are no other modes of transportation associated with this proposed project.

Public/ Stakeholder Involvement

No significant issues associated with this project were identified during the public/stakeholder involvement process.



Identified Problem

Existing US 158 is projected to be over capacity by 2035 from Monroeon Road (SR 2422) to US 29 Business south of Reidsville. The primary purpose of improving US 158 is to relieve congestion on the existing facility such that a minimum of LOS D can be achieved.

Justification of Need

US 158 is a major east-west corridor in Rockingham County, connecting the City of Reidsville with rural areas in the southern half of the county. The facility is a vital artery in moving people and goods through North Carolina, connecting Winston Salem with the northern part of central North Carolina.

US 158 is currently a 2-lane major thoroughfare from the Guilford County to US 29 Business south of Reidsville. US 158 is designated as a Boulevard from Guilford County to US 29 and an expressway from US 29 to the Caswell County Line, based on the SHC Vision Plan, in order to improve regional and statewide mobility and connectivity. It is part of the statewide tier of the NCMIN.

By 2035, the facility is projected to be over capacity from Monroeon Road (SR 2422) to US 29 Business south of Reidsville based on a capacity of LOS D. Traffic from Monroeon Road (SR 2422) to the US 29 Business/NC 87 Interchange is projected to increase from 9,200 vpd in 2009 to 17,900 vpd in 2035, compared to a capacity of 12,600 vpd.

Community Vision and Problem History

Due to Rockingham County's close proximity to the greater Triad area, population along this corridor is expected to increase at a greater rate than the rest of the county. It is expected that the greatest residential and commercial growth will be from the City of Reidsville west to Guilford County along this corridor.

Currently, US 158 is a two-lane major thoroughfare from Guilford County to US 29 Business/NC 87 in Reidsville. Residents who live in the southern portion of Rockingham County use this facility to access jobs and other amenities in Reidsville or the Winston Salem MPO.

CTP Project Proposal

Project Description

The proposed project (Local ID R-2580) is to improve the existing 2-lane major thoroughfare to a 4-lane divided boulevard from Guilford County to the US 29 Business/NC 87 interchange, including the construction of new interchanges at Woolen Store Road/Church Street Extension (SR 1001) and at Monroeton Road (SR 2422)/Cunningham Mill Road (SR 2426).

The proposed improvements to US 158 will help to reduce congestion between Winston Salem and Reidsville. Additionally, it will fulfill the SHC Vision Plan, which recommends US 158 be upgraded to a Boulevard from Guilford Line to US 29 Business/NC 87.

Linkages to Other Plans and Proposed Project History

The improvement proposal for US 158 is an important link to many of the recommendations in the Rockingham County CTP. It directly connects to proposed improvements of US 29 and US 29 Business. According to the 2035 Greensboro MPO LRTP, US 158 is scheduled to be widened to a 4-lane divided Boulevard by the year 2035 from the future US 220 in Guilford County to Rockingham County.

Land Use Patterns

The Rockingham County 2025 Land Use Plan indicates that areas to the west of Reidsville will become a rural transition area by 2025. Mixed use development is expected to occur to the west of Reidsville along this corridor. Mobility on this existing 2-lane facility can be maximized by limiting driveway access. Future land use plan amendments and land use decisions should consider the functionality of this corridor.

Natural & Human Environmental Context

Based on available GIS data, this project is within the non-critical water supply watershed.

Multi-modal Considerations

There are no other modes of transportation associated with this proposed project.

Public/ Stakeholder Involvement

The SHC Vision Plan was originally adopted by NCDOT on September 2, 2004. In this plan, US 158 was designated to be improved in Rockingham County to Boulevard standards from Guilford County to US 29 and improved to Expressway standards from US 29 to Caswell County. On July 10, 2008, the SHC Vision Plan was updated by NCDOT, including upgrading US 158 to Expressway standards from Guilford County to Caswell County.

Additionally, a request was made by the City of Reidsville in 2001 to have US 158 rerouted from its current alignment along US 29 Business north to NC 14 to a new alignment from US 29 Business southeast to NC 87 (e.g. the southern connector).

Two scenarios were presented in the CTP Development Process. These are documented in Appendix J. Ultimately, US 158 was designated back to the previous classification of a Boulevard from Guilford County to US 29 and an Expressway from US 29 to Caswell County. US 158 was also recommended to be rerouted on US 29 Business southeast to NC 87 (e.g. the southern connector).

US 220, TIP No. U-3326A

US 29 Business/NC 87 from US 158 to US 29 Business is currently over capacity. The 2009-2015 TIP includes project U-3326A that is intended to address this problem. This project is currently in the right-of-way acquisition phase. For additional information about this project, including the Purpose and Need, contact NCDOT's Project Development and Environmental Analysis Branch.

US 158/NC 87, Local ID: ROCK0003-H

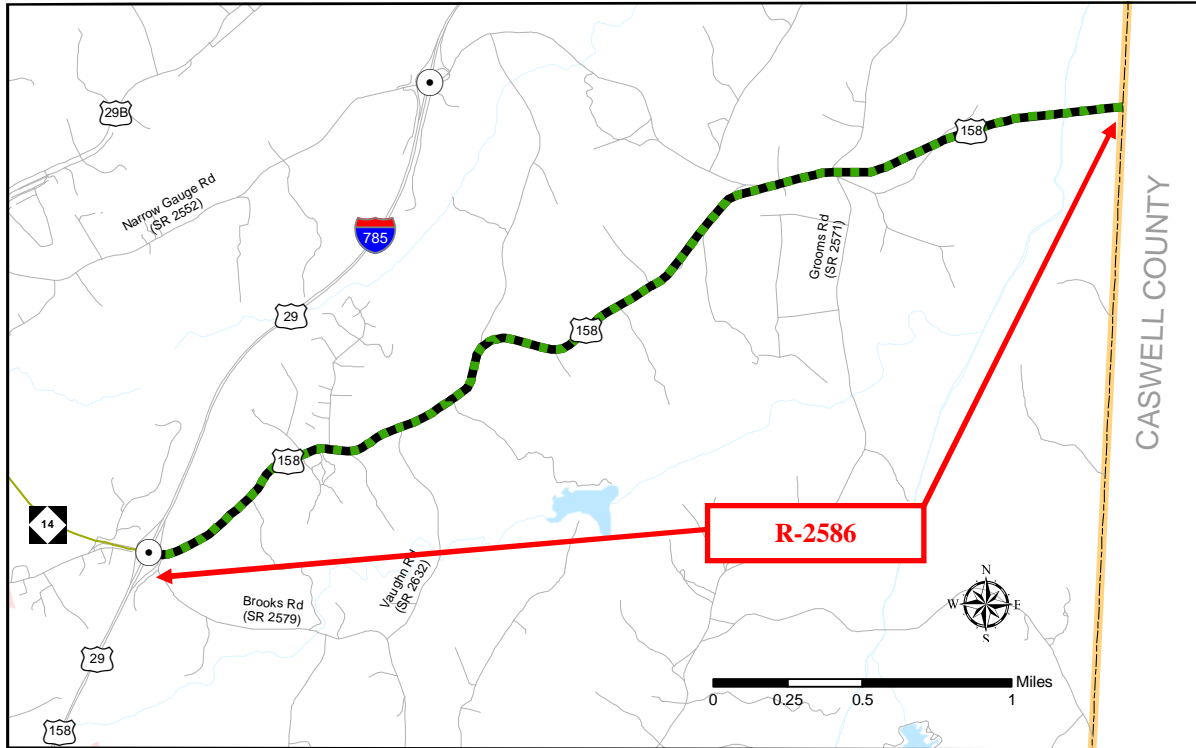
Existing US 158/NC 87 is currently a 5-lane major thoroughfare from US 29 Business to US 29. The primary purpose of improving US 158 is to improve mobility and connectivity.

The proposed project (Local ID ROCK0003-H) is to convert the existing 5-lane major thoroughfare to a 4-lane boulevard from US 29 Business to US 29, including the construction of a new interchange at US 29 Business.

The proposed improvements to US 158 will fulfill the SHC Initiative, which recommends US 158 be upgraded to boulevard standards from US 29 Business to US 29.

US 220, TIP No. R-2413C

US 220 from NC 68 to the Guilford County Line is currently over capacity. The 2009-2015 TIP includes project R-2413C that is intended to address this problem. This project is currently in the project development phase. For additional information about this project, including the Purpose and Need, contact NCDOT's Project Development and Environmental Analysis Branch.



Identified Problem

Existing US 158 is currently a 2-lane major thoroughfare from US 29 to Caswell County. The primary purpose of improving US 158 is to improve mobility and connectivity between Reidsville and Caswell County.

Justification of Need

US 158 is a major east-west corridor in Rockingham County, connecting the Reidsville with Caswell County. The facility is a vital artery in moving people and goods through North Carolina, connecting Reidsville with the northern part of central North Carolina.

US 158 is currently a 2-lane major thoroughfare from US 29 east of Reidsville to Caswell County. US 158 is ultimately envisioned to be an Expressway from US 29 to Caswell County, based on the SHC Vision Plan. It is part of the statewide tier of the NCMIN.

CTP Project Proposal

Project Description

The proposed project (Local ID R-2586) is to improve the existing 2-lane major thoroughfare to a 4-lane divided expressway from US 29 to Caswell County.

The proposed improvements to US 158 will fulfill the SHC Vision Plan, which recommends US 158 be upgraded to and Expressway from US 29 to Caswell County.

Linkages to Other Plans and Proposed Project History

The improvement proposal for US 158 is an important link to many of the recommendations in the Rockingham County CTP. It directly connects to proposed improvements to US 29. According to the 2009 Caswell County CTP, US 158 is proposed to be widened to a 4-lane divided Expressway from Rockingham County to Person County.

Land Use Patterns

The Rockingham County 2025 Land Use Plan indicates that the area east of Reidsville will remain rural in nature through 2025. Mobility on the existing 2-lane facility can be maximized by limiting driveway access. Future land use plan amendments and land use decisions should consider the functionality of this corridor.

Natural & Human Environmental Context

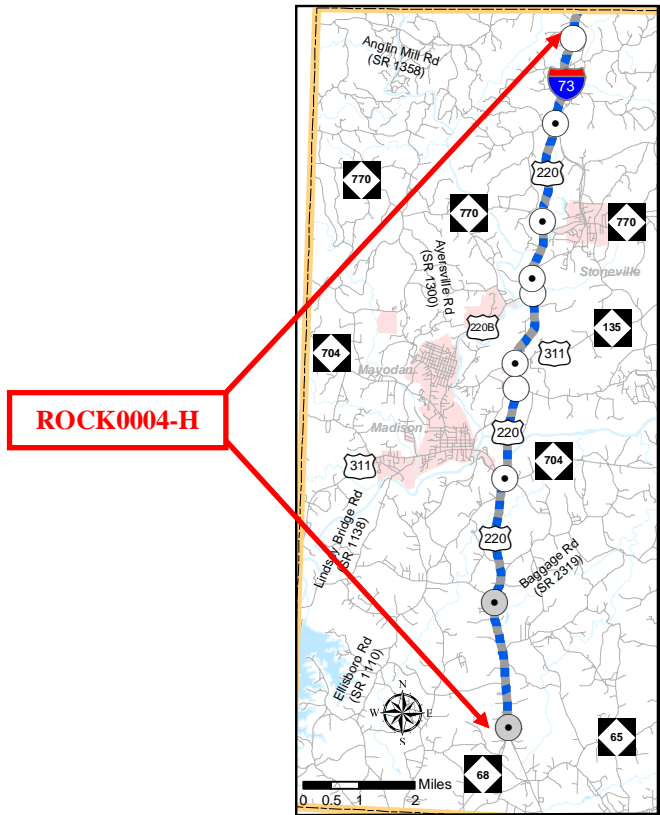
Based on available GIS data, this project is within the non-critical water supply watershed.

Multi-modal Considerations

There are no other modes of transportation associated with this proposed project.

Public/ Stakeholder Involvement

No significant issues associated with this project were identified during the public/stakeholder involvement process.



Identified Problem

Existing US 220 (Future I-73) is projected to be over capacity by 2035 from US 311 to NC 68. The primary purpose of improving US 220 (Future I-73) is to relieve congestion on the existing facility such that a minimum of Level of Service (LOS) D can be achieved.

Justification of Need

US 220 is a major north-south corridor in Rockingham County, connecting the Madison, Mayodan, and Stoneville, with rural areas in the western half of the county. The facility is a vital artery in moving people and goods through North Carolina, connecting two major urban areas, Martinsville, Virginia and Greensboro, and ultimately connecting Southwest Virginia to Central North Carolina.

US 220 is currently a 4-lane freeway from Virginia to US 311 and a 4-lane expressway from US 311 to NC 68. US 220 is ultimately envisioned to be an Interstate and designated as Interstate 73, based on the SHC Vision Plan. It is part of the statewide tier of the NCMIN.

By 2035, the facility is projected to be over capacity from the US 311 south to Guilford County based on a LOS D. Traffic from US 311 south to NC 68 is projected to increase from 30,000 vpd in 2009 to 50,500 vpd in 2035, compared to a capacity of 36,000 vpd. From US 311 north to Virginia, the recommended designation of this route to Interstate 73 will require US 220 to be upgraded to Interstate standards.

Community Vision and Problem History

Due to Rockingham County's close proximity to Greensboro and the rest of the greater Triad area, population along this corridor is expected to increase at a greater rate than the rest of the county. It is expected that the greatest residential and commercial growth will be from Madison and Mayodan south to the Guilford County line along this corridor.

Currently, US 220 is a a four-lane freeway from Virginia to Madison and a four-lane expressway from Madison to NC 68. The expressway section creates potential safety problems at various at-grade intersections as well as at many private access roads.

There were 11 crashed between January 1, 2007 and December 31, 2009 at the at-grade intersection of US 220 and Ellisboro Road (SR 1110). The CTP Proposal recommends the elimination of this at-grade intersection.

CTP Project Proposal

Project Description

The proposed project (Local ID ROCK0004-H) is improve the existing 4-lane Expressway and 4-lane Freeway sections to Interstate standards from Virginia to NC 68, including the construction of a new interchange at SR 1128 (Sardis Church Rd).

The proposed improvements to US 220 will help to reduce congestion between Madison and NC 68. Additionally, it will fulfill the SHC Vision Plan, which recommends US 220 be upgraded to interstate standards and designated I-73 from the Greensboro MPO to Roanoke, Virginia.

Linkages to Other Plans and Proposed Project History

The improvement proposal for US 220 is an important link to many of the recommendations in the Rockingham County CTP. It directly connects to proposed improvements of US 220 Business, US 311, NC 65, NC 68, and NC 135.

Land Use Patterns

The Rockingham County 2025 Land Use Plan indicates this currently rural area will become an economic development growth corridor by 2025. Mixed use development is expected to occur along this corridor. Access will only occur at fully controlled access interchanges. Future land use plan amendments and land use decisions should consider the functionality of this corridor.

Natural & Human Environmental Context

Based on available GIS data, this project is within the non-critical water supply watershed.

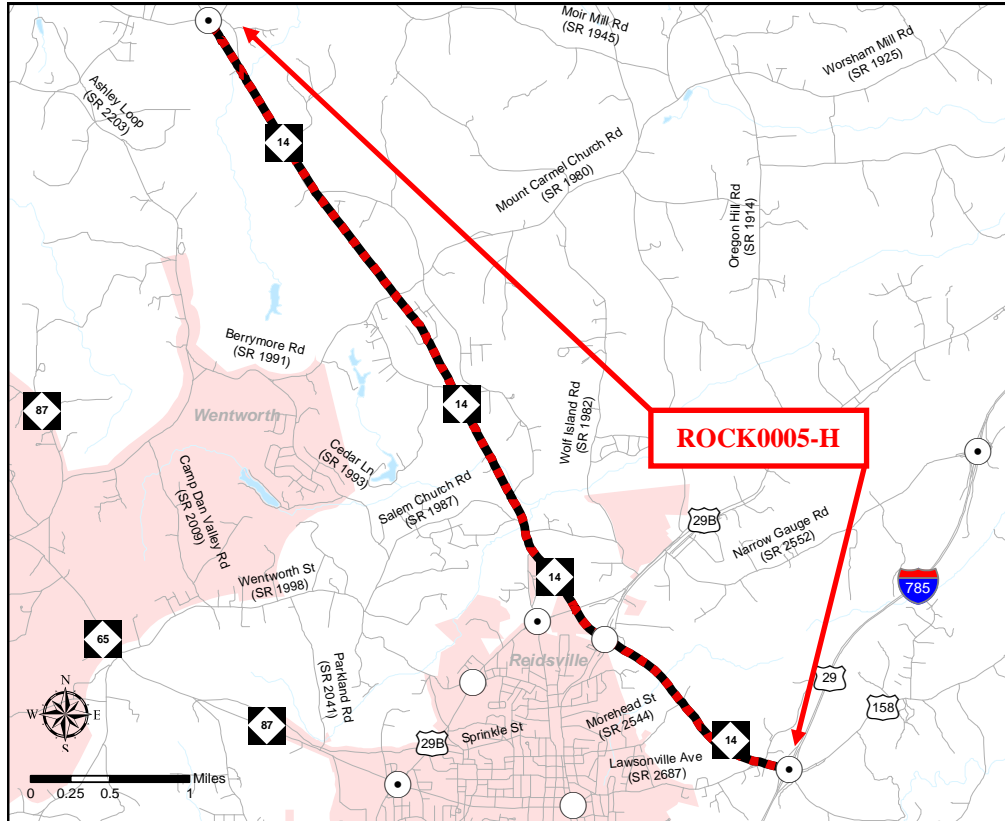
Multi-modal Considerations

The CTP includes recommendations for bicycle, pedestrian and public transportation facilities around the Madison-Mayodan area. The Piedmont Authority for Regional Transportation (PART) has a planned transit route from Guilford County to Rockingham County, using US 220 to connect between the two counties. Transit stops have been recommended near the US 220/US 311-NC 135 Interchange and US 220/SR 1128 (Sardis Church Rd) Intersection. These

recommended transit stops will allow citizens who live in western Rockingham County to access the Greensboro Urban Area by transit, rather than automobile. However, this multi-modal feature does not significantly impact the traffic demand along this corridor.

Public/ Stakeholder Involvement

No significant issues associated with this project were identified during the public/stakeholder involvement process.



Identified Problem

NC 14 is projected to be near capacity by 2035 from Bethlehem Church Road (SR 2039) south of Eden to the US 29 interchange northeast of Reidsville. The primary purpose of improving NC 14 is to relieve congestion on the existing facility such that a minimum of Level of Service (LOS) D can be achieved.

Justification of Need

NC 14 is a major north-south corridor in Rockingham County, connecting the City of Reidsville with the City of Eden and rural areas in the central part of the county. The facility is a vital artery in moving people and goods through Rockingham County, ultimately connecting Martinsville, Virginia to US 29.

NC 14 is currently a major thoroughfare (5-lane section) from Bethlehem Church Road (SR 2039) to US 29 Business in Reidsville. It is part of the regional tier of the NCMIN.

By 2035, the facility is projected to be near capacity from Bethlehem Church Road (SR 2039) to the US 29 Business Intersection in Reidsville based on a LOS D. Traffic is projected to increase from 15,000 vehicles per day (vpd) in 2009 to 30,500 vpd in 2035, compared to a capacity of 31,600 vpd.

Community Vision and Problem History

Due to NC 14 being the primary access between Eden and Reidsville, as well as an connection to US 29, moderate growth is expected in the foreseeable future.

While NC 87 does connect Eden and Reidsville, it does not provide a high-speed route as it traverses Wentworth. The lower speeds and traffic signals in the downtown Wentworth area are more conducive to pedestrian and local vehicular traffic, but make it inefficient for automobile trips that are going through that area.

CTP Project Proposal

Project Description

The proposed project (Local ID ROCK0005-H) is to convert the existing 5-lane facility into a 4-lane divided facility with a raised median and turn bays at major intersections.

The proposed improvements to NC 14 will help to reduce congestion between Eden and Reidsville.

Linkages to Other Plans and Proposed Project History

The improvement proposal for US 29 is an important link to the US 29 Business recommendation in the Rockingham County CTP. According to the 2009 City of Eden CTP, NC 14 is recommended to be upgraded to boulevard standards from Virginia to Bethlehem Church Road (SR 2039).

Land Use Patterns

The Rockingham County 2025 Land Use Plan indicates this currently rural area will be a suburban area by 2025. Agricultural and residential development is expected to occur along this corridor. Mobility on this existing 4-lane facility can be maximized by limiting driveway access. Future land use plan amendments and land use decisions should consider the functionality of this corridor.

Natural & Human Environmental Context

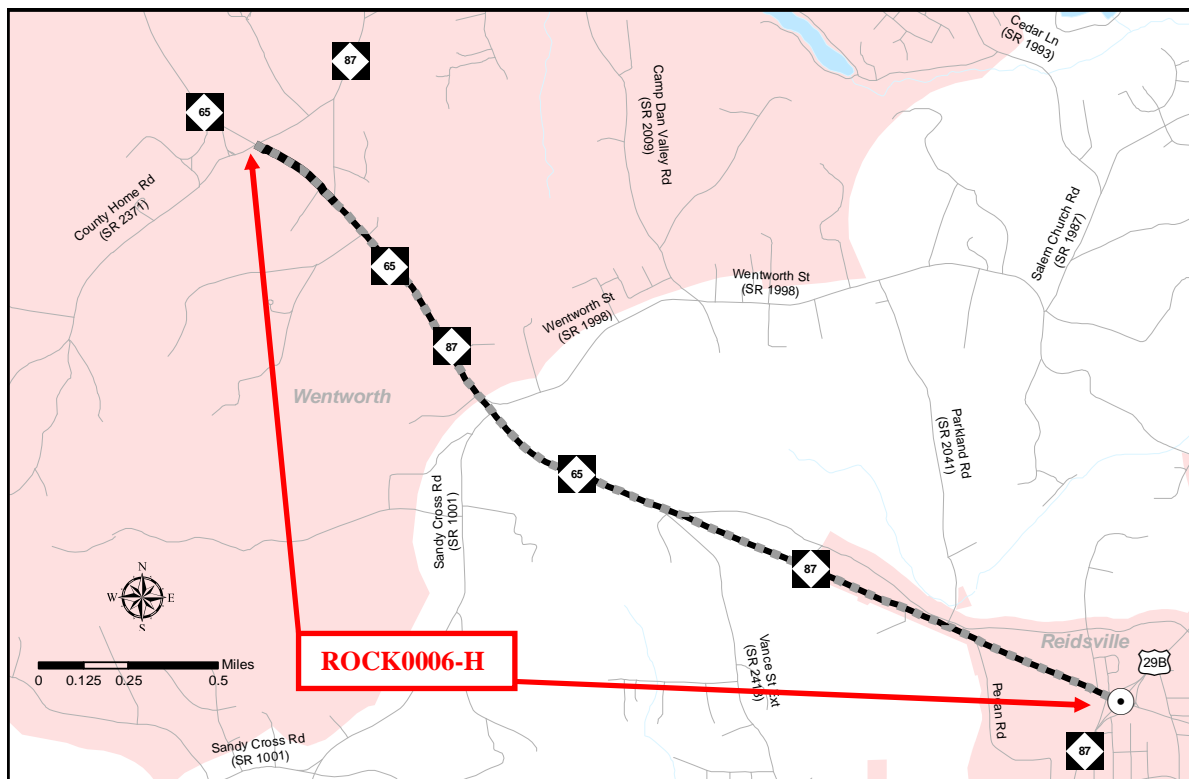
Based on available GIS data, none of the natural and human environmental features examined as a part of this study were identified in the immediate vicinity of the project.

Multi-modal Considerations

There are no other modes of transportation associated with this proposed project.

Public/ Stakeholder Involvement

No significant issues associated with this project were identified during the public/stakeholder involvement process.



Identified Problem

Existing NC 65 is projected to be over capacity by 2035 in Wentworth from County Home Road (SR 2371) to NC 87. Existing NC 65/87 is projected to be over capacity from NC 87 to US 29 Business in Reidsville. The primary purpose of improving NC 65 and NC 65/87 is to relieve congestion on the existing facility such that a minimum of Level of Service (LOS) D can be achieved.

Justification of Need

NC 65 is the major east-west corridor in the county seat of Wentworth, connecting the town with NC 87 to the east and Rockingham Community College to the west. NC 65-87 is a major east-west corridor in Rockingham County, connecting the City of Reidsville with the county seat of Wentworth. The facility is a vital artery in moving people and goods through the central part of Rockingham County, connecting Reidsville and Wentworth.

NC 65 is currently a 3-lane major thoroughfare from County Home Road (SR 2371) to NC 87 and NC 65/87 is currently a 2-to-3 lane major thoroughfare from NC 87 to US 29 Business in Reidsville. It is part of the regional tier of the NCMIN.

By 2035, both NC 65 and NC 65/87 are projected to be over capacity based on a LOS D. Traffic on NC 65 is projected to increase from 9,000 vpd in 2009 to 15,100 vpd in 2035,

compared to a capacity of 13,600 vpd, while traffic on NC 65/87 traffic is projected to increase from 12,000 vpd in 2009 to 19,300 vpd in 2035, compared to a capacity of 12,600 vpd.

Community Vision and Problem History

Due to the Town of Wentworth being the county seat and Rockingham Community College being located there, moderate growth is expected for the foreseeable future. Although not a population center, many trips are attracted to this area due to the county government and the community college.

NC 65 is the only route that traverses the Wentworth area and NC 65/87 is the main connection between Wentworth and Reidsville. All traffic is funneled through the governmental center of Wentworth, mixing through and local traffic. While the community envisions a vibrant, multi-modal friendly downtown area, the current and future levels of congestion make access difficult to residents and visitors alike. During peak times, through traffic is often delayed due to lack of through travel lanes.

CTP Project Proposal

Project Description

The proposed project (Local ID ROCK0006-H) is to widen NC 65 from a 3-lane to a 5-lane major thoroughfare from the NC 87 to County Home Road (SR 2371) and to widen NC 65/87 from a 2-to-3 lane to 4-lane major thoroughfare from NC 87 to US 29 Business.

The proposed improvements to NC 65 will help to reduce congestion within the Town of Wentworth. This CTP proposed project would allow through traffic to move through the governmental center of Wentworth with less congestion caused by local traffic. It is the goal of this recommendation to allow through trips to move through the area, but at the same time make a more efficient and direct connection for Rockingham County residents and visitors.

The proposed improvements to NC 65-87 will help to reduce congestion between Wentworth and Reidsville. This will make for a less congested roadway to the county seat and Rockingham Community College.

Linkages to Other Plans and Proposed Project History

The improvement proposal for this section NC 65 is an important link to recommendations in the Rockingham County CTP. It directly connects to proposed improvements of NC 65 to the west, NC 87 to the north, and US 29 Business to the east.

Land Use Patterns

The 2006 Town of Wentworth Land Use Plan indicates this area will become fully developed by 2025. Primarily institutional development is expected to occur along this corridor. Mobility on this proposed 4 and 5-lane facility can be maximized by limiting driveway access. Future land use plan amendments and land use decisions should consider the functionality of this corridor.

Natural & Human Environmental Context

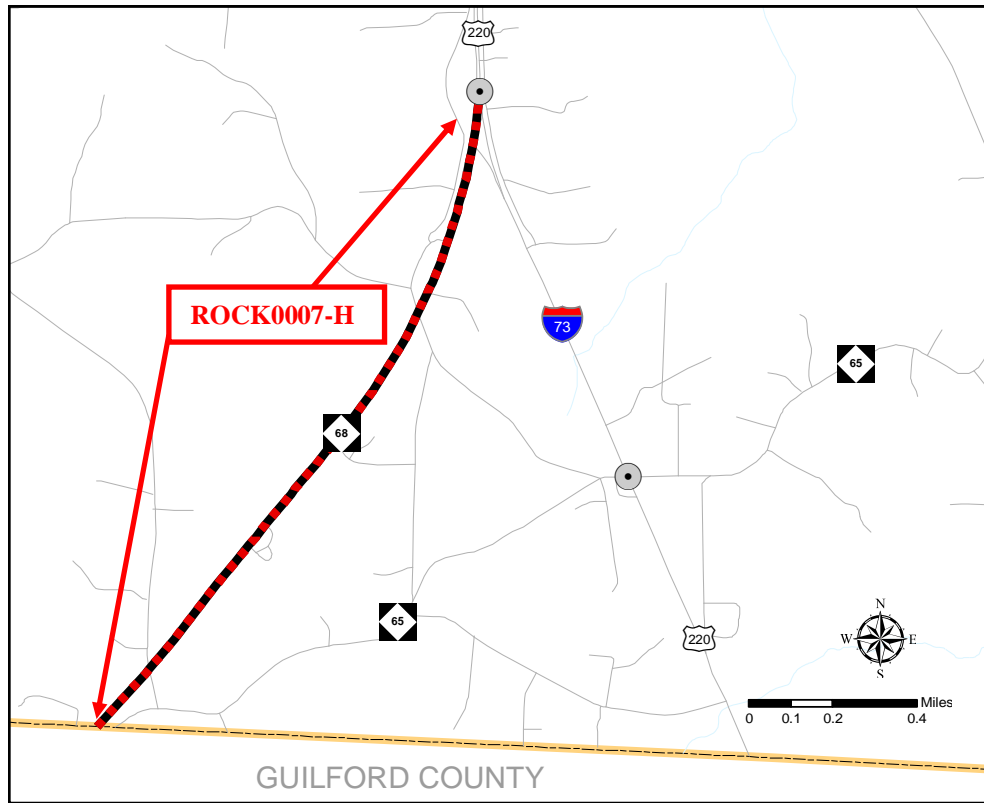
Based on available GIS data, this project is within the non-critical water supply watershed.

Multi-modal Considerations

The CTP includes recommendations for bicycle and pedestrian facilities around the Wentworth area. There are specific improvements for adding bicycle lanes on County Home Road (SR 2371) on the western end of this proposed improvement. There is a recommendation for a sidewalk along this section of NC 65 as well as along NC 65 to the west, NC 65-87 to the east, NC 87 on the east end of the project, and County Home Road (SR 2371) on the west end of the project. These multi-modal features do not significantly impact the traffic demand along this corridor.

Public/ Stakeholder Involvement

As part of developing the CTP recommendation for NC 65, two options were considered by the Rockingham County CTP Steering Committee, the Wentworth Town Council, and the Rockingham County Commissioners. These groups analyzed in two corridor options, considering transportation needs and impacts to the natural and human environment, before recommending the proposed corridor shown on the Rockingham County CTP. From public meetings and other comment opportunities, the primary public concern was that a center turn lane was needed to provide access county governmental buildings as well as other commercial buildings. Refer to Appendix J for more information on these alternatives.



Identified Problem

Existing NC 68 is projected to be over capacity by 2035 from US 220 to the Guilford County. The primary purpose of improving NC 68 is to relieve congestion on the existing facility such that a minimum of Level of Service (LOS) D can be achieved.

Justification of Need

NC 68 is a major north-south corridor in southern Rockingham County, connecting US 220 with Guilford County. The facility is a vital artery in moving people and goods throughout the two counties.

NC 68 is currently a 2-lane major thoroughfare from Guilford County to US 220. It is part of the regional tier of the NCMIN.

By 2035, the facility is projected to be over capacity along this section of NC 68 based a LOS D. Traffic is projected to increase from 14,000 vehicles per day (vpd) in 2009 to 20,500 vpd in 2035, compared to a capacity of 12,600 vpd.

Community Vision and Problem History

This area is seeing some of the higher growth in the county, due to its proximity to Greensboro. Population in this area is expected to increase into the foreseeable future, in part due to new residents from the Greensboro area.

NC 68 is currently the main route to connect Rockingham County with the municipalities of Stokesdale and Oak Ridge in Guilford County. The existing route is already experiencing high demand with development that has occurred in the area.

CTP Project Proposal

Project Description

The proposed project (Local ID ROCK0007-H) is to widen NC 68 from a 2-lane to a 4-lane Boulevard from Guilford County to US 220.

The proposed improvements to NC 68 will help to reduce congestion between US 220 and Guilford County.

Linkages to Other Plans and Proposed Project History

The improvement proposal for NC 68 is an important link to the US 220 recommendation in the Rockingham County CTP, including the proposed interchange with US 220 in Rockingham County. According to the 2035 Greensboro MPO LRTP, NC 68 is proposed to be widened to a 4-lane divided Boulevard by the year 2025 from Peebles Road (SR 2130) in Guilford County to Rockingham County.

Land Use Patterns

The Rockingham County 2025 Land Use Plan indicates this currently rural area will become an economic development growth corridor by 2025. Mixed use development is expected to occur along this corridor. Mobility on this proposed 4-lane facility can be maximized by limiting driveway access. Future land use plan amendments and land use decisions should consider the functionality of this corridor.

Natural & Human Environmental Context

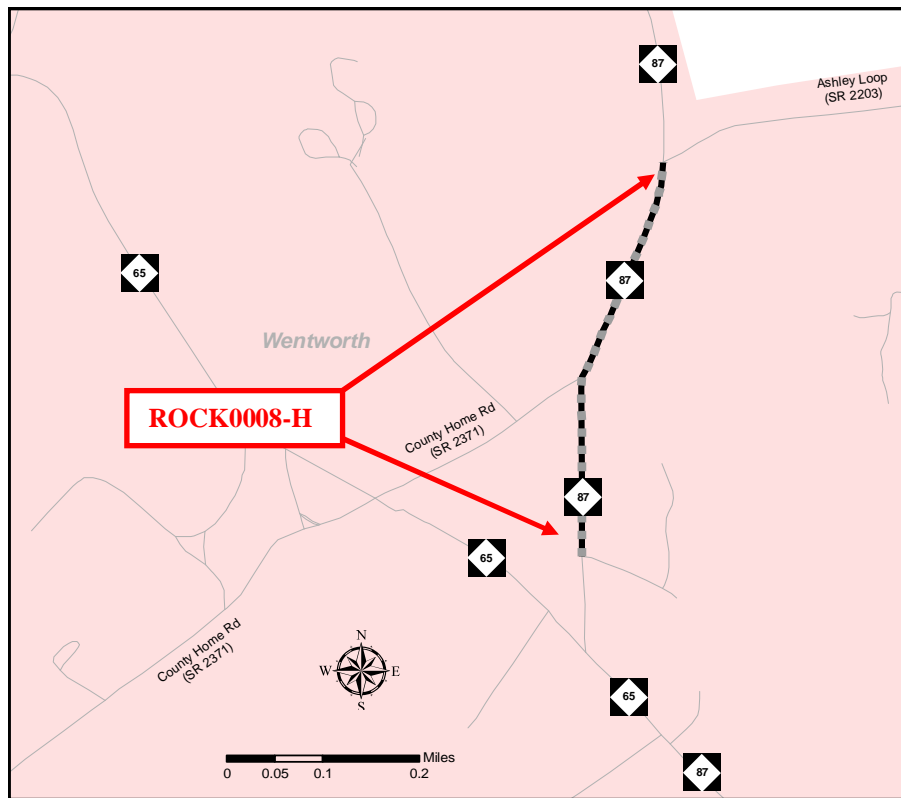
Based on available GIS data, this project is within the non-critical water supply watershed.

Multi-modal Considerations

There are no other modes of transportation associated with this proposed project.

Public/ Stakeholder Involvement

No significant issues associated with this project were identified during the public/stakeholder involvement process.



Identified Problem

Existing NC 87 from Ashley Loop Road (SR 2203) to High School Road (SR 2082) is projected to be near capacity by 2035. The primary purpose of improving NC 87 is to relieve congestion on the existing facility such that a minimum of Level of Service (LOS) D can be achieved.

Justification of Need

NC 87 is the north-south corridor in the county seat of Wentworth, connecting the town with Eden. The facility is the vital artery in moving people and goods through the Wentworth area, providing access to county government buildings.

NC 87 is currently a 2-lane major thoroughfare from Ashley Loop (SR 2203) to High School Road (SR 2082). Improvements to this facility will increase local mobility and provide access to adjacent land development. It is part of the regional tier of the NCMIN.

By 2035, the facility is projected to be near capacity based on a LOS D. Traffic is projected to increase from 5,800 vpd in 2009 to 10,100 vpd in 2035, compared to a capacity of 12,600 vpd.

Community Vision and Problem History

Due to the Wentworth being the county seat and Rockingham Community College being located there, moderate growth is expected for the foreseeable future. Although not a population

center, many trips are attracted to this area due to county government buildings and the community college in the town.

NC 87 is the main connection between the areas three public schools. Wentworth Elementary School is located near the intersection of NC 87 and Ashley Loop Road (SR 2203), while Rockingham Middle and High Schools area located near the intersection of NC 87 and High School Road (SR 2082). During peak times, through traffic is often delayed due to lack of a center left-turn lane.

CTP Project Proposal

Project Description

The proposed project (Local ID ROCK0008-H) is to widen NC 87 from a 2-lane to a 3-lane major thoroughfare from Ashley Loop Road (SR 2203) to High School Road (SR 2082).

The proposed improvements to NC 87 will help to reduce congestion within the Town of Wentworth. This CTP proposed project would allow through traffic to move through the school area of Wentworth with less congestion caused local traffic making left-turns. It is the goal of this recommendation to allow through trips to move through the area, but at the same time provide a more efficient and direct connection for Rockingham County residents and visitors.

Land Use Patterns

The 2006 Town of Wentworth Land Use Plan indicates this currently urban transition area will become fully developed by 2025. Primarily institutional and mixed use development is expected to occur along this corridor. Mobility on this proposed 3-lane facility can be maximized by limiting driveway access. Future land use plan amendments and land use decisions should consider the functionality of this corridor.

Natural & Human Environmental Context

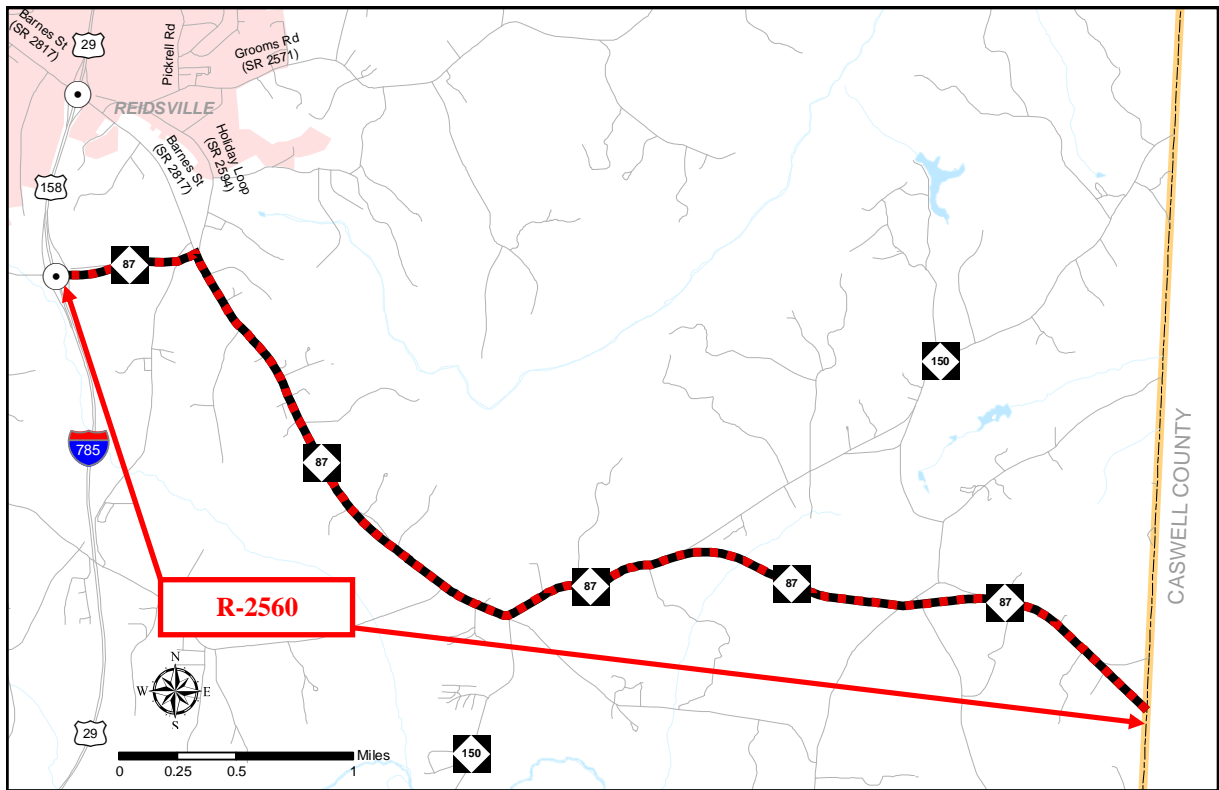
Based on available GIS data, this project is within the non-critical water supply watershed.

Multi-modal Considerations

The CTP includes recommendations for bicycle and pedestrian facilities around the Wentworth area. There are specific improvements for adding bicycle lanes on NC 87 from Ashley Loop Road (SR 2203) to County Home Road (SR 2371). There is a recommendation for a sidewalk along this section of NC 87. These multi-modal features, while providing better access to the areas three schools, do not significantly impact the traffic demand along this corridor.

Public/ Stakeholder Involvement

No significant issues associated with this project were identified during the public/stakeholder involvement process.



Identified Problem

Existing NC 87 is projected to be over capacity by 2035 from Barnes Street (SR 2817) southeast of Reidsville south to Caswell County. The primary purpose of improving this section of NC 87 is to relieve congestion on the existing facility such that a minimum of Level of Service (LOS) D can be achieved.

Justification of Need

NC 87 is a major north-south corridor in Rockingham County, connecting the City of Reidsville with rural areas in the southeastern part of the county. The facility is a vital artery in moving people and goods through North Carolina, connecting Rockingham County and the Burlington-Graham MPO.

NC 87 is currently a 5-lane major thoroughfare from US 29 to Barnes Street (SR 2817) and a 2-lane major thoroughfare from Barnes Street (SR 2817) to the Caswell County Line. NC 87 is ultimately envisioned to be a 4-lane divided Boulevard based on the SHC Vision Plan. It is part of the statewide tier of the NCMIN.

By 2035, the facility is projected to be over capacity from Barnes Street (SR 2817) south to Caswell County based on a LOS D. Traffic is projected to increase from 7,000 vpd in 2009 to 15,000 vpd in 2035, compared to a capacity of 10,100 vpd.

Community Vision and Problem History

Due to NC 87 being the primary access between Reidsville and the Burlington MPO, moderate growth is expected in the foreseeable future.

Currently, NC is a five-lane major thoroughfare from US 29 to Barnes Street (SR 2817) and a two-lane major thoroughfare from Barnes Street (SR 2817) to Caswell County. The 5-lane major thoroughfare section creates potential safety problems at various at-grade intersections. The 2-lane section creates a bottleneck for traffic trying to get to the Burlington MPO from Rockingham County.

CTP Project Proposal

Project Description

The proposed project (Local ID R-2560) is to widen NC 87 from 2-lanes to a 4-lane Boulevard from Barnes Street (SR 2817) to the Caswell County Line with the addition of a median on NC 87 from US 29 to Barnes Street (SR 2817).

The proposed improvements to NC 87 will help to reduce congestion between US 29 and Caswell County. Additionally, it will fulfill the SHC Vision Plan by improving regional and statewide mobility and connectivity.

Linkages to Other Plans and Proposed Project History

The improvement proposal for NC 87 is an important link to many of the recommendations in the Rockingham County CTP. It directly connects to proposed improvements of US 29 and Barnes Street (SR 2817). According to the 2009 Caswell County CTP, NC 87 is recommended to be widened to a 4-lane Boulevard from Rockingham County to Alamance County. According to the 2035 Burlington-Graham MPO LRTP, NC 87 is scheduled to be widened to a 4-lane boulevard by the year 2035.

Land Use Patterns

The Rockingham County 2025 Land Use Plan indicates this currently rural area will be in urban transition by 2025. Mostly residential development is expected along this corridor. Mobility on this proposed 4-lane facility can be maximized by limiting driveway access. Future land use plan amendments and land use decisions should consider the functionality of this corridor.

Natural & Human Environmental Context

Based on available GIS data, this project is within the non-critical water supply watershed.

Multi-modal Considerations

There are no other modes of transportation associated with this proposed project.

Public/ Stakeholder Involvement

No significant issues associated with this project were identified during the public/stakeholder involvement process.

Identified Problem

Baggage Road (SR 2319) currently terminates at US 220. In accordance with the SHC Vision Plan and recommendation ROCK0004-H of this plan, US 220 is recommended to be upgraded to a limited-access freeway facility and signed as Interstate 73. The primary purpose of this recommendation is to provide access and connectivity to US 220/Interstate 73.

Justification of Need

Baggage Road (SR 2319) is a minor collector in the south-central part of Rockingham County. The facility is a vital artery in moving people and goods through this section of Rockingham County, connecting the residents to US 220 and ultimately the Greensboro area. Baggage Road (SR 2319) is currently a 2-lane minor thoroughfare from US 220 to Bald Hill Loop Road (SR 2308). While Baggage Road (SR 2319) is not predicted to exceed capacity by 2035, the improvement of US 220 to a fully-controlled access freeway will prohibit traffic from being able to access this facility.

Community Vision and Problem History

Due to its close proximity to Greensboro, this area of Rockingham County is expected to experience moderate growth into the foreseeable future.

Currently, Baggage Road (SR 2319) connects with US 220 at an at-grade intersection. Per the SHC Vision Plan, US 220 will become future Interstate 73 and all at-grade intersections will be removed. If access is not provided around this area, traffic will have to access US 220/Future I-73 by traveling north to US 311/NC 704 or south to NC 68, creating additional traffic on local roads.

CTP Project Proposal

Project Description

The proposed project (Local ID ROCK0009-H) is to construct a new 2-lane minor thoroughfare from existing Baggage Road (SR 2319) to the recommended interchange at US 220/Future I-74 and Sardis Church Road (SR 1128). The proposed new construction will continue to allow access from existing Baggage Road (SR 2319) to US 220/Future I-74 and Sardis Church Road (SR 1128).

Land Use Patterns

The Rockingham County 2025 Land Use Plan indicates this currently rural area will become a rural transition area with an economic development area near US 220 by 2025. Primarily agricultural and residential development is expected to occur along this corridor with some commercial development around the proposed US 220/Sardis Church Road (SR 1128)-Baggage Road Connector Interchange.

Natural & Human Environmental Context

Based on available GIS data, none of the natural and human environmental features examined as a part of this study were identified in the immediate vicinity of the project.

Multi-modal Considerations

There are no other modes of transportation associated with this proposed project.

Public/ Stakeholder Involvement

No significant issues associated with this project were identified during the public/stakeholder involvement process.

Minor Widening Improvements

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

- US 29 Business: US 29/Mayfield Road (SR 1767) Interchange to North Reidsville Planning Area
- US 311/NC 135: US 220 to Stone Mountain Road (SR 2154)
- NC 65: Guilford County Line to County Home Road (SR 2371)
- NC 150: Caswell County Line to NC 87 and NC 87 to Guilford County Line
- NC 700: Oregon Hill Road (SR 1914) to Caswell County Line
- NC 704: Stokes County Line to Madison-Mayodan Planning Area
- NC 770: Stokes County Line to Ayersville Road (SR 1300)
- County Home Road (SR 2371): Vernon Road (SR 2363) to NC 87

Other Improvements

- US 311 Signage: US 311 has been approved to be signed from Madison to Eden. Its current signed terminus is at the US 220/NC 704 Interchange in Madison. Its approved signed terminus is at the NC 14-87-770 intersection in Eden. The approved route will use US 220 to NC 135 to NC 770. When funds become available, US 311 will be signed using these routes.
- Realignment of Peach Tree Road (SR 2374) and High School Entrance: Realign Peach Tree Road (SR 2374) and the Rockingham County Senior High School Entrance in Wentworth to form a crossroads at NC 65/87 and install a traffic signal at the newly formed intersection.

PUBLIC TRANSPORTATION AND RAIL ELEMENT

Identified Problem

Currently, there are no fixed route services from eastern and western Rockingham County to the Triad Metropolitan Area. Many residents in Rockingham County commute to the Triad Metropolitan Area each day for work, shopping, higher education opportunities, and medical purposes. The primary purpose of proposing transit service in Rockingham County is to provide another mode of transportation into the Triad Metropolitan Area.

CTP Project Proposal

Project Description

The CTP proposed project (Local ID ROCK0001-T) is to provide public transit along US 220 in western Rockingham County. It is recommended that a fixed-route bus service be developed through the Piedmont Authority for Regional Transportation (PART) on US 220 between the US 220/NC 135 Interchange near Mayodan to the Guilford County Line with service continuing into Guilford County. It is also recommended that park-and-ride lots be constructed near the US 220/NC 135 Interchange near Mayodan and the recommended interchange at US 220 and SR 1128 (Sardis Church Road).

The CTP proposed project (Local ID ROCK0002-T) is to provide public transit along US 29 in eastern Rockingham County. It is recommended that a fixed-route bus service be developed through PART on US 29 between the US 29-US 158/NC 14 Interchange east of Reidsville to the Guilford County Line with service continuing into Guilford County. It is also recommended that park-and-ride lots be constructed near the US 29/US 158-NC 14 interchange east of Reidsville and the US 29/NC 87 Interchange south of Reidsville.

During the development of the CTP, a need was identified for the Rockingham County Public Access Transportation, a private non-profit group operating under the Rockingham County Council of Aging, Inc., to pursue development of a flexible fixed route service throughout the county to connect with the proposed Rockingham County PART route stops.

BICYCLE ELEMENT

Identified Problem

Currently, there are no bicycle routes in the Wentworth area. The 2005 Regional Bicycle Study published by the Piedmont Triad Rural Planning Organization recommends improvements to bicycle routes throughout Rockingham County. The primary purpose of recommending additional bicycle route improvements is to better connect the Wentworth area to the 2005 Rockingham County Regional Bicycle Study.

CTP Project Proposal

Project Description

The following on-road bicycle facilities have been identified as needing improvement in the Rockingham CTP in addition to the Rockingham County Regional Bicycle Study.

- NC 65-87 from Wentworth Street (SR 1998) to Sandy Cross Road (SR 1001)
- NC 87 from Ashley Loop Road (SR 2203) to County Home Road (SR 2371)
- Ashley Loop Road (SR 2203) from Eden Planning Area to Camp Dan Valley Road (SR 2009)
- Baker Cross Road (SR 2380) from NC 65 to Sandy Cross Road (SR 1001)
- Berrymore Road (SR 1991) from Shepard Road (SR 2203) to NC 14
- Camp Dan Valley Road (SR 2009) from Ashley Loop Road (SR 2203) to Wentworth Street (SR 1998)
- County Home Road (SR 2371) from NC 87 to Vernon Road (SR 2363)
- Sandy Cross Road (SR 1001) from Boyd Road (SR 2409) to Baker Cross Road (SR 2380)
- Vernon Road (SR 2363) from County Home Road (SR 2371) to Baker Cross Road (SR 2380)
- Wentworth Street (SR 1998) from NC 65-87 to the Parkland Road (SR 2041)

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

- Curb & gutter sections require at minimum 4-ft bike lanes or 14-ft wide outside lanes.
- Shoulder sections require a minimum 4-ft paved shoulder.
- All bridges along roadways where bike facilities are recommended shall be equipped with 54" railings.

For further documentation of bicycle facilities and proposals, please refer to the 2005 Regional Bicycle Study, the Eden Greenway Master Plan, and the Madison-Mayodan and Reidsville Thoroughfare Plans.

PEDESTRIAN ELEMENT

Identified Problem

Currently, there are no pedestrian accommodations in the Wentworth area. There is a need for pedestrian accommodations to connect Wentworth Town Hall, Rockingham County Community College, county government buildings, and the primary and secondary schools within Wentworth. The primary purpose of recommending pedestrian accommodations is to provide an alternative mode of transportation within Wentworth.

CTP Project Proposal

Project Description

The following facilities are recommended to have sidewalks for pedestrians.

- ROCK0001-P: NC 65 from Tyre Dobson Road (SR 2460) to County Home Road (SR 2371)
- ROCK0002-P: NC 65 from County Home Road (SR 2371) to NC 87
- ROCK0003-P: NC 65-87 from NC 87 to Peachtree Road (SR 2374)
- ROCK0004-P: NC 87 from Ashley Loop Road (SR 2203) to
- ROCK0005-P: NC 87 from County Home Road (SR 2371) to NC 87
- ROCK0006-P: County Home Road (SR 2371) from NC 87 to NC 65
- ROCK0007-P: County Home Road (SR 2371) from NC 65 to Rockingham Community College
- ROCK0008-P: County Home Road (SR 2371) from Rockingham Community College to 0.22 miles west of Rockingham Community College
- ROCK0009-P: High School Road (SR 2082) from NC 87 to Rockingham County Middle School
- ROCK0010-P: Wrenn Memorial Road from NC 65 to the Rockingham Community College Campus
- ROCK0011-P: Rockingham Community College Road from County Home Road (SR 2371) to Wrenn Memorial Road
- ROCK0012-P: High School Road Entrance from NC 65-87 to Rockingham County Senior High School

For further documentation of pedestrian facilities and proposals, please refer to the Piedmont Triad Sidewalk Inventory, the Eden Greenway Master Plan, and the Madison-Mayodan and Reidsville Thoroughfare Plans.

Adopted by:

City of Eden
Date: February 27, 2010

Town of Madison
Date: February 11, 2010

Town of Mayodan
Date: February 8, 2010

Rockingham County
Date: May 10, 2010

City of Reidsville
Date: May 5, 2010

Town of Stoneville
Date: February 2, 2010

Town of Wentworth
Date: April 6, 2010

NCDOT
Date: September 2, 2010

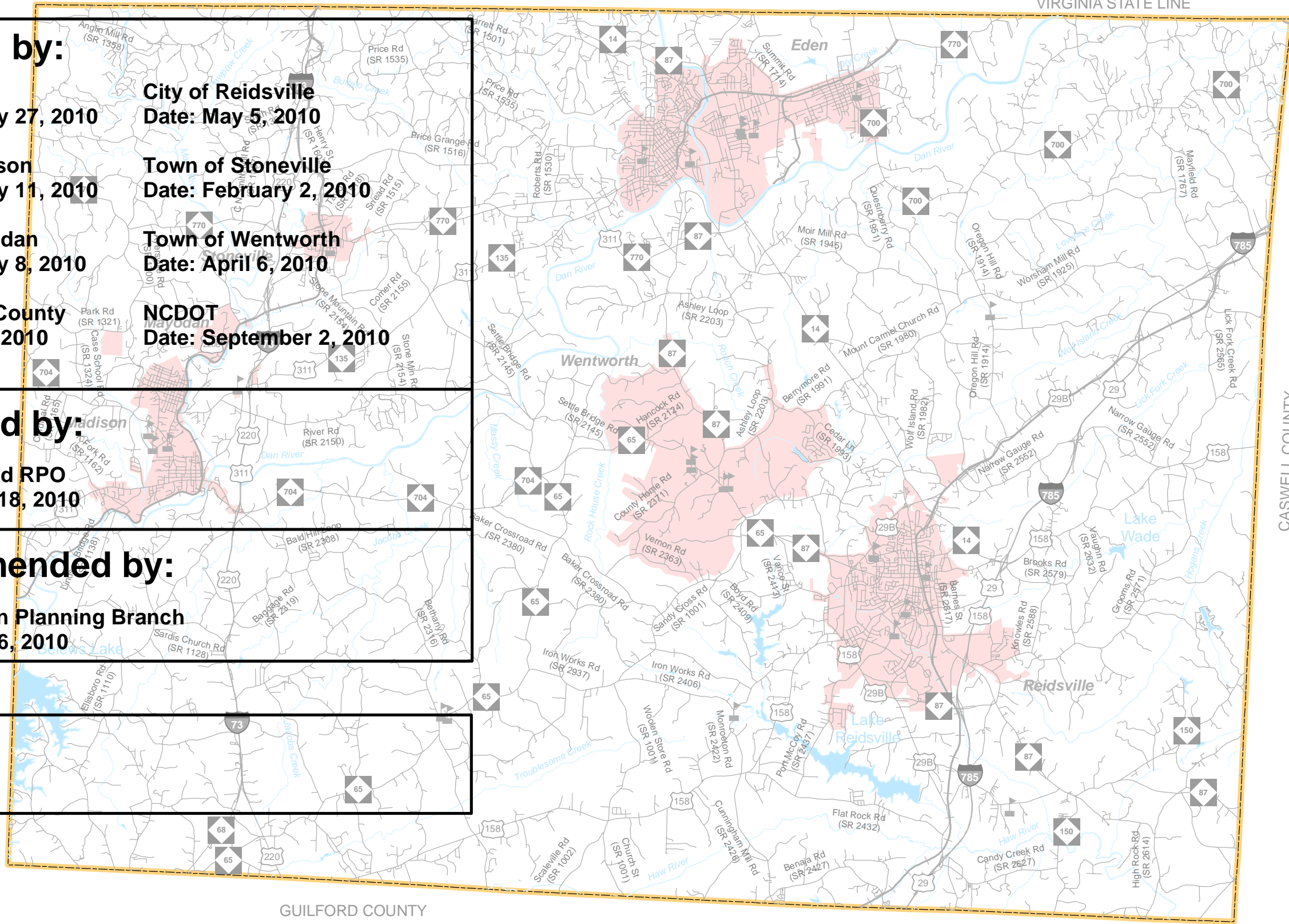
Endorsed by:

Piedmont Triad RPO
Date: August 18, 2010

Recommended by:

Transportation Planning Branch
Date: August 6, 2010

NOTES:



- 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
- Lakes
- Rivers and Streams
- Railroads
- County Boundary
- Municipal Boundaries

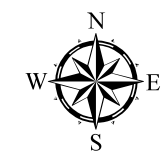
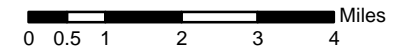
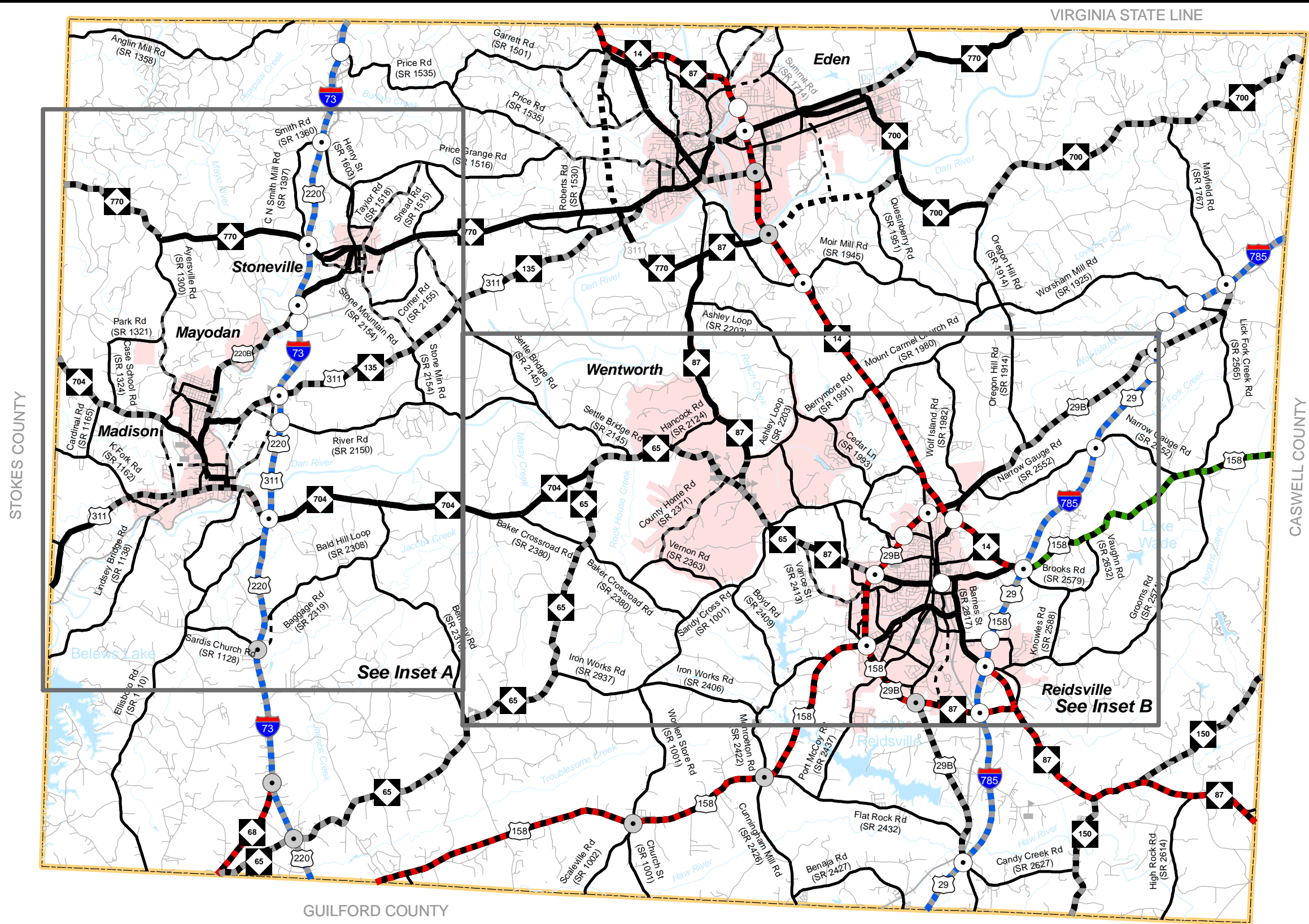


Figure 1 - Sheet 1 of 5

Base map date: October 2008
Refer to CTP document for more details

Rockingham County
North Carolina
**Comprehensive
Transportation Plan**

Plan date: March 19, 2010



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

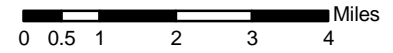


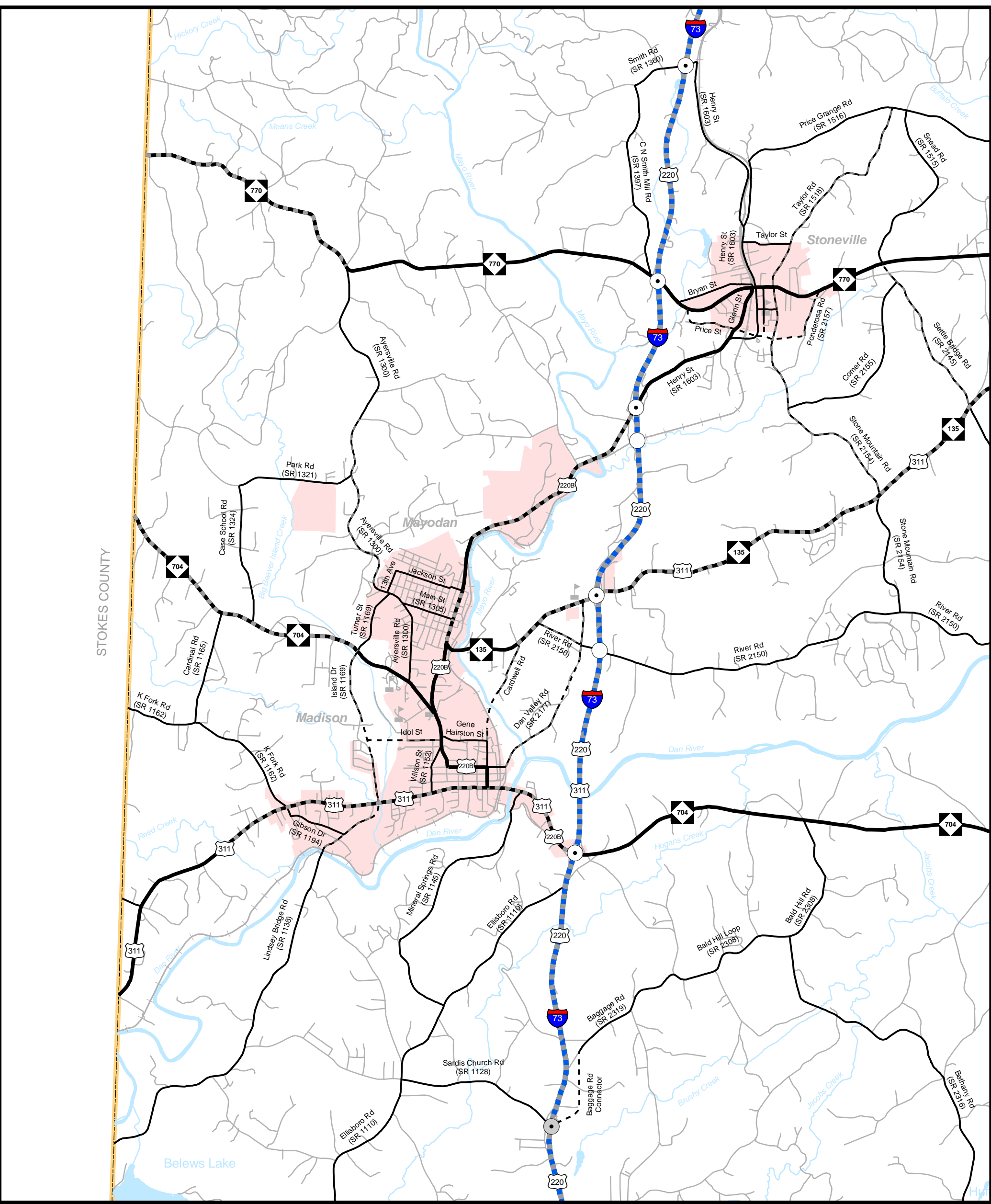
Figure 1 - Sheet 2 of 5

Base map date: October 2008

Refer to CTP document for more details

Highway Map
Rockingham County
Comprehensive
Transportation Plan

Plan date: March 19, 2010



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

0 0.25 0.5 1 1.5 2 Miles

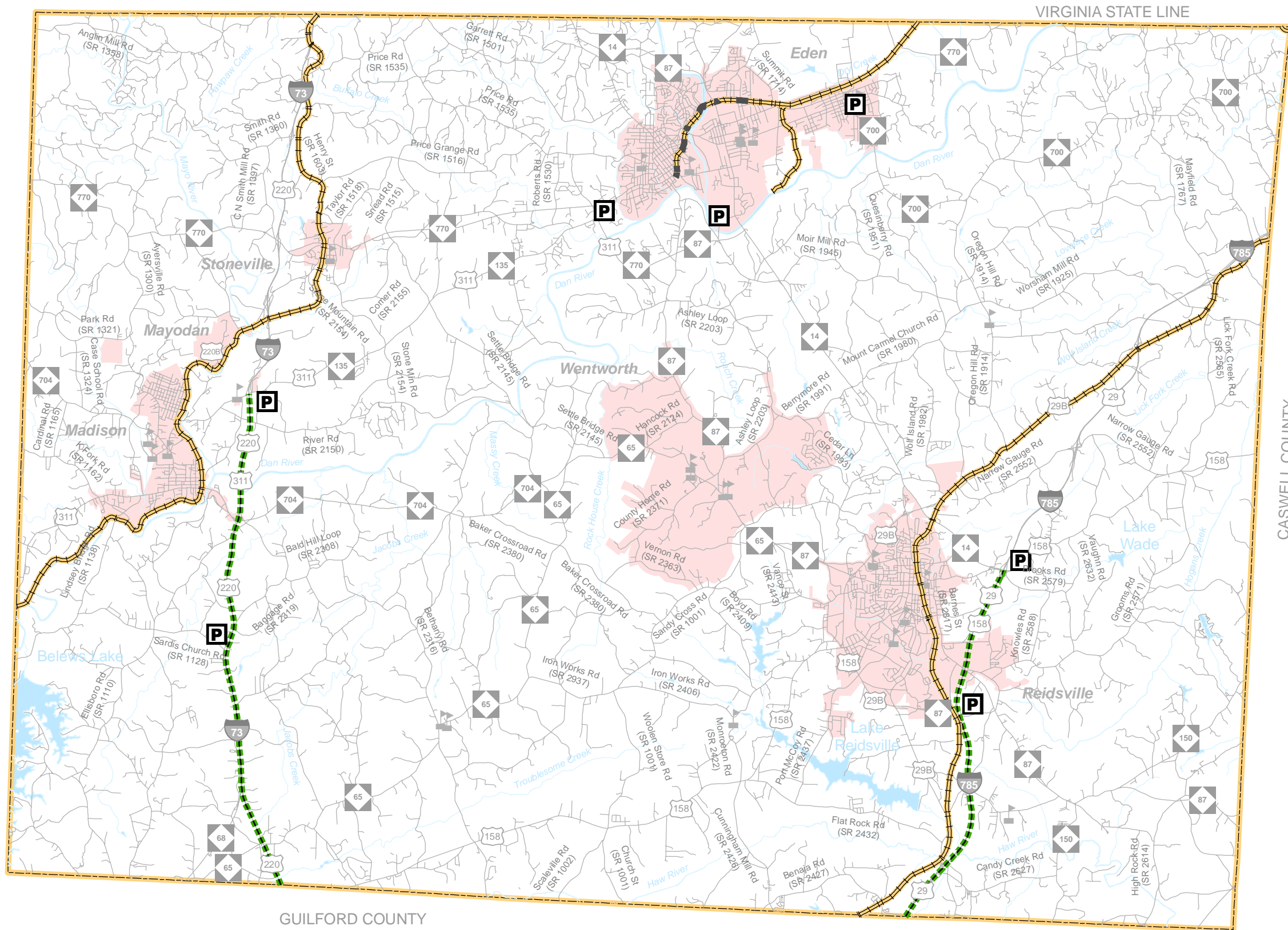
Figure 1 - Sheet 2A of 5

Base map date: October 2008

Refer to CTP document for more details

**Highway Map
Inset A
Rockingham
County
Comprehensive
Transportation Plan**

Plan date: March 19, 2010



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

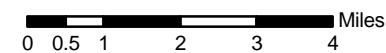
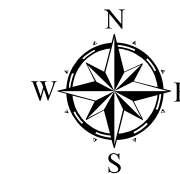


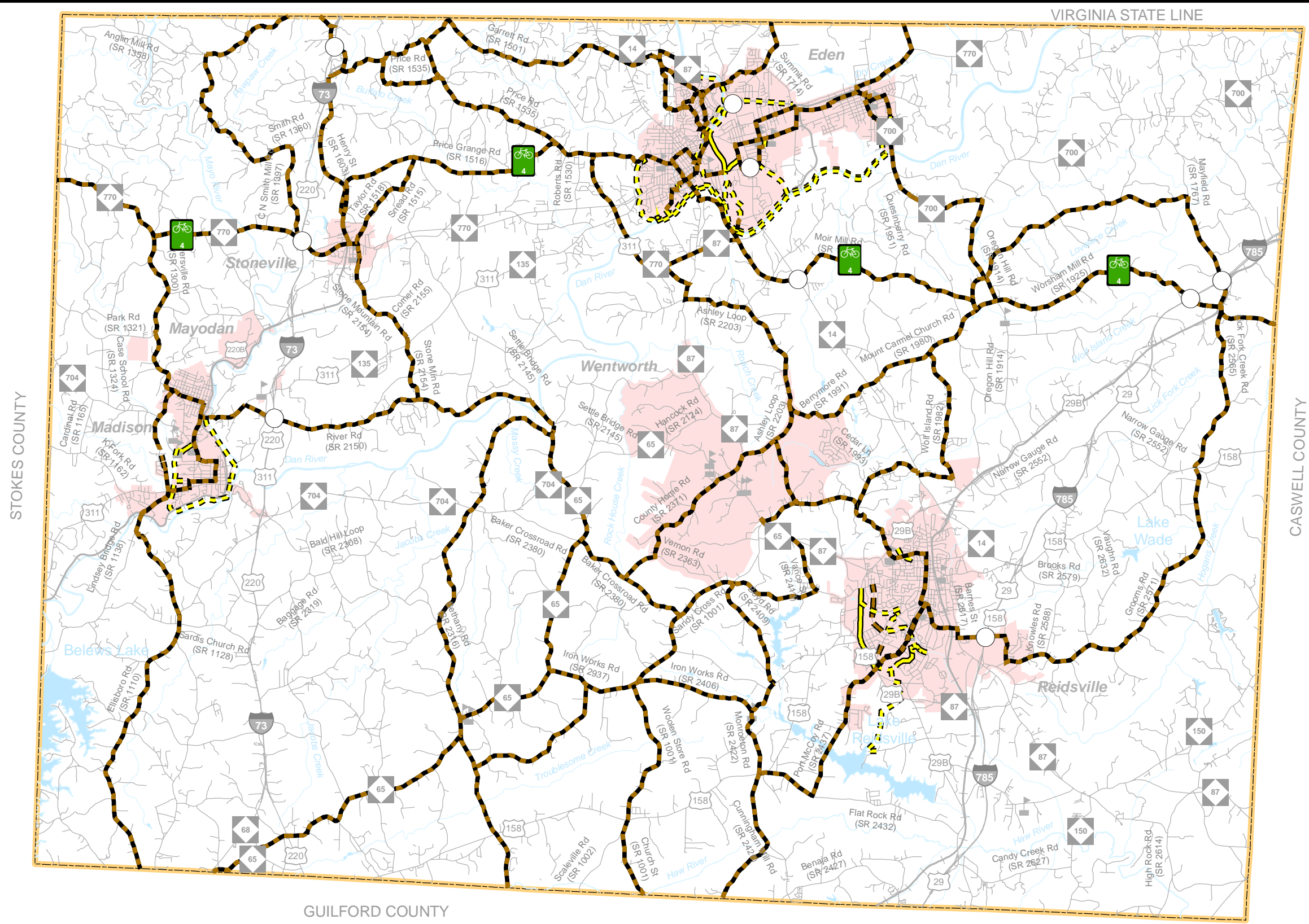
Figure 1 - Sheet 3 of 5

Base map date: October 2008

Refer to CTP document for more details



Public Transportation and Rail Map
Rockingham County
Comprehensive Transportation Plan
 Plan date: March 19, 2010



- | | | |
|---------------------------|-------------------|------------------------|
| On Road | Off Road | Multi-Use Paths |
| Existing | Existing | Existing |
| Needs Improvement | Needs Improvement | Needs Improvement |
| Recommended | Recommended | Recommended |
| Existing Grade Separation | | |
| Proposed Grade Separation | | |

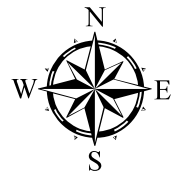
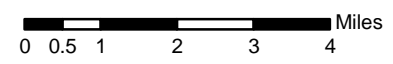
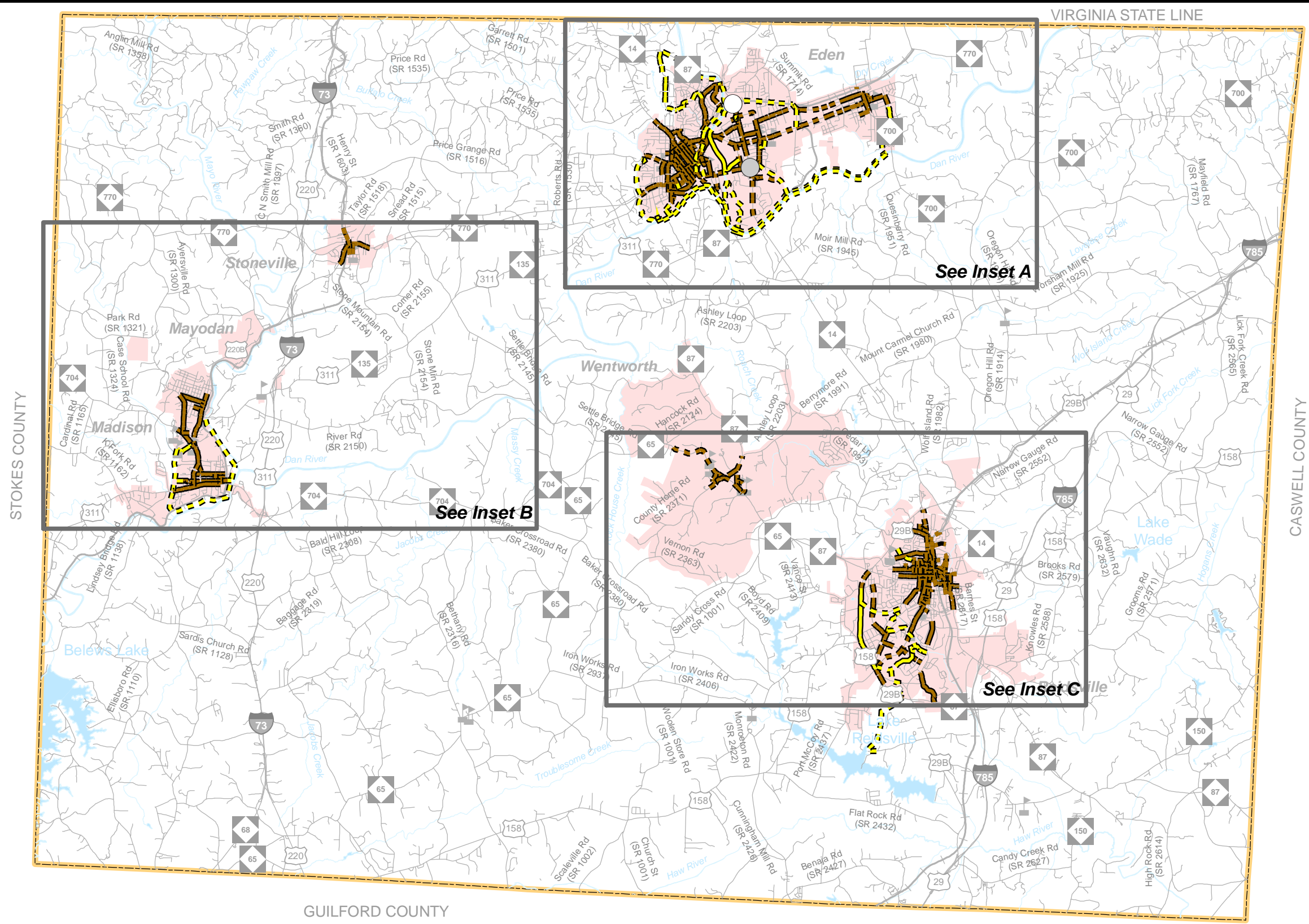


Figure 1 - Sheet 4 of 5

Base map date: October 2008

Refer to CTP document for more details

Bicycle Map
Rockingham County
Comprehensive Transportation Plan
 Plan date: March 19, 2010



- | | | |
|---------------------------|-------------------|------------------------|
| Sidewalks | Off Road | Multi-Use Paths |
| Existing | Existing | Existing |
| Needs Improvement | Needs Improvement | Needs Improvement |
| Recommended | Recommended | Recommended |
| Existing Grade Separation | | |
| Proposed Grade Separation | | |

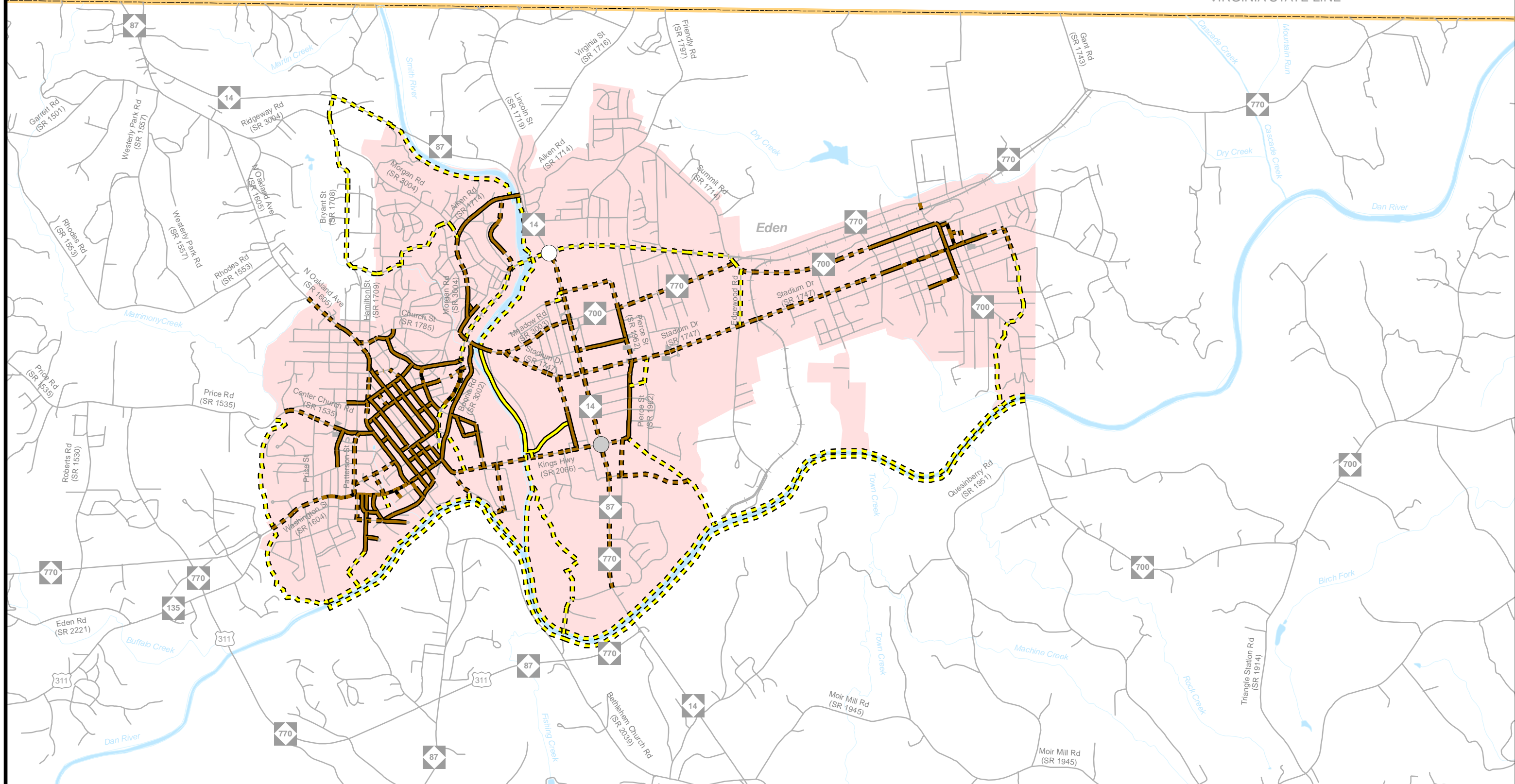
0 0.5 1 2 3 4 Miles

Figure 1 - Sheet 5 of 5

Base map date: October 2008

Refer to CTP document for more details

Pedestrian Map
Rockingham County
Comprehensive
Transportation Plan
 Plan date: March 19, 2010



Sidewalks

- Existing
- Needs Improvement
- Recommended

Off Road

- Existing
- Needs Improvement
- Recommended

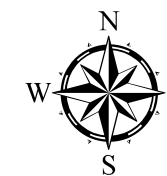
Multi-Use Paths

- Existing
- Needs Improvement
- Recommended

- Existing Grade Separation
- Proposed Grade Separation



Figure 1 - Sheet 5A of 5

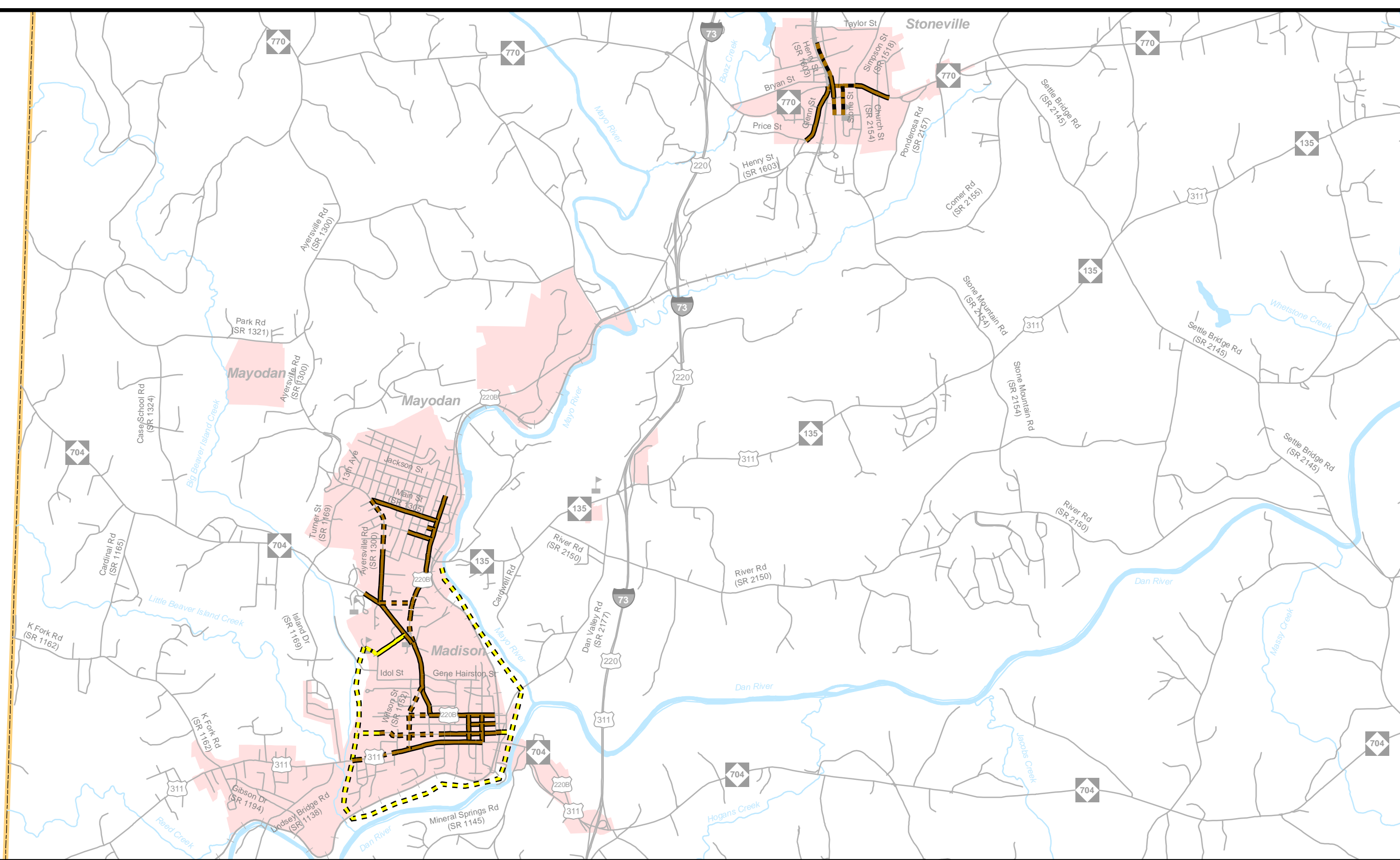


Base map date: October 2008

Refer to CTP document for more details

**Pedestrian Map
Inset A
Rockingham County
Comprehensive
Transportation Plan
Plan date: March 19, 2010**

STOKES COUNTY



Sidewalks

- Existing
- Needs Improvement
- Recommended

Off Road

- Existing
- Needs Improvement
- Recommended

Multi-Use Paths

- Existing
- Needs Improvement
- Recommended

- Existing Grade Separation
- Proposed Grade Separation



Figure 1 - Sheet 5B of 5

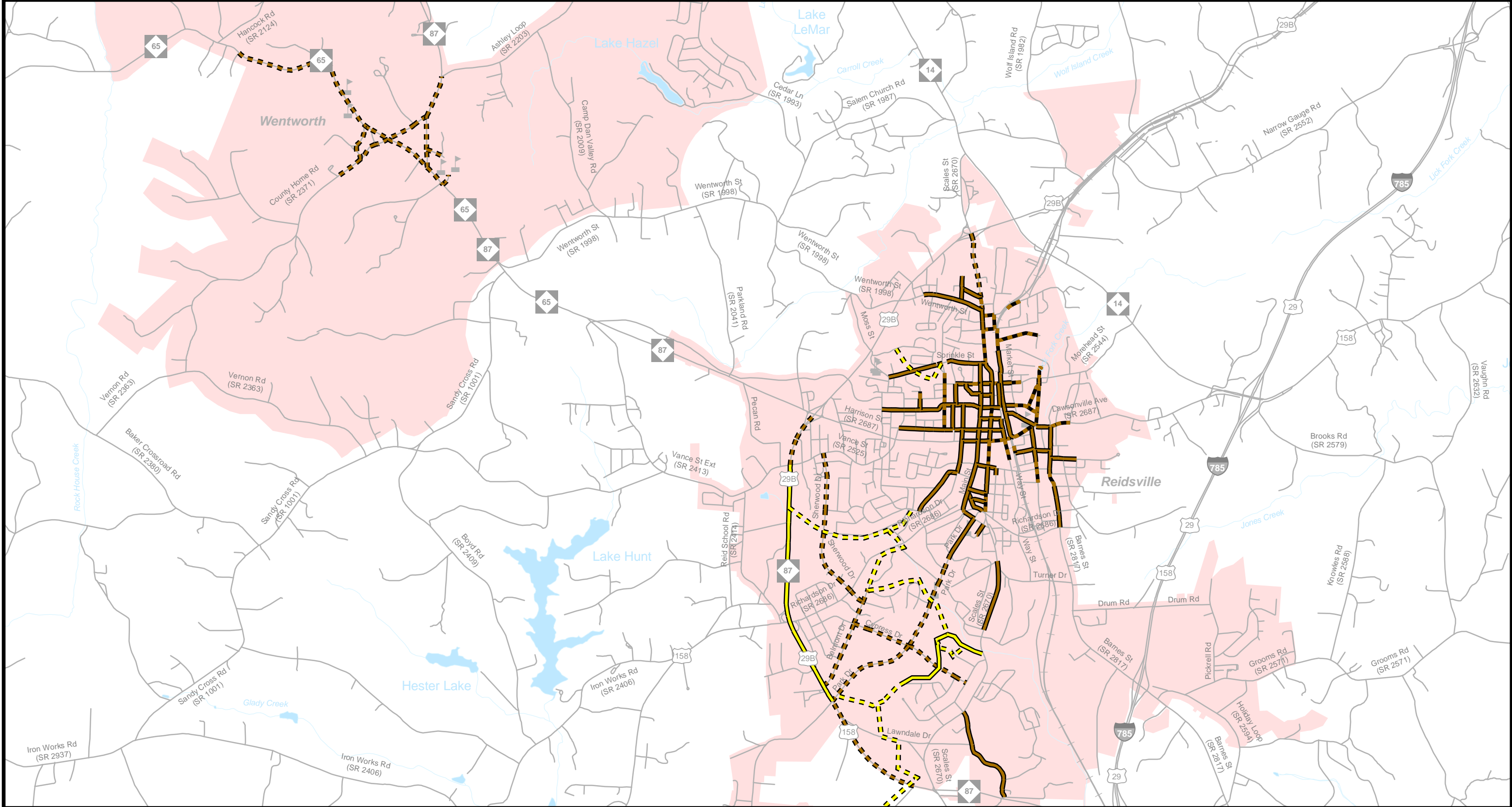
Base map date: October 2008

Refer to CTP document for more details

**Pedestrian Map
Inset B**

**Rockingham County
Comprehensive
Transportation Plan**

Plan date: March 19, 2010



Sidewalks

- Existing
- Needs Improvement
- Recommended

Off Road

- Existing
- Needs Improvement
- Recommended

Multi-Use Paths

- Existing
- Needs Improvement
- Recommended

- Existing Grade Separation
- Proposed Grade Separation

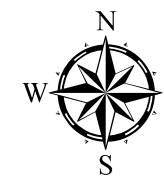


Figure 1 - Sheet 5C of 5

Base map date: October 2008

Refer to CTP document for more details

Pedestrian Map
Inset C
Rockingham County
Comprehensive
Transportation Plan
 Plan date: March 19, 2010

II. Analysis of the Existing and Future Transportation System

In order to develop a Comprehensive Transportation Plan (CTP), the following are considered:

- Analysis of the transportation system, including any local and statewide initiatives;
- Impacts to the natural and human environment, including natural resources, historic resources, homes, and businesses;
- Public input, including community vision and goals and objectives.

Analysis Methodology and Data Requirements

Reliable forecasts of future travel patterns must be estimated in order to analyze the ability of the transportation system to meet future travel demand. These forecasts depend on careful analysis of the character and intensity of existing and future land use and travel patterns.

An analysis of the transportation system looks at both current and future travel patterns and identifies existing and anticipated deficiencies. This is usually accomplished through a capacity deficiency analysis, a traffic crash analysis, and a system deficiency analysis. This information, along with population growth, economic development potential, and land use trends, is used to determine the potential impacts on the future transportation system.

Roadway System Analysis

An important stage in the development of a CTP is the analysis of the existing transportation 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, and intersection controls; or system problems, such as the need to construct missing travel links, bypass routes, loop facilities, or additional radial routes.

In the development of this plan, travel demand was projected from 2009 to 2035 using a trend line analysis based on Annual Average Daily Traffic (AADT) from 1991 to 2008. In addition, local land use plans and growth expectations were used to further refine future growth rates and patterns. The established future growth rates were endorsed by the Rockingham County in June 2009.

Existing and future travel demand is compared to existing roadway capacities. Capacity deficiencies occur when the traffic volume of a roadway exceeds the roadway's capacity. Roadways are considered near capacity when the traffic volume is at least

eighty percent of the capacity. Refer to Figures 2 and 3 for existing and future capacity deficiencies.

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:

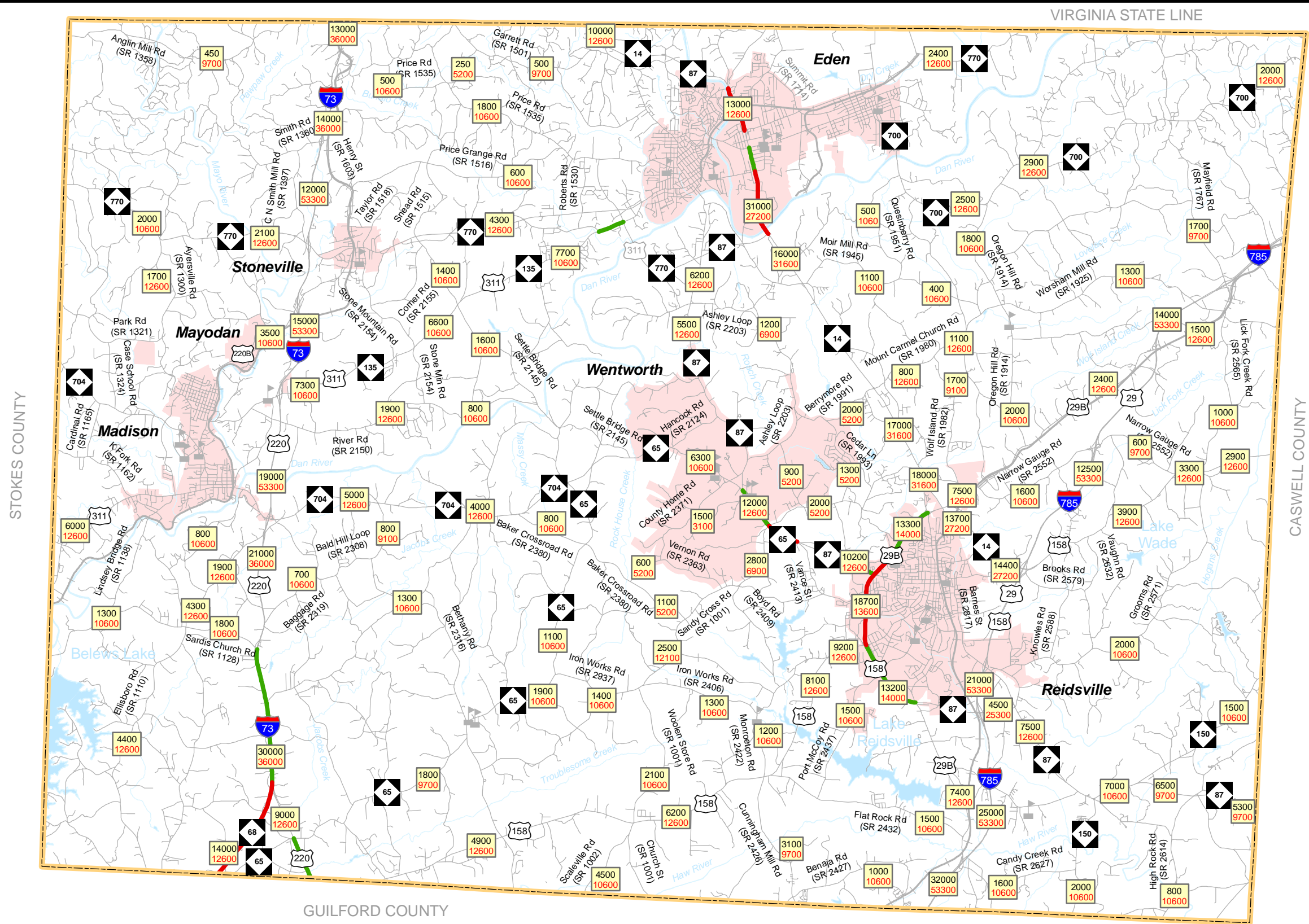
- Geometry of the road (including number of lanes), horizontal and vertical alignment, and proximity of perceived obstructions to safe travel along the road;
- Typical users of the road, such as commuters, recreational travelers, and truck traffic;
- Access control, including streets and driveways, or lack thereof, along the roadway;
- Development along 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.

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.

LOS D indicates “practical capacity” of a roadway, or the capacity at which the public begins to express dissatisfaction. The practical capacity for each roadway was developed based on the 2000 Highway Capacity Manual using the NCLOS Program. Recommended improvements and overall design of the transportation plan were based upon achieving a minimum LOS D on existing facilities and a LOS C for new facilities. Refer to Appendix E for detailed information on LOS.

Traffic Crash Analysis

Traffic crashes are often used as an indicator for locating congestion and roadway problems. Crash patterns obtained from an analysis of crash data can lead to the identification of improvements that will reduce the number of crashes. A crash analysis was performed for the Rockingham County CTP for crashes occurring in the planning area between January 1, 2007 and December 31, 2009. During this period, a total of 22 intersections were identified as high crash locations as illustrated in Figure 4. Refer to Appendix F for a detailed crash analysis.



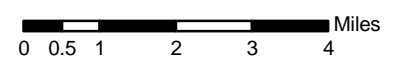
VIRGINIA STATE LINE

STOKES COUNTY

CASWELL COUNTY

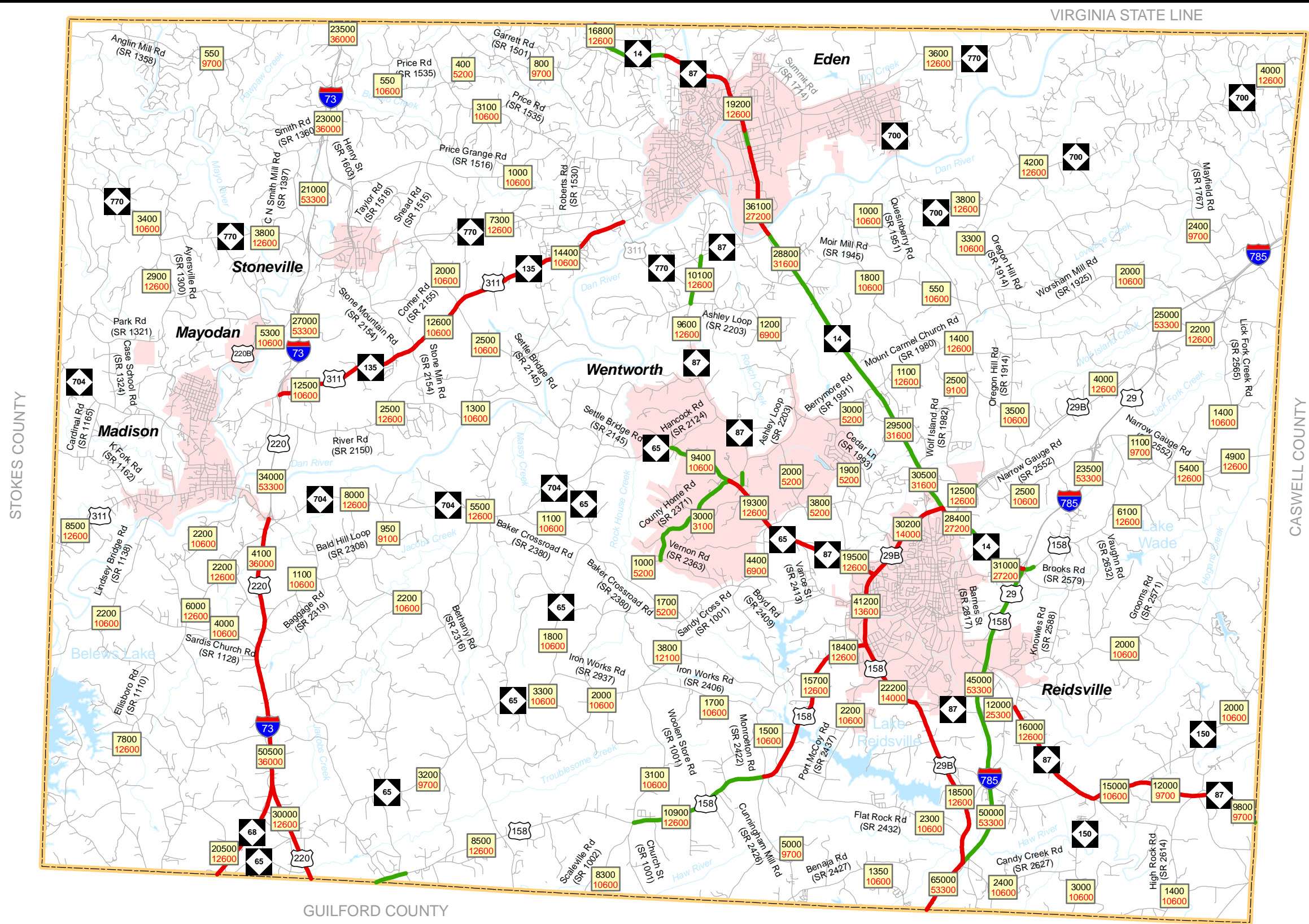
GUILFORD COUNTY

- Near Capacity
- Over Capacity
- 10000 2009 Volumes (AADT)
- 12600 2009 Capacity
- Schools
- Roads
- Railroads
- Lakes
- Rivers and Streams
- Municipal Limits
- County Boundary



Base map date: October 2008

FIGURE 2
2009 VOLUMES AND
CAPACITY DEFICIENCIES
Rockingham County
Comprehensive
Transportation Plan



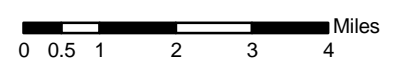
VIRGINIA STATE LINE

STOKES COUNTY

CASWELL COUNTY

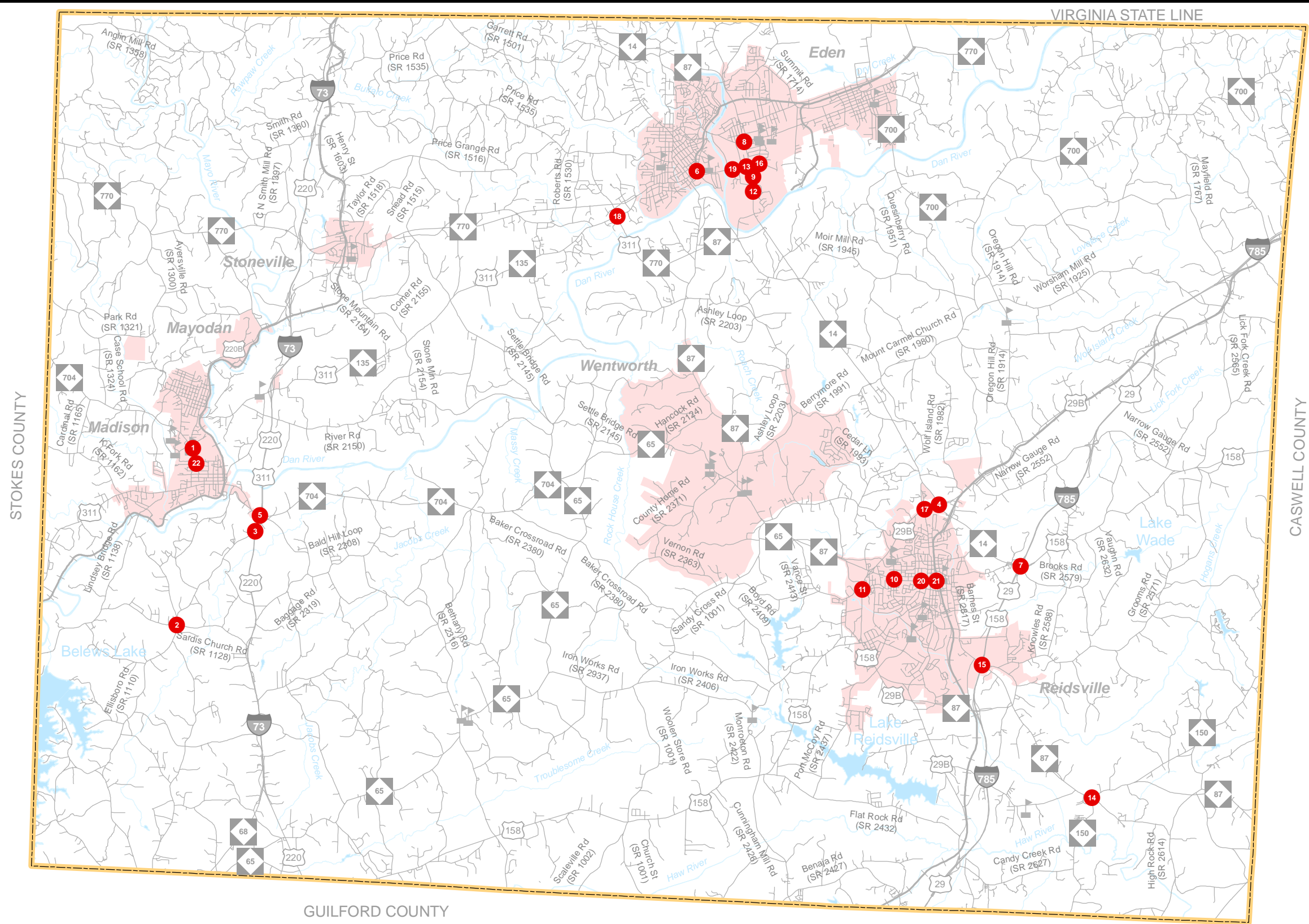
GUILFORD COUNTY

- Near Capacity
- Over Capacity
- 10000 2035 Volumes (AADT)
- 12600 2009 Capacity
- Schools
- Roads
- Railroads
- Lakes
- Rivers and Streams
- Municipal Limits
- County Boundary



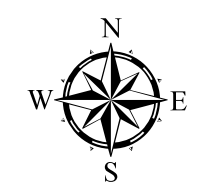
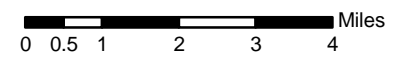
Base map date: October 2008

FIGURE 3
2035 VOLUMES AND
CAPACITY DEFICIENCIES
Rockingham County
Comprehensive
Transportation Plan



- # Crash Location (# Map Index)
- Schools
- Roads
- Railroads

- Lakes
- Rivers and Streams
- Municipal Limits
- County Boundary



Base map date: October 2008

Refer to Appendix F for more details

FIGURE 4
Crash Locations
January 1, 2007 to December 31, 2009
Rockingham County
Comprehensive
Transportation Plan

Bridge Deficiency Assessment

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 NCDOT Bridge Maintenance Unit inspects all bridges in North Carolina at least once every two years. Bridges having the highest priority are replaced as Federal and State funds become available. Eighty-nine deficient bridges were identified within the planning area and are illustrated in Figure 5. Refer to Appendix G for more detailed information.

Public Transportation and Rail

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

Public Transportation

North Carolina's public transportation systems serve more than 50 million passengers each year. Five categories define North Carolina's public transportation system: community, regional community, urban, regional urban and intercity.

- Community Transportation - Local transportation efforts formerly centered on assisting clients of human service agencies. Today, the vast majority of rural systems serve the general public as well as those clients.
- Regional Community Transportation - Regional community transportation systems are composed of two or more contiguous counties providing coordinated / consolidated service. Although such systems are not new, the NCDOT Board of Transportation is encouraging single-county systems to consider mergers to form more regional systems.
- Urban Transportation – There are currently nineteen urban transit systems operating in North Carolina, from locations such as Asheville and Hendersonville in the west to Jacksonville and Wilmington in the east. In addition, small urban systems are at work in three areas of the state. Consolidated urban-community transportation exists in five areas of the state. In those systems, one transportation system provides both urban and rural transportation within the county.

- Regional Urban Transportation - Regional urban transit systems currently operate in three areas of the state. These systems connect multiple municipalities and counties.
- Intercity Transportation - Intercity bus service is one of a few remaining examples of privately owned and operated public transportation in North Carolina. Intercity buses serve many cities and towns throughout the state and provide connections to locations in neighboring states and throughout the United States and Canada. Greyhound/Carolina Trailways operates in North Carolina. However, community, urban and regional transportation systems are providing increasing intercity service in North Carolina.

An inventory of existing and planned fixed public transportation routes for the planning area is presented on Sheet 3 of Figure 1. There is currently no fixed-route bus service in Rockingham County.

There are two planned transit routes for the county that include the construction of park-and-ride lots. Additionally, during the development of the CTP, a need was identified for the Rockingham County Public Access Transportation, a private non-profit group operating under the Rockingham County Council of Aging, Inc., to pursue development of a flexible fixed route service throughout the county to connect with the proposed Rockingham County PART route stops.

All recommendations for public transportation were coordinated with the local governments and the Public Transportation Division of NCDOT. Refer to Appendix A for contact information.

Rail

Today North Carolina has 3,684 miles of railroad tracks throughout the state. There are two types of trains that operate in the state, passenger trains and freight trains.

The North Carolina Department of Transportation sponsors two passenger trains, the Carolinian and Piedmont. The Carolinian runs between Charlotte and New York City, while the Piedmont train carries passengers from Raleigh to Charlotte and back everyday. Combined, the Carolinian and Piedmont carry more than 200,000 passengers each year.

There are two major freight railroad companies that operate in North Carolina, CSX Transportation and Norfolk Southern Corporation. Also, there are more than 20 smaller freight railroads, known as shortlines.

An inventory of existing and planned rail facilities for the planning area is presented on Sheet 3 of Figure 1. Amtrak currently runs the Crescent Line from New York City to New Orleans, Louisiana. It currently has two stops near Rockingham County, one in Greensboro and the other in Danville, Virginia. During the development of this CTP, it

was investigated whether a stop could be added in Reidsville. Due to the long distances between stops and high speed of this train line, it is not feasible to place a train stop between Greensboro and Danville, Virginia. All recommendations for rail were coordinated with the local governments and the Rail Division of NCDOT. Refer to Appendix A for contact information.

Bicycles & Pedestrians

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

NCDOT's Bicycle Policy, updated in 1991, clarifies responsibilities regarding the provision of bicycle facilities upon and along the 77,000-mile state-maintained highway system. The policy details guidelines for planning, design, construction, maintenance, and operations pertaining to bicycle facilities and accommodations. All bicycle improvements undertaken by the NCDOT are based upon this policy.

The 2000 NCDOT Pedestrian Policy Guidelines specifies that NCDOT will participate with localities in the construction of sidewalks as incidental features of highway improvement projects. At the request of a locality, state funds for a sidewalk are made available if matched by the requesting locality, using a sliding scale based on population.

NCDOT's administrative guidelines, adopted in 1994, ensure that greenways and greenway crossings are considered during the highway planning process. This policy was incorporated so that critical corridors which have been adopted by localities for future greenways will not be severed by highway construction.

Inventories of existing and planned bicycle and pedestrian facilities for the planning area are presented on Sheets 4 and 5 of Figure 1. The Piedmont Triad RPO Regional Bicycle Study, Piedmont Triad RPO Sidewalk Inventory, Eden Greenway Master Plan, 2001 Madison-Mayodan Thoroughfare Plan, and 2001 Reidsville Thoroughfare Plan were utilized in the development of these elements of the CTP. State Bicycle Route #4 passes through the northern part of the county as shown on the map. All recommendations for bicycle and pedestrian facilities were coordinated with the local governments and the NCDOT Division of Bicycle and Pedestrian Transportation. Refer to Appendix A for contact information.

Land Use

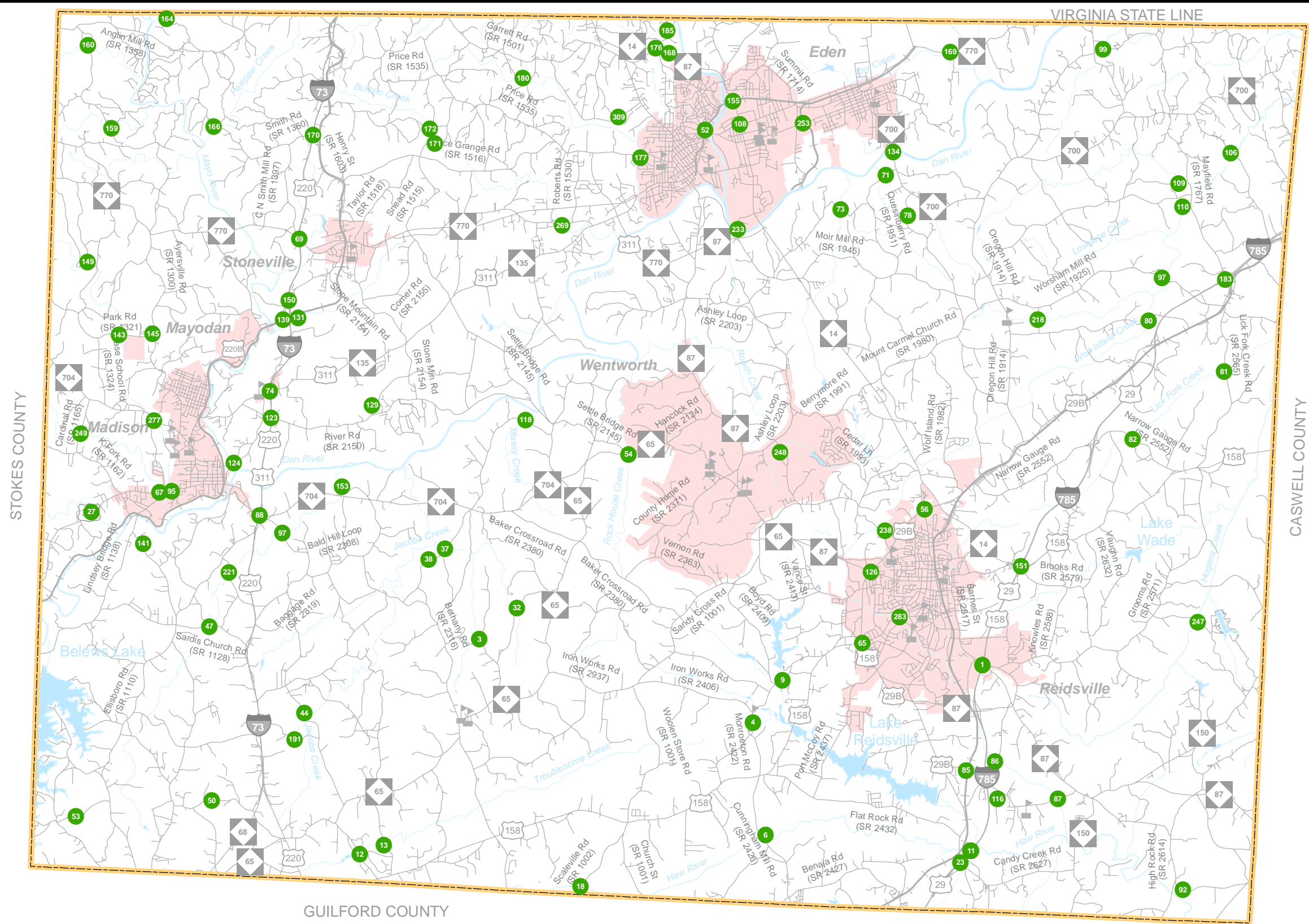
G.S. §136-66.2 requires that local areas have a current (less than five years old) land development plan prior to adoption of the CTP. For this CTP, the 2006 Rockingham County Land Use Plan and 2006 Town of Wentworth Land Development Plan were used to meet this requirement and are illustrated in Figures 6 & 7, and Figures 8 & 9, respectively.

Land use refers to the physical patterns of activities and functions within an area. Traffic demand in a given area is, in part, attributed to adjacent land use. For example, a large shopping center typically generates higher 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. Additionally, traffic volumes 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: Land devoted to the housing of people, with the exception of hotels and motels which are considered commercial.
- Commercial: Land 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: Land devoted to the manufacturing, storage, warehousing, and transportation of products.
- Public: Land devoted to social, religious, educational, cultural, and political activities; this would include the office and service employment establishments.
- Agricultural: Land 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.
- Mixed Use: Land devoted to a combination of any of the categories above.

Anticipated future land development is, in general, a logical extension of the present spatial land use distribution. Locations and types of expected growth within the planning area help to determine the location and type of proposed transportation improvements.

Rockingham County primary anticipates growth in areas designated as “Urban Transition” or “Economic Development,” which is depicted in Figure 7. These areas tend to be either in or near the extraterritorial jurisdiction of the county’s municipalities, along a major route, or near another major land use. Significant overall growth is expected in these areas, while significant residential growth is expected in the southern part of the county.



VIRGINIA STATE LINE

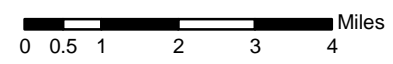
STOKES COUNTY

CASWELL COUNTY

GUILFORD COUNTY

- Deficient Bridges (# Bidge Number)
- Schools
- Roads
- Railroads

- Lakes
- Rivers and Streams
- Municipal Limits
- County Boundary

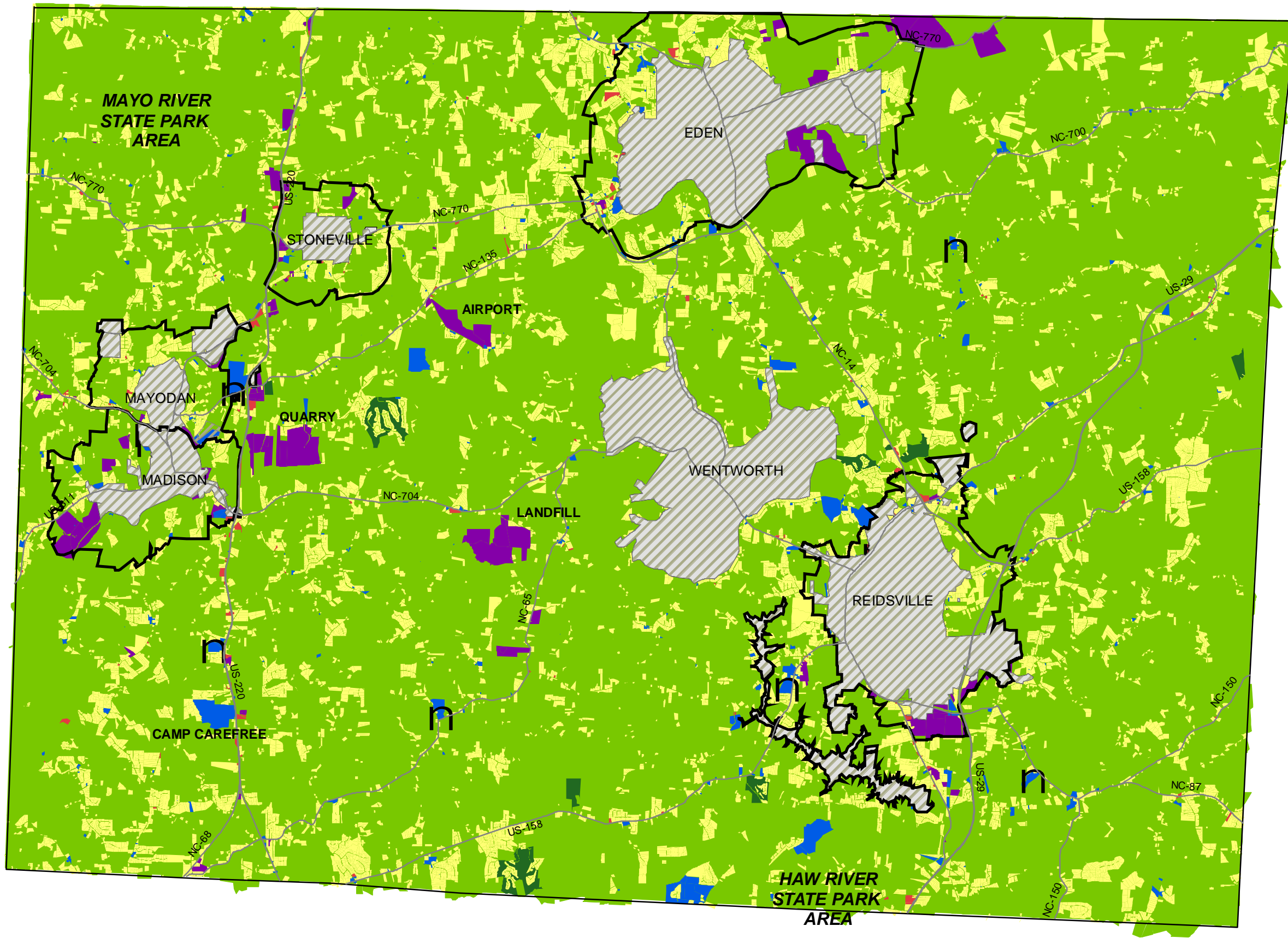


Base map date: October 2008

Refer to Appendix G for more details

FIGURE 5
Deficient Bridges
Rockingham County
Comprehensive
Transportation Plan

Figure 6



LAND USE LEGEND

- RESIDENTIAL
- AGRICULTURAL
- RECREATIONAL
- COMMERCIAL
- INSTITUTIONAL
- INDUSTRIAL

- SCHOOL
- ETJ
- MUNICIPALITY
- RIVERS/ LAKES

NOTES:

EXAMPLES OF USES BY CATEGORY

RESIDENTIAL = SITE BUILT HOMES
MANUFACTURED HOMES (LOTS < 5 ACRES)

COMMERCIAL = AUTO SHOPS & DEALERS
CONVENIENCE STORES
RESTUARANTS
RETAIL SERVICES

INDUSTRIAL = GAS & OIL STORAGE
MANUFACTURING
SAWMILLS
MINING AND QUARRYING
PUBLIC UTILITIES
LANDFILLS
AIRPORTS

AGRICULTURAL= FARM LAND
TIMBER LAND
OPEN LAND

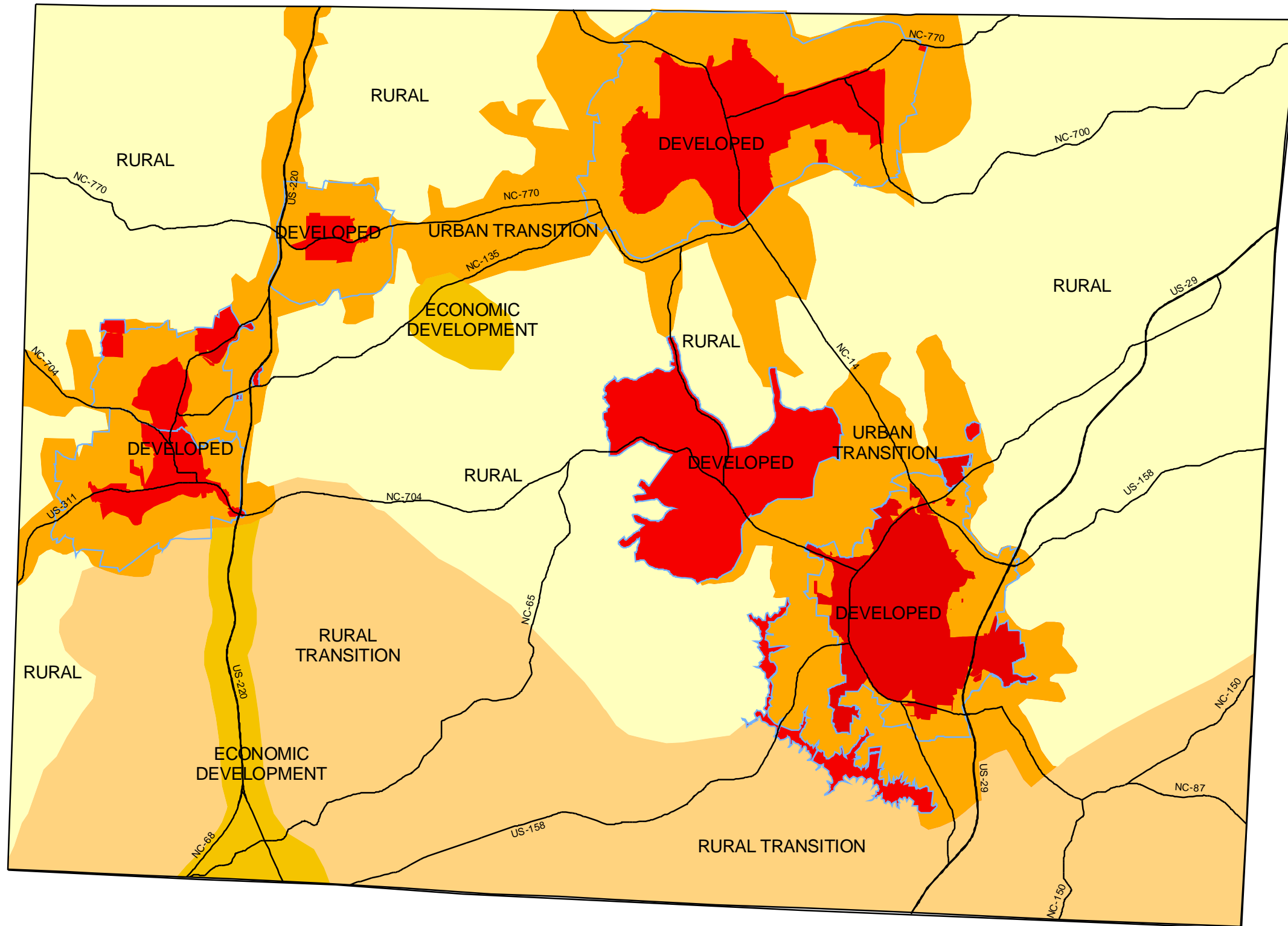
INSTITUTIONAL = SCHOOLS
CHURCHES
GOVERNMENTAL PROPERTY
CEMETERIES

RECREATIONAL = GOLF COURSES
CAMPGROUNDS

ROCKINGHAM COUNTY EXISTING LAND USE

MAP CREATED AUGUST 2005 BASED ON DATA FROM ROCKINGHAM COUNTY TAX OFFICE AND ROCKINGHAM PLANNING AND ZONING OFFICE

Figure 7



LAND CLASS AREA PERCENTAGES

DEVELOPED	8.84%
URBAN TRANSITION	18.45%
ECONOMIC DEVELOPMENT	2.43%
RURAL TRANSITION	24.08%
RURAL	46.20%



LAND CLASS

- DEVELOPED
- URBAN TRANSITION
- ECONOMIC DEVELOPMENT
- RURAL TRANSITION
- RURAL

ROCKINGHAM COUNTY LAND CLASSIFICATION MAP

Figure 8: Town of Wentworth Existing Land Use

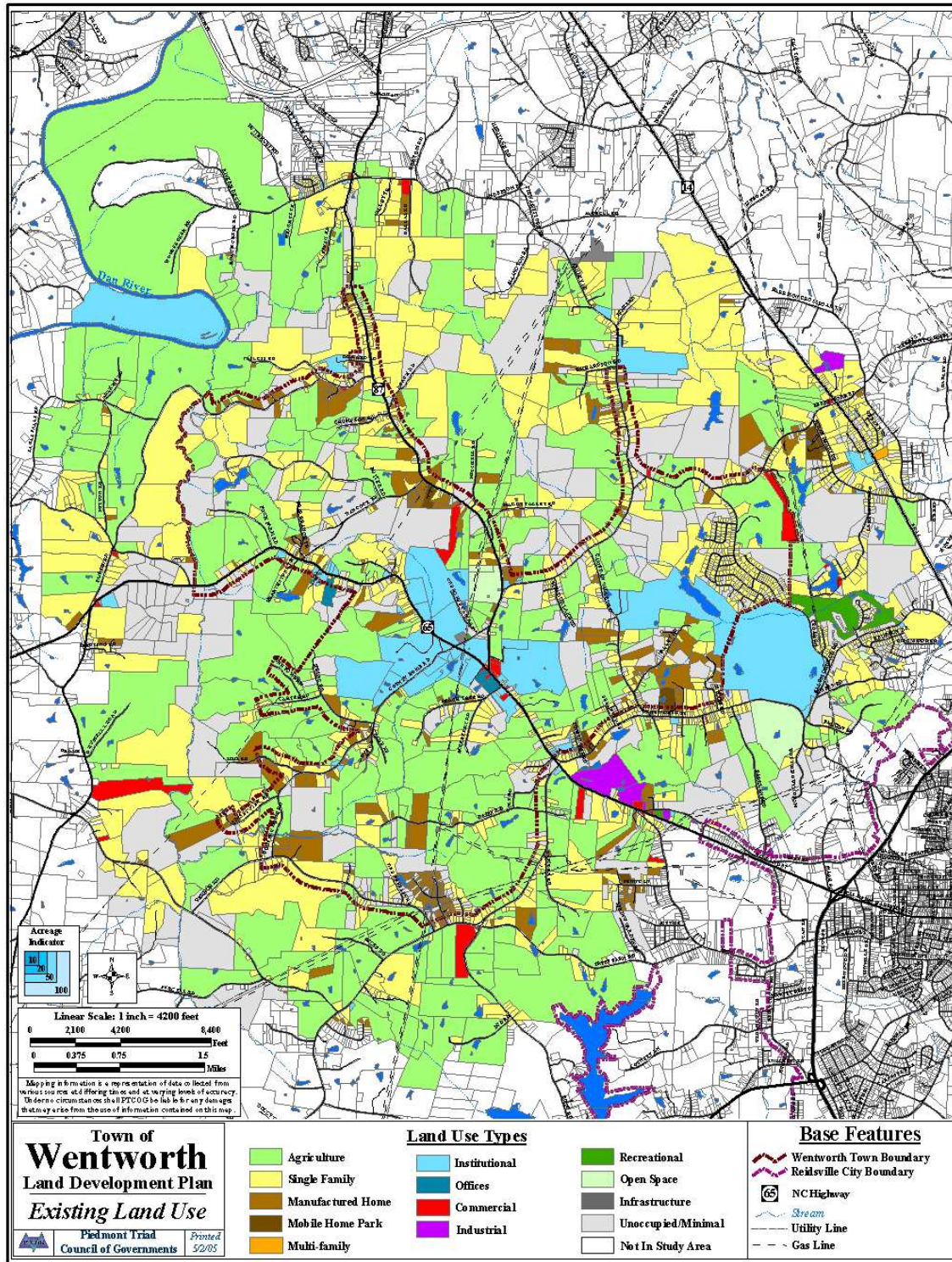
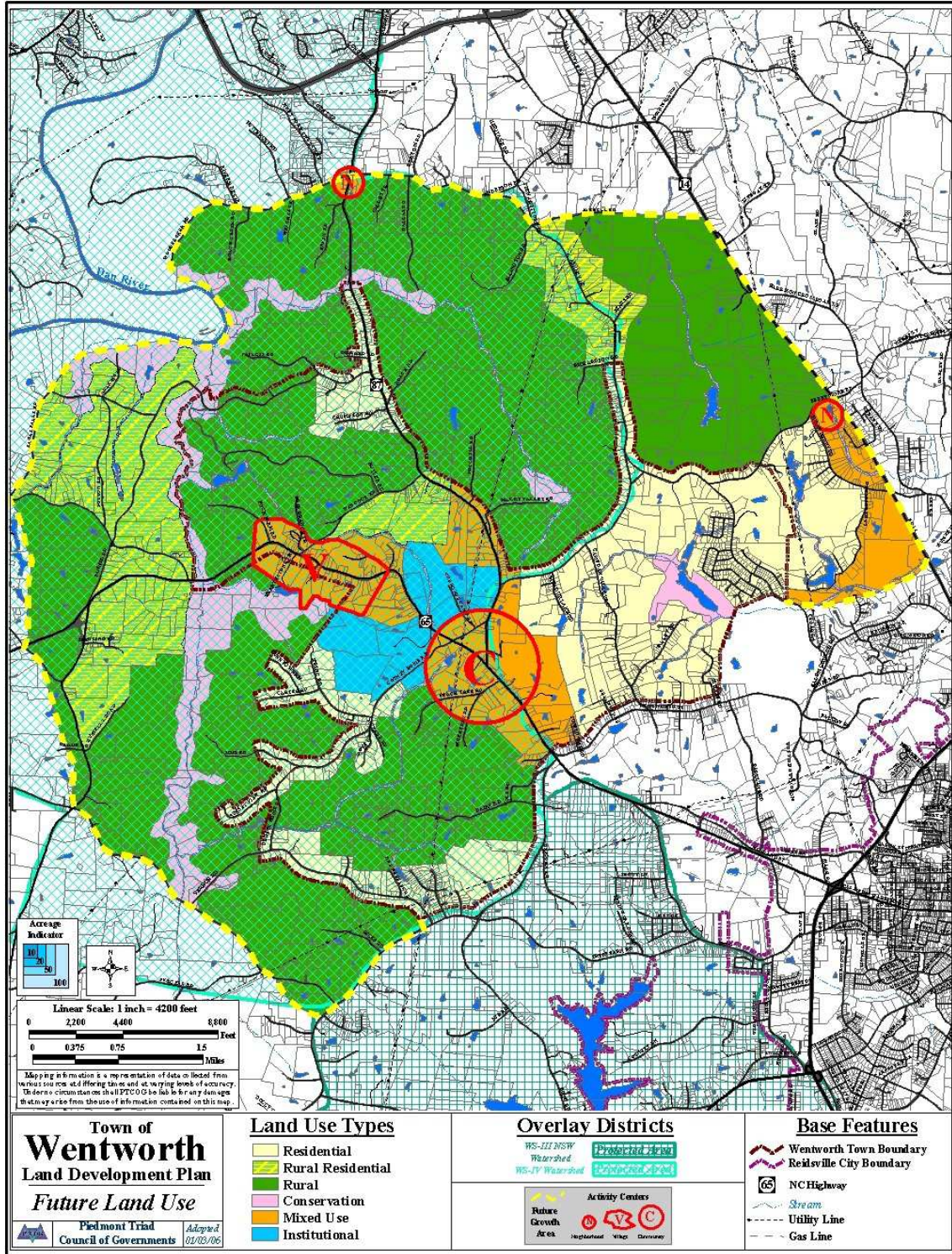


Figure 9: Town of Wentworth Future Land Use



Consideration of Natural and Human Environment

In recent years, the environmental considerations have come to the forefront of the transportation planning process. Section 102 of the National Environmental Policy Act (NEPA) requires consideration of impacts on wetlands, wildlife, water quality, historic properties, and public lands. While a full NEPA evaluation was not conducted as part of the CTP, potential impacts to these resources were identified as a part of the project recommendations in Chapter 1 of this report. Prior to implementing transportation recommendations of the CTP, a more detailed environmental study would need to be completed in cooperation with the appropriate environmental resource agencies.

A full listing of environmental features that were examined as a part of this study is shown in the following table utilizing the best available data. Environmental features occurring within Rockingham County are shown in Figure 10.

Table 1 – Environmental Features

- | | |
|---|---|
| <ul style="list-style-type: none"> • Air Quality Pollution Discharge Points • Ambient Water Quality Monitoring Sites • Anadromous Fish Spawning Areas • Animal Operation Permits • Artificial Marine Reefs • Beach Access Sites • Benthic Monitoring Results • Bottom Sediment Sampling Sites • Cemeteries • Churches • Citizen Water Quality Monitoring Sites • Closed Shellfish Harvesting Areas • Coastal Reserves • Conditionally Approved Shellfish Harvesting Areas • Conservation Easements, US Fish & Wildlife Service • Conservation Tax Credit Properties • Discharger Coalitions' Monitoring Sites • Ecosystem Enhancement Program (EEP) Local Watershed Plans, 2004 | <ul style="list-style-type: none"> • Ecosystem Enhancement Program (EEP) Targeted Local Watersheds, 2004 • Federal Land Ownership • Fish Community Sampling Sites • Fisheries Nursery Areas • Game Lands – Wildlife Resources Commission • Groundwater Incidents, unverified • Groundwater Recharge/Discharge • Hazardous Substance Disposal Sites • Hazardous Waste Facilities • Heavy Metal & Organic-Rich Mud Pollutant Sample Sites • High Quality Water and Outstanding Resource Water Management Zones • Hurricane Storm Surge Inundation Areas • Land Trust Conservation Properties • Land Trust Priority Areas • Lands Managed for Conservation & Open Space • Macrosite Boundaries • Megasite Boundaries • National Pollutant Discharge Elimination System Sites (NPDES) – Major and Minor |
|---|---|

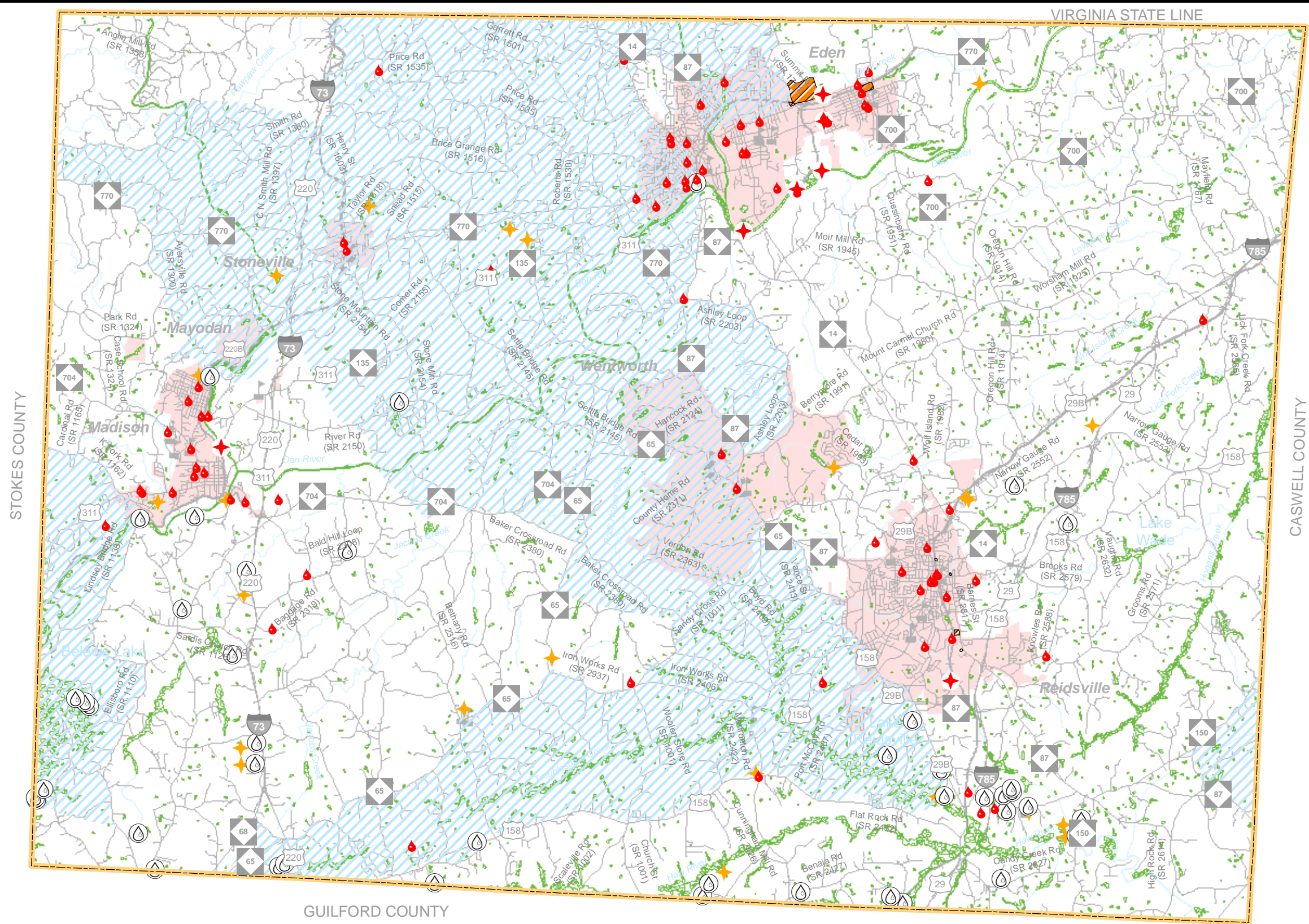
Table 1 – Environmental Features (cont.)

- National Wetlands Inventory
- North Carolina Coastal Region Evaluation of Wetland Significance (NC-CREWS) Public Water Supply Water Sources
- Recreation Projects – Land and Water
- Conservation Fund
- Shellfish Strata
- Significant Aquatic Endangered Species Habitats
- Solid Waste Facilities
- State Parks
- Submersed Rooted Vasculars
- Surface Water Intakes
- Trout Streams (DWQ)
- Water Distribution Systems – Water Treatment Plants
- Water Supply Watersheds
- Well Ground Water Intakes

Additionally, the following environmental features were considered but are not mapped due to restrictions associated with the sensitivity of the data.

Table 2 – Restricted Environmental Features

- Archaeological Sites
- Dedicated Nature Preserves and Registered Heritage Areas
- Historic National Register Districts
- Historic National Register Structures
- Historic Study List Districts
- Historic Study List Structures
- Managed Areas National Heritage Element Occurrences
- Significant Natural Heritage Areas



VIRGINIA STATE LINE

STOKES COUNTY

CASWELL COUNTY

GUILFORD COUNTY

- ◆ Groundwater Incidents Unverified Points
- ⊙ Public Water Supply Water Sources
- ★ NPDES Major Sites
- ★ NPDES Minor Sites
- Water Supply Water Shed
- Hazardous Substance Disposal Sites
- National Wetlands Inventory
- S Schools
- Roads
- Railroads
- Lakes
- Rivers and Streams
- Municipal Limits
- County Boundary

0 0.5 1 2 3 4 Miles



Base map date: October 2008

FIGURE 10
Environmental Features
Rockingham County
Comprehensive
Transportation Plan

Public Involvement

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

The Piedmont Triad RPO requested the development of a comprehensive transportation plan for Rockingham County through a prioritized list of regional needs. A meeting was held with the Rockingham County Board of Commissioners in March 2009 to formally initiate the study, provide an overview of the transportation planning process, and to gather input on area transportation needs.

Throughout the course of the study, the Transportation Planning Branch cooperatively worked with the Rockingham County CTP Steering Committee, which included a representative from the Town of Wentworth, county staff, and the Piedmont Triad RPO to provide information on current local plans, to develop transportation vision and goals, to discuss population and employment projections, and to develop proposed CTP recommendations. Refer to Appendix H for detailed information on the vision statement, the goals and objectives survey and a listing of committee members.

The public involvement process included holding two public drop-in sessions in Rockingham County to present the proposed Comprehensive Transportation Plan to the public and solicit comments. The first meeting was held on March 23, 2009 at the Wentworth Town Hall; the second meeting was held on June 30, 2009 at the Rockingham Community College. Each session was publicized in the local newspaper and was held from 6:00-9:00 pm. No comment forms were submitted during either session.

A public hearing was held on May 10, 2010 during the Rockingham County Commissioners meeting. The purpose of this meeting was to discuss the plan recommendations and to solicit further input from the public. The CTP was adopted during this meeting.

The Piedmont Triad RPO endorsed the CTP on August 18, 2010. The North Carolina Board of Transportation voted to mutually adopt the Rockingham County CTP on September 2, 2010.

APPENDICES

Appendix A Resources and Contacts

North Carolina Department of Transportation

Customer Service Office

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

1-877-DOT-4YOU

(1-877-368-4968)

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

Secretary of Transportation

Eugene A. Conti, Jr., Ph.D.

1501 Mail Service Center

Raleigh, NC 27699-1501

(919) 733-2520

gconti@ncdot.gov

<http://www.ncdot.org/about/leadership/secretary.html>

Board of Transportation Member

Mr. Michael S. Fox

P.O. Box 2888

Greensboro, NC 27402

(336) 378-1431

mikefox@ncdot.gov

<http://www.ncdot.gov/about/board/default.html>

Highway Division Engineer

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

Mr. Mike Mills. PE

P.O. Box 14996

1584 Yanceyville Street

Greensboro, NC 27415-4996

(336) 334-3192

mmills@ncdot.gov

<http://www.ncdot.gov/doh/operations/division7/>

Division Project Manager

Contact the Division Project Manager with questions concerning transportation projects within each Division.

Mr. John Hunsinger
P.O Box 14996
1584 Yanceyville Street
Greensboro, NC 27415-4996
(336) 334-3192
jhunsinger@ncdot.gov

Division Construction Engineer

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

Mr. Patty Eason, PE
P.O Box 14996
1584 Yanceyville Street
Greensboro, NC 27415-4996
(336) 334-3192
peason@ncdot.gov

Division Traffic Engineer

Contact the Division Traffic Engineer for information concerning traffic signals, highway signs, pavement markings and crash history.

Mr. Kelvin L. Jordan
P.O Box 14996
1584 Yanceyville Street
Greensboro, NC 27415-4996
(336) 334-3192
kjordan@ncdot.gov

Division Operations Engineer

Contact the Division Operations Engineer for information concerning facility operations.

Mr. Pat Wilson, PE
P.O Box 14996
1584 Yanceyville Street
Greensboro, NC 27415-4996
(336) 334-3192
pwilson@ncdot.gov

Division Maintenance Engineer

Contact the Division Maintenance Engineer information regarding maintenance of all state roadways, improvement of secondary roads and other small improvement projects. The Division Maintenance Engineer also oversees the District Offices, the Bridge Maintenance Unit and the Equipment Unit.

Brad Wall, PE
P.O Box 14996
1584 Yanceyville Street
Greensboro, NC 27415-4996
(336) 334-3192
bwall@ncdot.gov

District Engineer

Contact the District Engineer for information on outdoor advertising, junkyard control, driveway permits, road additions, subdivision review and approval, Adopt A Highway program, encroachments on highway right of way, issuance of oversize/overwidth permits, paving priorities, secondary road construction program and road maintenance.

Mr. Paul Ingram, PE
P.O. Box 2513
920 Montgomery Street
Reidsville, NC 27323-2513
pingram@ncdot.gov

Transportation Planning Branch (TPB)

Contact the Transportation Planning Branch for information on long-range multi-modal planning services.

1554 Mail Service Center
Raleigh, NC 27699-1554
(919) 733-4705
<http://www.ncdot.gov/doh/preconstruct/tpb/>

Piedmont Triad Rural Planning Organization (RPO)

Contact the RPO for information on long-range multi-modal planning services.

Ms. Hanna Cockburn, AICP
2216 West Meadowview Road, Suite 201
Greensboro, NC 27407-3480
(336) 294-4950
hcockburn@ptcog.org
http://www.ptcog.org/planning_services/transportation/RPO/index.php

Strategic Planning Office

Contact the Strategic Planning Office for information concerning prioritization of transportation projects.

Mr. Don Voelker

1501 Mail Service Center

Raleigh, NC 27699-1501

(919) 715-0951

djvoelker@ncdot.gov

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

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

<http://www.ncdot.gov/doh/preconstruct/pe/>

Secondary Roads Office

Contact the Secondary Roads Office for information regarding the status for unpaved roads to be paved, additions and deletions of roads to the State maintained system and the Industrial Access Funds program.

1535 Mail Service Center

Raleigh, NC 27699-1535

(919) 733-3250

<http://www.ncdot.gov/doh/operations/secondaryroads/>

Program Development Branch

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

1534 Mail Service Center

Raleigh, NC 27699-1534

(919) 733-2039

<http://www.ncdot.org/planning/development/>

Public Transportation Division

Contact the Public Transportation Division for information public transit systems.

1550 Mail Service Center

Raleigh, NC 27699-1550

(919) 733-4713

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

Rail Division

Contact the Rail Division for rail information throughout the state.

1553 Mail Service Center
Raleigh, NC 27699-1553
(919) 733-7245
<http://www.bytrain.org/>

Division of Bicycle and Pedestrian Transportation

Contact this Division for bicycle and pedestrian transportation information throughout the state.

1552 Mail Service Center
Raleigh, NC 27699-1552
(919) 807-0777
<http://www.ncdot.gov/transit/bicycle/>

Bridge Maintenance Unit

Contact the Bridge Maintenance Unit for information on bridge management throughout the state.

1565 Mail Service Center
Raleigh, NC 27699-1565
(919) 733-4362
http://www.ncdot.gov/doh/operations/dp_chief_eng/maintenance/bridge/

Highway Design Branch

The Highway Design Branch consists of the Roadway Design, Structure Design, Photogrammetry, Location & Surveys, Geotechnical, and Hydraulics Units. Contact the Highway Design Branch for information regarding design plans and proposals for road and bridge projects throughout the state.

1584 Mail Service Center
Raleigh, NC 27699-1584
(919) 250-4001
<http://www.ncdot.gov/doh/preconstruct/highway/>

Other State Government Offices

Department of Commerce – Division of Community Assistance

Contact the Department of Commerce for resources and services to help realize economic prosperity, plan for new growth and address community needs.

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

Appendix B Comprehensive Transportation Plan Definitions

Highway Map

For visual depiction of facility types for the following CTP classification, visit <http://www.ncdot.gov/doh/preconstruct/tpb/SHC/facility/>.

Facility Type Definitions

- **Freeways**

- Functional purpose – high mobility, high volume, high speed
- Posted speed – 55 mph or greater
- Cross section – minimum four lanes with continuous median
- 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 (*US and NC routes may have less than four lanes*)
- 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 55 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*

Other Highway Map Definitions

- **Existing** – Roadway facilities that are not recommended to be improved.
- **Needs Improvement** – Roadway facilities that need to be improved for capacity, safety, 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 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 an **existing** 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 only bicycle transportation and is physically separated from a highway facility either within the right-of-way or within an independent right-of-way.
- **Off Road-Needs Improvement** – A facility that accommodates only bicycle transportation and is physically separated from a highway facility either within the right-of-way or within an independent right-of-way that will not adequately serve future bicycle needs. Improvements may include but are not limited to, widening, paving (not re-paving or other maintenance activities), and improved horizontal or vertical alignment.

- **Off Road-Recommended** – A facility needed to accommodate only bicycle transportation and is physically separated from a highway facility either within the right-of-way or within an independent right-of-way.
- **Multi-use Path-Existing** – An existing facility physically separated from motor vehicle traffic that is either within the highway right-of-way or on an independent right-of-way that serves bicycle and pedestrian traffic. Sidewalks should not be designated as a multi-use path.
- **Multi-use Path-Needs Improvement** – An existing facility physically separated from motor vehicle traffic that is either within the highway right-of-way or on an independent right-of-way that serves bicycle and pedestrian traffic that will not adequately serve future needs. Improvements may include but are not limited to, widening, paving (not re-paving or other maintenance activities), and improved horizontal or vertical alignment. Sidewalks should not be designated as a multi-use path.
- **Multi-use Path-Recommended** – A facility physically separated from motor vehicle traffic that is either within the highway right-of-way or on an independent right-of-way that is needed to serve bicycle and pedestrian traffic. Sidewalks should not be designated as a multi-use path.
- **Existing Grade Separation** – Locations where existing “Off Road” facilities and “Multi-use Paths” are physically separated from existing highways, railroads, or other transportation facilities. These may be bridges, culverts, or other structures.
- **Proposed Grade Separation** – Locations where “Off Road” facilities and “Multi-use Paths” are recommended to be physically separated from existing or recommended highways, railroads, or other transportation facilities. These may be bridges, culverts, or other structures.

Pedestrian Map

- **Sidewalk-Existing** – Paved paths (including but not limited to concrete, asphalt, brick, stone, or wood) on both sides of a highway facility and within the highway right-of-way that are adequate to safely accommodate pedestrian traffic.
- **Sidewalk-Needs Improvement** – Improvements are needed to provide paved paths on both sides of a highway facility. The highway facility may or may not need improvements. Improvements do not include re-paving or other maintenance activities but may include: filling in gaps, widening sidewalks, or meeting ADA (Americans with Disabilities Act) requirements.
- **Sidewalk-Recommended** – At the systems level, it is desirable for a recommended highway facility to accommodate pedestrian transportation **or** to add sidewalks on an existing facility where no sidewalks currently exist. The highway should be designed and built to safely accommodate pedestrian traffic.

- **Off Road-Existing** – A facility that accommodates only pedestrian traffic and is physically separated from a highway facility usually within an independent right-of-way.
- **Off Road-Needs Improvement** – A facility that accommodates only pedestrian traffic and is physically separated from a highway facility usually within an independent right-of-way that will not adequately serve future pedestrian needs. Improvements may include but are not limited to, widening, paving (not re-paving or other maintenance activities), improved horizontal or vertical alignment, and meeting ADA requirements.
- **Off Road-Recommended** – A facility needed to accommodate only pedestrian traffic and is physically separated from a highway facility usually within an independent right-of-way.
- **Multi-use Path-Existing** – An existing facility physically separated from motor vehicle traffic that is either within the highway right-of-way or on an independent right-of-way that serves bicycle and pedestrian traffic. Sidewalks should not be designated as a multi-use path.
- **Multi-use Path-Needs Improvement** – An existing facility physically separated from motor vehicle traffic that is either within the highway right-of-way or on an independent right-of-way that serves bicycle and pedestrian traffic that will not adequately serve future needs. Improvements may include but are not limited to, widening, paving (not re-paving or other maintenance activities), and improved horizontal or vertical alignment. Sidewalks should not be designated as a multi-use path.
- **Multi-use Path-Recommended** – A facility physically separated from motor vehicle traffic that is either within the highway right-of-way or on an independent right-of-way that is needed to serve bicycle and pedestrian traffic. Sidewalks should not be designated as a multi-use path.
- **Existing Grade Separation** – Locations where existing “Off Road” facilities and “Multi-use Paths” are physically separated from existing highways, railroads, or other transportation facilities. These may be bridges, culverts, or other structures.
- **Proposed Grade Separation** – Locations where “Off Road” facilities and “Multi-use Paths” are recommended to be physically separated from existing or recommended highways, railroads, or other transportation facilities. These may be bridges, culverts, or other structures.

Appendix C

CTP Inventory and Recommendations

Assumptions/ Notes:

- **Local ID:** This Local ID is the same as the one used for the Prioritization Project Submittal Tool. If a TIP project number exists it is listed as the ID. Otherwise, the following system is used to create a code for each recommended improvement: the first 4 letters of the county name is combined with a 4 digit unique numerical code followed by '-H' for highway, '-T' for public transportation, '-R' for rail, '-B' for bicycle, '-M' for multi-use paths, or '-P' for pedestrian modes. If a different code is used along a route it indicates separate projects will probably be requested. Also, upper case alphabetic characters (i.e. 'A', 'B', or 'C') are included after the numeric portion of the code if it is anticipated that project segmentation or phasing will be recommended.
- **Jurisdiction:** Jurisdictions listed are based on municipal limits, county boundaries, and MPO Metropolitan Planning Area Boundaries (MAB), as applicable.
- **Existing Cross-Section:** Listed under '(ft)' is the approximate width of the roadway from edge of pavement to edge of pavement. Listed under 'lanes' is the total number of lanes, with the letter 'D' if the facility is divided.
- **Existing ROW:** The estimated existing right-of-way is based on the NCDOT Roadway Characteristics Shapefile and NCDOT Division 7 information. These right-of-way amounts are approximate and may vary.
- **Existing and Proposed Capacity:** The estimated capacities are given in vehicles per day (vpd) based on LOS D for existing facilities and LOS C for new facilities. These capacity estimates were developed using the NCLOS Program, as documented in Chapter II.
- **Existing and Proposed AADT** (Annual Average Daily Traffic) volumes, given in vehicles per day (vpd), are estimates only based on a systems-level analysis. The '2035 AADT E+C' is an estimate of the volume in 2035 with only existing plus committed projects assumed to be in place, where committed is defined as projects programmed for construction in the Transportation Improvement Program (TIP). The '2035 AADT with CTP' is an estimate of the volume in 2035 with all proposed CTP improvements assumed to be in place. The '2035 AADT with CTP' is shown in bold if it exceeds the proposed capacity, indicating an unmet need. For additional information about the assumptions and techniques used to develop the AADT volume estimates, refer to Chapter II.
- **Proposed Cross-section:** The CTP recommended cross-sections are listed by code; for depiction of the cross-section, refer to Appendix D. An entry of 'ADQ' indicates the existing facility is adequate and there are no improvements recommended as part of the CTP.
- **CTP Classification:** The CTP classification is listed, as shown on the adopted CTP Maps (see Figure 1). Abbreviations are F= freeway, E= expressway, B= boulevard, Maj= other major thoroughfare, Min= minor thoroughfare.
- **Tier:** Tiers are defined as part of the North Carolina Multitmodal Investment Network (NCMIN). Abbreviations are Sta= statewide tier, Reg= regional tier, Sub= subregional tier.
- **Other Modes:** If there is an improvement recommended for another mode of transportation that relates to the given recommendation, it is indicated by an alphabetic code (H=highway, T= public transportation, R= rail, B= bicycle, and P= pedestrian).

ROCKINGHAM COUNTY CTP INVENTORY AND RECOMMENDATIONS

HIGHWAY

ID	Facility	Section (From - To)	Jurisdiction	2009 Existing System				2035 Proposed System					CTP Classification	Other Modes			
				Dist. (mi)	Cross-Section (ft) lanes	ROW (ft)	Speed Limit (mph)	Existing Capacity (vpd)	2009 AADT	2035 AADT E+C	2035 AADT with CTP	Proposed Capacity (vpd)			Rec. Cross-Section	ROW (ft)	
			Rockingham Co.	1.4	20	2	60	55	10600	6600	12600	12600	12600	K	60	60	Reg
			Rockingham Co.	3.8	20	2	60	55	10600	7700	14400	14400	12600	K	60	60	Reg
			Eden	0.6	20	2	150	35	10600	8800	15000	15000	12600	K	60	60	Reg
			Rockingham Co.	4.0	20	2	60	55	10600	1500	2000	2000	12600	K	60	60	Reg
			Rockingham Co.	1.8	20	2	100	55	10600	2100	2900	2900	12600	K	100	100	Reg
			Rockingham Co.	1.2	20	2	100	55	10600	2000	3000	3000	12600	K	100	100	Reg
			Eden														
			Rockingham Co.	1.7	24	2	60	55	12600	2500	3800	3800	12600	B-4	60	60	Reg
			Rockingham Co.	5.1	22	2	60	55	12600	2900	4200	4200	12600	K	60	60	Reg
			Rockingham Co.	3.7	22	2	60	55	12600	2000	4000	4000	12600	K	60	60	Reg
			Rockingham Co.	1.5	20	2	100	55	10600	3100	5100	5100	12600	K	100	100	Reg
			Madison														
			Rockingham Co.	2.7	28	2	100	55	12600	5000	8000	8000	12600	ADQ	100	100	Reg
			Rockingham Co.	3.3	24	2	100	55	12600	4000	5500	5500	12600	ADQ	100	100	Reg
			Rockingham Co.	2.0	24	2	100	55	12600	3500	5300	5300	12600	ADQ	100	100	Reg
			Rockingham Co.	2.8	20	2	100	55	10600	2000	3400	3400	12600	K	100	100	Reg
			Rockingham Co.	2.5	24	2	100	55	12600	2100	3800	3800	12600	ADQ	100	100	Reg
			Stonewille														
			Rockingham Co.	1.8	24	2	60	55	12600	2400	3600	3600	12600	ADQ	100	100	Reg
			Rockingham Co.	3.7	18	2	0	55	9700	450	550	550	9700	ADQ	60	60	Sub
			Rockingham Co.	2.3	18	2	0	55	9700	350	450	450	9700	B-4	60	60	Sub
			Rockingham Co.	4.1	22	2	0	50	6900	1200	1600	1600	10600	B-4	60	60	Sub
			Rockingham Co.	1.0	22	2	0	50	6900	2000	3400	3400	10600	B-4	60	60	Sub
			Rockingham Co.	0.9	22	2	0	50	6900	2700	4200	4200	10600	B-4	60	60	Sub
			Rockingham Co.	1.9	22	2	0	55	12600	1700	2900	2900	10600	ADQ	60	60	Sub
			Madison														
			Rockingham Co.	1.5	20	2	0	55	10600	700	1100	1100	10600	ADQ	60	60	Sub
			Rockingham Co.	0.3													
			Rockingham Co.	1.7	20	2	0	55	10600	800	1100	1100	10600	ADQ	60	60	Sub
			Rockingham Co.	1.5	20	2	60	55	5200	1200	1800	1800	6900	B-4	60	60	Sub
			Rockingham Co.	1.6	20	2	60	55	5200	1100	1700	1700	6900	B-4	60	60	Sub
			Rockingham Co.	1.5	20	2	0	45	9100	800	950	950	9100	ADQ	60	60	Sub
			Rockingham Co.	1.5	20	2	0	45	9100	600	650	650	9100	ADQ	60	60	Sub
			Rockingham Co.	3.3	20	2	300	55	10600	1000	1350	1350	10600	ADQ	300	300	Sub
			Rockingham Co.	0.9	20	2	0	45	5200	2100	3600	3600	9100	B-4	60	60	Sub
			Rockingham Co.	1.5	20	2	0	45	5200	2000	3000	3000	9100	B-4	60	60	Sub
			Rockingham Co.	0.3	20	2	0	45	5200	500	600	600	9100	B-4	60	60	Sub
			Rockingham Co.	5.1	20	2	0	55	10600	1300	2200	2200	10600	ADQ	60	60	Sub
			Rockingham Co.	1.6	20	2	60	45	5200	900	2000	2000	9100	B-4	60	60	Sub
			Rockingham Co.	0.2	24	2	0	55	12600	3000	5000	5000	12600	ADQ	60	60	Sub
			Rockingham Co.	0.5	24	2	0	55	12600	1600	2400	2400	12600	ADQ	60	60	Sub
			Rockingham Co.	2.2	20	2	0	55	10600	1600	2400	2400	10600	ADQ	60	60	Sub
			Rockingham Co.	1.3	20	2	60	45	5200	1300	1900	1900	5200	ADQ	60	60	Sub
			Rockingham Co.	1.2	20	2	0	55	10600	250	400	400	10600	ADQ	60	60	Sub
			Rockingham Co.	0.3	20	2	0	45	9100	1600	2300	2300	9100	ADQ	60	60	Sub
			Rockingham Co.	0.3	20	2	0	55	10600	5000	8000	8000	12600	B-4	60	60	Sub
			Rockingham Co.	1.6	20	2	0	55	10600	3700	6800	6800	12600	B-4	60	60	Sub
			Rockingham Co.	2.4	18	2	60	55	3100	1500	3000	3000	6900	B-4	60	60	Sub
			Rockingham Co.	0.3	18	2	60	55	3100	1500	3000	3000	6900	B-4	60	60	Sub
			Rockingham Co.	0.4	20	2	60	55	5200	2000	3800	3800	6900	B-4	60	60	Sub
			Rockingham Co.	3.1	18	2	0	55	9700	3100	5000	5000	10600	B-4	60	60	Sub

ROCKINGHAM COUNTY CTP INVENTORY AND RECOMMENDATIONS

HIGHWAY																	
ID	Facility	Section (From - To)	Jurisdiction	Dist. (mi)	2009 Existing System				2035 Proposed System					CTP Classification	Other Modes		
					Cross-Section (ft) lanes	ROW (ft)	Speed Limit (mph)	Existing Capacity (vpd)	2009 AADT	2035 AADT with E+C CTP	2035 AADT with CTP	Proposed Capacity (vpd)	Rec. Cross-Section			ROW (ft)	
	River Rd (SR 2150)	SR 2153 - SR 2154	Rockingham Co.	1.2	20	2	0	55	10600	700	1200	1200	10600	B-4	60	Min	Sub
	River Rd (SR 2150)	SR 2154 - SR 2145	Rockingham Co.	2.9	20	2	0	55	10600	800	1300	1300	10600	B-4	60	Min	Sub
	Sandy Cross Rd (SR 1001)	NC 65/NC 87 - SR 2409	Rockingham Co.	1.7	22	2	0	50	6900	2800	4400	4400	6900	ADQ	60	Min	Sub
	Sandy Cross Rd (SR 1001)	SR 2409 - SR 2363	Rockingham Co.	0.4	22	2	0	50	6900	3500	4800	4800	12600	B-4	60	Min	Sub
	Sandy Cross Rd (SR 1001)	SR 2363 - SR 2380	Rockingham Co.	1.1	22	2	0	50	6900	3200	4400	4400	12600	B-4	60	Min	Sub
	Sandy Cross Rd (SR 1001)	SR 2380 - SR 2406	Rockingham Co.	2.0	22	2	0	50	12100	2500	3800	3800	12600	B-4	60	Min	Sub
	Sandy Cross Rd (SR 1001)	SR 2406 - SR 2937	Rockingham Co.	0.1	20	2	0	55	10600	3000	4900	4900	12600	B-4	60	Min	Sub
	Sandis Church Rd (SR 1128)	SR 1110 - US 220	Rockingham Co.	1.8	20	2	0	55	10600	1800	4000	4000	10600	ADQ	60	Min	Sub
	Scaleville Rd (SR 1002)	SR 1001 - Guilford Co. Line	Rockingham Co.	1.6	20	2	0	55	10600	4500	8300	8300	10600	ADQ	60	Min	Sub
	Settle Bridge Rd (SR 2145)	SR 2155 - US 311/NC 135	Rockingham Co.	1.7	20	2	0	55	10600	1400	2000	2000	10600	ADQ	60	Min	Sub
	Settle Bridge Rd (SR 2145)	US 311/NC 135 - SR 2150	Rockingham Co.	3.2	20	2	0	55	10600	1600	2500	2500	10600	ADQ	60	Min	Sub
	Settle Bridge Rd (SR 2145)	SR 2150 - NC 65	Rockingham Co.	2.3	20	2	0	55	5200	1600	2800	2800	5200	ADQ	60	Min	Sub
	Stone Mountain Rd (SR 2154)	NC 770 - SR 2155/S Stoneville Planning Area	Stoneville	See Stoneville Thoroughfare Plan													
	Stone Mountain Rd (SR 2154)	SR 2155/S Stoneville Planning Area - SR 2150	Rockingham Co.	1.5	20	2	60	55	10600	1000	1900	1900	10600	B-4	60	Min	Sub
	Stone Mountain Rd (SR 2154)	NC 135/S Stoneville Planning Area - SR 2150	Rockingham Co.	1.4	20	2	60	55	10600	500	900	900	10600	B-4	60	Min	Sub
	Vernon Rd (SR 2363)	SR 2380 - 2371	Rockingham Co.	0.9	20	2	60	45	5200	600	1000	1000	6900	B-4	60	Min	Sub
	Vernon Rd (SR 2363)	SR 2371 - SR 1001	Rockingham Co.	1.7	20	2	60	55	5200	700	1100	1100	5200	ADQ	60	Min	Sub
	Wentworth St (SR 1998)	NC 65/NC 87 - SR 2009	Rockingham Co.	1.1	20	2	0	45	5200	1300	2400	2400	9100	B-4	60	Min	Sub
	Wentworth St (SR 1998)	SR 2009 - SR 2041/N Reidsville Planning Area	Rockingham Co.	0.7	20	2	0	45	5200	2000	3800	3800	9100	B-4	60	Min	Sub
	Wolf Island Ck Rd (SR 1982)	SR 1980 - 0.56 miles N of SR 1985/N Reidsville Planning Area	Rockingham Co.	3.6	20	2	0	45	9100	1700	2500	2500	10600	B-4	60	Min	Sub
	Woolen Store Rd (SR 1001)	SR 2937 - US 158	Rockingham Co.	3.6	20	2	0	55	10600	2100	3300	3300	12600	B-4	60	Min	Sub
	Worsham Mill Rd (SR 1925)	SR 1914 - US 29	Rockingham Co.	5.1	20	2	0	55	10600	1300	2000	2000	10600	B-4	60	Min	Sub
	Worsham Mill Rd (SR 1925)	US 29 - US 29 Bus	Rockingham Co.	0.7	20	2	0	45	9100	1000	2100	2100	10600	B-4	60	Min	Sub
	Worsham Mill Rd (SR 1925)	US 29 Bus - SR 2860	Rockingham Co.	0.0	18	2	0	55	9700	1000	1800	1800	9700	ADQ	60	Min	Sub

ROCKINGHAM COUNTY CTP INVENTORY AND RECOMMENDATIONS

PUBLIC TRANSPORTATION							
ID	Facility/ Route	Section (From - To)	Speed Limit (mph)	Existing System		Proposed System	Other Modes
				Distance (mi)	Type		
ROCK0001-T	Rockingham County PART Route 1 Bus Route	US 220 (NC 135/US 220 Interchange - PART Hub)	55 to 60	10.53	--	Bus	H
ROCK0002-T	Rockingham County PART Route 2 Bus Route	US 29 (US158/US 29 Interchange - PART Hub)	55 to 65	8.66	--	Bus	H

RAIL										
ID	Facility/ Route	Section (From - To)	Class	Speed Limit (mph)	Distance (mi)	Existing System		Proposed System		Other Modes
						Type	ROW (ft)	Type	ROW (ft)	
--	--	--	--	--	--	--	--	--	--	--

BICYCLE ¹									
ID	Facility/ Route	Section (From - To)	Distance (mi)	Existing System		Proposed System		Other Modes	
				Cross-Section (ft)	lanes	Type	Cross-Section		
	North Carolina Bicycle Route 4								
	Town of Wentworth Connector Bicycle Route								
ROCK0006-H	NC 65/NC 87	SR 1001 - SR 2413	0.8	Concurrent with NC 87	see Highway Table			H	
ROCK0009-H	NC 87	SR 2203 - SR 2371	0.3	Concurrent with NC 87	see Highway Table			H	
ROCK0001-B	Ashley Loop Rd (SR 2203)	SR 2009 - NC 87	0.9	Concurrent with SR 2203	see Highway Table			H	
ROCK0002-B	Baker Cross Rd (SR 2380)	NC 87 - SR 1001	1.6	Concurrent with SR 2203	see Highway Table			H	
ROCK0003-B	Berrymore Rd (SR 1991)	SR 2203 - NC 14	2.4	Concurrent with SR 2203	see Highway Table			H	
ROCK0004-B	Camp Dan Valley Rd (SR 2009)	SR 2203 - SR 1998	1.6	Concurrent with SR 2203	see Highway Table			H	
ROCK0005-B	County Home Rd (SR 2371)	NC 87 - SR 2363	3.1	Concurrent with SR 2371	see Highway Table			H	
ROCK0006-B	Sandy Cross Rd (SR 1001)	SR 2409 - SR 2380	1.5	Concurrent with SR 2371	see Highway Table			H	
ROCK0007-B	Vernon Rd (SR 2363)	SR 2371 - SR 2380	0.9	Concurrent with SR 2371	see Highway Table			H	
ROCK0008-B	Wentworth St (SR 1998)	NC 65/87 - SR 2041	1.8	Concurrent with SR 2371	see Highway Table			H	

PEDESTRIAN ¹									
ID	Facility/ Route	Section (From - To)	Distance (mi)	Existing System		Proposed System		Other Modes	
				Type	Side of Street	Type	Side of Street		
ROCK0001-P	NC 65	0.44 miles east of SR 2124 - SR 2371	1.3	--	--	Sidewalks	Both	H	
ROCK0002-P	NC 65	SR 2371 - NC 87	0.3	--	--	Sidewalks	Both	H	
ROCK0003-P	NC 65/NC 87	NC 87 - SR 2374	0.2	--	--	Sidewalks	Both	H	
ROCK0004-P	NC 87	SR 2203 - SR 2371	0.3	--	--	Sidewalks	Both	H B	
ROCK0005-P	NC 87	SR 2371 - NC 65	0.4	--	--	Sidewalks	Both	H B	
ROCK0006-P	County Home Rd (SR 2371)	NC 87 - NC 65	0.4	--	--	Sidewalks	Both	H B	
ROCK0007-P	County Home Rd (SR 2371)	NC 65 - Rockingham Community College	0.3	--	--	Sidewalks	Both	H B	
ROCK0008-P	County Home Rd (SR 2371)	Rockingham Community College - 0.22 miles S of RCC	0.2	--	--	Sidewalks	Both	H B	
ROCK0009-P	High School Rd (SR 2022)	NC 87 - Rockingham County Middle School	0.2	--	--	Sidewalks	Both		
ROCK0010-P	Wrenn Memorial Dr	NC 65 - Rockingham Community College	0.2	--	--	Sidewalks	Both		
ROCK0011-P	Rockingham Community College Rd	Wrenn Memorial Dr - SR 2371	0.1	--	--	Sidewalks	Both		
ROCK0012-P	High School Entrance	NC 65-87 - Rockingham County High School	0.1	--	--	Sidewalks	Both		

¹Only major routes and proposals are shown here. For further documentation of bicycle and pedestrian facilities and proposals, refer to 2005 Piedmont Triad RPO Regional Bicycle Study, 2007 Piedmont Triad RPO Sidewalk Inventory, 2009 Eden Greenway Master Plan, 2001 Madison-Mayodan Thoroughfare Plan, and 2001 Reidsville Thoroughfare Plan

Appendix D

Typical Cross Sections

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

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.

Typical Cross Sections

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

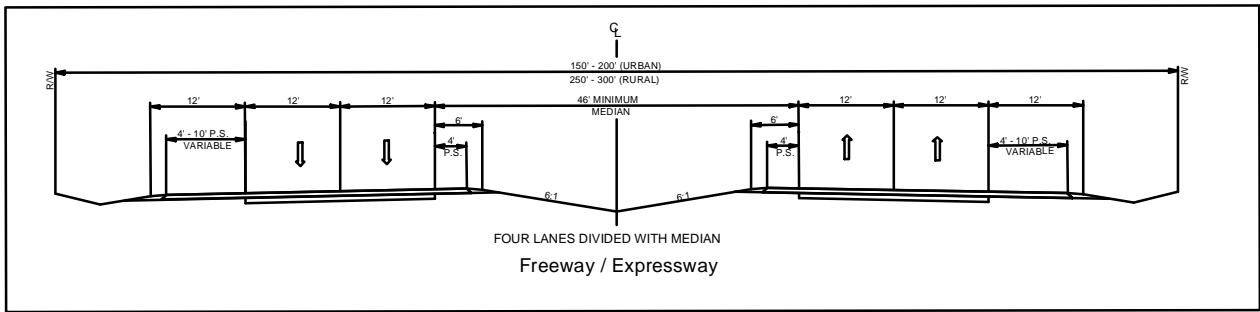
On urban streets with curb and gutter, wide outside lanes and bicycle lanes are usually the preferred facilities. Shoulders for bicycle use are not typically provided on roadways with curb and gutter. On rural roadways where bicycle travel is common, such as roads in coastal resort areas, wide paved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

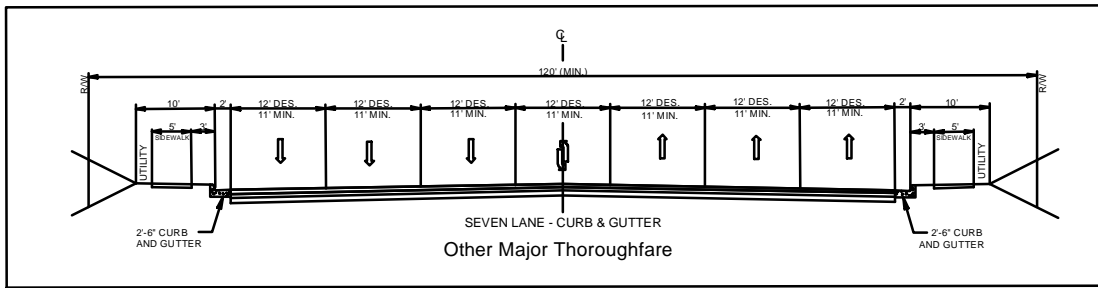
When properly located, multi-use pathway can be a safer type of facility for novice and child bicyclists because they do not have to share the path with motor vehicles. The design standards used for this cross section provides adequate width for two-directional use by both cyclists and pedestrians, provisions 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.

TYPICAL HIGHWAY CROSS SECTIONS

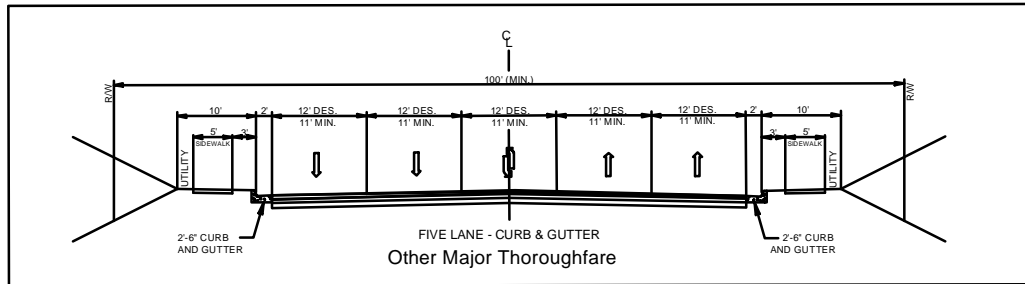
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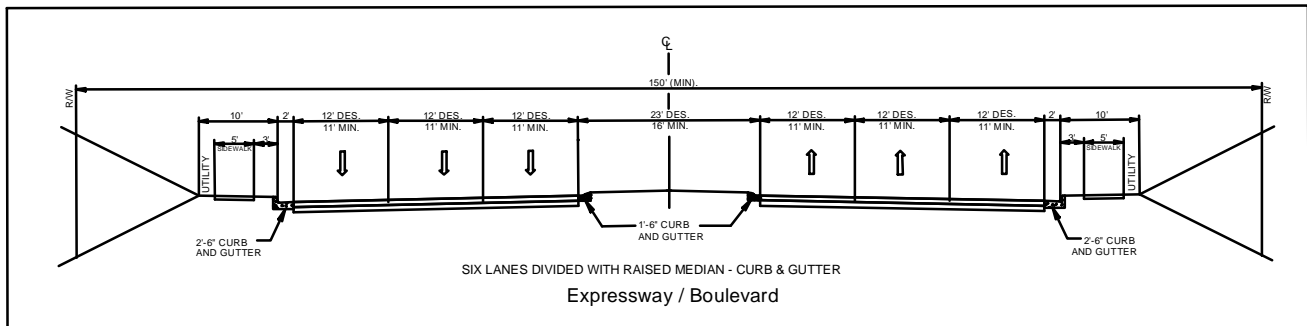
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C



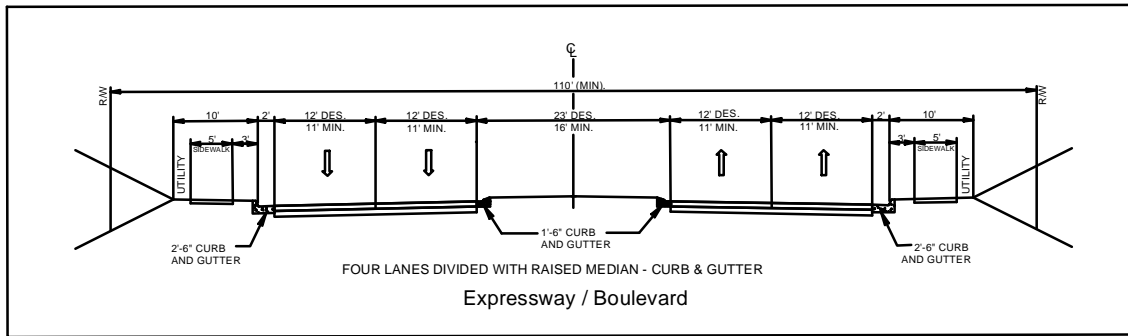
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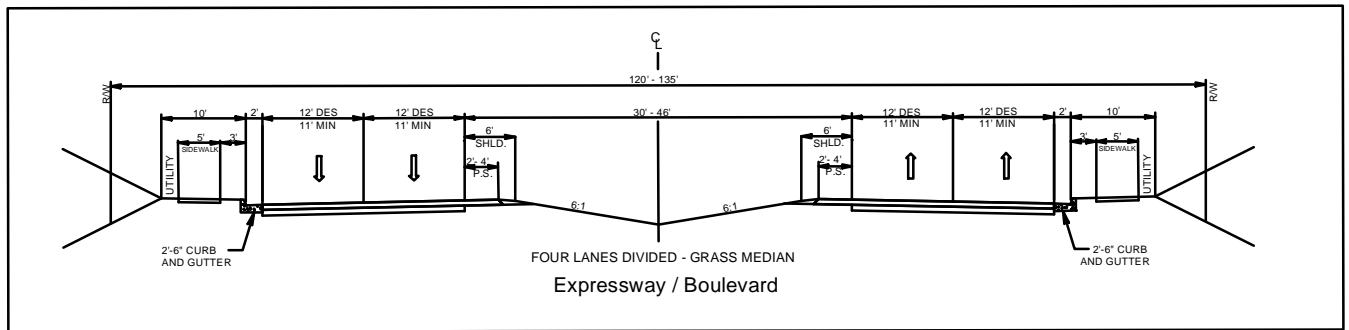
revised 04-01-05

TYPICAL HIGHWAY CROSS SECTIONS

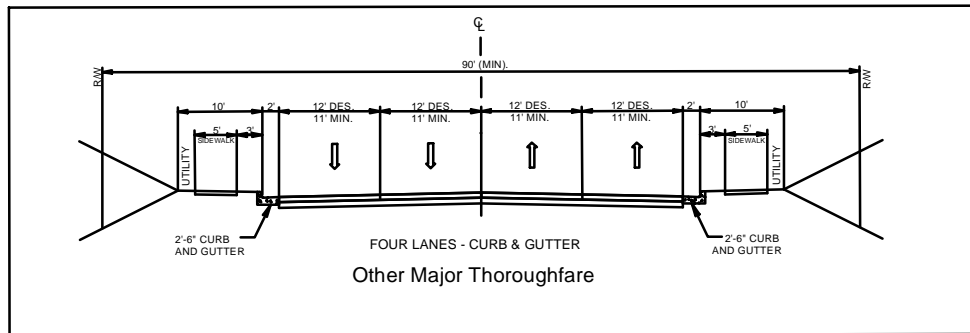
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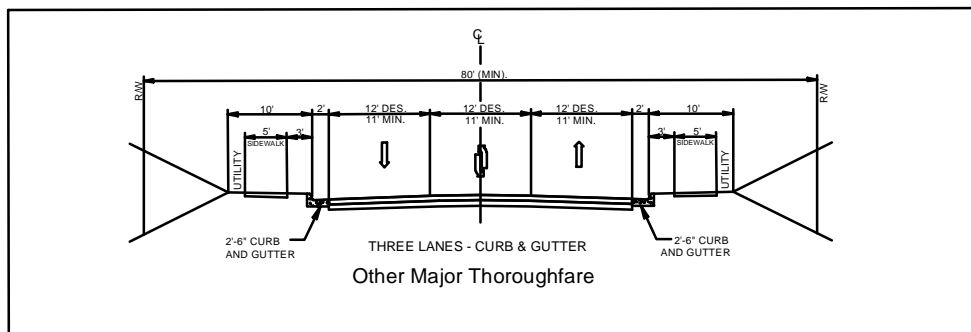
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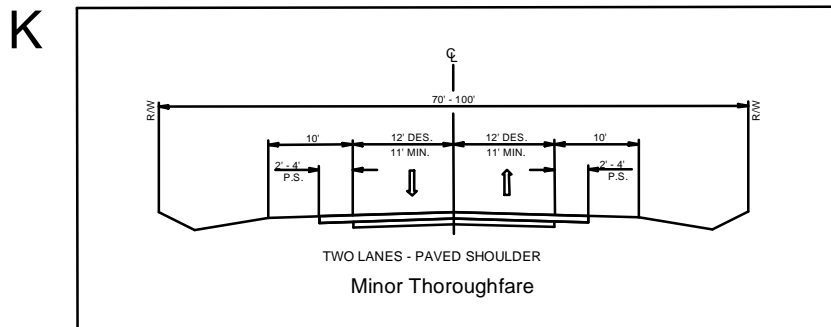
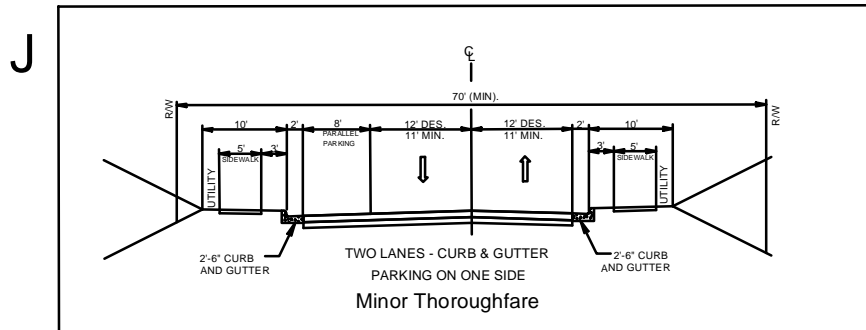
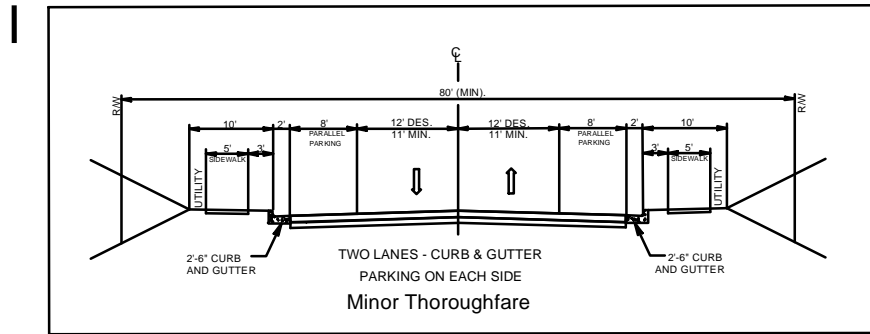
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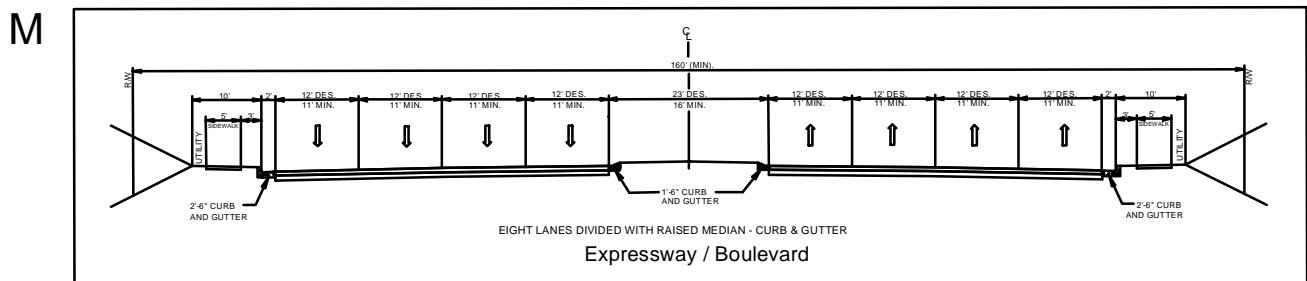
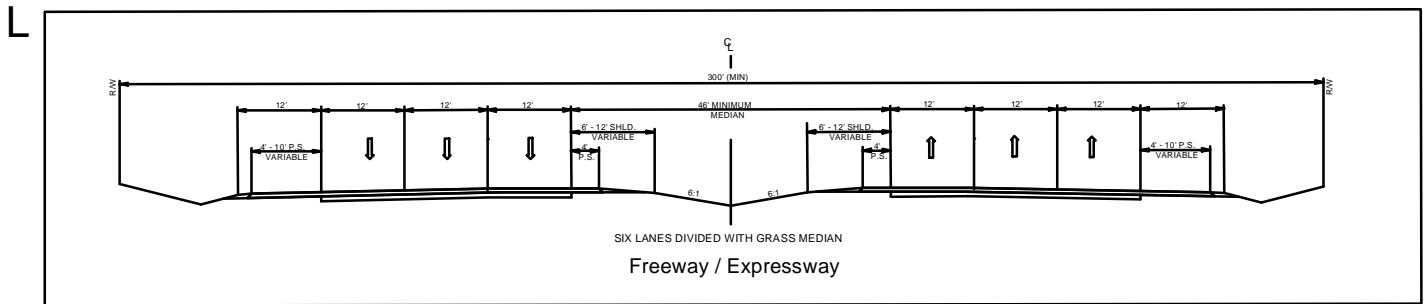
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TYPICAL HIGHWAY CROSS SECTIONS



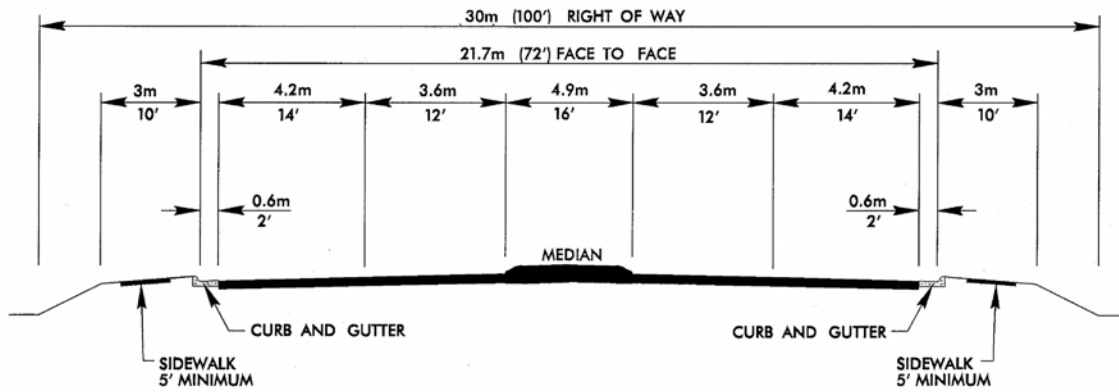
TYPICAL HIGHWAY CROSS SECTIONS



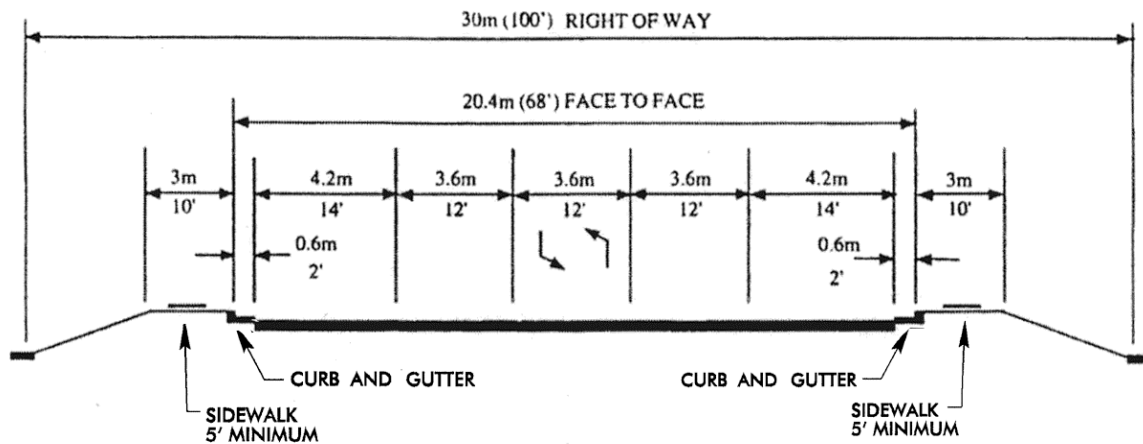
Typical Bicycle Cross Sections

WIDE CURB LANES

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

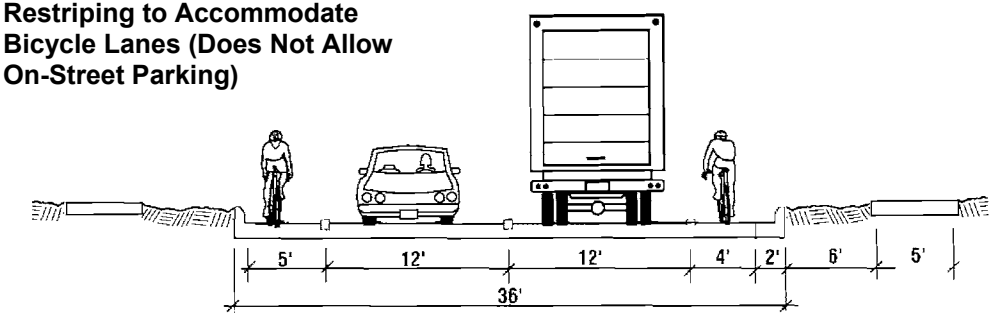
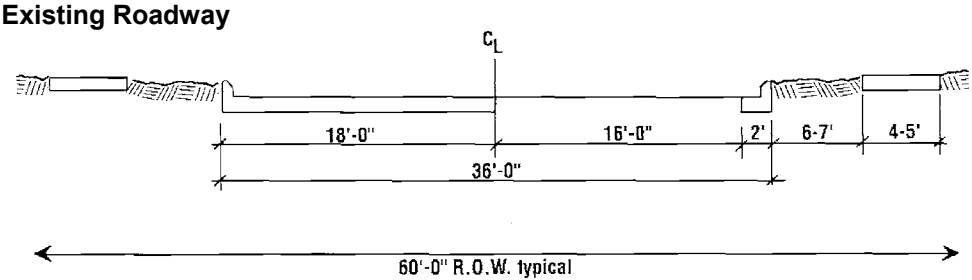


B-2 5-LANE TYPICAL SECTION With Wide Outside Lanes



Typical Bicycle Cross Sections

B-3 BICYCLE LANES ON COLLECTOR STREETS

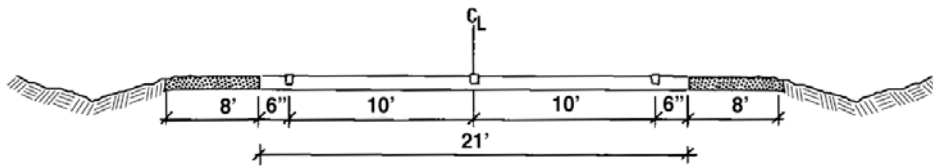


Typical Bicycle Cross Sections

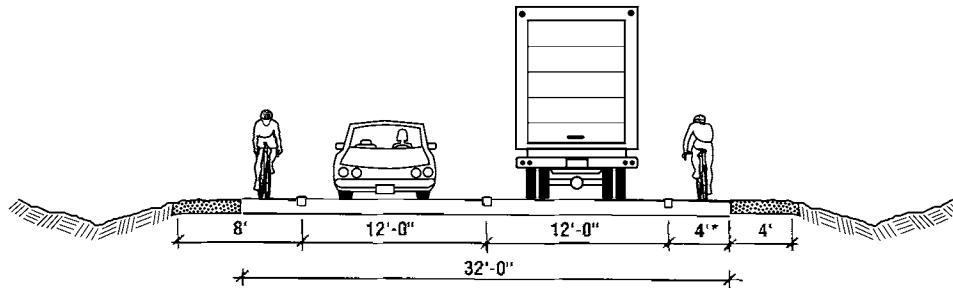
B-4

WIDE PAVED SHOULDERS

Existing Roadway



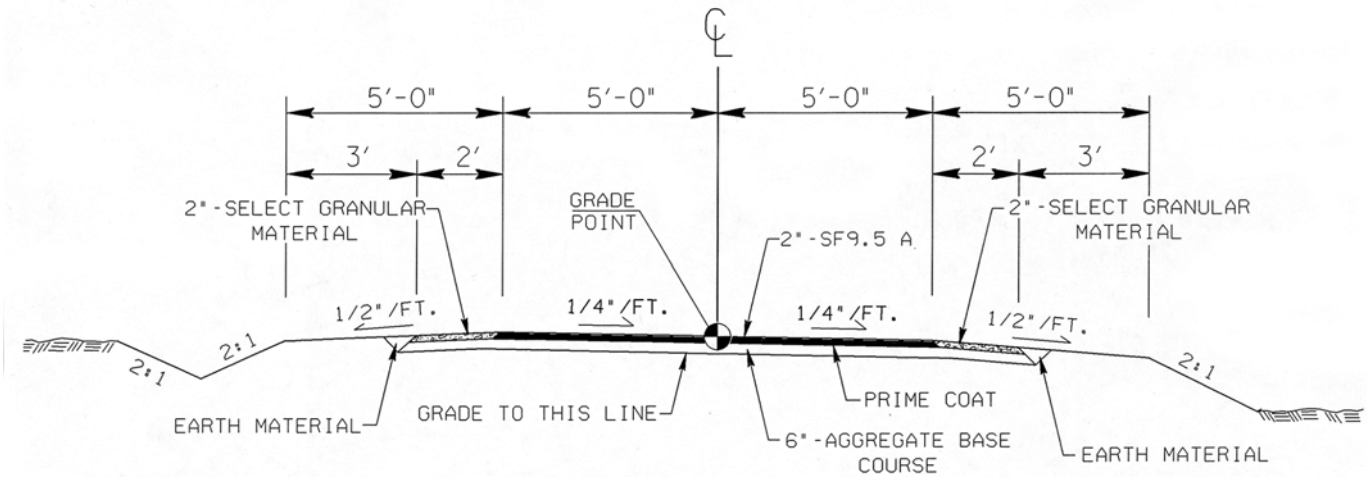
Roadway Retrofitted with
4-Ft Paved Shoulders



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

Typical Bicycle Cross Sections

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



Appendix E

Level of Service Definitions

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

Design requirements for roadways vary according to the desired capacity and level of service. LOS D indicates “practical capacity” of a roadway, or the capacity at which the public begins to express dissatisfaction. Recommended improvements and overall design of the transportation plan were based upon achieving a minimum LOS D on existing facilities and a LOS C on new facilities. The six levels of service are described below and illustrated in Figure 12.

- **LOS A**: Describes primarily free flow conditions. The motorist experiences a high level of physical and psychological comfort. The effects of minor incidents of breakdown are easily absorbed. Even at the maximum density, the average spacing between vehicles is about 528 ft, or 26 car lengths.
- **LOS B**: Represents reasonably free flow conditions. The ability to maneuver within the traffic stream is only slightly restricted. The lowest average spacing between vehicles is about 330 ft, or 18 car lengths.
- **LOS C**: Provides for stable operations, but flows approach the range in which small increases will cause substantial deterioration in service. Freedom to maneuver is noticeably restricted. Minor incidents may still be absorbed, but the local decline in service will be great. Queues may be expected to form behind any significant blockage. Minimum average spacing is in the range of 220 ft, or 11 car lengths.
- **LOS D**: Borders on unstable flow. Density begins to deteriorate somewhat more quickly with increasing flow. Small increases in flow can cause substantial deterioration in service. Freedom to maneuver is severely limited, and the driver experiences drastically reduced comfort levels. Minor incidents can be expected to create substantial queuing. At the limit, vehicles are spaced at about 165 ft, or 9 car lengths.
- **LOS E**: Describes operation at capacity. Operations at this level are extremely unstable, because there are virtually no usable gaps in the traffic stream. Any disruption to the traffic stream, such as a vehicle entering from a ramp, or changing lanes, requires the following vehicles to give way to admit the vehicle. This can establish a disruption wave that propagates through the upstream traffic flow. At capacity, the traffic stream has no ability to dissipate any disruption. Any incident can be expected to produce a serious breakdown with extensive queuing. Vehicles are spaced at approximately 6 car lengths, leaving little room to maneuver.

- **LOS F:** Describes forced or breakdown flow. Such conditions generally exist within queues forming behind breakdown points.

Figure 12 - 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

Appendix F Traffic Crash Analysis

A crash analysis performed for the Rockingham County CTP factored crash frequency, crash type, and crash severity. Crash frequency is the total number of reported crashes and contributes to the ranking of the most problematic intersections. 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 crash is measured with a series of weighting factors developed by the NCDOT Division of Highways (DOH). These factors define a fatal or incapacitating crash as 47.7 times more severe than one involving only property damage and a crash 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 4 depicts a summary of the crashes occurring in the planning area between January 1, 2007 and December 31, 2009. The data represents locations with 10 or more crashes and/or a severity average greater than that of the state's 4.37 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 4 - Crash Locations

Map Index	Intersection	Average Severity	Total Collisions
1	US 220 Business and SR 1300 (Ayersville Rd)	12.79	16
2	SR 1110 (Ellisboro Rd) and SR 1128 (Sardis Church Rd)	12.28	10
3	US 220 and SR 1110 (Sardis Church Rd)	11.25	11
4	US 29 Business and NC 14	9.9	16
5	US 220 and NC 704	5.44	10
6	SR 1605 (Bridge St) and SR 1604 (Washington St)	5.04	11
7	US 29 and US 158	4.98	13

8	NC 14-87-770 and SR 1737 (Stadium Dr)	4.95	15
9	NC 14-87-770 and Arbor Ln	4.82	31
10	SR 1583 (Harrison Rd) and Marcellus St	4.7	12
11	US 220 Business/NC 87 and SR 2413 (Vance St)	4.7	14
12	NC 14-87-770 an Harris Pl	4.7	10
13	SR 2066 (Kings Hwy) and Fagg Dr	4.08	12
14	NC 87 and NC 150	4.08	12
15	US 29 and SR 2817 (Barnes St)	3.96	10
16	NC 14-87-770 and SR 2066 (Kings Hwy)	3.47	30
17	US 29 Business and SR 1002 (Scales St)	2.85	12
18	NC 135 and NC 770	2.85	12
19	SR 2066 (Kings Hwy) and Kennedy Ave	2.85	12
20	SR 1583 (Harrison Rd) and Maple Ave	2.48	10
21	SR 1583 (Harrison Rd) and SR 1002 (Scales St)	2.23	12
22	US 220 Business and Madison McDonald's Restaurant	1	11

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 4, or other intersections of concern, contact the Division Traffic Engineer. Contact information for the Division Traffic Engineer is included in Appendix A.

Appendix G

Bridge Deficiency Assessment

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. Structurally deficient means there are elements of the bridge that need to be monitored and/or repaired. The fact that a bridge is "structurally deficient" does not imply that it is likely to collapse or that it is unsafe. It means the bridge must be monitored, inspected and repaired/replaced at an appropriate time to maintain its structural integrity. A functionally obsolete bridge is one that was built to standards that are not used today. These bridges are not automatically rated as structurally deficient, nor are they inherently unsafe. Functionally obsolete bridges are those that do not have adequate lane widths, shoulder widths, or vertical clearances to serve current traffic demand or to meet the current geometric standards, or those that may be occasionally flooded.

A bridge must be classified as deficient in order to qualify for Federal replacement funds. Additionally, the sufficiency rating must be less than 50% to qualify for replacement or less than 80% to qualify for rehabilitation under federal funding. Deficient bridges within the planning area are listed in Table 5.

Table 5 - Deficient Bridges

Bridge #	Facility	Feature	Condition	CTP Project
1	SR 2817 (Barnes St)	US 29	Structurally Deficient	
3	SR 2359 (Huffines Mill Rd)	Creek	Structurally Deficient	
4	SR 2422 (Monroeton Rd)	Troublesome Creek	Structurally Deficient	
6	SR 2426 (Cunningham Mill Rd)	Haw River	Structurally Deficient	B-4807
9	SR 2406 (Iron Works Rd)	Troublesome Creek	Structurally Deficient	B-4805
11	US 29 Northbound	Haw River	Structurally Deficient	
12	SR 2343 (Price Mill Rd)	Troublesome Creek	Structurally Deficient	B-4804
13	SR 2344 (Haynes Rd)	Troublesome Creek	Structurally Deficient	B-4864
15	US 29 Southbound	Haw River	Structurally Deficient	
18	SR 1002 (Scalesville Rd)	Haw River	Structurally Deficient	B-4802
23	US 29 Business	US 29	Structurally Deficient	
27	US 311	Reed Creek	Structurally Deficient	
32	SR 2361 (New Lebannon Church Rd)	Jacob's Creek	Structurally Deficient	B-4963
37	SR 2302 (McCollum Rd)	Jacob's Creek	Structurally Deficient	
38	SR 2304 (Honeysuckle Rd)	Creek	Structurally Deficient	
44	SR 2336 (Griffin Rd)	Jacob's Creek	Structurally Deficient	
47	SR 1128 (Sardis Church Rd)	Hogan's Creek	Structurally Deficient	B-4623
50	SR 1104 (Lemons Rd)	Hogan's Creek	Structurally Deficient	
52	SR 3003 (Meadow Rd)	Smith River	Structurally Deficient	B-3509
53	SR 1114 (Renn Rd)	Creek	Structurally Deficient	
54	NC 65	Rock House Creek	Structurally Deficient	B-4622
56	SR 2670 (Scales St)	US 158/US 29 Business	Structurally Deficient	U-3326B
65	US 158	US 158/US 29 Business	Structurally Deficient	U-3326A
67	US 311	Little Beaver Island Creek	Functionally Obsolete	B-4252
69	NC 770	US 220	Structurally Deficient	
71	SR 1951 (Quesinberry Rd)	Creek	Structurally Deficient	
73	SR 1974 (Town Creek Rd)	Creek	Structurally Deficient	
74	US 311/NC 135	US220	Structurally Deficient	R-5015
78	SR 2715 (Hampton Rd)	Creek	Structurally Deficient	
80	SR 1929 (Estes Rd)	Wolf Island Creek	Structurally Deficient	B-4624
81	SR 2565 (Lick Fork Creek Rd)	Lick Fork Creek	Structurally Deficient	
82	SR 2552 (Narrow Gauge Rd)	Lick Fork Creek	Functionally Obsolete	
85	SR 2600 (Mizpah Church Rd)	Southern Railroad	Structurally Deficient	B-4964
86	SR 2598 (Cook Florist Rd)	Little Troublesome Creek	Structurally Deficient	
87	SR 2600 (Mizpah Church Rd)	Little Troublesome Creek	Structurally Deficient	
88	US 311/US220 Business	US 220	Structurally Deficient	
92	SR 2692 (Kernodle Rd)	CREEK	Structurally Deficient	
95	US 311	Big Beaver Island Creek	Structurally Deficient	B-4252
97	SR 2308 (Bald Hill Rd)	Hogan's Creek	Functionally Obsolete	
97	SR 1925 (Worsham Mill Rd)	Wolf Island Creek	Structurally Deficient	B-4803
99	SR 1759 (Gravel Hill Rd)	Creek	Functionally Obsolete	
106	SR 1902 (Dibrell Rd)	Wolf Island Creek	Structurally Deficient	

108	NC 700	NC14, NC87 & NC770	Structurally Deficient	R-4402
109	SR 1767 (Mayfield Rd)	Birch Fork Creek	Structurally Deficient	B-4253
110	SR 1767 (Mayfield Rd)	Wolf Island Creek	Structurally Deficient	
116	SR 2600 (Mizpah Church Rd)	US 29	Structurally Deficient	
118	SR 2192 (Smothers Rd)	Massy Creek	Structurally Deficient	B-4625
123	SR 2150 (River Rd)	US220/US311	Functionally Obsolete	
124	SR 2177 (Dan Valley Rd)	Mayo River	Functionally Obsolete	
126	US 158/US 29 Business	NC 65-87	Structurally Deficient	U-3326B
129	SR 2153 (Grogan Rd)	Prong of Jacob's Creek	Structurally Deficient	
131	US 220 Northbound	Norfolk Western RR	Structurally Deficient	
134	NC 700	Dan River	Structurally Deficient	
139	SR 2258 (Pheasant Rd)	Creek	Structurally Deficient	
141	SR1143 (Rierson Rd)	Creek	Functionally Obsolete	
143	SR 1321 (Park Rd)	Beaver Island Creek	Structurally Deficient	
145	SR 1300 (Ayersville Rd)	Prong of Beaver Creek	Structurally Deficient	
149	SR 1321 (Park Rd)	Creek	Functionally Obsolete	
150	US 220 Northbound	US 220 Business	Structurally Deficient	B-4621
151	US 158	US 29	Structurally Deficient	
153	SR 2189 (Mosely Loop)	Creek	Structurally Deficient	
155	NC14-87	C & NW Railroad	Structurally Deficient	R-4402
159	SR 1354 (Bennett Rd)	Hickory Creek	Structurally Deficient	
160	SR 1354 (Bennett Rd)	Buffalo Creek	Structurally Deficient	B-5163
164	SR 1402 (Deshazo Mill Rd)	Creek	Structurally Deficient	
166	SR 1360 (Smith Rd)	Prong of Paw Paw Creek	Structurally Deficient	
168	NC14-87	Smith River	Structurally Deficient	R-4402
169	NC 770	Cascade Creek	Structurally Deficient	
170	SR 1360 (Smith Rd)	US 220	Structurally Deficient	
171	SR 1515 (Snead Rd)	Buffalo Creek	Functionally Obsolete	
172	SR 1509 (Wray Rd)	Buffalo Creek	Functionally Obsolete	
176	SR 1700 (Fisher Hill Rd)	NC 14-87	Structurally Deficient	
177	SR 1535 (Price Rd)	Matrimony Creek	Functionally Obsolete	
180	SR 1546 (Beck Rd)	Prong of Matrimony Creek	Structurally Deficient	
183	SR 1767 (Mayfield Rd)	US 29	Structurally Deficient	
185	SR 1700 (Fisher Hill Rd)	Creek	Structurally Deficient	
191	SR 2337 (Carlton Rd)	Creek	Structurally Deficient	
218	SR 1928 (Boaz Rd)	Quaqua Creek	Structurally Deficient	
221	SR 1125 (Williams Rd)	Creek	Structurally Deficient	
233	SR 1964 (Mebane Bridge – CLOSED)	Dan River	Structurally Deficient	
238	SR 1998 (Wentworth St)	S. Prong to Terry's Creek	Structurally Deficient	
247	SR 2582 (Rockingham Lake Rd)	Hogan's Creek	Functionally Obsolete	
248	SR 2009 (Camp Dan Valley Rd)	Carroll Creek	Functionally Obsolete	
249	SR 1165 (Cardinal Rd)	Creek	Structurally Deficient	B-4965
253	SR 1747 (Stadium Dr)	Southern Railway	Structurally Deficient	
269	SR 2221 (Eden Rd)	Buffalo Creek	Structurally Deficient	
277	SR 1169 (Turner St)	Beaver Creek	Structurally Deficient	
283	SR 2686 (Richardson Dr)	Little Troublesome Creek	Structurally Deficient	
309	SR 1553 (Rhodes Rd)	Branch of Matrimony Crk.	Structurally Deficient	

Appendix H Public Involvement

Listing of steering committee members

Tom Wiggins, AICP – Rockingham County Planning Director
 Frankie Legaux, AICP – Rockingham County Assistant Planning Director
 Brenda Ward – Town of Wentworth Clerk
 Hanna Cockburn, AICP – Piedmont Triad Rural Planning Organization Coordinator

Goals and Objectives Survey Results

Rockingham County Transportation Survey				
How important are the following transportation goals?				
Answer Options	Very Important	Important	Not Important	Response Count
Increase access to park and ride lots (to car or van pool)	2	3	2	7
Increase access to local and regional transit service	0	6	1	7
Improve automobile travel times	5	2	0	7
Preserve community and rural character	5	3	0	8
Protect the environment	5	3	0	8
Support economic growth	5	2	0	7
Improve services for special needs populations (demand response)	3	4	0	7
Create a bicycle and pedestrian friendly community	3	3	2	8
<i>answered question</i>				8
<i>skipped question</i>				0

There are several ways to increase road capacity - the volume of traffic a road can adequately handle. How important is it to use each of the following strategies on roads in Wentworth and Rockingham County?				
Answer Options	Very Important	Important	Not Important	Response Count
Build additional travel lanes on main roads	4	4	0	8
Make intersection improvements, like turn lanes and better signal timing	7	1	0	8
Control the number and location of driveways and cross-streets that access major roads	4	3	1	8
Control the location of left turns with medians	3	4	1	8
<i>answered question</i>				8
<i>skipped question</i>				0

Are you concerned with safety or crashes in the county or your community?		
Answer Options	Response Percent	Response Count
Yes	85.7%	6
No	14.3%	1
If Yes, Please describe the location with road name and cross street, including specific safety concerns.		6
answered question		7
skipped question		1
In Wentworth, near Courthouse, and as entering the old part of town, speed limits are hardly ever obeyed. Near miss crashes have almost occurred with people coming in and out of the postoffice. Again, the reason for this is SPEEDING. Shoulders of the road are not deep enough, and we could use sidewalks.		
County Home Road, NC 65-87, At Mom's Kitchen (NC 65-87 Intersection)		
NC 87 at Mom's Kitchen		
historic courthouse area; wright's tavern and Wentworth Post Office		
NC 87 near Rockingham County High School and NC 87/65 intersection. Way too much congestion in morning and at 3:15 pm each school day.		
Hwy 65 at the court house and Post Office. It is VERY hard to see to get out of the Post Office. Trees & bushes should be trimmed and possibly speed strips to slow people down.		

Is semi-truck traffic a problem in the county or your community?		
Answer Options	Response Percent	Response Count
Yes	16.7%	1
No	83.3%	5
If yes, please give examples of specific locations or concerns.		1
answered question		6
skipped question		2
Tractor-trailer traffic is increasing through Wentworth and many are exceeding the posted speed limit. (Courthouse area)		

When traveling in and around the county, do you find that you have to go out of your way to get to your destination because a direct route does not exist?		
Answer Options	Response Percent	Response Count
Yes	42.9%	3
No	57.1%	4
If yes, please give examples.		4
answered question		7
skipped question		1
Unless going to Greensboro		
Western Rockingham County to Reidsville		
From Wentworth to Greensboro		
Access to major roads from Wentworth. 14, 29, 704, 220		

When traveling in the cities and towns of the county, do you find that you have to go out of your way to get to your destination because the most direct route is too congested?		
Answer Options	Response Percent	Response Count
Yes	100.0%	7
No	0.0%	0
If yes, please give examples.		6
answered question		7
skipped question		1
FREEWAY DRIVE...Congested and slow...difficult to travel at times.		
NC 65-87 to Reidsville and Greensboro		
NC 65/87 thru Wentworth		
NC 65/87 in Wentworth en-route to Reidsville, Danville VA & Greensboro		
Freeway Drive. Eden traffic should be diverted to HWY 14 from 29.		
Where Benaja road and hwy 29 meet there is not enough get off lane to get off and on highway.		

What destinations or road corridors would you most like to have improved access to? Please rank each area by how critically you believe improvements are needed.						
Answer Options	Very Critically	Critically	Somewhat Critically	Not Critically	Rating Average	Response Count
Danville, VA area	1	1	1	3	2.00	6
Martinsville, VA area	0	2	1	3	1.83	6
Triangle area (Raleigh, Durham, RTP)	1	0	2	3	1.83	6
Greensboro area	2	3	0	2	2.71	7
Winston-Salem area	1	1	2	3	2.00	7
US 220 (Future I-73)	2	3	1	1	2.86	7
US 29 (Future I-785)	5	1	0	1	3.43	7
Interstate 40	1	3	1	1	2.67	6
Interstate 85	0	3	1	2	2.17	6
US 311	0	1	2	3	1.67	6
US 158	2	0	1	3	2.17	6
Other (please specify)						1
answered question						7
skipped question						1
HWY 700 to 29 from Eden. (Reduce truck traffic)						

We would like to know about your walking habits. For each purpose or destination below, please indicate how frequently you walk.						
Answer Options	Regularly	Occasionally	Rarely	Never	Would, if facility existed	Response Count
Fitness/exercise	3	4	0	0	0	7
Get to school	0	0	1	5	0	6
Get to work	0	0	0	6	0	6
Shopping/errands	0	2	0	4	0	6
Restaurant	2	0	0	4	0	6
Entertainment/special event	0	0	2	4	0	6
Social visit	2	2	0	3	0	7
Walk the dog	4	0	0	3	0	7
Walk with stroller/baby	0	1	0	4	0	5
<i>answered question</i>						7
<i>skipped question</i>						1

Now, for each purpose or destination below, please indicate how far you typically walk or might be willing to walk.					
Answer Options	1 mile (30 minute walk)	1/2 mile (20 minute walk)	1/4 mile (10 minute walk)	1/8 mile (5 minute walk)	Response Count
Fitness/exercise	4	0	0	0	4
Get to school	0	1	1	0	2
Get to work	0	1	0	0	1
Shopping/errands	1	1	1	0	3
Restaurant	2	0	1	0	3
Entertainment/special event	1	0	2	0	3
Social visit	1	1	1	0	3
Walk the dog	3	0	0	0	3
Walk with stroller/baby	0	0	2	0	2
<i>answered question</i>					4
<i>skipped question</i>					4

What areas would you identify as a priority for sidewalks to be constructed or improved? Please select all that apply.		
Answer Options	Response Percent	Response Count
In Wentworth	83.3%	5
In greater Rockingham County	16.7%	1
For the locations selected above, please describe where. Note road names, cross streets or landmarks.		6
answered question		6
skipped question		2
Hwy 65 through Wentworth to area at new Courthouse...		
Around college, government offices, schools, new town hall		
County Home Road, NC 65/87 in the city limits		
Central business area of Wentworth - Governmental Center to community college, NC 65/87 (new courthouse & new town hall) & County Home Road		
From college to governmental center area to commercial district (NC 87/65) to Peachtree road		
A bicycle lane on Benaja Rd between 29 and hwy150 I would ride more frequently if I knew there was a safer place to ride especially since the bicycle death on Church St.		

We would like to know about your bicycling habits. How frequently do you participate in the types of cycling activities listed below?						
Answer Options	Regularly	Occasionally	Rarely	Never	Would, if facility existed	Response Count
On-road cycling for exercise or recreation	1	2	0	3	1	7
On-road cycling for errands	0	0	2	4	1	7
Off-road single track (Mountain Biking)	0	0	1	5	0	6
Off-road greenway or trail	0	1	1	2	2	6
Commuting	0	0	1	5	0	6
Group rides/tours	1	0	2	3	0	6
answered question						7
skipped question						1

If facilities or accommodations were available for bicycling, which of these destinations would you consider riding to? Indicate all that apply.		
Answer Options	Response Percent	Response Count
School	0.0%	0
Work	25.0%	1
Park & ride lot (to car or van pool)	0.0%	0
Shopping/errands	75.0%	3
Restaurant	75.0%	3
Entertainment/special event	25.0%	1
Social visit	100.0%	4
Other (please specify)		1
answered question		4
skipped question		4
There is no way to bike to school or work when it already takes 20-30 minutes to drive it. You would have to go back to community schools. Instead of the Middle & High School being in the center of the county.		

Would you use on-road bicycle facilities such as bike lanes and wide paved shoulders, if they were available? Please select all that apply.		
Answer Options	Response Percent	Response Count
Yes, in Wentworth	57.1%	4
Yes, in greater Rockingham County	28.6%	2
No	42.9%	3
if yes, please describe where. Note road names, cross streets or landmarks.		2
answered question		7
skipped question		1
NC 65/87; County Home Road		
established bike routes		

If available, would you use off-road trails or greenways for walking and bicycling? Please select all that apply.		
Answer Options	Response Percent	Response Count
Yes, in Wentworth	71.4%	5
Yes, in Greater Rockingham County	42.9%	3
No	28.6%	2
If Yes, Please describe where. Note destinations, corridors or landmarks.		4
answered question		7
skipped question		1
HWY 65 in Wentworth to junction of hwy 87/65		
RCC College, NC 65/87; County Home Road		
Around college and new town hall		
county home road; NC 65; Peachtree Road; Sandy Cross Road; Vernon Road		

What areas would you identify as a priority for bicycle facilities to be constructed or improved? Please select all that apply.		
Answer Options	Response Percent	Response Count
In Wentworth	60.0%	3
In greater Rockingham County	60.0%	3
Please describe where. Note road names, cross streets or landmarks.		4
answered question		5
skipped question		3
Back roads; NC 65/87		
County home road; NC 65; Peachtree Road; Sandy Cross Road; Vernon Road		
In the larger towns. Where things are close by.		
Benaja Rd.		

Would you use the transit services listed below, if they were provided?				
Answer Options	Yes	No	Possibly	Response Count
Bus Service around Rockingham County	2	1	4	7
Bus Service to Greensboro Area	4	2	0	6
Bus Service to Winston-Salem Area	1	5	0	6
Bus Service to the Triangle	0	4	1	5
Park and Ride Lot (to car or van pool)	1	3	2	6
PART Express Service	1	4	1	6
Passenger Rail Service	1	4	1	6

How frequently would you use the service, if provided?					
Answer Options	every few months	once a month	once a week	more than once a week	Response Count
Bus Service around Rockingham County	0	1	1	3	5
Bus Service to Greensboro Area	1	2	1	0	4
Bus Service to Winston-Salem Area	0	1	0	0	1
Bus Service to the Triangle	0	0	0	0	0
Park and Ride Lot (to car or van pool)	0	0	1	1	2
PART Express Service	0	0	1	1	2
Passenger Rail Service	0	0	0	1	1
Other Destinations or services (please specify)					2
answered question					7
skipped question					1
Bus Service to the Governmental Center, Court House, RCC (Wentworth)					
to get to work					

In which jurisdiction do you live?		
Answer Options	Response Percent	Response Count
Unincorporated Rockingham County	28.6%	2
The Town Wentworth	57.1%	4
Another Rockingham County Municipality	14.3%	1
Outside Rockingham County	0.0%	0
answered question		7
skipped question		1

What is your home ZIP Code?		
Answer Options	Response Percent	Response Count
27288	14.3%	1
27320	57.1%	4
27326	14.3%	1
27375	14.3%	1
<i>answered question</i>		7
<i>skipped question</i>		1

What is your age?		
Answer Options	Response Percent	Response Count
Under 18	0.0%	0
18 - 24	0.0%	0
25 - 34	0.0%	0
35 - 44	42.9%	3
45 - 64	28.6%	2
65 - 74	28.6%	2
75 or older	0.0%	0
<i>answered question</i>		7
<i>skipped question</i>		1

How would you classify your race?		
Answer Options	Response Percent	Response Count
White	100.0%	7
Black	0.0%	0
Hispanic	0.0%	0
Asian	0.0%	0
Native American	0.0%	0
Other	0.0%	0
<i>answered question</i>		7
<i>skipped question</i>		1

How many people live in your household, including yourself?		
Answer Options	Response Percent	Response Count
1	0.0%	0
2	28.6%	2
3	28.6%	2
4	28.6%	2
5	0.0%	0
6	14.3%	1
7	0.0%	0
8 or more	0.0%	0
answered question		7
skipped question		1

What was your household income last year?		
Answer Options	Response Percent	Response Count
Less than \$24,999	0.0%	0
\$25,000 - \$44,999	28.6%	2
\$45,000 - \$64,999	28.6%	2
\$65,000 - \$84,999	14.3%	1
More than \$85,000	14.3%	1
Don't know	0.0%	0
Don't wish to answer	14.3%	1
answered question		7
skipped question		1

How did you hear about this survey?		
Answer Options	Response Percent	Response Count
Government meeting or location	42.9%	3
Retail location	0.0%	0
Church	0.0%	0
Newspaper	14.3%	1
Newsletter	0.0%	0
School	0.0%	0
E-mail	0.0%	0
Other (please specify)	42.9%	3
answered question		7
skipped question		1
Town Clerk		
Looking for DOT information		
came across it while searching internet		

Public Workshop #1 at the Wentworth Town Hall

The first public workshop took place at the Wentworth Town Hall on March 23, 2009 from 6:00-9:00 pm. The Rockingham County Commissioners met before this workshop and were introduced to the CTP. This workshop introduced the CTP process as well as what can be expected of the final plan. Eight citizens were in attendance. They were divided into workgroups to help identify each of the needs of the different modes of transportation in the county. Many of the workgroups identified the need for improved transit and pedestrian facilities in the county.

Public Workshop #2 at Rockingham Community College

The second public workshop took place at Rockingham Community College on June 30, 2009 from 6:00-9:00 pm. There was a presentation that detailed the preliminary recommendations of the Rockingham County CTP. Six citizens were in attendance. They were given the opportunity to look through the recommendations and give additional feedback if anything needed to be added, removed, or changed. As part of the discussion, a possible bypass of Wentworth was discussed. This desire was primarily based on through traffic from Western Rockingham County passing through to Reidsville. However, it was determined and agreed that additional lanes in Wentworth and to Reidsville on existing NC 65/87 would accommodate the local and through traffic needs.

Appendix I

Existing Transportation Plans

The following CTPs or Thoroughfare Plans for areas within the County that were incorporated as a part of this plan are listed below. Major recommendations for each of these plans are also listed. Refer to those reports for detailed descriptions of recommendations that were not documented as a part of this report.

The Madison-Mayodan, Reidsville, and Stoneville plans may be viewed at:

<http://www.ncdot.org/doh/preconstruct/tpb/planning/RockinghamCTP.html>

The Eden plan may be viewed at:

<http://www.ncdot.org/doh/preconstruct/tpb/planning/EdenCTP.html>

2009 Eden Comprehensive Transportation Plan

- NC 14-87 – Widen existing two-lane facility to a four-lane divided Boulevard from Virginia to NC 700-770. Also, upgrade existing five-lane facility to a four-lane divided Boulevard from NC 700-770 to Bethlehem Church Road (SR 2039)
- NC 14-87 Bypass – Construct new two-lane facility from NC 87 to NC 770
- Harrington Highway Eastern Extension – Construct new two-lane facility from NC 14-87 to Quesinberry Road (SR 1951)
- West Draper Spur – Construct a new two-lane facility from NC 700 to the proposed Harrington Highway Eastern Extension
- Kings Highway (SR 2066) – Upgrade existing five-lane facility with center left-turn lane to a four-lane divided facility from Washington Street (SR 1604) to NC 14-87-770
- US 311/NC 135 – Widen existing facility to two 12-foot lanes with 2-foot paved shoulders from Settle Bridge Road (SR 2145) to NC 770
- NC 770 – Widen existing facility to two 12-foot lanes with 2-foot paved shoulders from Main Street (SR 1737) to Gant Road (SR 1743)
- Price Road/Center Church Road (SR 1535) – Widen existing facility to two 12-foot lanes with 2-foot paved shoulders from Beck Road (SR 1546) to Price Street
- Rhodes Road (SR 1553) – Widen existing facility to two 12-foot lanes with 2-foot paved shoulders from Garrett Road (SR 1501) to N. Oakland Avenue (SR 1605)
- Virginia Street (SR 1716) – Widen existing facility to two 12-foot lanes with 2-foot paved shoulders from Virginia to Lincoln Road-Southern Terminus (SR 1709)
- Old NC 135 (SR 2881) - Widen existing facility to two 12-foot lanes with 2-foot paved shoulders from NC 770 to Washington Street (SR 1604)
- East Aiken Road (SR 1714) – Realign existing facility from Virginia Street (SR 1716) to Friendly Road North (SR 1797)
- Bryant Street (SR 1708) – Realign existing facility from Bryant Street (SR 1708) to North Hamilton Street (SR 1709)

2001 Madison-Mayodan Thoroughfare Plan

- US 311/NC 704 – Widen existing two-lane facility to three-lanes with center left-turn lane from Reed Creek to US 220
- Chief Martin Street Extension – Construct new connector from existing termini of Chief Martin Street to proposed relocation of Island Drive (SR 1169)
- Island Drive (SR 1169) – Realign existing facility from 0.77 miles south of NC 770 to 0.16 miles north of Chief Martin Street Extension, widen entire facility to three-lanes with center left-turn lane, and redesignate as NC 704
- Market Street Extension – Construct new connector from existing termini of Market Street to Cardwell Drive (SR 2216) and widen to two 12-foot lanes with 2-foot paved shoulders
- US 220 Business – Widen existing facility to two 12-foot lanes with 2-foot paved shoulders from US 220 to Northern Corporate Limits of Mayodan
- US 220 Business – Improve existing facility to relieve congestion by removing on-street parking and restripe to three-lanes with center left-turn lane from Jackson Street to NC 135 in Mayodan
- Ayersville Road (SR 1300) – Widen existing facility to two 12-foot lanes with 2 foot paved shoulders from Northern Planning Area to the Northern Corporate Limits of Mayodan
- Dan River Road (SR 2177) – Realign existing facility from 0.17 miles south of River Road (SR 2150) to 0.71 miles south of River Road (SR 2150) and widen entire facility to two 12-foot lanes with 2-foot paved shoulders
- Lindsey Bridge Road (SR 1138) – Realign existing facility from 0.22 miles south of US 311 to US 311 with the intersection of Island Drive (SR 1169)

2001 Reidsville Thoroughfare Plan

- US 29 Business (Freeway Drive) – Widen existing two-to-three lane facility to a four-lane divided Boulevard from NC 14 to US 158.
- Way Street Extension – Construct new connector from existing termini to US 158/NC 87
- Vance Street Extension (SR 2413) – Widen existing facility to two 12-foot lanes with 2 foot paved shoulders from NC 65/87 to US 29 Business/NC 87
- Pecan Road Extension – Construct new two-lane facility from Vance Street Extension (SR 2413) to Lowe’s Food Shopping Center
- Reidsville School Road Extension – Construct new two-lane facility from US 158 to Ashcroft Drive

1992 Stoneville Thoroughfare Plan

- Ponderosa Road (SR 2157) – Widen existing facility to two 12-foot lanes with 2-foot paved shoulders from proposed Southern Loop to NC 770
- Price Street – Widen existing facility to two 12-foot lanes with 2-foot paved shoulders from proposed Southern Loop to Henry Street (SR 1603)

- Settle Bridge Road (SR 2145) – Construct new connector from NC 770 to Priddy Loop Road (SR 1594) and widen existing facility to two 12-foot lanes with 2-foot paved shoulders from Priddy Road (SR 1594) to US 311/NC 135
- Southern Loop – Construct new facility from NC 770 to Price Street and from Henry Street (SR 1603) to Ponderosa Road (SR 2157)
- Stone Mountain Road (SR 2154) – Widen existing facility to two 12-foot lanes with 2-foot paved shoulders from NC 770 to US 311/NC 135
- Stone Street Extension – Construct new connector from existing termini of Stone Street to proposed Southern Loop
- Taylor Road (SR 1518) – Widen existing facility to two 12-foot lanes with 2-foot paved shoulders from Price Grange Road (SR 1516) to NC 770

Appendix J

Land Use Scenarios Evaluated

US 158 in Reidsville

The Strategic Highway Corridors (SHC) Vision Plan was originally adopted by the North Carolina Board of Transportation (NCBOT) on September 2, 2004. In this plan, US 158 was designated to be improved in Rockingham County to boulevard standards from the Guilford County Line to US 29 and improved to expressway standards from US 29 to the Caswell County Line. On July 10, 2008, the SHC Vision Plan was updated by the NCBOT. Part of this update included US 158 through Rockingham County. In this updated SHC Vision Plan, US 158 was to be improved to expressway standards from the Guilford County Line, through Reidsville, to the Caswell County Line.

The City of Reidsville officials and staff were concerned about and not in support of this updated recommendation due to the following reasons: the roadway design of TIP Project U-3326 supports a boulevard from NC 14 to US 29 Business, the City of Reidsville had already agreed with NCDOT on a boulevard divided section on TIP Project U-3326, and they were not in support of the updated SHC Vision Plan that placed an expressway with no traffic signals along their primary commercial corridor of US 29 Business from US 158 to NC 14.

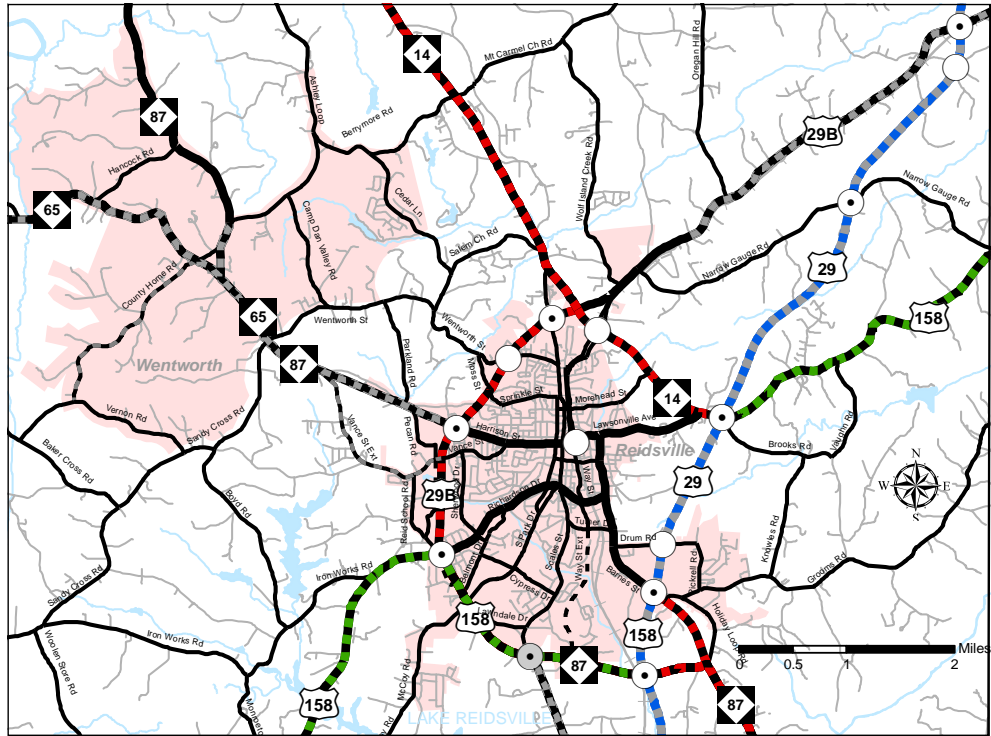
Additionally, a request was made by the City of Reidsville in 2001 to have US 158 rerouted from its current alignment along US 29 Business north to NC 14 to a new alignment from US 29 Business southeast to NC 87 (e.g. the southern connector).

To address these issues, the NCDOT Transportation Planning Branch proposed two scenarios to the City of Reidsville for their consideration. Both scenarios maintained the expressway recommendation throughout Rockingham County. The first scenario was to simply reroute the expressway recommendation onto the requested re-routing of US 158 from the US 29 Business interchange to NC 87 (southern connector).

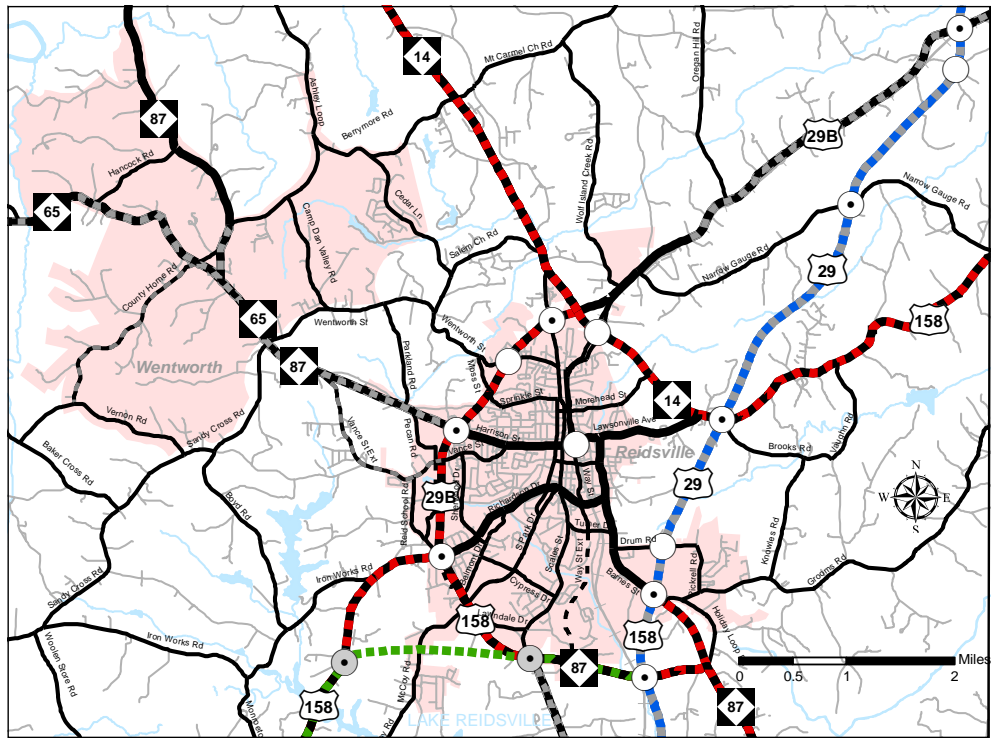
The second scenario was to propose a new route from US 158 west of Reidsville to US 29 Business, then use NC 87 (southern connector). Neither of these scenarios were acceptable to the City of Reidsville as the first scenario was still along their commercial corridor and the second scenario proposed building a new expressway in prime farmland and a non-critical watershed.

Both scenarios are mapped on the next page.

Scenario 1: Reroute US 158 onto existing NC 87 via the Southern Connector



Scenario 2: Reroute US 158 onto existing NC 87, part on new location



Neither of these scenarios were acceptable to the City of Reidsville as the first scenario was still along their main commercial corridor and the second scenario proposed building a new expressway in prime farmland and a non-critical watershed.

The Piedmont Triad Rural Planning Organization, through NCDOT – Division 7, submitted a request to NCDOT that US 158 be reverted to its original 2004 SHC Vision Plan designation. On March 9, 2010, the Secretary of Transportation provided a letter formally reverting the US 158 Corridor to its original 2004 SHC Vision Plan designation as well as re-routing US 158 onto the southern section of NC 87 (southern connector).

NC 65 in Wentworth

As part of developing the CTP recommendation for NC 65, two options were considered by the Rockingham County CTP Team, the Wentworth Town Council, and the Rockingham County Commissioners to address current and future deficiencies on NC 65 in the Town of Wentworth.

Scenario 1: Widen existing NC 65 from County Home Road (SR 2731) to US 29 Business

The first option considered widening existing NC 65 from County Home Road (SR 2731) to US 29 Business. This included widening the existing 3-lane facility with center left-turn lane to a 5-lane facility with center left-turn lane from County Home Road (SR 2371) to NC 87 and widening from the existing 2-to-3 lane facility to a 4-lane divided facility from NC 87 to US 29 Business in Reidsville.

Scenario 2: Bypass Wentworth from Settle Bridge Road (SR 2145) to Sandy Cross Road (SR 1001)

The second scenario considered bypassing the Town of Wentworth to the south from Settle Bridge Road (SR 2145) to Sandy Cross Road (SR 1001). This also included the widening of existing NC 65 from Sandy Cross Road (SR 1001) to US 29 Business in Reidsville.

These two options were analyzed by considering the transportation needs and impacts to the natural and human environment, before recommending the proposed corridor shown on the Rockingham County CTP. From public meetings and other comment opportunities, the primary public concern was that a center turn lane continued to be provided to access county governmental buildings as well as other commercial buildings. It should also be noted that businesses along the NC 65 corridor were not in favor of bypassing Wentworth.