2014 Gates County
Comprehensive Transportation Plan

2014 Gates County
Comprehensive Transportation Plan

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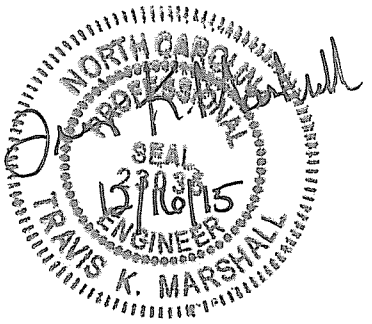
Transportation Planning Branch
N.C. Department of Transportation

In Cooperation with: Gates County
Gatesville
Albemarle Rural Planning Organization

Published: December 2015



Travis Marshall
Eastern Planning Unit Head

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Executive Summary

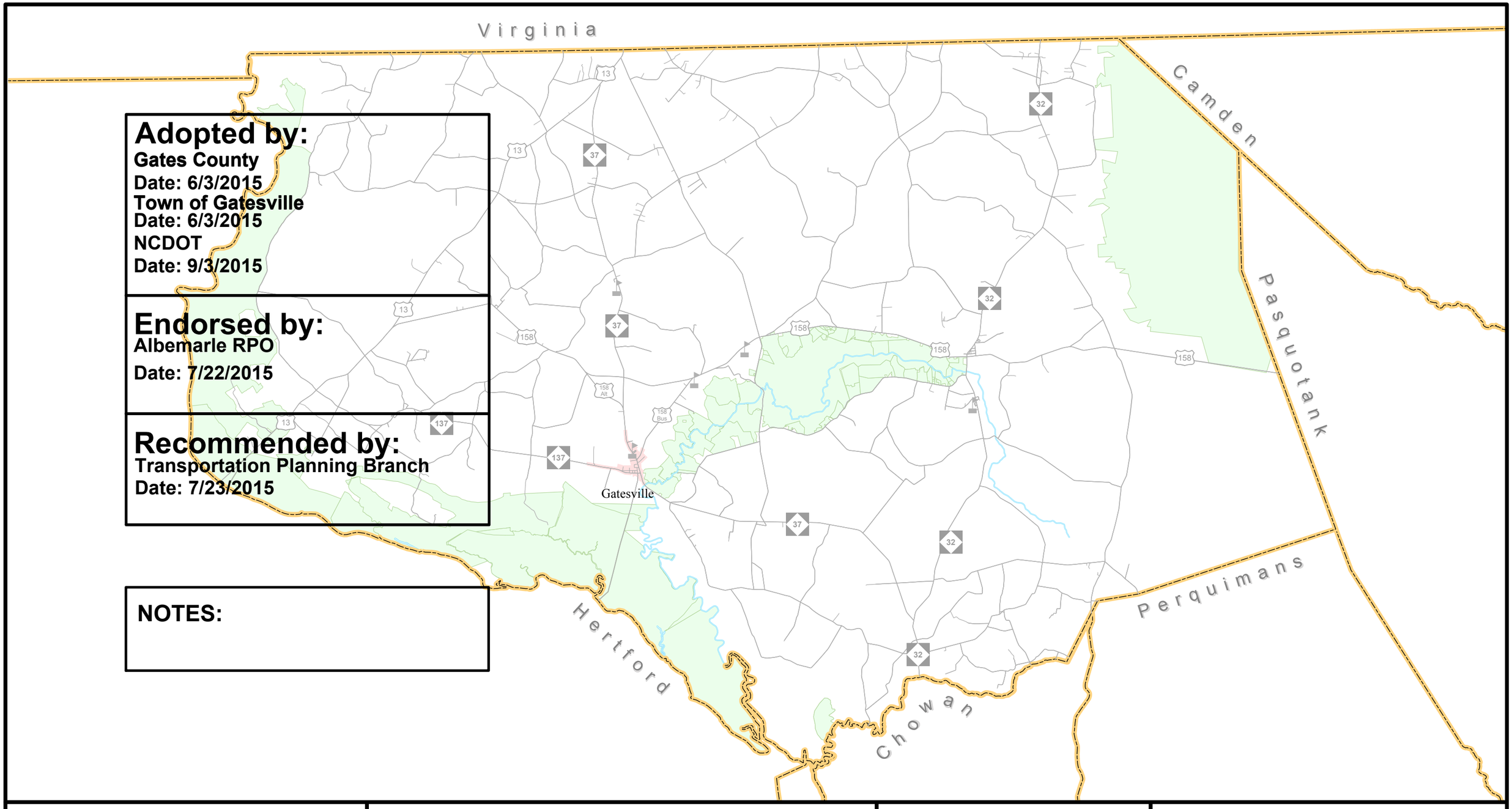
In January of 2014, the Transportation Planning Branch of the North Carolina Department of Transportation (NCDOT) and Gates County initiated a study to cooperatively develop the Gates County Comprehensive Transportation Plan (CTP), which includes Gatesville. This is a long range multi-modal transportation plan that covers transportation needs through 2040. Modes of transportation evaluated as part of this plan include: highway, public transportation and rail, bicycle, and pedestrian. This plan does not cover routine maintenance or minor operations issues. Refer to Appendix A for contact information on these types of issues.

Findings of this CTP study were based on an analysis of the transportation system, environmental screening and public input, which are detailed in Chapter 1. Figure 1 shows the CTP maps, which were mutually adopted by NCDOT in 2015. Descriptive information and definitions for designations depicted on the CTP maps can be found in Appendix B. Implementation of the plan is the responsibility of the county, its municipalities, and NCDOT. Refer to Chapter 2 for information on the implementation process.

This report documents the recommendations for improvements that are included in the Gates County CTP. The major recommendations for improvements are listed below. More detailed information about these and other recommendations can be found in Chapter 2.

- **US 13:** US-13 is a two-lane road crossing across Gates County from the southwest near Winton (Hertford County) to the northeast at the border of Virginia, the whole stretch of this road in within Gates county is being proposed to be widened from a two lane road to a four lane road. US-13 is a freeway that is west of Gatesville. Currently a portion of US-13/US 158 from NC 45 near Winton to the US 158 Bypass in Tarheel is being widened to a four-lane section under project R-2507A in both Gates and Hertford County. Total length of the R-2507A project is 7.1 miles.

- **US 158:** US-158 is a two-lane road crossing across Gates County from US-13 Winton to NC 32 in Sunbury. US-158 is an expressway/principal arterial that crosses from west to east starting at US-13 and continuing into Pasquotank County. The speed limit on this route is currently 55mph, lane width is 12 feet. R-2578 is on the TIP (SPOT ID H090145), the project is unfunded, and cost to NCDOT is expected to be $110,400,000. The project is proposed to be widened from an undivided two-lane road to a four-lane road on the TIP. Total length of the R-2578 project is 15 miles.



Adopted by:

Gates County
Date: 6/3/2015
Town of Gatesville
Date: 6/3/2015
NCDOT
Date: 9/3/2015

Endorsed by:

Albemarle RPO
Date: 7/22/2015

Recommended by:

Transportation Planning Branch
Date: 7/23/2015

NOTES:

Legend

- Schools
- Roads
- Rivers and Streams
- Gates County
- Municipal Boundary
- Water Bodies
- Parks and Gameland

0 1.25 2.5 5 Miles

Sheet 1 of 5

N W E S

Base map date: March 5, 2014

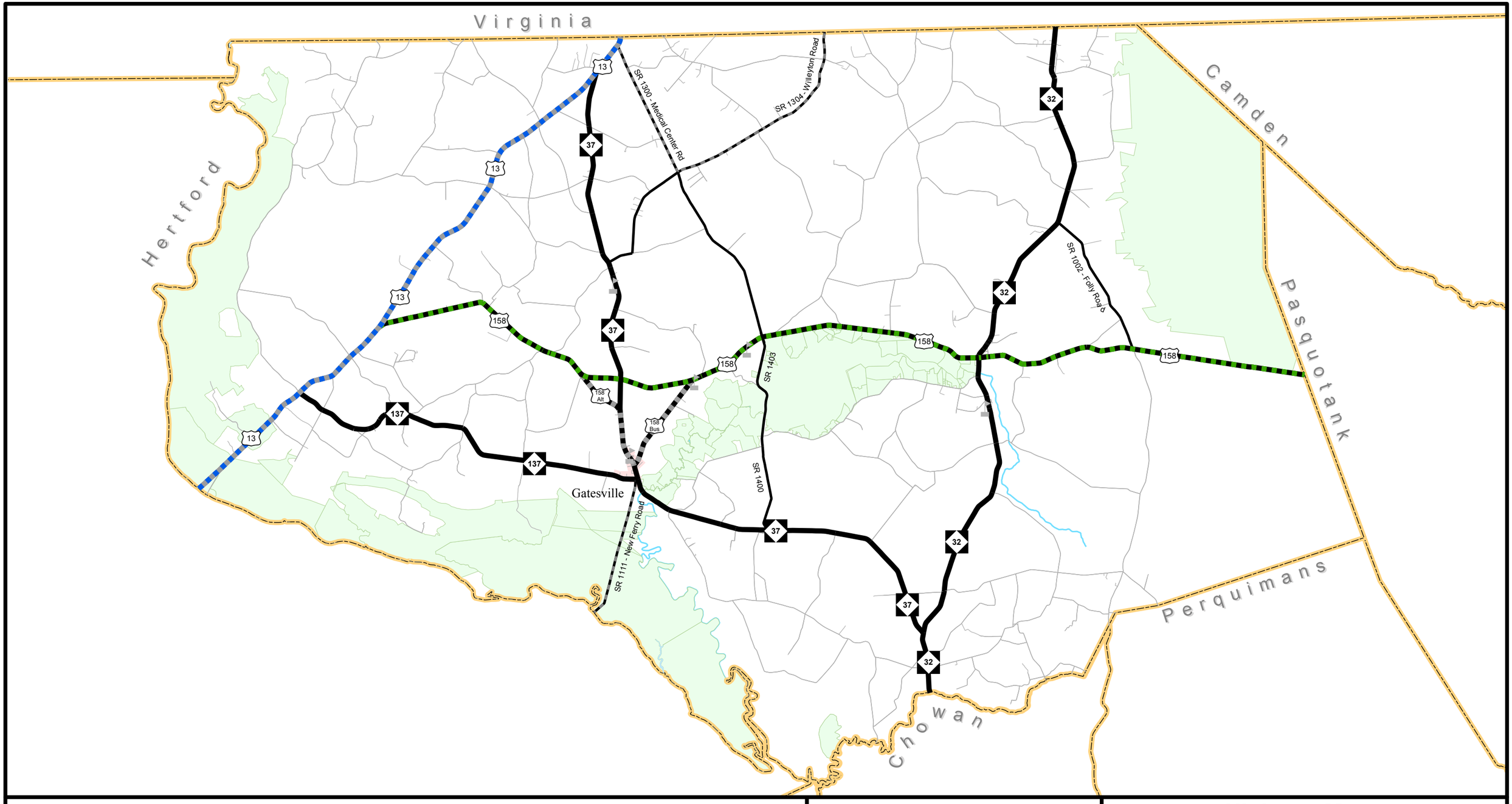
Refer to CTP document for more details

Gates County

North Carolina

Comprehensive Transportation Plan

Plan date: May 14, 2015



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
- Interchange Needs Improvement
- Existing Grade Separation
- Proposed Grade Separation

0 1 2 4 Miles

Sheet 2 of 5

N W E S

Base map date: March 5, 2014

Refer to CTP document for more details

Highway Map

Gates County

Comprehensive Transportation Plan

Plan date: May 14, 2015

Virginia

Hertford

Camden

Pasquotank

Perquimans

Chowan

Gatesville

13 37 32 158 158 Alt 158 Bus 137

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

Intermodal Connector
- Existing
- Recommended

- Existing Grade Separation
- Proposed Grade Separation

Rail Stops
- Existing
- Recommended

Park and Ride Lot
- Existing
- Recommended

0 1.25 2.5 5 Miles

N W E S

Sheet 3 of 5

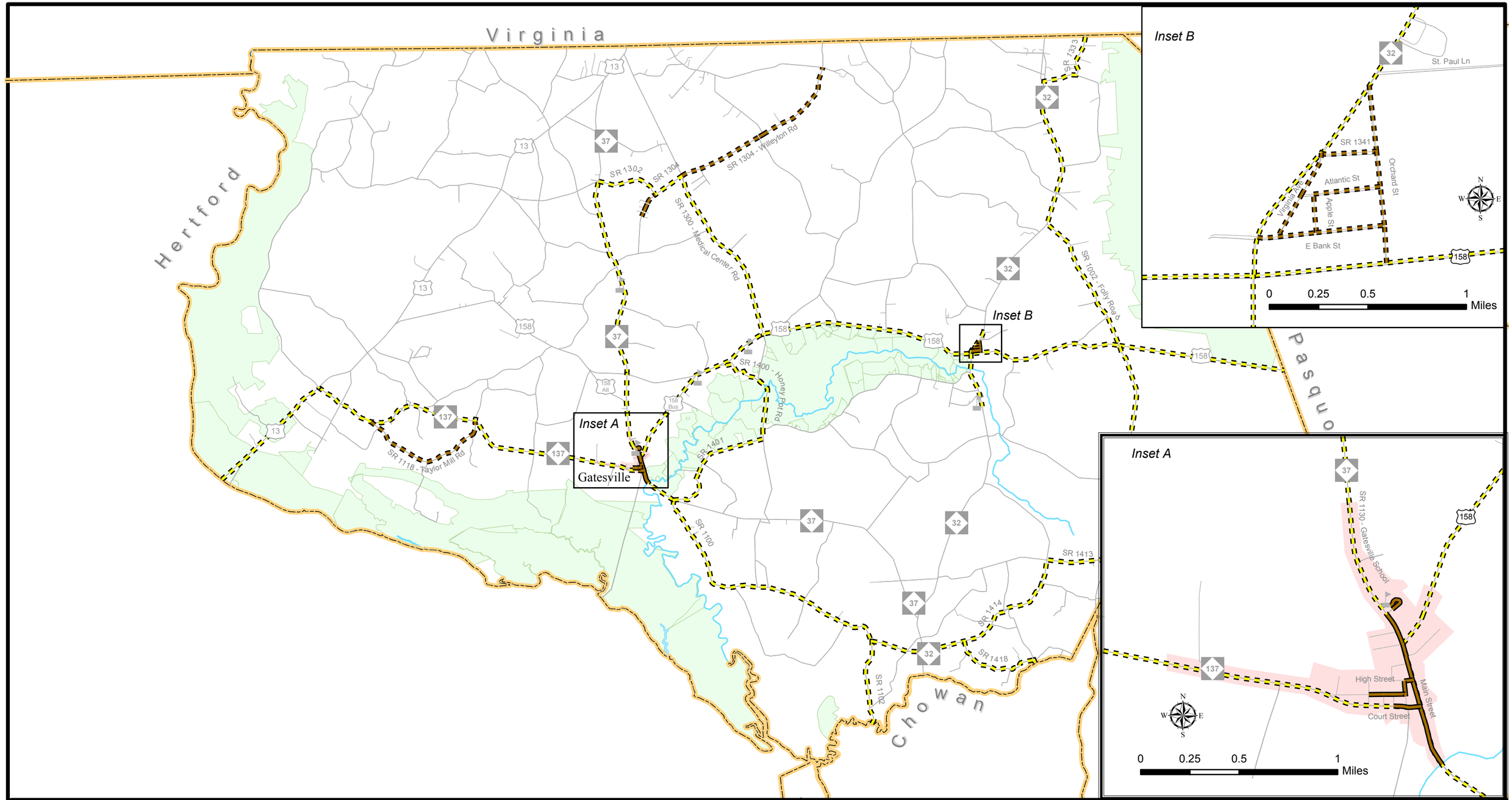
Base map date: March 5, 2014

Refer to CTP document for more details

Public Transportation and Rail Map

Gates County Comprehensive Transportation Plan

Plan date: May 14, 2015



Sidewalks
- Existing
- Needs Improvement
- Recommended

Off Road
- Existing
- Needs Improvement
- Recommended

Multi-Use Paths
- Existing
- Needs Improvement
- Recommended

- Existing Grade Separation
- Proposed Grade Separation

0 1.25 2.5 5 Miles

Sheet 5 of 5

Base map date: March 5, 2014

Refer to CTP document for more details

Pedestrian Map

Gates County

Comprehensive Transportation Plan

Plan date: May 14, 2015

1. Analysis of the Existing and Future Transportation System

A Comprehensive Transportation Plan (CTP) is developed to ensure that the 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 environmental resources.

In order to develop a 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.

1.1 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 demand. 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 in pavement widths, intersection geometry, or intersection controls. System deficiencies may result from missing travel links, bypass routes, loop facilities, or radial routes; or improvements needed to meet statewide initiatives.

One of those statewide initiatives is the Strategic Highway Corridor (SHC) Vision Plan[1] adopted by the Board of Transportation on September 2, 2004. The SHC Vision Plan is

[1] *For more information on the SHC Vision Plan, go to:* https://connect.ncdot.gov/projects/planning/Pages/StrategicHighwayCorridors.aspx.

an initiative to protect and maximize the mobility and connectivity on a core set of transportation corridors throughout North Carolina, while promoting environmental stewardship through maximizing the use of existing facilities to the extent possible, and fostering economic prosperity through the quick and efficient movement of people and goods.

The primary purpose of the SHC Vision Plan is to provide a network of high-speed, safe, reliable highways throughout North Carolina. The primary goal to support this purpose is to create a greater consensus towards the development of a genuine vision for each corridor – specifically towards the identification of a desired facility type (Freeway, Expressway, Boulevard, or Thoroughfare) for each corridor. Individual CTPs shall incorporate the long-term vision of each corridor. Refer to Appendix A for contact information for the SHC Vision Plan.

In the development of this plan, travel demand was projected from 2014 to 2040 using a trend line analysis based on Annual Average Daily Traffic (AADT) from 1990 to 2011. 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 Gates County Commissioners on July 2, 2014. Refer to Appendix H for more detailed information on growth expectations and the socio-economic data forecasting methodology.

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. The 2014 traffic volume in Figure 2 is an estimate of the traffic volume in 2014 with only existing plus committed projects assumed to be in place, where committed is defined as projects programmed for construction in the 2014 – 2040 Transportation Improvement Program[2] (TIP).

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;

[2] *For more information on the TIP, go to:* https://connect.ncdot.gov/projects/planning/Pages/default.aspx

- ❖ 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 experience delay. The practical capacity for each roadway was developed based on the 2000 Highway Capacity Manual using the Transportation Planning Branch's *LOS D Standards for Systems Level Planning*. 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 Assessment

Traffic crashes are often used as an indicator for locating congestion and roadway problems. Crash patterns obtained from an analysis of crash data can lead to the identification of improvements that will reduce the number of crashes. The Traffic Safety Unit of NCDOT's Transportation Mobility and Safety Division identifies high frequency crashes at intersections and along roadway sections during a five year period. The high frequency crash locations examined during the development of the Gates County CTP occurred between January 1, 2006 and December 31, 2010. During this period, a total of fifteen intersections and forty-five roadway sections were identified as having a high frequency of crashes as illustrated in Figure 4. Contact information for the Transportation Mobility and Safety Division can be found in Appendix A.

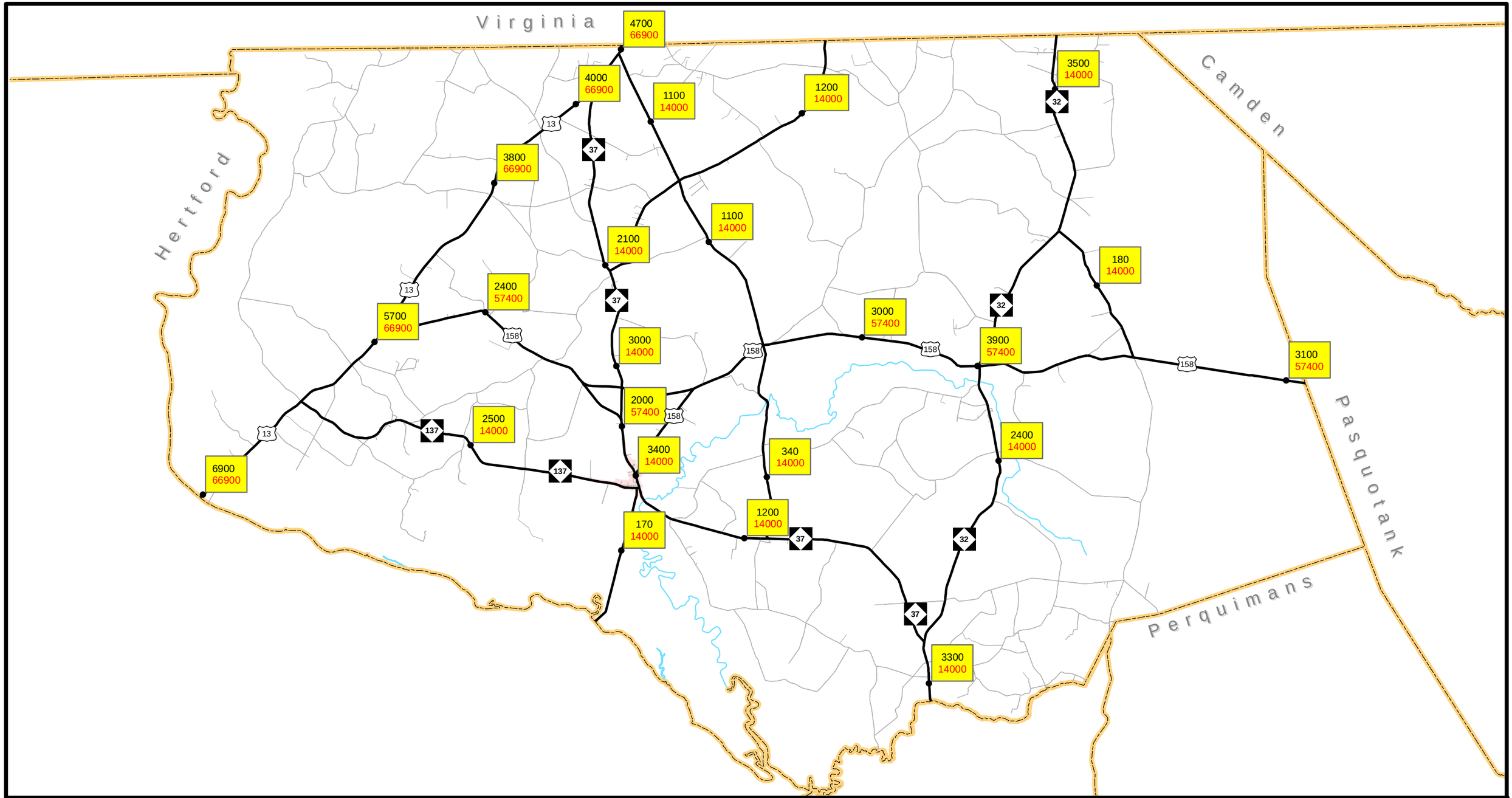
The NCDOT is actively involved with investigating and improving many of these locations. To request a more detailed analysis for any of these locations, or other intersections of concern, contact the Division Traffic Engineer (see Appendix A).

Bridge Deficiency Assessment

Bridges are a vital 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 Structures Management 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. Five deficient bridges were identified on roads evaluated as part of the CTP and are illustrated in Figure 5. Of these, one is scheduled for replacement in the 2014 – 2040 TIP. Additionally, three others occur along roadways recommended for improvement in the CTP. As deficient bridges are replaced, every consideration should be given to proposed CTP recommendation and cross section associated with the recommendation. Table 3 in Appendix F gives a listing of the deficient bridges identified in the CTP and the ID number associated with CTP project proposal. Refer to Appendix F for more detailed bridge deficiency information.



Legend

2014 AADT
2014 Capacity

- Near Capacity
- Over Capacity
- Network Roads
- Other Roads
- Schools
- Rivers and Streams
- Water Bodies
- County Boundary
- Municipal Boundary
- Parks and Game Land

0 1.25 2.5 5 Miles

Figure 2

N W E S

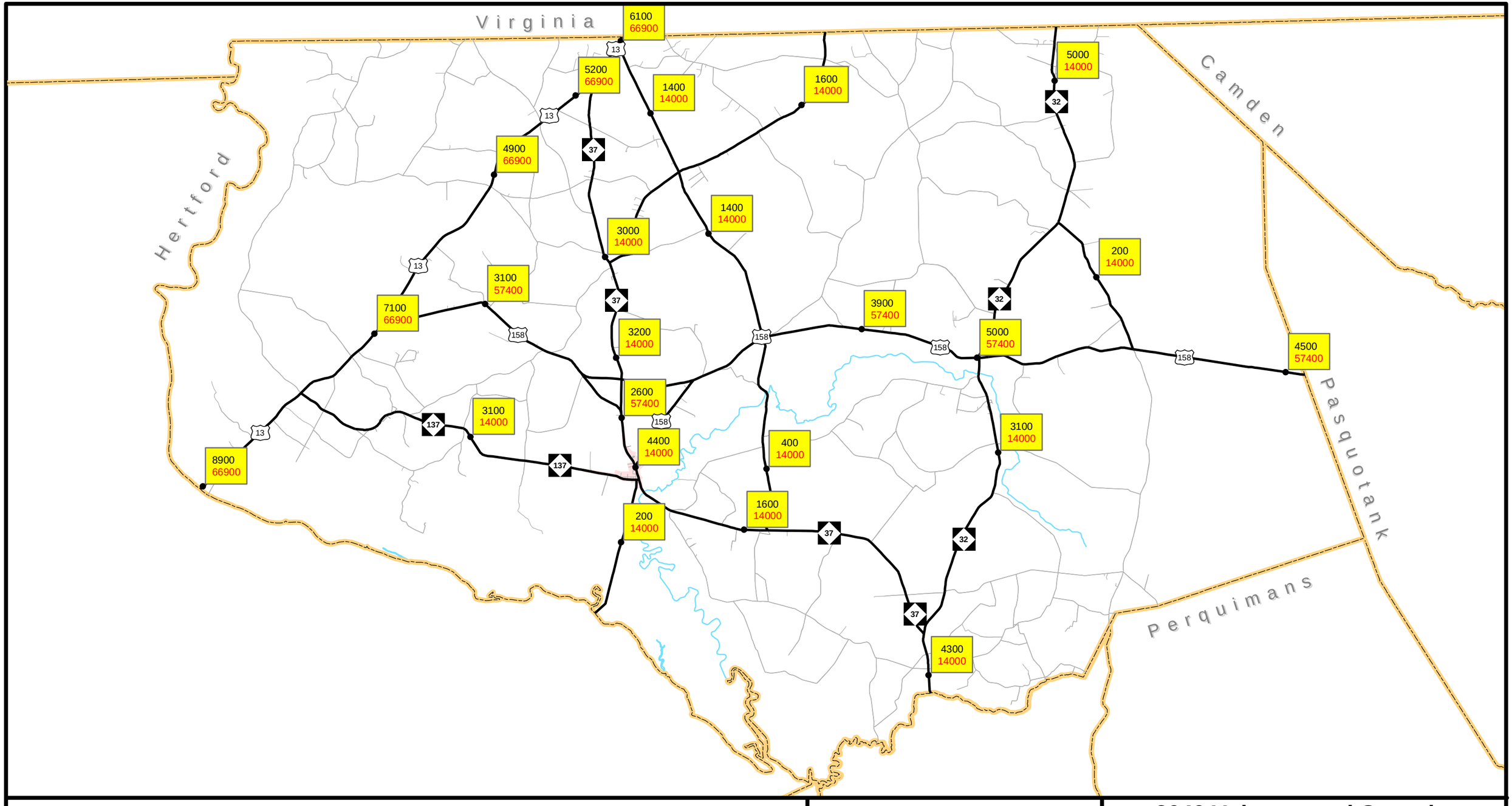
Base map date: March 5, 2014

Refer to CTP document for more details

2014 Volumes and Capacity Deficiencies

Gates County Comprehensive Transportation Plan

Plan date: December 16, 2014



Legend

2040 AADT
2014 Capacity

- Near Capacity
- Over Capacity
- Network Roads
- Other Roads
- Schools
- Rivers and Streams
- Water Bodies
- County Boundary
- Municipal Boundary
- Parks and Game Land

0 1.25 2.5 5 Miles

Figure 3

N W E S

Base map date: March 5, 2014

Refer to CTP document for more details

2040 Volumes and Capacity Deficiencies

Gates County Comprehensive Transportation Plan

Plan date: December 16, 2014

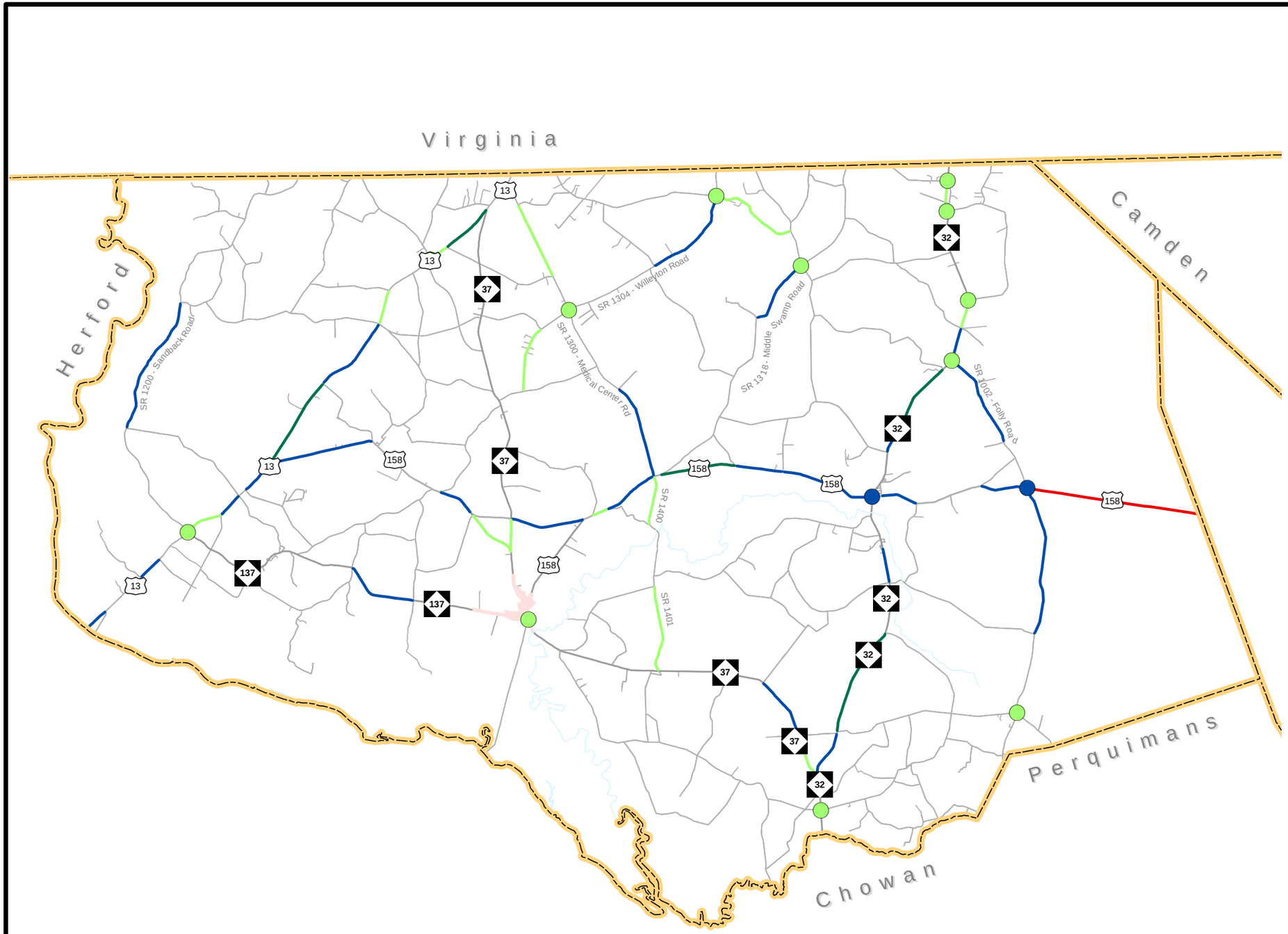


FIGURE 4

Gates County

Comprehensive Transportation Plan

HIGH FREQUENCY CRASH LOCATIONS

January 1, 2007 to
December 31, 2011

Crash Intersections

- 50 and above
- 40 to 49
- 30 to 39
- 20 to 29
- 10 to 19
- 4 to 9

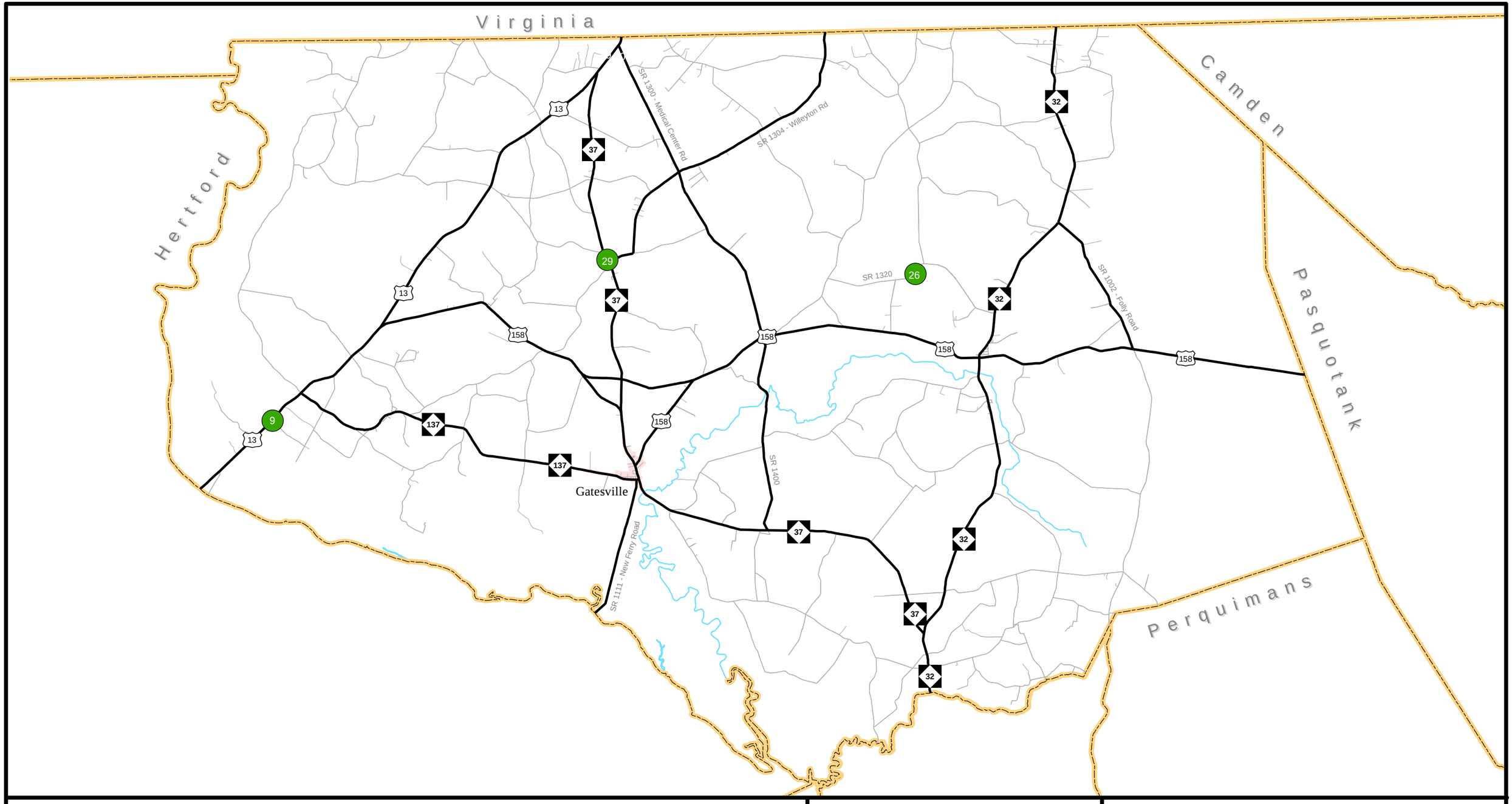
Crash Sections

- 50 and above
- 40 to 49
- 30 to 39
- 20 to 29
- 10 to 19
- 4 to 9
- Study Roads
- Roads
- Schools
- Ferry
- Airports
- Railroads
- Rivers and Streams
- Water Bodies
- Municipal Boundaries
- County Boundary

0 0.5 1 2 3 Miles

N W E S

Base map date: March 5, 2014



Legend

- # Deficent Bridges (Bridge Number)
- Schools
- Network Roads
- Other Roads
- Rivers and Streams
- Parks and Game Land
- Municipal Boundary
- County Boundary
- Water Bodies

Miles
0 1.25 2.5 5

Figure 5

N W E S

Base map date: March 5, 2014

Refer to CTP document for more details

Deficient Bridges

Gates County Comprehensive Transportation Plan

Plan date: October 22, 2014

Public Transportation and Rail

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

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, 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 provide service 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 no current or future public transportation system in Gates County. 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 for the Public Transportation Division.

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.

Intercity passenger service is provided by a partnership between NCDOT and Amtrak. Amtrak currently operates six passenger services daily in or through North Carolina serving 16 cities across the state. Five of the services are interstate (Crescent, Palmetto, Silver Meteor, Silver Star, and Carolinian passenger trains) and one service (Piedmont passenger train) operates exclusively within North Carolina. In addition to the six passenger services mentioned, Amtrak also operates its Auto Train service which passes through North Carolina but does not make any stops. Amtrak ridership demand has been on a rise in the state. In 2010 ridership was 840,000 and increased to 893,000 passengers in 2011.

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 every day. 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. There is no current or future rail system in Gates County. All recommendations for rail were coordinated with the local governments and the Rail Division of NCDOT. Refer to Appendix A for contact information for the Rail Division.

Bicycles & Pedestrians

Bicyclists and pedestrians are a growing part of the transportation system 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 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 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 2013 Albemarle Regional Bicycle Plan was utilized in the development of these elements of the CTP. US 13, US 158, NC 37, NC 137, and NC 32 go through this area. 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 for the Division of Bicycle and Pedestrian Transportation.

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 2003-2004 Gate County CAMA Core Land Use Plan (refer to Appendix G) was used to meet this requirement.

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.

The County's commercial areas are established and located in the Town of Gatesville and the villages of Sunbury, Corapeake, and Gates. Isolated commercial developments are found along US 158, US 13, NC 37, and NC 32.

Gates County has a limited economic base consisting primarily of service type business geared to the needs of the County's permanent population. The County's businesses appear to be diverse, successful, and general well maintained.

The County has a good transportation system of through highways including US 158, US 13, NC 32, NC 37, and NC 137. Some deterioration caused by heavy traffic, storm drainage, and heavy equipment has been noted along some of the County's secondary roads.

For detailed information on how land use and growth projections were developed for and applied in the CTP, refer to Appendix G.

1.2 Consideration of Natural and Human Environment

Environmental features are a key consideration in the transportation planning process. Section 102 of the National Environmental Policy Act[3] (NEPA) requires consideration of impacts on wetlands, wildlife, water quality, historic properties, and public lands. While a full NEPA evaluation was not conducted as part of the CTP, every effort was made to minimize potential impacts to these features utilizing the best available data. Any potential impacts to these resources were identified as a part of the project recommendations in Chapter 2 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 are typically examined as a part of a CTP study is shown in the following tables. Environmental features occurring within Gates County are shown in Figure 6 and are shown in bold text in Table 1.

[3] *For more information on NEPA, go to: http://ceq.hss.doe.gov/.*

Table 1 – Environmental Features

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

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

1.3 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.

A meeting was held with the Gates County Board of Commissioners in July 2014 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 NCDOT Transportation Planning Branch cooperatively worked with the Gates County CTP Committee, which included a representative from each municipality, county staff, the RPO and others. The committee provided information on current local plans, developed transportation vision and goals, discussed population and employment projections, and developed 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 one public drop-in sessions in the Gates County Community Center to present the proposed CTP to the public and solicit comments. The meeting was held on November 17, 2014 at 130 US Hwy.158W Gatesville, NC. This meeting was advertised by the county through emails and local contacts. Comments from six individual citizens were considered and/or incorporated into the multi-modal maps on November 17, 2014.

A public hearing was held on 6/3/2015 during the Gates 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.

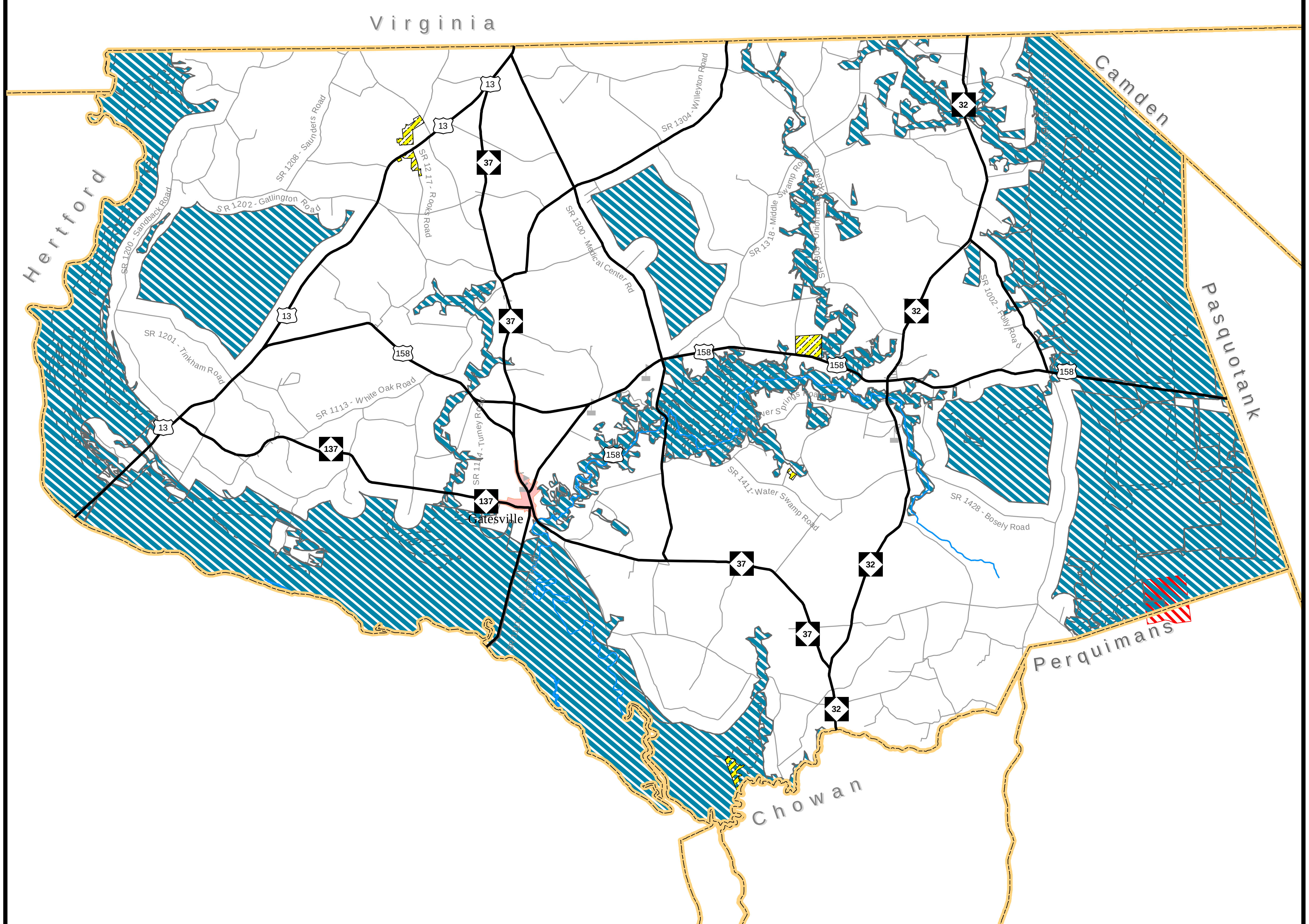
The Albemarle RPO endorsed the CTP on 7/22/2015. The North Carolina Department of Transportation mutually adopted the Gates County CTP on September 3, 2015.

Environmental Features

Gates County

North Carolina

Comprehensive Transportation Plan



Virginia
Hertford
Camden
Pasquotank
Perquimans
Chowan
Gatesville
SR 1208 - Saunders Road
SR 1217 - Rooks Road
SR 1202 - Gatlington Road
SR 1200 - Sandback Road
SR 1201 - Tinkham Road
SR 1113 - White Oak Road
SR 1114 - Turney Road
SR 1300 - Medical Center Rd
SR 1304 - Willeyton Road
SR 1318 - Middle Swamp Road
SR 1002 - Folly Road
SR 1411 - Water Swamp Road
SR 1428 - Bosely Road
13
37
158
137
32
Legend
Schools
Gates County
Conservation Tax Credit Prop.
Landscape Habitat Indicator Guilts
NCDOT Maintained Mitigation Sites
Rivers and Streams
Rivers and Streams
Network Roads
Roads
Municipal Boundary
Gates_Surrounding_Counties
0 0.5 1 2 3 Miles
N
W
E
S

Sheet 1 of 2

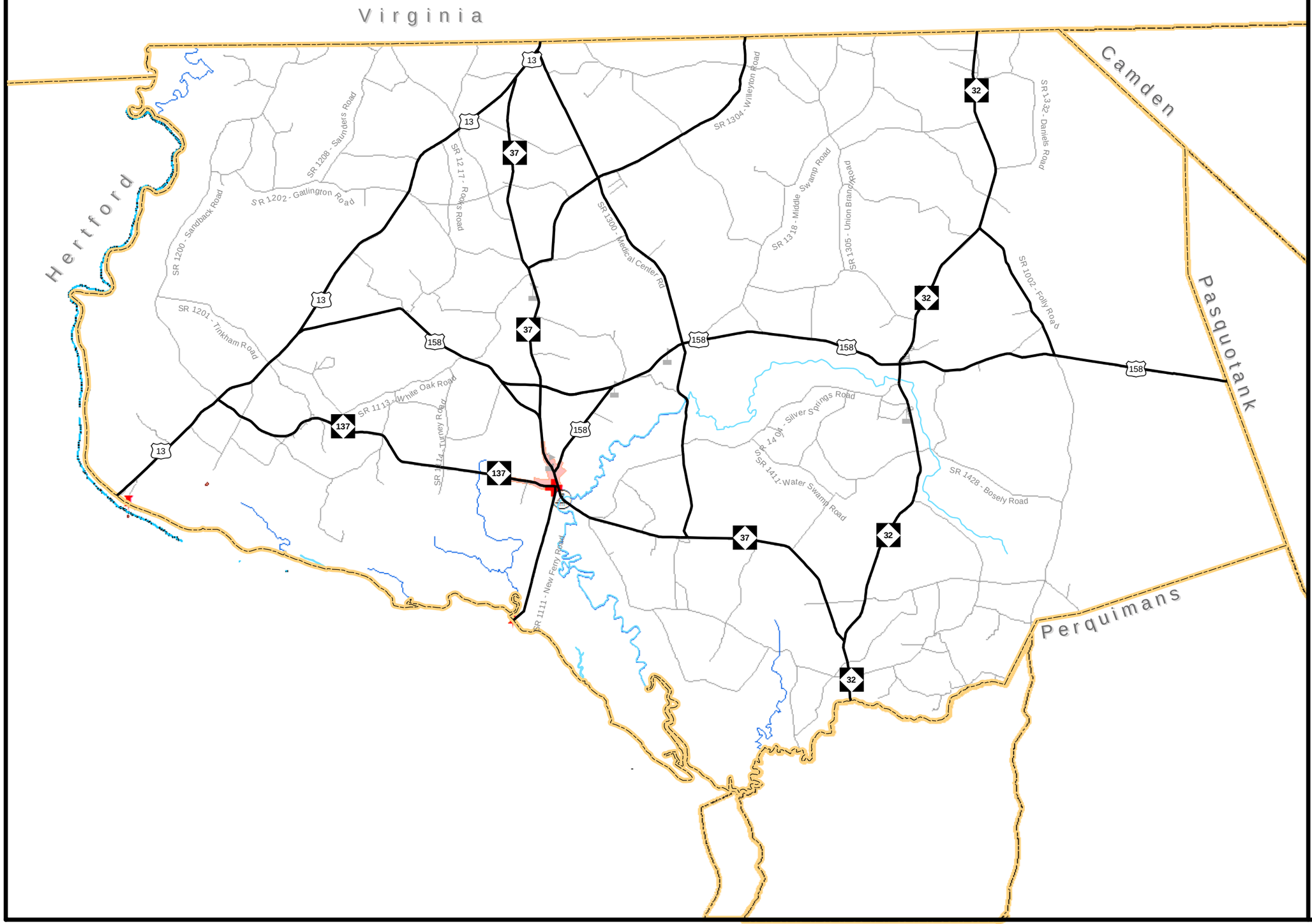
Map Date: 3/5/2014

Environmental Features Map

Gates County

North Carolina

Comprehensive Transportation Plan



Legend

- Schools
- Gates County
- Rivers and Streams
- Beach Access
- Boating Access
- Emergency Operation Centers
- 303D Streams
- Anadromous Fish Spawning Areas
- Hazardous Substance Disposal Sites
- Network Roads
- Roads
- Municipal Boundaries

0 0.5 1 2 3 Miles

N W E S

Sheet 2 of 2

Map Date: 3/5/2014

2. Recommendations

This chapter presents recommendations for each mode of transportation in the 2015 Gates County CTP as shown in Figure 1. More detailed information on each recommendation is tabulated in Appendix C. Refer to Appendix I for documentation of project alternatives and scenarios that were studied, but are not included in the adopted CTP.

NCDOT adopted a "Complete Streets[1]" policy in July 2009. The policy directs the Department to consider and incorporate several modes of transportation when building new projects or making improvements to existing infrastructure. Under this policy, the Department will collaborate with cities, towns and communities during the planning and design phases of projects. Together, they will decide how to provide the transportation options needed to serve the community and complement the context of the area. The benefits of this approach include:

- making it easier for travelers to get where they need to go;
- encouraging the use of alternative forms of transportation;
- building more sustainable communities;
- increasing connectivity between neighborhoods, streets, and transit systems;
- improving safety for pedestrians, cyclists, and motorists.

Complete streets are streets designed to be safe and comfortable for all users, including pedestrians, bicyclists, transit riders, motorists and individuals of all ages and capabilities. These streets generally include sidewalks, appropriate bicycle facilities, transit stops, right-sized street widths, context-based traffic speeds, and are well-integrated with surrounding land uses. The complete street policy and concepts were utilized in the development of the CTP. The CTP proposes projects that include multi-modal project recommendations as documented in the problem statements within this chapter. Refer to Appendix C for recommended cross sections for all project proposals and Appendix D for more detailed information on the typical cross sections.

2.1 Unaddressed Deficiencies

There were no unaddressed deficiencies.

2.2 Implementation

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

[1] *For more information on Complete Streets, go to: http://www.completestreetsnc.org/*

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

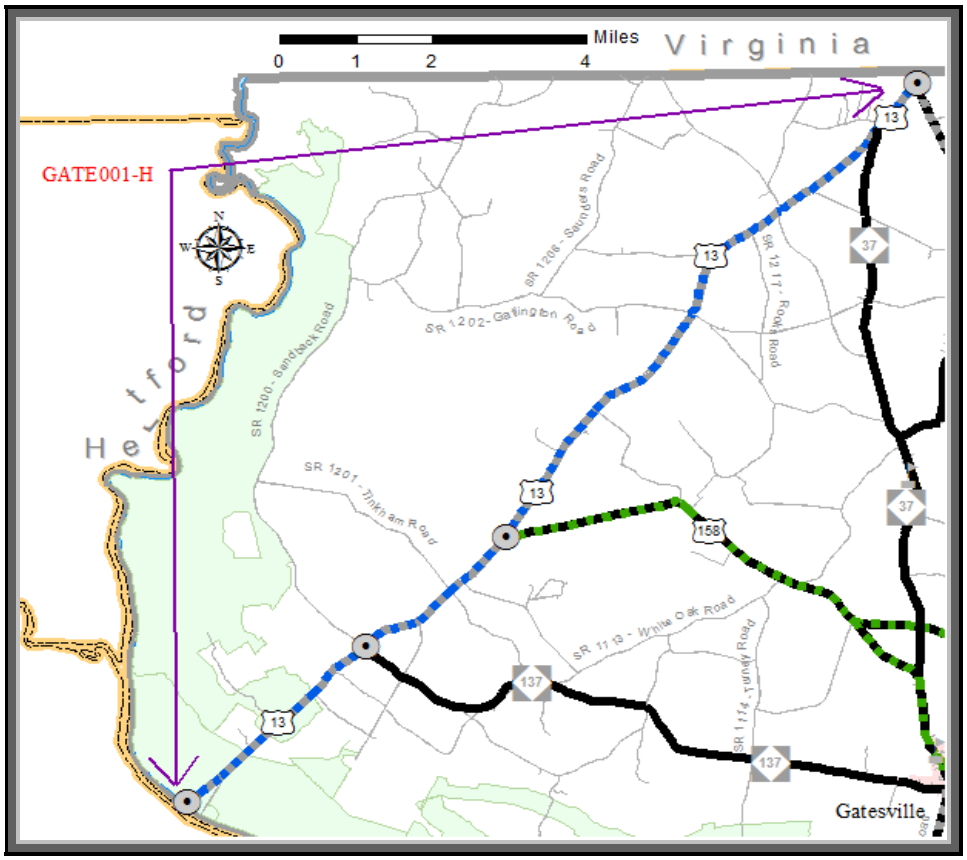
Recommended improvements shown on the CTP map represent an agreement of identified transportation deficiencies and potential solutions to address the deficiencies. While the CTP does propose solutions, it may not represent the final location or cross section associated with the improvement. All CTP recommendations are based on high level systems analyses that seek to minimize impacts to the natural and human environment. Prior to implementing projects from the CTP, additional analysis will be necessary to meet the National Environmental Policy Act (NEPA) or the North Carolina (or State) Environmental Policy Act (SEPA). During the NEPA/SEPA process, the specific project location and cross section will be determined based on environmental analysis and public input. This CTP may be used to support transportation decision making and provide transportation planning data in the NEPA/SEPA process.

2.3 Problem Statements

The following pages contain problem statements for each recommendation, organized by CTP modal element. The information provided in the problem statement is intended to help support decisions made in the NEPA/SEPA process. A full, minimum or reference problem statement is presented for each recommendation, with full problem statements occurring first in each section. Full problem statements are denoted by a gray shaded box containing project information. Minimum problem statements are more concise and less detailed than full problem statements, but include all known or readily available information. Reference problem statements are developed for TIP projects where the purpose and need for the project has already been established.

HIGHWAY

US 13 Multi-Lane Widening	**Local ID: GATE001-H** **Last Updated: 9/29/14**



US 13 is a two-lane road crossing Gates County from the southwest near Winton (Hertford County) to the northeast at the border of Virginia. Currently a portion of US 13/US 158 from NC 45 near Winton in Hertford County to the US 158 Bypass in Tarheel in Gates County is being widened to a four-lane section under project R-2507A. Total length of the R-2507A project is 7.1 miles.

US 13 from US 158 Bypass in Tarheel to SR 1202 (Gatlington/Gates School Road) is proposed to be widened from a two-lane section to a four-lane section under project R-2507B in Gates County. Total length of the R-2507B (H090099-B) project is 4.16 miles. US 13 from SR 1202 (Gatlington Road/Gates School Road) to Virginia State Line is proposed to be widened from a two-lane section to a four-lane section under project R-2507C in Gates County. Total length of the R-2507C project is 4.71 miles. R-2507C (H090099-C) is funded for right of way in 2023 and construction in 2025 in draft 2016-2025 STIP.

This route is part of the Strategic Transportation Corridors Vision for Division 1; plan date for this route was September of 2004 and revised on July 2008.

Identified Problem

The project's primary purpose is to reduce traffic congestion and improve travel time and safety within the project limits.

US 13 is designated as a freeway on the North Carolina Strategic Transportation Corridor Vision Plan. Typical characteristics of freeways are 55 mph or higher, high mobility and low access, traffic signals are not allowed and a minimum of four-lane median divided cross-section. Current roadway characteristics are at the minimum speed, higher access than most freeways, and it is a two-lane undivided cross-section. The classification for current roadway characteristics for US 13 is that of boulevards and not freeway. The intention is to bring US 13 up to freeway standards from boulevards.

Justification of Need

US 13 passes through NC and into Virginia in Gates County. It is a major connector for the two states. US 13 starts at Interstate 95 north of Fayetteville, NC and ends in the suburbs of Philadelphia, PA. This road is a major connector for 4 states up the east coast. It is recommended it be brought up to freeway standards because it is such a major connector. Currently the speed limit for US 13 in Gates County is 55mph and it is recommended the speed limit be increased to 60mph.

To continue fulfilling the requirements for mobility, safety and connectivity US 13 must meet design criteria for a freeway, which would be four-lane, median-divided highway with full control of access and speeds of 55mph or higher. In order to meet this criteria, US 13 need to become a multi-lane highway.

Community Vision and Problem History

The community would like to see this highway brought up to freeway standards in order to reduce traffic congestion, and improve safety and travel time.

CTP Project Proposal

Project Description and Overview

In Hertford and Gates Counties, the Design-Build Project R-2507A widens US 13 / US 158 from US 158 / NC 45 near Winton to the US 158 Bypass in Tarheel. The proposed improvements widen approximately 7.1 miles of U.S. 13 / U.S. 158 to a four lane divided facility with directional crossovers and median U-Turn bulb-outs. The project's primary purpose is to reduce traffic congestion and improve travel time and safety within the project limits.

US 13 / US 158 as a four-lane divided facility with a 46-foot median (30-foot at the Chowan River). The partial control of access facility will meet a 60-mph design speed. An interchange at US 13 / US 158/ NC 45. All other -Y- Lines along the mainline will be at-grade intersections with directional crossovers and median U-Turn bulb-outs.

Natural & Human Environmental Context

By analyzing different alternatives for the proposed US 13, efforts were made to mitigate the effects the newly proposed roadway will have on the natural and human environment. Based on a planning level environmental assessment using available GIS data, some natural and human environmental features examined will be affected in the immediate vicinity of the project.

Relationship to Land Use Plans

Gates County is a rural county and its current land use plan reflects its character.
Vast spans of land are either in their natural state (limited streams and forest area to the south) or being farmed as agricultural fields. The county is sprinkled with small single-home developments with lots of an acre or greater. There is very little business development along US-13 currently, other than Doris & Rogers Kitchen, Eure Heating and Refrigeration Services, and Tarheel BBQ. The proposed new corridor will intersect mostly farmland and some forest areas.

Linkages to Other Plans and Proposed Project History

This TIP project is proposed to reduce traffic congestion and improve travel time and safety within the project limits.

In the Gates County, North Carolina Coastal Area Management Act (NC CAMA) Core Land Use Plan Update of 2003-2004, isolated commercial development is mentioned along US 13. There is a State boat landing area along US 13. TIP # R-2507 is listed among transportation improvement projects in the County.

The Albemarle Regional Bicycle Plan mentioned US 13 in Gates County needing paved shoulders south of NC 137 to the county line.

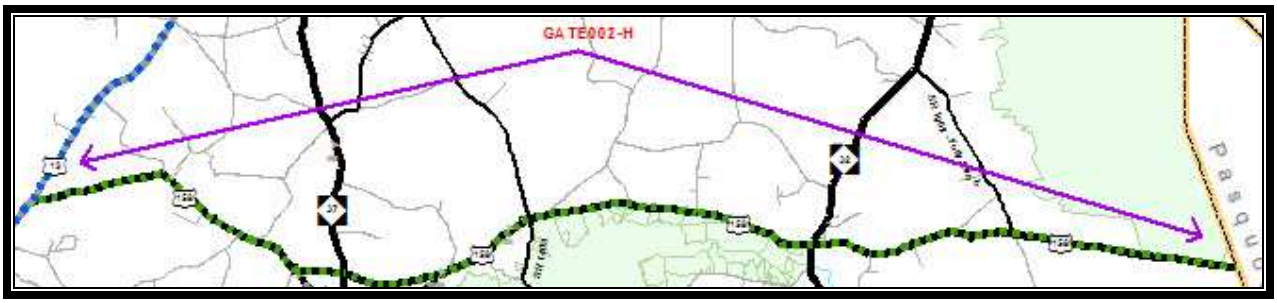
Multi-modal Considerations

From the county line (south) to NC 137, recommendations are being made for sidewalks. Bicycle accommodations are recommended along the entire length of the proposed project.

Public/ Stakeholder Involvement

No significant issues associated with the projects were identified during any of the stakeholder meetings. The committee identified all deficiencies and came to agreements on solutions. The first public workshop was held on November 17, 2014 from 4-7pm at the Gates County Community Center. A total of six citizens attended the public workshop. Additional pedestrian and bicycle recommendations were made during the workshop, all were taken into consideration, and most were incorporated into the multi-modal maps. There were, however, no comments about US 13.

US-158 Multi-Lane Widening **Local ID: GATE002-H**
Last Updated: 9/29/14



US-158 is a two-lane road crossing Gates County from US 13 Winton to NC 32 in Sunbury. US 158 is a principal arterial that crosses from west to east starting at US 13 and continuing into Pasquotank County. The speed limit on this route is currently 55mph, lane width is 12 feet. R-2578 (SPOT ID H090145) is unfunded, and cost to NCDOT is expected to be $110,400,000. The project is proposed to be widened from an undivided two-lane road to a four-lane road. Total length of the R-2578 project is 15 miles.

Identified Problem

The project's primary purpose is to provide more alternative routes to those traveling to the Outer Banks by upgrading US 158 to expressway standards. Traffic on US 17 would

be reduced if US 158 were to be brought up to expressway standards. Another reason to bring US 158 up to expressway standards in Gates County is to attract more businesses into the communities along this route.

Typical characteristics of expressways are 45mph to 60mph, high mobility and low to moderate access, traffic signals are not allowed and a minimum of four-lane with a median cross-section. Currently this is a two-lane road with no median. The classification for current roadway characteristics for US 158 is a combination of expressways (low or moderate access) and thoroughfares (no median and two-lane minimum). The intention is to upgrade US 158 to expressway standards from boulevards.

Justification of Need

US 158 passes through North Carolina from western North Carolina to eastern North Carolina. US 158 starts in Mocksville, NC and ends in Nags Head, NC. This highway's entirety is in North Carolina. Currently the speed limit for US 158 in Gates County is 55mph. No change in speed limit is being proposed.

To continue fulfilling the requirements for mobility, safety and connectivity US 158 must meet design criteria for an expressway, which would be four-lane, with a median and low to moderate access and speeds from 45mph to 60mph. In order to meet this criteria, US 158 needs to become a multi-lane highway.

Community Vision and Problem History

The community would like to see this highway brought up to expressway standards, provide an alternative route for those passing by Gates County, and attract more businesses.

CTP Project Proposal

Project Description and Overview

Project R-2578 is solely in Gates County. The proposed improvements are to widen approximately 15 miles of US 158 to four lanes with a median. The project's primary purpose is to reduce traffic congestion and improve travel time and safety within the project limits.

Currently US 158 is a two-lane road. The functional classification on this road is principal arterial. The lane width currently is 12 feet. There is no paved shoulder on this road right now. The volumes on this highway range from 2,100 AADT to 3,900 AADT in 2014. Future volumes on this highway range from 2,700 AADT to 5,000 AADT for 2040.

This highway is proposed to become 4 lane divided (46' median) with paved shoulders. This is proposed to be a 4A cross section in Appendix D. The speed limit is expected to remain the same (55 mph).

Natural & Human Environmental Context

By analyzing different alternatives for the proposed US-158, efforts were made to mitigate the effects the newly proposed roadway will have on the natural and human environment. Based on a planning level environmental assessment using available GIS data, some natural and human environmental features examined will be affected in the immediate vicinity of the project.

Relationship to Land Use Plans

Gates County is a rural county and its current land use plan reflects its character.
Vast spans of land are either in their natural state (limited streams and forest area to the south) or being farmed as agricultural fields. The county is sprinkled with small single-home developments. There are many businesses and developments along this stretch of highway such as Tarheel BBQ, US Post Office, Central Middle School, Gates County Community Center, Gates Rescue Squad, BC Farm Bureau Insurance, Dixie Auto Parts, and Redbox. The proposed new corridor will intersect mostly farmland, some forest areas, and businesses/official government buildings.

Linkages to Other Plans and Proposed Project History

The purpose of these projects are to build to expressway standards, provide an alternative route for those passing through Gates County, and attract more businesses.

In the Gates County, North Carolina Coastal Area Management Act (NC CAMA) Core Land Use Plan Update of 2003-2004, the deterioration of the road is mentioned due to heavy traffic, storm damage, and heavy farm equipment on the road. It is also mentioned in the land use plan that the county supports NCDOT in their efforts to upgrade US 158 to construct an interstate link between Norfolk and Raleigh that is easily accessible to Gates County residents. The county is hopeful that the sewage system owned by the State (Department of Corrections), if expanded could serve some very limited development in an area of US 158 in Gates County, which is projected to likely experience some growth.

Multi-modal Considerations

A multi-use path is being proposed on this route starting from the intersection of US-158 and US 158 Business and ending at the county line.

Public/ Stakeholder Involvement

No significant issues associated with the projects were identified during any of the stakeholder meetings. The committee identified all deficiencies and came to agreements on solutions. The first public workshop was held on November 17, 2014 from 4-7 pm at the Gates County Community Center. A total of six citizens attended the public workshop. Additional pedestrian and bicycle recommendations were made during the workshop, all were taken into consideration, and most were incorporated into the multi-modal maps. There were, however, no comments about US 13.

US 158 Alt Proposed Improvements from US 158 to NC 137, Local ID: Gates0003-H

The proposed improvements are to widen US 158 Alt from the US 158 to NC 137. This will help the road to meet the standards for a major thoroughfare, thus enhancing mobility and connectivity. Currently US 158 Alt is a 23 feet, two lane road with a speed limit of 55 mph. Right-of-Way on this road is 60 feet. Recommendations are being made that this road be widened from 23 feet to 24 feet.

US-158 Bus Proposed Improvements from NC 137 to US-158, Local ID: Gates0004-H

The proposed improvements are to widen US 158 Business from NC 137 to US 158. This will help the road to meet the standards for a major thoroughfare, thus enhancing mobility and connectivity. Currently US 158 Business is a 23 feet, two lane road with a speed limit that varies from 35 mph to 55 mph. Right-of-Way on this road is 60 feet. Recommendations are being made that this road be widened from 23 feet to 24 feet.

New Ferry Road (SR 1111) Proposed Improvements from NC 137 to County Line, Local ID: Gates0005-H

The proposed improvements are to pave New Ferry Road (SR 1111) from the NC 137 to County Line/Chowan River. Currently SR 1111 is an unpaved two lane road with a width of 18 feet, with a speed limit of 55 mph. Right-of-Way on this road is 50 feet. Recommendations are being made to pave this road. Both locals and visitors use this road to travel down to the Chowan River for recreational purposes. Shoulder widening on this road is being recommended in order to bring the road to paved condition. There are canals on both side of this route that will be impacted. Due to environmental constraints regarding the canal and other features, preliminary investigations of environmental impacts must be pursued prior to requesting this project.

Willeyton Road (SR 1304) Proposed Improvements from County Line to SR 1300, Local ID: Gates0006-H

The proposed improvements are to widen Willeyton Road (SR 1304) from the US 13 to NC 37. Although there is not much traffic on most minor thoroughfares in Gates County, this road has an AADT of 1,200, almost double that of other minor thoroughfares in the county. This road is also an important route for locals to commute to Virginia. Currently this road is a 18 foot, two lane road with a speed limit of 55mph. Recommendations are to widen this road from 18 feet to 22 feet. Currently there is no recorded ROW on this road, but locals are hopeful ROW will be acquired before 2040.

Medical Center Road (SR 1300) Proposed Improvements from US 13 to SR 1304, Local ID: Gates0007-H

The proposed improvements are to widen Medical Center Road (SR 1300) from the County/State line to US 158. This road is an important road for locals to commute up to US-13 which connects into Virginia. Currently this road varies from 18 to 20 feet, two lane road with a speed limit of 55mph. Recommendations are to widen this road from 18 and 20 feet to 22 feet. There is 60 feet of ROW on this road.

PUBLIC TRANSPORTATION & RAIL

A public transportation and rail assessment was completed during the development of the CTP. There are no recommended improvements associated with the public transportation mode. There is an inactive rail corridor coming from the Virginia border down to Hertford County. Originally this railroad was created to carry shipments such as timber and to encourage influx of goods for economic growth. In 1979, the railroads stopped running due to truck shipment being cheaper than rails.

BICYCLE

During the development of the CTP, the following facilities were identified as recommended bicycle routes and will need improvement. 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 5 foot bike lanes or 14 foot wide shoulder lanes.
- Shoulder sections require a minimum of 4 foot paved shoulder.
- All bridges along the roadways where bike facilities are recommended shall be equipped with 54 inch railings.

NC 32, Local ID: GATE001-B

The Comprehensive Transportation Plan (CTP) recommends upgrading NC 32 from South of Cooper Road (SR 1406) to Zion Road (SR 1410) to accommodate bicycle travel along the NC 32 corridor. The recommended cross-section is 2A, Appendix D.

Sugar Run Road (SR 1429), Local ID: GATE002-B

The Comprehensive Transportation Plan (CTP) recommends upgrading Sugar Run Road (SR 1429) from NC 32 to US 158 to accommodate bicycle travel along the Sugar Run Road. The recommended cross-section is 2A, Appendix D.

Sandbanks Road (SR 1200), Local ID: GATE003-B

The Comprehensive Transportation Plan (CTP) recommends upgrading SR 1200 from US 13 to Virginia state line to accommodate bicycle travel along the SR 1200 corridor. The recommended cross-section is 2A, Appendix D.

Daniels Road (SR 1332), Local ID: GATE004-B

The Comprehensive Transportation Plan (CTP) recommends upgrading SR 1332 from NC 32 to NC 32 to accommodate bicycle travel along Daniels Road. The recommended cross-section is 2A, Appendix D.

Tinkham Road (SR 1201), Local ID: GATE005-B

The Comprehensive Transportation Plan (CTP) recommends upgrading SR 1201 from SR 1200 to NC 137 to accommodate bicycle travel along Tickham Road. This road needs safety improvements to accommodate cyclists. The recommended cross-section is 2A, Appendix D.

Taylor Mill Road (SR 1118), Local ID: GATE006-B

The Comprehensive Transportation Plan (CTP) recommends upgrading SR 1118 from NC 137 to SR 1117 to accommodate bicycle travel along Taylor Mill Road. This road needs safety improvements to accommodate cyclists. The recommended cross-section is 2A, Appendix D.

Askew Road (SR 1117), Local ID: GATE007-B

The Comprehensive Transportation Plan (CTP) recommends upgrading SR 1117 from SR 1118 to SR 1114 to accommodate bicycle travel along Askew Road. This road needs safety improvements to accommodate cyclists. The recommended cross-section is 2A, Appendix D.

Turner Road (SR 1114), Local ID: GATE008-B

The Comprehensive Transportation Plan (CTP) recommends upgrading SR 1114 from SR 1117 to NC 137 to accommodate bicycle travel along Turner Road. This road needs safety improvements to accommodate cyclists. The recommended cross-section is 2A, Appendix D.

Mill Pond Road (SR 1400), Local ID: GATE009-B

The Comprehensive Transportation Plan (CTP) recommends upgrading SR 1400 from NC 37 to SR 1401 to accommodate bicycle travel along Mill Pond Road. This road needs safety improvements to accommodate cyclists. The recommended cross-section is 2A, Appendix D.

Muddy Cross Road (SR 1412), Local ID: GATE010-B

The Comprehensive Transportation Plan (CTP) recommends upgrading SR 1412 from NC 37 to SR 1413 to accommodate bicycle travel along Muddy Cross Road. This road needs safety improvements to accommodate cyclists. The recommended cross-section is 2A, Appendix D.

Sandy Cross Road (SR 1413), Local ID: GATE011-B
The Comprehensive Transportation Plan (CTP) recommends upgrading SR 1413 from SR 1412 to Gates County line to accommodate bicycle travel along Sandy Cross Road. This road needs safety improvements to accommodate cyclists. The recommended cross-section is 2A, Appendix D.

Folly Road (SR 1002), Local ID: GATE012-B
The Comprehensive Transportation Plan (CTP) recommends upgrading SR 1002 from SR 1413 to NC 32 to accommodate bicycle travel along Folly Road. This road needs safety improvements to accommodate cyclists. The recommended cross-section is 2A, Appendix D.

PEDESTRIAN

Comprehensive Transportation Plan recommendations call for new sidewalks along the following facilities in order to provide adequate connectivity for pedestrians in the area:

GATE001-P: Orchard Street from NC 32 to US 158
GATE002-P: Willeyton Road (SR 1341) from NC 32 to US 158
GATE003-P: Atlantic Street from Virginia Avenue to Orchard Street
GATE004-P: Virginia Avenue from Willeyton Road (SR 1341) to East Bank Street
GATE005-P: East Bank Street from NC 32 to Orchard Street
GATE006-P: Apple Street from Atlantic Ave to East Bank Street
GATE007-P: Taylor Mill Road (SR 1118) from NC 137 to NC 137
GATE008-P: Willeyton Road (SR 1304) from Drum Hill Road (SR 1308) to Deep Swamp Road

MULTI-USE

A Multiuse path is an off-road hard-surfaced path that is separated from motorized vehicular traffic and is designed for public use for human-powered travel or movement. Human-powered meaning movement accomplished or propelled by human power, such as walking, running, or by any vehicle or device which is designed and equipped to be propelled by human power, without any assistance by a motor or power unit (*e.g.*, bicycle, roller skates, skateboard, and wheel chair).

GATE0001-M: US 13 from County Line to NC 137
GATE0002-M: NC 137 from US 13 to NC 37
GATE0003-M: Gates Bank Road (SR 1302) from NC 37 to Willeyton Road (SR 1304)
GATE0004-M: Willeyton Road (SR 1304) from Gates Bank Road (SR 1302) to Page Riddick Road (SR 1300)
GATE0005-M: Page Riddick Road (SR 1300) from Willeyton Road (SR 1304) to US 158
GATE0006-M: US 158 Business from NC 37 to US 158
GATE0007-M: US 158 from US 158 Business to County Line
GATE0008-M: NC 32 from Mobile Home Parkway Lane to Goodmans Folly Lane

GATE0009-M: Carters Road (SR 1100) from NC 37 to Hobbsville Road (SR 1414)
GATE0010-M: Hobbsville Road (SR 1414) from Carters Road (SR 1100) to Sandy Cross Road (SR 1413)
GATE0011-M: Catherine Creek Rd (SR 1102) from Carters Road (SR 1100) to County Line
GATE0012-M: Spivey Road (SR 1418) from Hobbsville Road (SR 1414) to County Line
GATE0013-M: Untitled Greenway from US 158 to Mill Pond Road
GATE0014-M: Folly Road (SR 1002) from NC 32 to Hardy Askey Lane (SR 1314)
GATE0015-M: Saunderstown Road (SR 1333) from Virginia state line to NC 32
GATE0016-M: Sandy Cross Road (SR 1413) from Hobbsville Road (SR 1414) to Folly Road (SR 1002)
GATE0017-M: NC 37 from Gates Bank Road (SR 1302) to US 158 Business
GATE0018-M: NC 32 from Saunderstown Road (SR 1333) to Folly Road (SR 1002)
GATE0019-M: Honey Pot Road (SR 1400) from US 158 to Flat Branch Road (SR 1401)

APPENDICES

Appendix A
Resources and Contacts

Local Planning Organization

Albemarle Rural Planning Organization (www.albemarlecommission.org/)
Contact the RPO for information on long-range multi-modal planning services.
512 S Church St. Hertford, NC 27944 (252) 426-5775

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 directory:

1-877-DOT-4YOU (1-877-368-4968) *http://www.ncdot.gov/contact/*

Secretary of Transportation (http://www.ncdot.org/about/leadership/secretary.html)
1501 Mail Service Center Raleigh, NC 27699-1501 (919) 707-2800

Board of Transportation (http://www.ncdot.gov/about/board/)
1501 Mail Service Center Raleigh, NC 27699-1501 (919) 707-2820

Highway Division 1 (https://apps.dot.state.nc.us/dot/directory/authenticated/ToC.aspx)
113 Airport Drive Edenton, NC 27932 (252) 482-1850

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

Contact the following NCDOT divisions and units[1] for:

Transportation Planning Branch (TPB)	*Information on long-range multi-modal planning services.* 1554 Mail Service Center Raleigh, NC 27699 (919) 707-0900
Strategic Planning	*Information concerning prioritization of transportation projects.* 1501 Mail Service Center Raleigh, NC 27699 (919) 707-4740
Project Development & Environmental Analysis (PDEA)	*Information on environmental studies for projects that are included in the TIP.* 1548 Mail Service Center Raleigh, NC 27699 (919) 707-6000
State Asset Management Unit	*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 (919) 707-2500

[1] Unit websites are hyperlinked and can also be accessed at *https://connect.ncdot.gov/Pages/default.aspx*.

Program Development Branch	*Information concerning Roadway Official Corridor Maps, Feasibility Studies and the Transportation Improvement Program (TIP).* 1542 Mail Service Center Raleigh, NC 27699 (919) 707-4610
Public Transportation Division	*Information on public transit systems.* 1550 Mail Service Center Raleigh, NC 27699 (919) 707-4670
Rail Division	*Rail information throughout the state.* 1553 Mail Service Center Raleigh, NC 27699 (919) 707-4700
Division of Bicycle and Pedestrian Transportation	*Bicycle and pedestrian transportation information throughout the state.* 1552 Mail Service Center Raleigh, NC 27699 (919) 707-2600
Structures Management Unit	*Information on bridge management throughout the state.* 1581 Mail Service Center Raleigh, NC 27699 (919) 707-6400
Roadway Design Unit	*Information regarding design plans and proposals for road and bridge projects throughout the state.* 1582 Mail Service Center Raleigh, NC 27699 (919) 707-6200
Transportation Mobility and Safety Division	*Information regarding crash data throughout the state.* 1561 Mail Service Center Raleigh, NC 27699 (919) 773-2800

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/cd

Appendix B
Comprehensive Transportation Plan Definitions

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

Highway Map

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

Facility Type Definitions

- **Freeways**
  - Functional purpose – high mobility, high volume, high speed
  - Posted speed – 55 mph or greater
  - Cross section – minimum four lanes with continuous median
  - 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, operations, or system continuity. The improvement to the facility may be widening, increasing the level of access control along the facility, operational strategies (including but not limited to traffic control and enforcement, incident and emergency management, and deployment of Intelligent Transportation Systems (ITS) technologies), or a combination of improvements and strategies. *"Needs improvement" does not refer to the maintenance needs of existing facilities or the replacement or rehab of structures.*
- **Recommended** – Roadway facilities on new location that are needed in the future.
- **Interchange** – Through movement on intersecting roads is separated by a structure. Turning movement area accommodated by on/off ramps and loops.
- **Grade Separation** – Through movement on intersecting roads is separated by a structure. There is no direct access between the facilities.
- **Full Control of Access** – Connections to a facility provided only via ramps at interchanges. No private driveway connections allowed.
- **Limited Control of Access** – Connections to a facility provided only 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.
- **Existing Grade Separation** – Locations where existing rail facilities and are physically separated from existing highways or other transportation facilities. These may be bridges, culverts, or other structures.
- **Proposed Grade Separation** – Locations where rail facilities are recommended to be physically separated from existing or recommended highways or other transportation facilities. These may be bridges, culverts, or other structures.

Bicycle Map

- **On Road-Existing** – Conditions for bicycling on the highway facility are adequate to safely accommodate cyclists.
- **On Road-Needs 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 'Total Width (ft)' is the approximate width of the roadway from edge of pavement to edge of pavement and under 'Lane Width (ft)' is the approximate width of a single lane based on centerline/ edge line markings. Listed under 'Lanes' is the total number of lanes, with 'D' if the facility is divided, and 'OW' if it is a one-way facility.
- **Existing ROW:** The estimated existing right-of-way is based on input from division and GIS shapefiles. These right-of-way amounts are approximate and may vary.
- **Existing and Proposed Capacity:** The estimated capacities are given in vehicles per day (vpd) based on LOS D for existing facilities and LOS C for new facilities. These capacity estimates were developed based on the 2000 Highway Capacity Manual using the Transportation Planning Branch's LOS D Standards for Systems Level Planning, as documented in Chapter 1.
- **Existing and Proposed Volumes**, given in vehicles per day (vpd), are estimates only based on a systems-level analysis. The '2014 Volume E+C' is an estimate of the volume in 2014 with only existing plus committed projects assumed to be in place, where committed is defined as projects programmed for construction in the 2014 - 2040 Transportation Improvement Program (TIP). The '2040 Volume with CTP') is an estimate of the volume in 2040 with all proposed CTP improvements assumed to be in place. The '2040 Volume with CTP' is shown in bold if it exceeds the proposed capacity, indicating an unmet need. For additional information about the assumptions and techniques used to develop the AADT volume estimates, refer to Chapter 1.
- **Proposed Cross-section:** The CTP recommended cross-sections are listed by code; for depiction of the cross-section, refer to Appendix D. An entry of 'ADQ' indicates the existing facility is adequate and there are no improvements recommended for the given mode as part of the CTP.

- **CTP Classification:** The CTP classification is listed, as shown on the adopted CTP Maps (see Figure 1). Abbreviations are F= freeway, E= expressway, B= boulevard, Maj= other major thoroughfare, Min= minor thoroughfare.
- **Tier:** Tiers are defined as part of the North Carolina Multimodal Investment Network (NCMIN). Abbreviations are Sta= statewide tier, Reg= regional tier, Sub= subregional tier.
- **Proposals for Other Modes:** If there is an improvement recommended for another mode of transportation that relates to the given recommendation, it is indicated by an alphabetic code (H= highway, T= public transportation, R= rail, B= bicycle, P= pedestrian, and M= multi-use path).

TABLE 2 - CTP INVENTORY AND RECOMMENDATIONS

HIGHWAY																				
		Section				2014 Existing System							2040 Proposed System							
Local ID	Facility	From	To	Jurisdiction	Dist. (mi)	Total Width (ft)	Lanes	Lane Width (ft)	ROW (ft)	Speed Limit (mph)	Existing Capacity (vpd	2014 Volume	2014 Volume E+C	2040 Volume with CTP	Proposed Capacity (vpd)	Cross-Section	ROW (ft)	CTP Classifi-cation	Tier	Proposals for Other Modes
GATE001-H	US 13	VA border	SR 1300	Gates	0.2	26	2	13.0	100	55	66900	4700	4700	6100	67900	4A	100	F	Sta	-
	US 13	SR 1300	NC 37	Gates	0.8	26	2	13.0	100	55	66900	4600	4600	6000	67900	4A	100	F	Sta	-
	US 13	NC 37	SR 1215	Gates	1.2	25	2	12.5	100	55	66900	4000	4000	5200	67900	4A	100	F	Sta	-
	US 13	SR 1215	SR 1202	Gates	3.7	25	2	12.5	100	55	66900	3800	3800	4900	67900	4A	100	F	Sta	-
	US 13	SR 1202	US 158	Gates	4.1	25	2	12.5	100	55	66900	3700	3700	4800	67900	4A	100	F	Sta	-
	US 13	US 158	SR 1200	Gates	2.5	25	2	12.5	60	55	66900	5700	5700	7100	67900	4A	100	F	Sta	-
	US 13	SR 1200	County line	Gates	3.2	25	2	12.5	60	55	66900	6900	6900	8900	67900	4A	100	F	Sta	B, M
	NC 137	US 13	SR 1118	Gates	4.2	20	2	10.0	60	55	14000	1500	1500	1600	14000	ADQ	60	Maj	Reg	B
	NC 137	SR 1118	NC 37	Gates	4.4	20	2	10.0	60	55	14000	2500	2500	3100	14000	ADQ	60	Maj	Reg	B, P
GATE002-H	US 158	US 13	SR 1221	Gates	2.3	24	2	12.0	60	55	57400	2100	2100	2700	58800	4A	100	E	Sta	-
	US 158	SR 1221	SR 1217	Gates	0.2	24	2	12.0	60	55	57400	2300	2300	2800	58800	4A	100	E	Sta	-
	US 158	SR 1217	SR 1116	Gates	2.7	24	2	12.0	60	55	57400	2400	2400	3100	58800	4A	100	E	Sta	-
	US 158	SR 1116	NC 37	Gates	1.0	24	2	12.0	60	55	57400	2200	2200	2800	58800	4A	100	E	Sta	-
	US 158	NC 37	SR 1315	Gates	2.0	24	2	12.0	60	55	57400	3800	3800	4900	58800	4A	100	E	Sta	M
	US 158	SR 1315	SR 1319	Gates	3.6	24	2	12.0	60	55	57400	3100	3100	4100	58800	4A	100	E	Sta	M
	US 158	SR 1319	NC 32	Gates	3.2	24	2	12.0	60	55	57400	3000	3000	3900	58800	4A	100	E	Sta	M
	US 158	NC 32	SR 1002	Gates	3.7	24	2	12.0	60	55	57400	3900	3900	5000	58800	4A	100	E	Sta	M
	US 158	SR 1002	County line	Gates	4.0	24	2	12.0	60	55	57400	3100	3100	4500	58800	4A	100	E	Sta	M
GATE003-H	US 158 Alt	US 158	NC 37	Gates	1.5	23	2	11.5	60	55	57400	1200	1200	2000	58800	2A	60	E	Reg	-
GATE004-H	US 158 Bus	NC 37	NC 137/US 158	Gates	1.3	23	2	11.5	60	35	57400	-	-	-	-	2A	60	E	Reg	M
	US 158 Bus	NC 37	US 158	Gates	2.4	23	2	11.5	60	55	57400	2000	2000	2600	58800	2A	60	E	Reg	M
	NC 37	US 13	SR 1215	Gates	1.3	22	2	11.0	60	55	14000	910	910	1200	14000	ADQ	60	Maj	Reg	B
	NC 37	SR 1215	SR 1302	Gates	1.2	22	2	11.0	60	55	14000	1400	1400	1800	14000	ADQ	60	Maj	Reg	B
	NC 37	SR 1302	SR 1219	Gates	1.8	22	2	11.0	60	55	14000	2100	2100	3000	14000	ADQ	60	Maj	Reg	B
	NC 37	SR 1219	SR 1317	Gates	2.2	22	2	11.0	60	55	14000	1600	1600	2100	14000	ADQ	60	Maj	Reg	B
	NC 37	SR 1317	US 158 Bus	Gates	1.4	22	2	11.0	60	55	14000	3000	3000	3200	14000	ADQ	60	Maj	Reg	B
	NC 37	US 158 Bus	SR 1109	Gates	4.3	24	2	12.0	60	55	14000	3400	3400	4400	14000	ADQ	60	Maj	Reg	B, P
	NC 37	SR 1109	SR 1410	Gates	3.1	24	2	12.0	60	55	14000	1200	1200	1600	14000	ADQ	60	Maj	Reg	B
	NC 37	SR 1410	NC 32	Gates	2.4	24	2	12.0	60	35	14000	1300	1300	1700	14000	ADQ	60	Maj	Reg	-
GATE005-H	SR 1111	NC 137	County line	Gates	3.3	18	2	9.0	50	55	14000	360	360	700	14000	ADQ	50	Min	Sub	-
GATE006-H	SR 1304	County line	SR 1308	Gates	0.7	18	2	9.0	60	55	14000	1100	1100	1400	14000	2B	60	Min	Sub	-

TABLE 2 - CTP INVENTORY AND RECOMMENDATIONS

HIGHWAY																				
		Section				2014 Existing System							2040 Proposed System							
Local ID	Facility	From	To	Jurisdiction	Dist. (mi)	Total Width (ft)	Lanes	Lane Width (ft)	ROW (ft)	Speed Limit (mph)	Existing Capacity (vpd	2014 Volume	2014 Volume E+C	2040 Volume with CTP	Proposed Capacity (vpd)	Cross-Section	ROW (ft)	CTP Classification	Tier	Proposals for Other Modes
	SR 1304	SR 1308	SR 1312	Gates	2.3	18	2	9.0	60	55	14000	1200	1200	2400	14000	2B	60	Min	Sub	B, M, P
	SR 1304	SR 1312	NC 37	Gates	2.1	18	2	9.0	60	55	14000	1100	1100	2400	14000	2B	60	Min	Sub	B, M, P
GATE007-H	SR 1300	US-13	SR 1304	Gates	3.1	20	2	10.0	60	55	14000	660	660	900	14000	2B	60	Min	Sub	-
	SR 1300	SR 1304	SR 1303	Gates	1.5	18	2	9.0	60	55	14000	960	960	1600	14000	2B	60	Min	Sub	M
	SR 1300	SR 1303	US 158	Gates	2.8	18	2	9.0	60	55	14000	1100	1100	1400	14000	2B	60	Min	Sub	M
	SR 1403	US 158	SR 1400	Gates	1.1	18	2	9.0	60	55	14000	800	800	1000	14000	ADQ	60	Min	Sub	-
	SR 1400	SR 1403	SR 1404	Gates	0.9	18	2	9.0	60	55	14000	300	300	400	14000	ADQ	60	Min	Sub	M
	SR 1400	SR 1404	NC 37	Gates	3.5	18	2	9.0	60	55	14000	600	600	800	14000	ADQ	60	Min	Sub	B
	NC 32	County line	SR 1330	Gates	0.4	25	2	12.5	60	55	14000	3500	3500	5000	14000	ADQ	60	Maj	Reg	-
	NC 32	SR 1330	SR 1334	Gates	3.5	25	2	12.5	60	55	14000	3500	3500	5000	14000	ADQ	60	Maj	Reg	B
	NC 32	SR 1334	SR 1324	Gates	2.7	25	2	12.5	60	55	14000	2700	2700	2800	14000	ADQ	60	Maj	Reg	-
	NC 32	SR 1324	US 158	Gates	1.8	24	2	12.0	60	55	14000	3300	3300	4300	14000	ADQ	60	Maj	Reg	M
	NC 32	US 158	SR 1436	Gates	0.9	24	2	12.0	60	55	14000	3400	3400	4500	14000	ADQ	60	Maj	Reg	M
	NC 32	SR 1436	SR 1432	Gates	0.2	24	2	12.0	60	55	14000	2800	2800	3500	14000	ADQ	60	Maj	Reg	M
	NC 32	SR 1432	SR 1428	Gates	0.9	24	2	12.0	60	55	14000	2400	2400	3100	14000	ADQ	60	Maj	Reg	B
	NC 32	SR 1428	SR 1413	Gates	3.7	24	2	12.0	60	55	14000	1900	1900	2200	14000	ADQ	60	Maj	Reg	-
	NC 32	SR 1413	SR 1412	Gates	0.1	24	2	12.0	60	55	14000	2000	2000	2200	14000	ADQ	60	Maj	Reg	-
	NC 32	SR 1412	NC 37	Gates	1.0	24	2	12.0	60	55	14000	3300	3300	4300	14000	ADQ	60	Maj	Reg	-
	NC 32	NC 37	County line	Gates	1.4	24	2	12.0	60	55	14000	3000	3000	3900	14000	ADQ	60	Maj	Reg	-
	SR 1002	NC 32	US 158	Gates	3.5	22	2	11.0	60	55	14000	1100	1100	2000	14000	ADQ	60	Min	Sub	B

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

BICYCLE AND PEDESTRIAN [1]

BICYCLE

Local ID	Facility/ Route	Section (From - To)	Distance (mi)	Existing System Cross-Section (ft)	Existing System Cross-Section lanes	Proposed System Type	Proposed System Cross-Section	Other Modes
	US 13	County Line - NC 137	3.3	25	2	On Road	ADQ	H, M
	NC 137	US 13 - NC 37	8.6	20	2	On Road	ADQ	H, P
	NC 37	US 158 Bus - SR 1412	8.0	24	2	On Road	ADQ	H, P
	NC 32	County Line North - SR 1002	5.4	25	2	On Road	ADQ	H
GATE001-B	NC 32	South of SR 1406 - SR 1410	0.7	24	2	On Road	2A	H
GATE002-B	SR 1429	NC 32 - US 158	2.3	18	2	On Road	2A	-
GATE003-B	SR 1200	US 13 - VA Border	10.5	20	2	On Road	2A	-
GATE004-B	SR 1332	NC 32 - NC 32	4.1	20	2	On Road	2A	-
GATE005-B	SR 1201	SR 1200 - NC 37	4.9	20	2	On Road	2A	-
	SR 1118	NC 37 - NC 37	3.3	20	2	On Road	ADQ	-
GATE006-B	SR 1118	NC 137 - Askew Road	0.9	18	2	On Road	2A	P
GATE007-B	Askew Road	SR 1118 - Turner Rd	1.3	16	2	On Road	2A	-
GATE008-B	Turner Road	Askew Rd - NC 137	1.4	18	2	On Road	2A	-
GATE009-B	SR 1400	NC 37 - SR 1401	2.0	16	2	On Road	2A	-
GATE010-B	SR 1412	NC 37-SR 1413	6.2	18	2	On Road	2A	-
GATE011-B	SR 1413	SR 1412 - County Line	6.2	18	2	On Road	2A	-
GATE012-B	SR 1002	NC 32 - County Line	10.0	22	2	On Road	2A	H

PEDESTRIAN

Local ID	Facility/ Route	Section (From - To)	Distance (mi)	Existing System Type	Existing System Side of Street	Proposed System Type	Proposed System Side of Street	Other Modes
	SR 1130 - Gatesville School Dr.	NC 37 - NC 37	0.2	-	-	On Road	Both	-
	Roberts Street	US 158 - US 37	0.0	-	-	On Road	Both	-
	High Street	Church St - NC 137	0.4	-	-	On Road	Both	-
	Church Street	NC 37 - NC 127	0.1	-	-	On Road	Both	B, H, M
	NC 37	NC 37 - Church St	0.6	-	-	On Road	Both	B, H, M
GATE001-P	Orchard St	NC 32 - US 158	0.3	-	-	On Road	Both	-
GATE002-P	SR 1341	NC 32 - Orchard St	0.1	-	-	On Road	Both	-
GATE003-P	Atlantic St	Virginia Ave - Orchard St	0.1	-	-	On Road	Both	-
GATE004-P	Virginia Street	SR 1341 - E Bank St	0.2	-	-	On Road	Both	-
GATE005-P	E Bank St	NC 32 - Orchard St	0.2	-	-	On Road	Both	-
GATE006-P	Apple Street	Atlantic Ave - E Bank St	0.1	-	-	On Road	Both	-
GATE007-P	SR 1118 - Taylor Mill Rd	NC 137 - NC 137	3.3	-	-	On Road	Both	B
GATE008-P	SR 1304 - Willeyton Road	SR 1308 - Deep Swamp Lane	5.9	-	-	On Road	Both	H

MULTI-USE PATH								
				Existing System		Proposed System		Other
Local ID	Facility/ Route	Section (From - To)	Distance (mi)	Side of Street	Cross-Section	Side of Street	Cross-Section	Modes
GATE001-M	US 13	US 158 - Mill Pond Road	3.3	-	-	-	MB	B, H
GATE002-M	NC 137	US 13 - NC 37	8.6	-	-	-	MB	B, H
GATE003-M	SR 1302	NC 37 - SR 1304	1.7	-	-	-	MB	H
GATE004-M	SR 1304	SR 1302 - SR 1300	0.8	-	-	-	MB	H
GATE005-M	SR 1300	SR 1304 - US 158	4.4	-	-	-	MB	H
GATE006-M	US 158 Bus	NC 37 - US 158	2.4	-	-	-	MB	H
GATE007-M	US 158	US 158 Bus - County Line	17.0	-	-	-	MB	H
GATE008-M	NC 32	Mobile Home Pk Ln - Goodmans Folly	1.9	-	-	-	MB	-
GATE009-M	SR 1100	NC 37 - SR 1414	7.9	-	-	-	MB	B
GATE010-M	SR 1414	SR 1100 - SR 1413	4.1	-	-	-	MB	-
GATE011-M	SR 1102	SR 1100 - County Line	1.9	-	-	-	MB	H
GATE012-M	SR 1418	SR 1414 - County Line	2.1	-	-	-	MB	-
GATE013-M	Untitled Greenway	US 158 - Mill Pond Road	0.8	-	-	-	MB	-
GATE014-M	SR 1002	NC 32 - SR 1314	8.8	-	-	-	MB	-
GATE015-M	SR 1333	VA Border - NC 32	1.8	-	-	-	MB	B
GATE016-M	SR 1413	SR 1414- SR 1002	1.6	-	-	-	MB	-
GATE017-M	NC 37	SR 1302- US 158 Bus	6.6	-	-	-	MB	H
GATE018-M	NC 32	SR 1333- SR 1002	3.5	-	-	-	MB	B, H
GATE019-M	SR 1400 - Honey Pot Rd	US 158 - SR 1401	2.5	-	-	-	MB	-

Appendix D
Typical Cross Sections

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

The typical cross sections were updated on December 7, 2010 to support the Department's "Complete Streets[1]" policy that was adopted in July 2009. This guidance established design elements that emphasize safety, mobility, and accessibility for multiple modes of travel. These "typical" cross sections should be used as preliminary guidelines for comprehensive transportation planning, project planning and project design activities. The specific and final cross section details and right of way limits for projects will be established through the preparation of the National Environmental Policy Act (NEPA) documentation and through final plan preparation.

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:

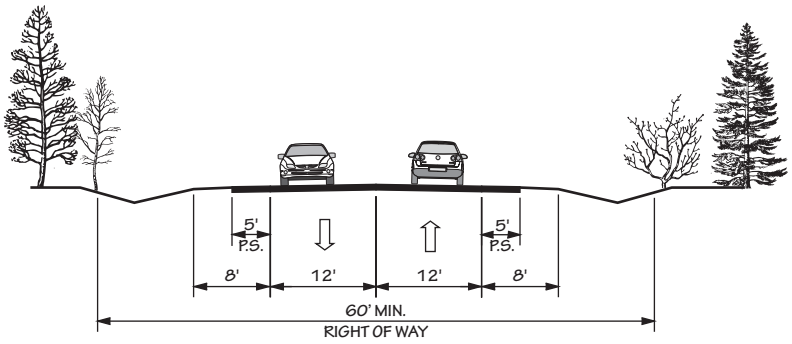
- roadways which may require widening after the current planning period,
- roadways which are borderline adequate and accelerated traffic growth could render them deficient,
- roadways where an urban curb and gutter cross section may be locally desirable because of urban development or redevelopment,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

[1] *For more information on Complete Streets, go to: http://www.completestreetsnc.org/.*

FIGURE 7
TYPICAL HIGHWAY CROSS SECTIONS
2 LANES

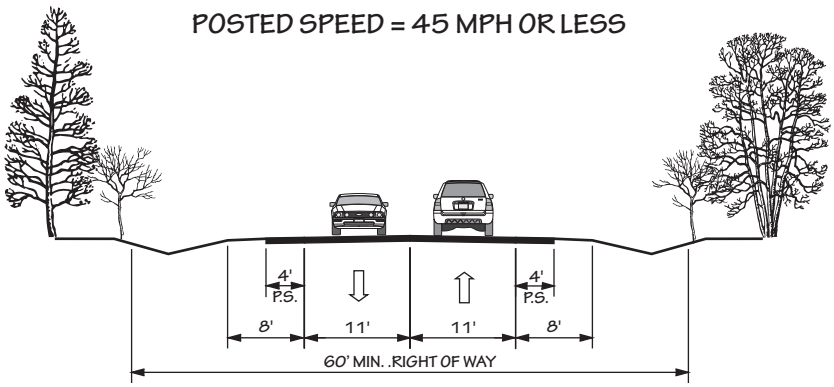
2 A

WIDE PAVED SHOULDERS
POSTED SPEED = 55 MPH



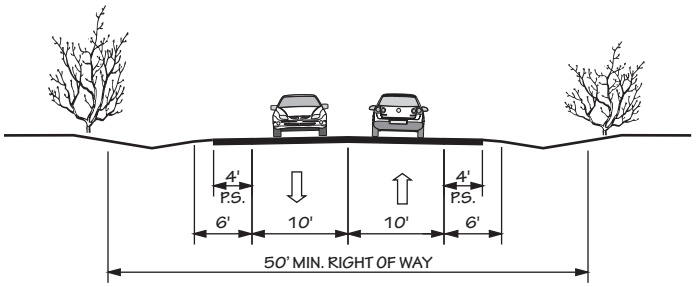
2 B

WIDE PAVED SHOULDERS
POSTED SPEED = 45 MPH OR LESS



2 C

WIDE PAVED SHOULDERS
POSTED SPEED = 35 MPH OR LESS



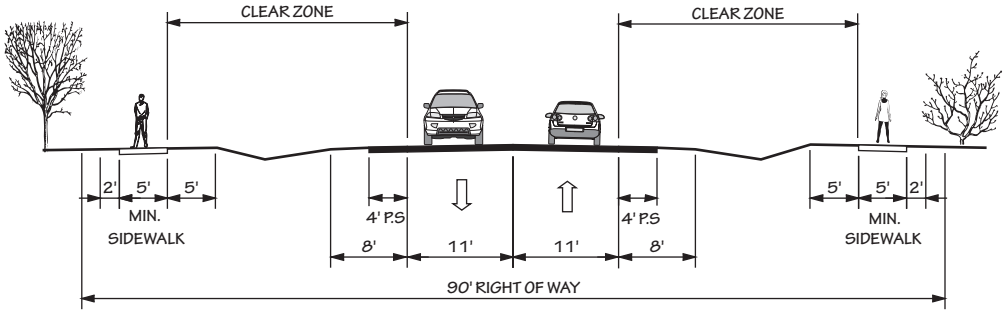
Revised 12/07/2010

TYPICAL HIGHWAY CROSS SECTIONS

2 LANES

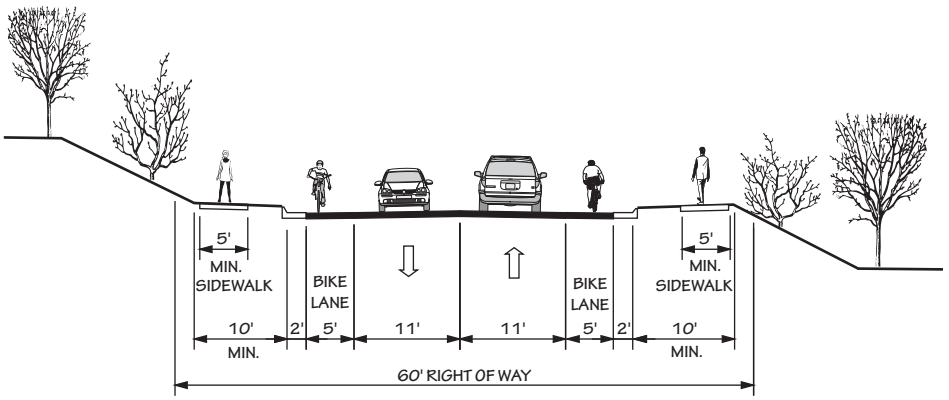
2 D

SIDEWALK PLACEMENT BEHIND A ROADWAY DITCH



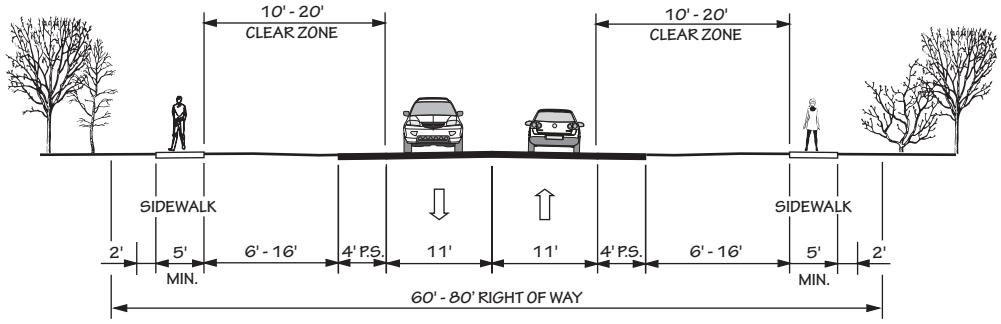
2 E

CURB AND GUTTER
WITH BIKE LANES AND SIDEWALKS



2 F

BUFFERS AND SIDEWALKS WITHOUT A ROADWAY DITCH
(20 MPH TO 45 MPH)
(TYPICALLY COASTAL AREA MANAGEMENT ACT COUNTIES)



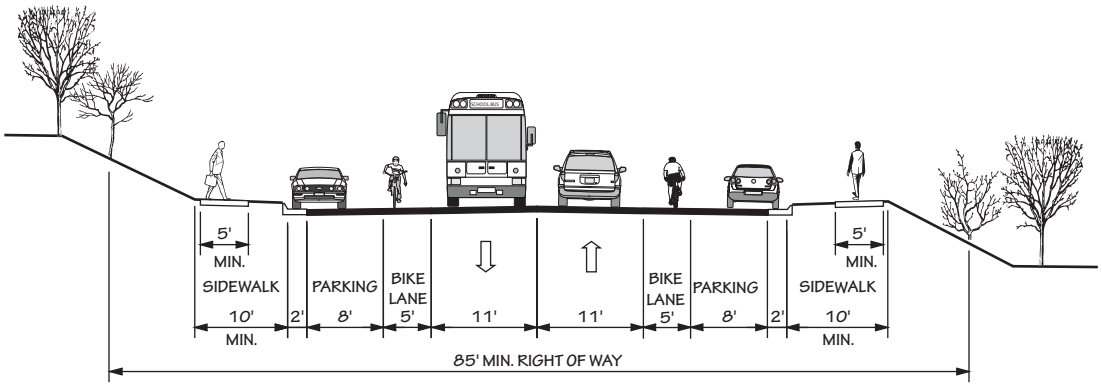
Revised 12/07/2010

TYPICAL HIGHWAY CROSS SECTIONS

2 LANES

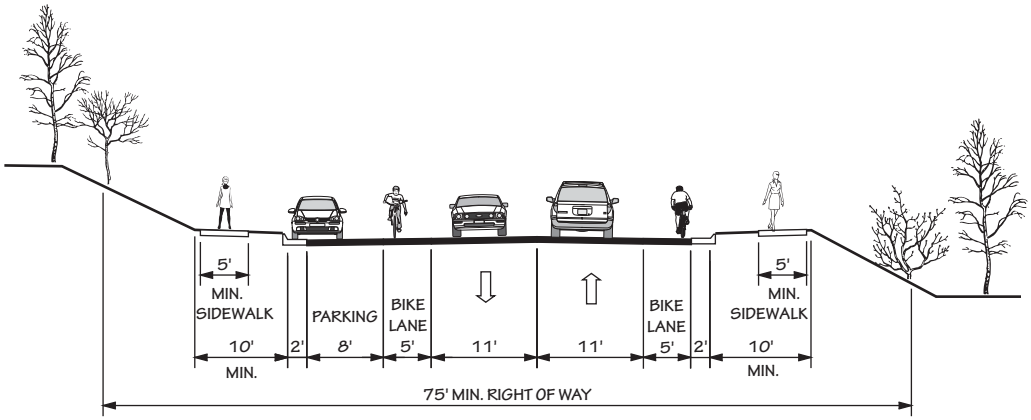
2 G

CURB & GUTTER - PARKING ON EACH SIDE



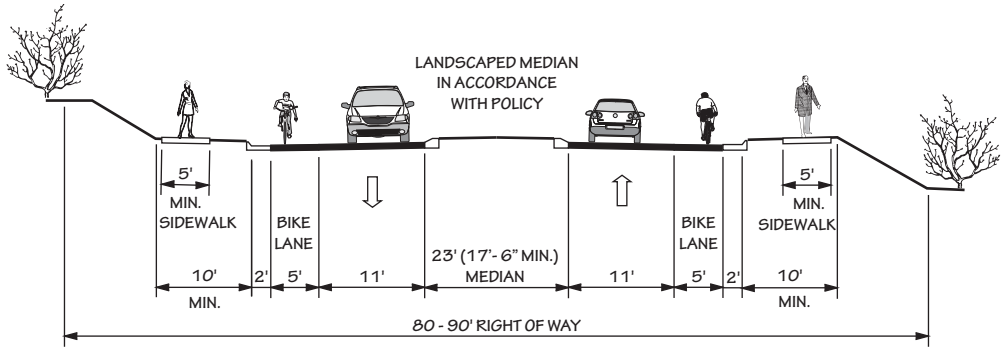
2 H

CURB & GUTTER - PARKING ON ONE SIDE



2 I

RAISED MEDIAN WITH CURB & GUTTER



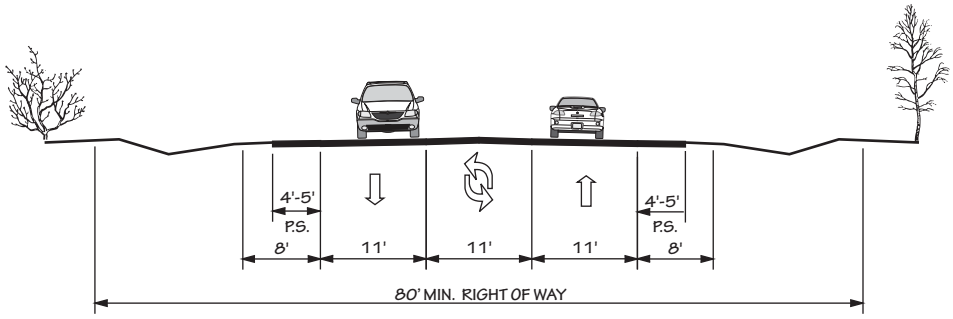
Revised 12/07/2010

TYPICAL HIGHWAY CROSS SECTIONS

3 LANES

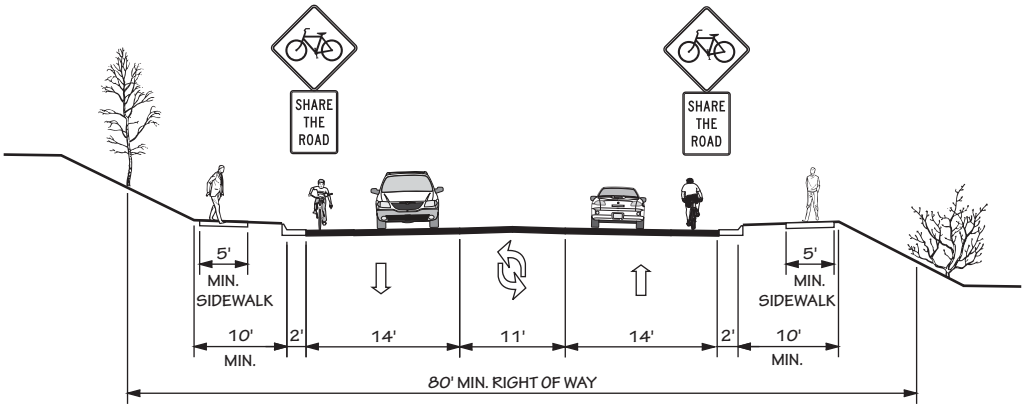
3 A

WIDE PAVED SHOULDERS



3 B

CURB & GUTTER WITH WIDE OUTSIDE LANES AND SIDEWALKS



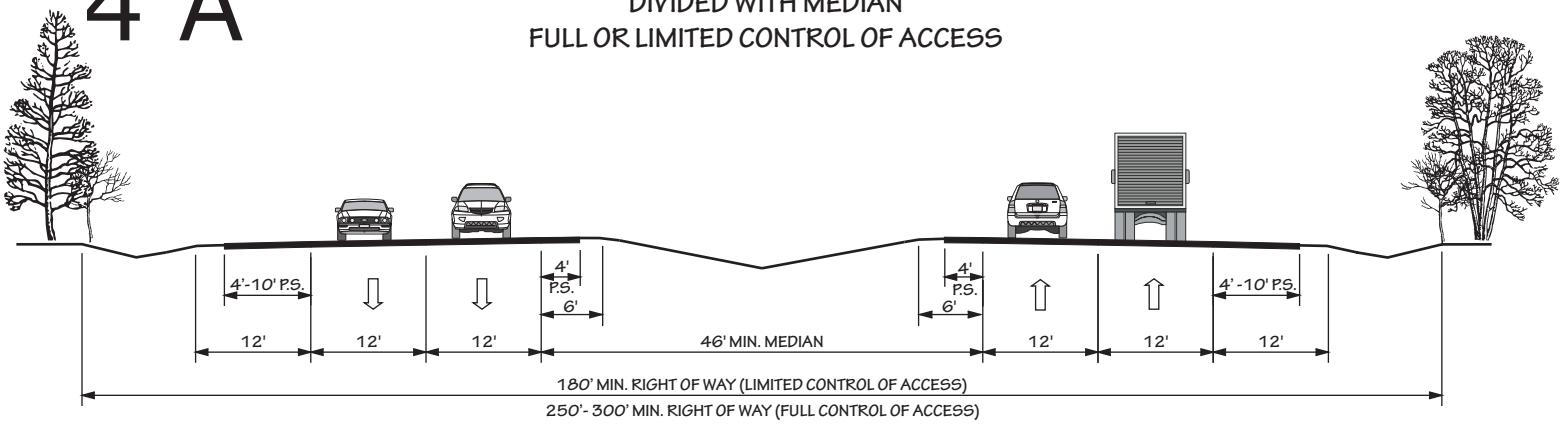
Revised 12/07/2010

TYPICAL HIGHWAY CROSS SECTIONS

4 LANES

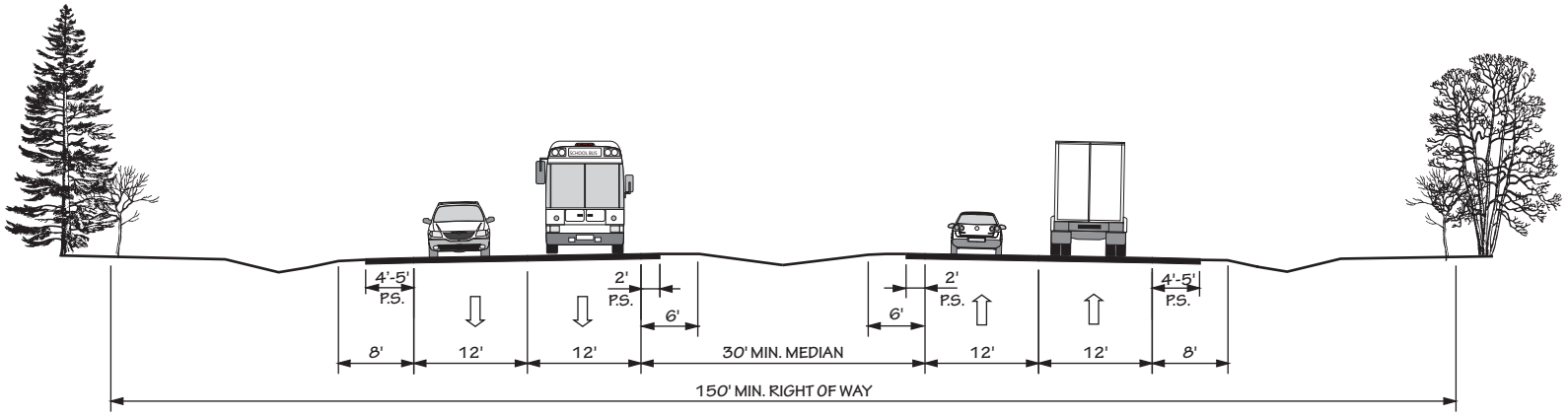
4 A

DIVIDED WITH MEDIAN
FULL OR LIMITED CONTROL OF ACCESS



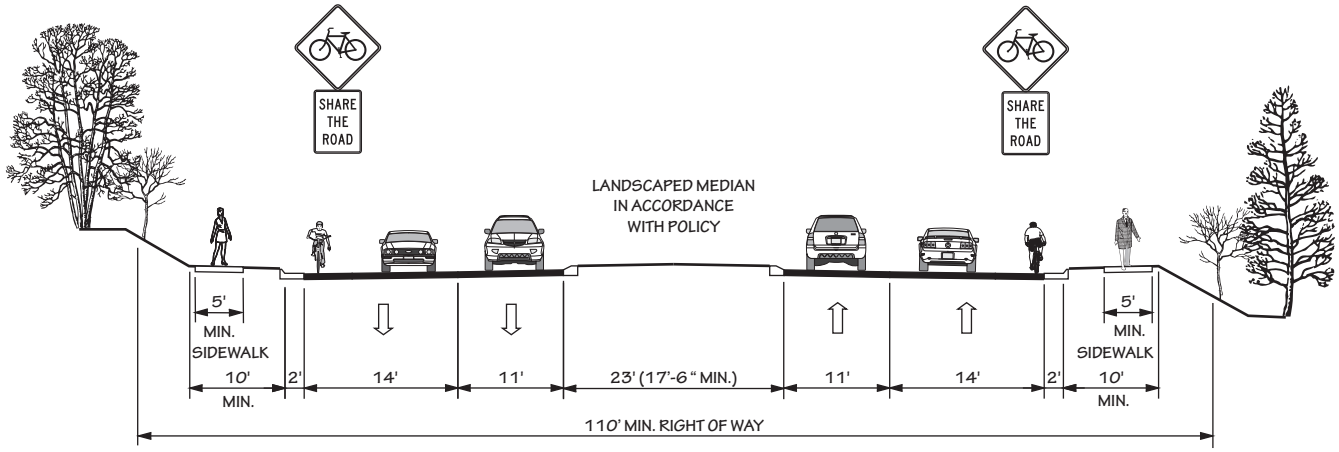
4 B

DIVIDED WITH MEDIAN - NO CURB & GUTTER
PARTIAL CONTROL OF ACCESS



4 C

RAISED MEDIAN WITH WIDE OUTSIDE LANES AND SIDEWALKS



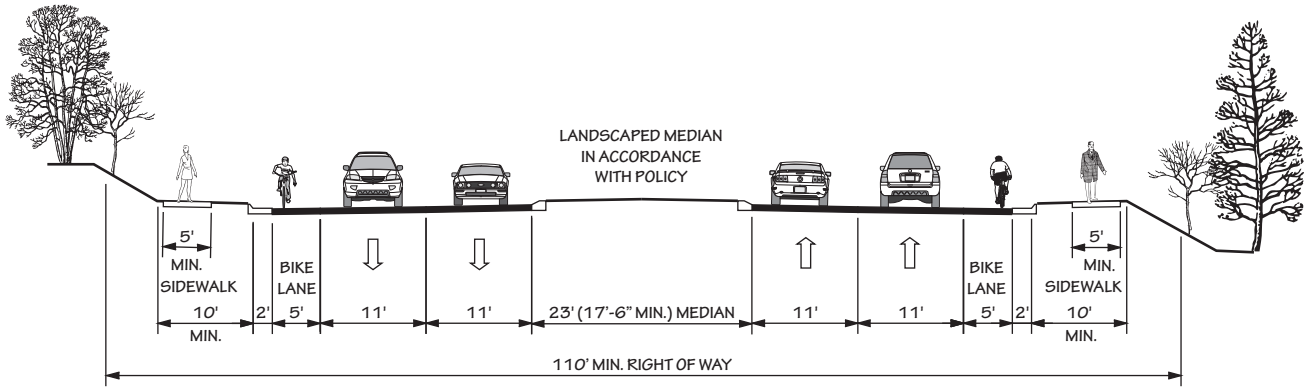
Revised 12/07/2010

TYPICAL HIGHWAY CROSS SECTIONS

4 LANES

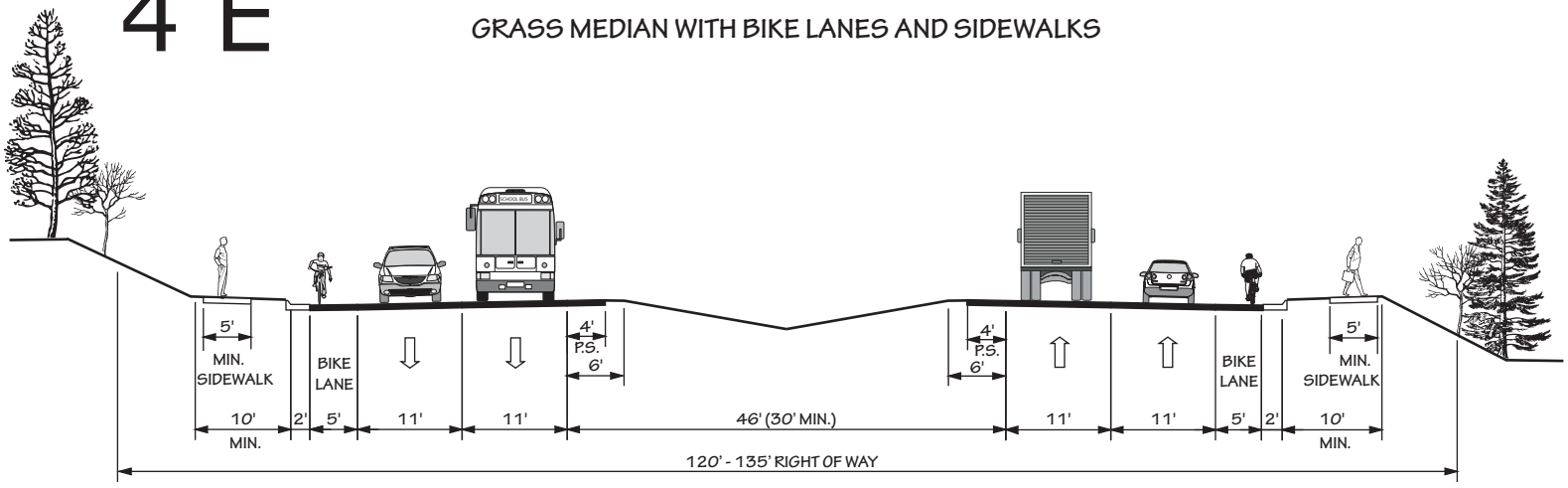
4 D

RAISED MEDIAN - CURB & GUTTER WITH BIKE LANES AND SIDEWALKS



4 E

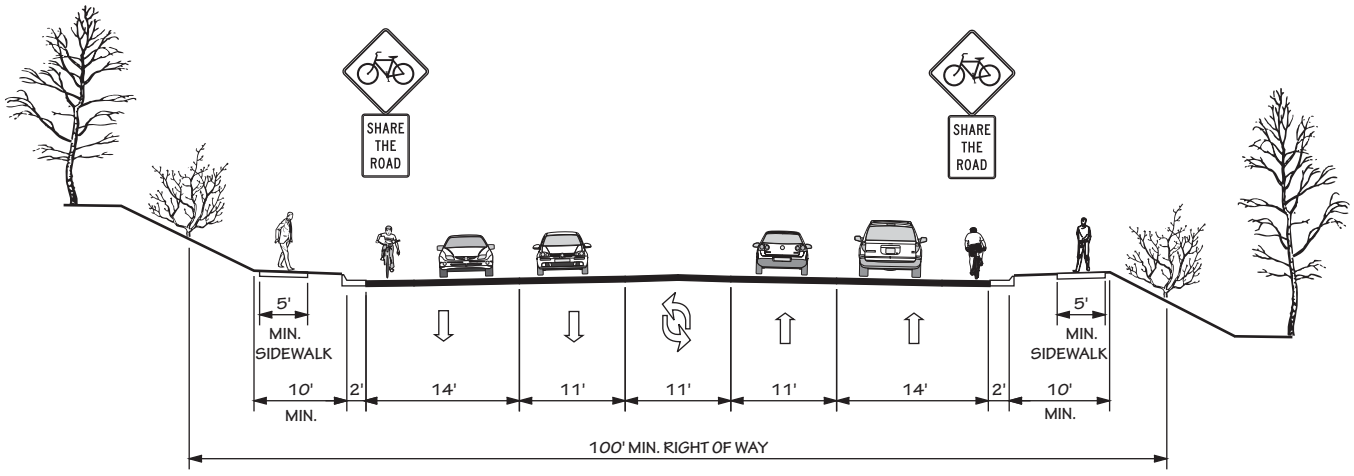
GRASS MEDIAN WITH BIKE LANES AND SIDEWALKS



5 LANES

5 A

WIDE OUTSIDE LANES



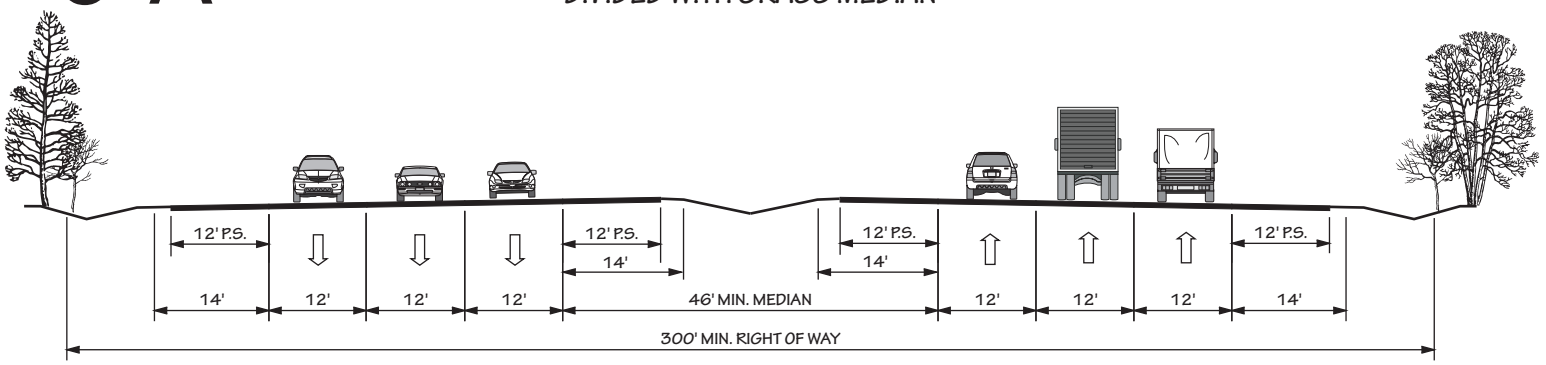
Revised 12/07/2010

TYPICAL HIGHWAY CROSS SECTIONS

6 LANES

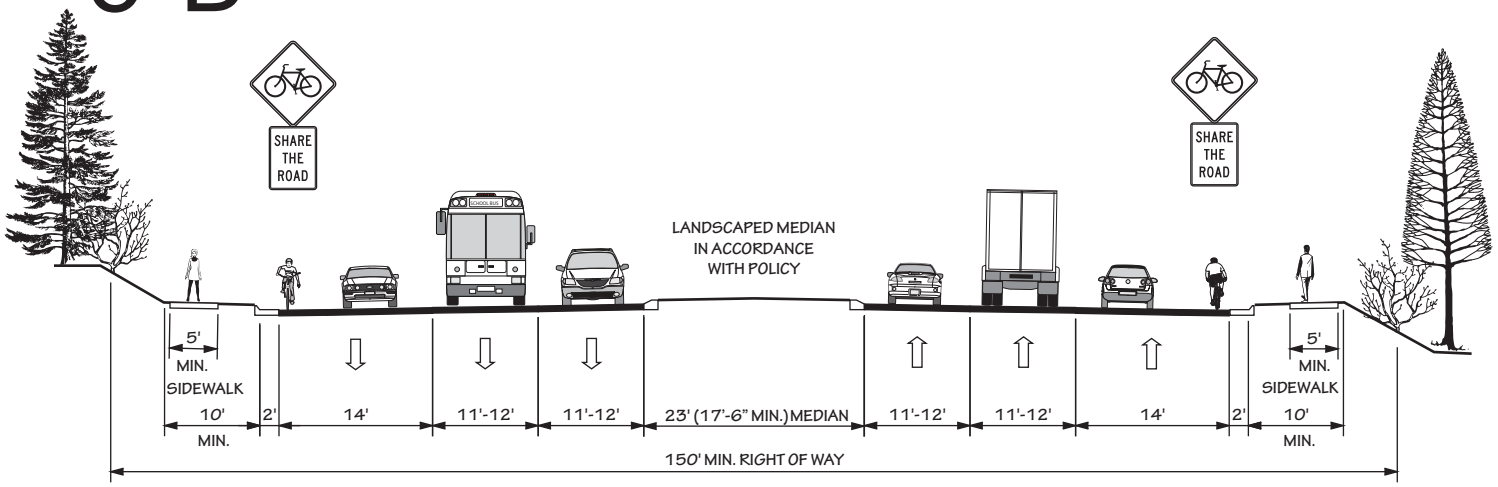
6 A

DIVIDED WITH GRASS MEDIAN



6 B

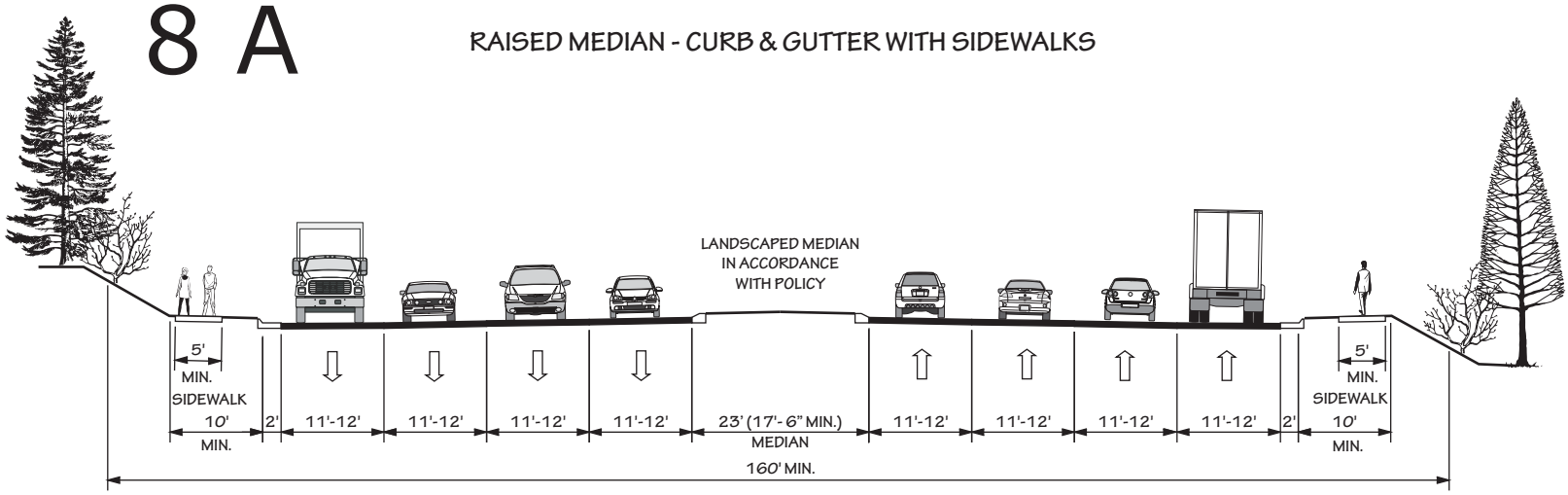
RAISED MEDIAN - CURB & GUTTER WITH WIDE OUTSIDE LANES AND SIDEWALKS



8 LANES

8 A

RAISED MEDIAN - CURB & GUTTER WITH SIDEWALKS

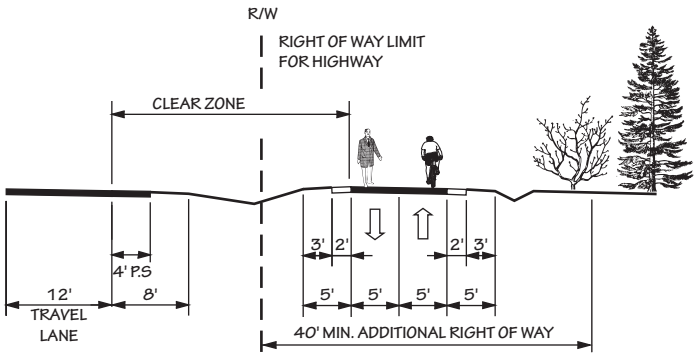


Revised 12/07/2010

TYPICAL MULTI - USE PATH

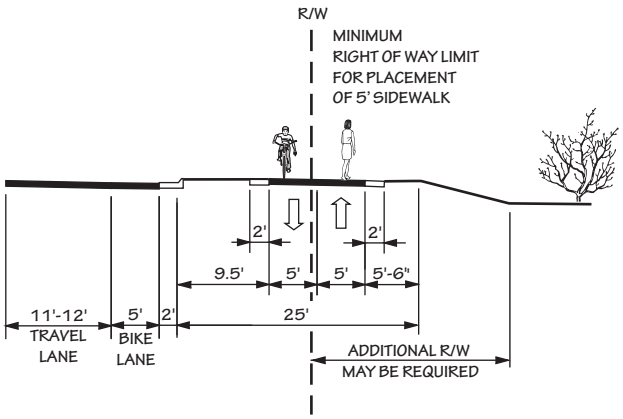
MULTI - USE PATH
ADJACENT TO RIGHT OF WAY OR SEPARATE PATHWAY

M A



MULTI - USE PATH ADJACENT TO CURB AND GUTTER

M B



Revised 12/07/2010

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 8.

- **LOS A**: Describes free-flow operations. Free Flow Speed (FFS) prevails and vehicles are almost completely unimpeded in their ability to maneuver within the traffic stream. The effects of incidents or point breakdowns are easily absorbed.
- **LOS B**: Represents reasonably free-flow operations, and FFS is maintained. The ability to maneuver within the traffic stream is only slightly restricted, and the general level of physical and psychological comfort provided to drivers is still high. The effects of minor incidents and point breakdowns are still easily absorbed.
- **LOS C**: Provides for flow with speeds near the FFS. Freedom to maneuver within the traffic stream is noticeably restricted, and lane changes require more care and vigilance on the part of the driver. Minor incidents may still be absorbed, but the local deterioration in service quality will be significant. Queues may be expected to form behind any significant blockages.
- **LOS D**: The level at which speeds begin to decline with increasing flows, with density increasing more quickly. Freedom to maneuver within the traffic stream is seriously limited and drivers experience reduced physical and psychological comfort levels. Even minor incidents can be expected to create queuing, because the traffic stream has little space to absorb disruptions.
- **LOS E**: Describes operation at capacity. Operations at this level are highly volatile because there are virtually no usable gaps within the traffic stream, leaving little room to maneuver within the traffic stream. Any disruption to the traffic stream, such as vehicles entering from a ramp or a vehicle changing lanes, can establish a disruption wave that propagates throughout the upstream traffic flow. At capacity, the traffic stream has no ability to dissipate even the most minor disruption, and any incident can be expected to produce a serious breakdown and substantial queuing. The physical and psychological comfort afforded to drivers is poor.
- **LOS F**: Describes breakdown, or unstable flow. Such conditions exist within queues forming behind bottlenecks.

Figure 8 - Level of Service Illustrations

Source: 2010 Highway Capacity Manual, Exhibit 11-4

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

A bridge is considered deficient if it is either structurally deficient (SD) or functionally obsolete (FO). 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 located on roads evaluated as a part of the CTP are listed in Table 3. For more details on deficient bridges within the planning area, contact the Structures Management Unit using the information in Appendix A.

Table 3 - Deficient Bridges

Bridge Number	Facility	Feature	Condition	Local ID
9	US 13	Run Swamp	FO	
19	US 13	Riddick Swamp	FO	
26	SR 1320	Duke Swamp	SD	
29	NC 37	Buckland Mill Branch	FO	
109	SR 1300	Ditch	SD	

Appendix G
Socio-Economic Data Forecasting Methodology

In the development of the Gates County CTP, existing and anticipated deficiencies were determined through an analysis of the transportation system looking at both current and future travel patterns.

Gates County travel demand was projected from 2014 to 2040 using a trend line analysis based on Annual Average Daily Traffic (AADT) from 1990 to 2012. The Traffic Forecasting Utility was used to forecast 2040 AADT. In addition, local land use plans and growth expectations were used to further refine future growth rates and patterns. For this CTP, the 2003-2004 Gates County Cama Core Land Use Plan was used and is illustrated in Figures X and Y, respectively.

The CTP Steering Committee worked with NCDOT to estimate population growth, economic development potential, and land use trends to determine the potential impacts on the future transportation system in 2040. This data was endorsed by the Gates County Commissioners on July 2, 2014.

Below is a description of the methodology used in the analysis.

Population

Population trends were estimated using available data from the Office of State Budget and Management (OSBM) and simple exponential growth. Table 6 shows current and projected population through the year 2040 which were taken from the OSBM website. The committee felt the OSBM growth rate for the county was very low, and in some cases there were negative growth rates. Therefore the committee proposed a 0.5% population growth rate from 2014-2020, a 0.7% population growth rate from 2020-2030 and 1.0% population growth rate from 2030-2040. These growth rates are based on the fact that a commerce park is anticipated to come to the area and has the potential for serving other businesses. Another reason for this growth rate is due to the fact that the committee believes that over time as prices rise in Virginia, people will start moving down to NC and into Gates County due to the affordability of land.

Table 4 – Population Data

Year	Population – Generic County
1970	8,524
1980	8875
1990	9305
2000	10506
2010	12,168
2014	11,939
2015	11,021
2020	10,674
2030	10,641
2040	11,705

* Extrapolated by NCDOT

Employment

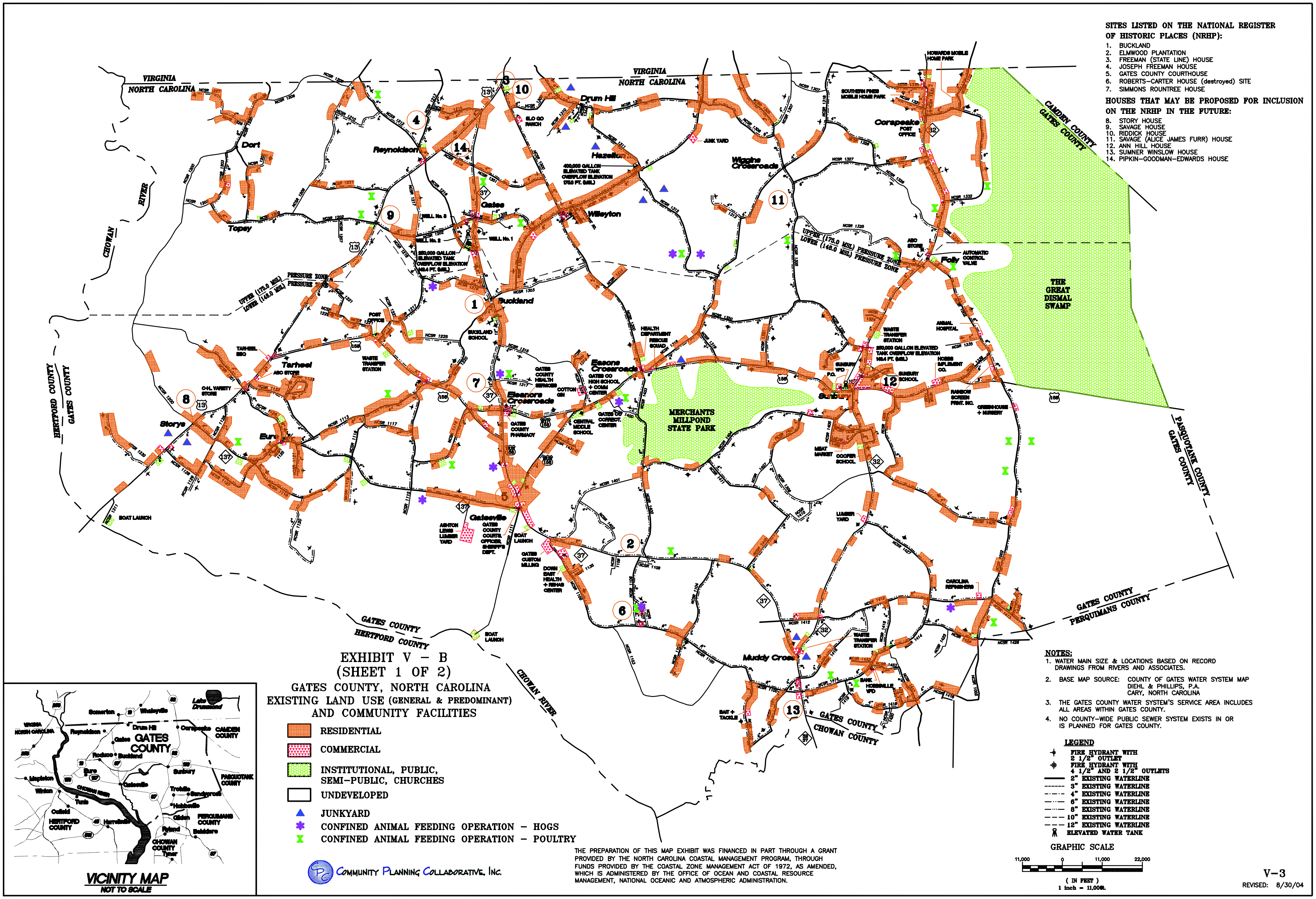
Future employment conditions within Gates County were approved by the CTP Steering Committee. This included approximate locations and intensity for proposed employment centers. Any anticipated heavy demand on the future transportation system as a result of these proposals is accounted for in projected traffic volumes. Employment totals were based on The Bureau of Labor Statistics by County, and growth rates that were used were the same as those for the county population growth. The total employment years provided on the Bureau of Labor Statistics were years 2001-2013. There had been a decline in employment from 2001-2013. In order to show potential for the county for the same reasons at provided for population, the 2003 population was taken and shown to exponentially grow at 0.5% from 2003 to 2014. For years 2020, 2030, and 2040 the growth rates were the same for employment as they were for population. For 2020 a 0.5% exponential growth rate for employment was used, for 2030 it was 0.7% exponential growth rate, and for 2040 a 1.0% exponential growth rate was used.

Table 5 – Employment Data

Year	2003	2013	2014	2020	2030	2040
Employment - Generic County	1585	1366	1674	1725	1850	2044

** Estimated by NCDOT*

Figure 9



SITES LISTED ON THE NATIONAL REGISTER OF HISTORIC PLACES (NRHP):
1. BUCKLAND
2. ELMWOOD PLANTATION
3. FREEMAN (STATE LINE) HOUSE
4. JOSEPH FREEMAN HOUSE
5. GATES COUNTY COURTHOUSE
6. ROBERTS–CARTER HOUSE (destroyed) SITE
7. SIMMONS ROUNTREE HOUSE
HOUSES THAT MAY BE PROPOSED FOR INCLUSION ON THE NRHP IN THE FUTURE:
8. STORY HOUSE
9. SAVAGE HOUSE
10. RIDDICK HOUSE
11. SAVAGE (ALICE JAMES FURR) HOUSE
12. ANN HILL HOUSE
13. SUMNER WINSLOW HOUSE
14. PIPKIN–GOODMAN–EDWARDS HOUSE
VIRGINIA
NORTH CAROLINA
CAMDEN COUNTY
GATES COUNTY
THE GREAT DISMAL SWAMP
MERCHANTS MILLPOND STATE PARK
PASQUOTANK COUNTY
GATES COUNTY
PERQUIMANS COUNTY
CHOWAN COUNTY
HERTFORD COUNTY
CHOWAN RIVER
Gatesville
Buckland
Corapeake
Sunbury
Eure
Gates
Hobbsville
Drum Hill
Reynoldson
Willeyton
Wiggins Crossroads
Eason Crossroads
Eleanors Crossroads
Tarheel
Storys
Dort
Topsy
Folly
Muddy Cross
EXHIBIT V – B
(SHEET 1 OF 2)
GATES COUNTY, NORTH CAROLINA
EXISTING LAND USE (GENERAL & PREDOMINANT)
AND COMMUNITY FACILITIES
RESIDENTIAL
COMMERCIAL
INSTITUTIONAL, PUBLIC, SEMI–PUBLIC, CHURCHES
UNDEVELOPED
JUNKYARD
CONFINED ANIMAL FEEDING OPERATION – HOGS
CONFINED ANIMAL FEEDING OPERATION – POULTRY
COMMUNITY PLANNING COLLABORATIVE, INC.
THE PREPARATION OF THIS MAP EXHIBIT WAS FINANCED IN PART THROUGH A GRANT PROVIDED BY THE NORTH CAROLINA COASTAL MANAGEMENT PROGRAM, THROUGH FUNDS PROVIDED BY THE COASTAL ZONE MANAGEMENT ACT OF 1972, AS AMENDED, WHICH IS ADMINISTERED BY THE OFFICE OF OCEAN AND COASTAL RESOURCE MANAGEMENT, NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION.
NOTES:
1. WATER MAIN SIZE & LOCATIONS BASED ON RECORD DRAWINGS FROM RIVERS AND ASSOCIATES.
2. BASE MAP SOURCE: COUNTY OF GATES WATER SYSTEM MAP DIEHL & PHILLIPS, P.A. CARY, NORTH CAROLINA
3. THE GATES COUNTY WATER SYSTEM'S SERVICE AREA INCLUDES ALL AREAS WITHIN GATES COUNTY.
4. NO COUNTY–WIDE PUBLIC SEWER SYSTEM EXISTS IN OR IS PLANNED FOR GATES COUNTY.
LEGEND
FIRE HYDRANT WITH 2 1/2" OUTLET
FIRE HYDRANT WITH 4 1/2" AND 2 1/2" OUTLETS
2" EXISTING WATERLINE
3" EXISTING WATERLINE
4" EXISTING WATERLINE
6" EXISTING WATERLINE
8" EXISTING WATERLINE
10" EXISTING WATERLINE
12" EXISTING WATERLINE
ELEVATED WATER TANK
GRAPHIC SCALE
11,000
0
11,000
22,000
(IN FEET)
1 inch = 11,000ft.
V–3
REVISED: 8/30/04
VICINITY MAP
NOT TO SCALE

Figure 10

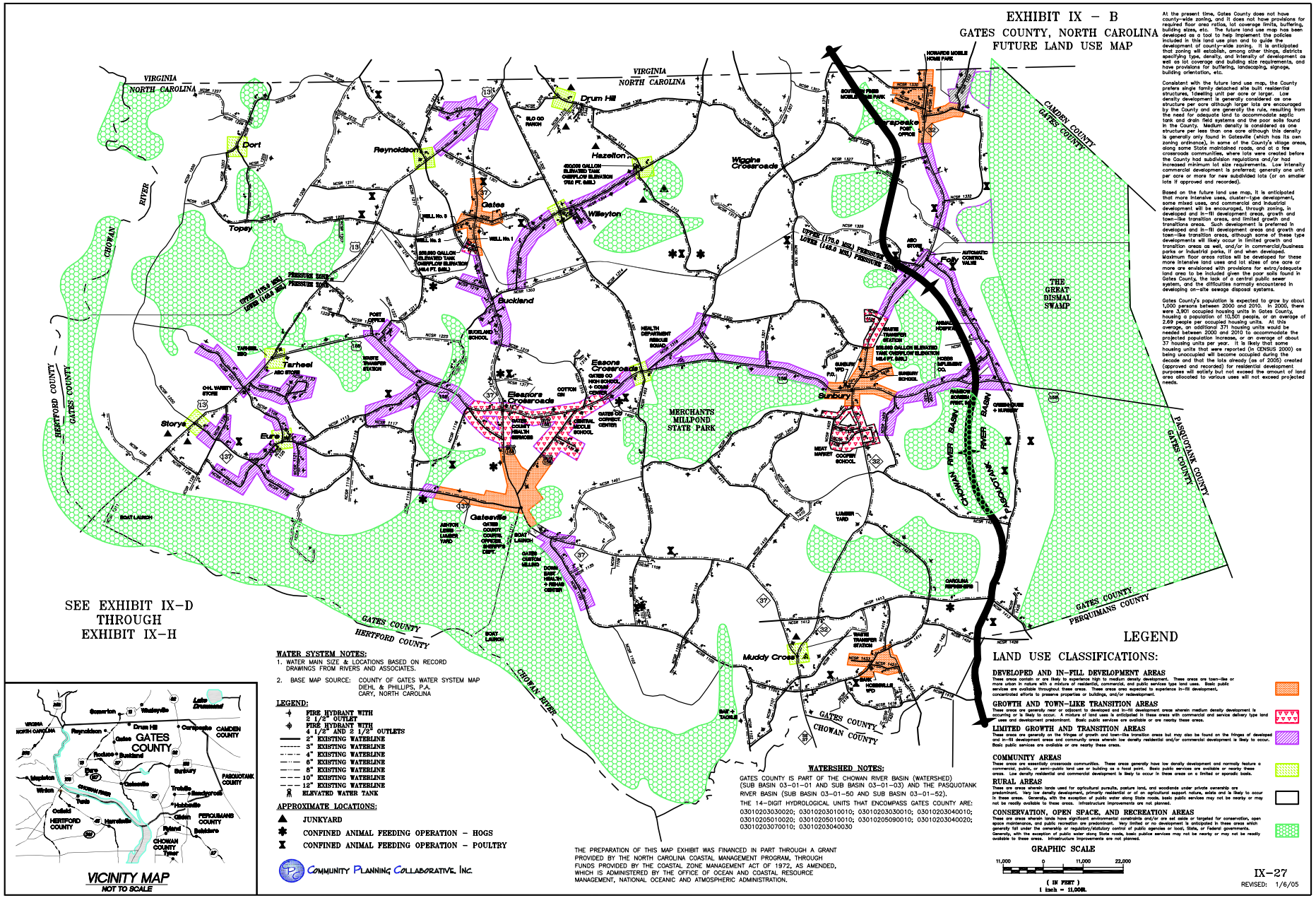


EXHIBIT IX – B
GATES COUNTY, NORTH CAROLINA
FUTURE LAND USE MAP
VIRGINIA
NORTH CAROLINA
GATES COUNTY
HERTFORD COUNTY
CHOWAN COUNTY
PERQUIMANS COUNTY
PASQUOTANK COUNTY
CAMDEN COUNTY
Dort
Reynoldson
Drum Hill
Hazelton
Wiggins Crossroads
Chesapeake
Howards Mobile Home Park
Topsy
Gates
Willeyton
Buckland
Tarheel
Storys
Eure
Eleanors Crossroads
Essons Crossroads
Sunbury
Folly
Gatesville
Muddy Creek
Merchants Millpond State Park
The Great Dismal Swamp
Chowan River
Pasquotank River
SEE EXHIBIT IX–D
THROUGH
EXHIBIT IX–H
WATER SYSTEM NOTES:
1. WATER MAIN SIZE & LOCATIONS BASED ON RECORD DRAWINGS FROM RIVERS AND ASSOCIATES.
2. BASE MAP SOURCE: COUNTY OF GATES WATER SYSTEM MAP DIEHL & PHILLIPS, P.A. CARY, NORTH CAROLINA
LEGEND:
FIRE HYDRANT WITH 2 1/2" OUTLET
FIRE HYDRANT WITH 4 1/2" AND 2 1/2" OUTLETS
2" EXISTING WATERLINE
3" EXISTING WATERLINE
4" EXISTING WATERLINE
6" EXISTING WATERLINE
8" EXISTING WATERLINE
10" EXISTING WATERLINE
12" EXISTING WATERLINE
ELEVATED WATER TANK
APPROXIMATE LOCATIONS:
JUNKYARD
CONFINED ANIMAL FEEDING OPERATION – HOGS
CONFINED ANIMAL FEEDING OPERATION – POULTRY
WATERSHED NOTES:
GATES COUNTY IS PART OF THE CHOWAN RIVER BASIN (WATERSHED) (SUB BASIN 03-01-01 AND SUB BASIN 03-01-03) AND THE PASQUOTANK RIVER BASIN (SUB BASIN 03-01-50 AND SUB BASIN 03-01-52).
THE 14-DIGIT HYDROLOGICAL UNITS THAT ENCOMPASS GATES COUNTY ARE:
03010203030020; 03010203010010; 03010203030010; 03010203040010; 03010205010020; 03010205010010; 03010205090010; 03010203040020; 03010203070010; 03010203040030
THE PREPARATION OF THIS MAP EXHIBIT WAS FINANCED IN PART THROUGH A GRANT PROVIDED BY THE NORTH CAROLINA COASTAL MANAGEMENT PROGRAM, THROUGH FUNDS PROVIDED BY THE COASTAL ZONE MANAGEMENT ACT OF 1972, AS AMENDED, WHICH IS ADMINISTERED BY THE OFFICE OF OCEAN AND COASTAL RESOURCE MANAGEMENT, NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION.
COMMUNITY PLANNING COLLABORATIVE, INC.
VICINITY MAP
NOT TO SCALE
LEGEND
LAND USE CLASSIFICATIONS:
DEVELOPED AND IN–FILL DEVELOPMENT AREAS
GROWTH AND TOWN–LIKE TRANSITION AREAS
LIMITED GROWTH AND TRANSITION AREAS
COMMUNITY AREAS
RURAL AREAS
CONSERVATION, OPEN SPACE, AND RECREATION AREAS
GRAPHIC SCALE
11,000 0 11,000 22,000
(IN FEET)
1 inch = 11,000ft.
IX–27
REVISED: 1/6/05

Appendix H
Public Involvement

This appendix documents the public involvement process and includes a listing of steering committee members, the goals and objectives survey results, and public meetings held throughout the development of the CTP.

List of CTP Steering Committee Members

At the start of a CTP study, a committee is formed that is comprised of individuals who represent the various needs, issues and populations of the community. These representatives are responsible for capturing the transportation needs of the community relative to all modes of transportation and for guiding the development of the CTP. A listing of steering committee members for the Gates County CTP is given below.

- Wade Askew, Gates County Planning Board
- Henry Jordan, Gates Board of Commissioners
- Billy Felton, Gates Board of Commissioners
- Patrice Lassiter, Gates County Inter-Regional Transportation System
- Reba Holly Green, Gates County Extension Director
- Natalie Rountree, Gates County Manager
- Ken Windley, Gates County Interim Manager
- Melissa Coe, Gates County Member
- Frank Walters, Gates County Administration
- Brenda Hatch, Gates County Citizen
- Graham Hatch, Gates County Citizen
- Janet Mizelle, Gates County Public Schools

CTP Vision, Goals, Objectives and MOEs

The CTP vision, goals and objectives are developed as part of the public involvement process and help identify how the people within an area would like to develop the transportation system (all modes). The CTP committee develops the draft vision, goals, objectives, and MOEs which are further refined with input from citizens via the CTP Goals & Objectives (G&O) survey. These products become the official guide for the CTP being developed.

The vision statement, goals and objectives reflect what is important for the area and defines any local preferences concerning the transportation system and community assets. The vision statement is the framework for the area's strategic planning. Goals

and objectives document how the area plans to fulfill its vision. The goals break down the vision statement into themes, while the objectives document how the area plans to make progress towards achieving each goal. MOEs are established to enable the area to track the progress of each objective.

Vision:

Gates County to have a safe, aesthetically pleasing, user friendly, integrated, and environmentally sensitive multi-modal transportation system for its community with regional connectivity and makes it easy for visitors to access the area and its attractions, while aiding the economic and industrial progress of the area. To improve access for emergency services, while maintaining the rural atmosphere, and protecting the area's natural, cultural, and recreational resources.

Goal: Have a safe Transportation System

Objective: Separate bicycle and pedestrians from motor vehicles whenever possible.

Goal: Sustain an aesthetically pleasing, environmentally sensitive transportation system.

Objective: Preserve the natural environment of the area as much as possible during the implementation of projects.

Goal: Develop a user friendly, multi-modal transportation system that is efficient and seamless.

Objective: Multi-modal connection (sidewalk, multi-use paths, transit) between key destinations.

Objective: Sustaining the county's public transit and bus system.

Goal: Promote roadways that allow and encourage alternative modes of transportation such as walking and biking.

Objective: Multi-modal connection (sidewalk, multi-use paths, transit) between key destinations.

Objective: Sustaining the county's public transit and bus system.

Objective: To have a waterway for canoeing.

Goal: Recognize a sustainable transportation infrastructure linking Gates County with surrounding metropolitan areas including Raleigh, Rocky Mount, and other areas in the Eastern United States.

Objective: Continue the level of quality and planning, building on infrastructure that is already being preserved.

Objective: To provide Gates County access to Ports, Tidewater Virginia Area/Hampton Roads, US 17, military bases, and other governmental agencies.

Goals and Objectives Survey

A G&O survey is a public involvement technique used to help identify an area's perception of transportation-related issues, identify concerns that should be addressed during the development of a CTP, and to help develop a vision for the community. The G&O survey is most appropriately implemented at the beginning of the transportation planning study. In addition to determining up front what is important to the citizens of the planning area, initiating the G&O survey early in the planning process allows the survey to serve as an introduction to the transportation planning process. The survey usually includes a brief introduction explaining what a transportation plan is and how the area can benefit from having one. The survey also includes a wide variety of questions that is tailored to each area as appropriate. A summary of the Gates County G & O survey is given below.

The Gates County CTP survey was composed by staff from Gates County, the Albemarle RPO, Town of Gatesville and NCDOT's Transportation Planning Branch. The purpose of the survey was to determine what transportation modes needed improvement within the county. The survey consisted of 17 questions that included multiple choice, ranking and short answer. The survey was distributed in two ways: electronically and paper. Almost 400 people took the survey.

1. Are you a permanent residence of Gates County?

Total of 97% answered yes, and 3% answered no.

2. What is your zip code?

Total of 341 people answered this question, majority of the citizens answered 27938.

3. How important are the following Transportation goals?

a. *Existing public transportation:* Majority agreed it is important
b. *Congested highways:* Majority agreed it is important
c. *Preserve community and rural character:* Majority agreed it is very important
d. *Protect the environment:* Majority agreed it is very important
e. *Sustainable economic growth:* Majority agreed it is very important
f. *Improve services for special needs*: Majority agreed it is important
g. *More opportunities for safe biking and walking instead of driving:* Majority agreed it is important

4. Please indicate your agreement or disagreement with the following statements regarding Gates County.

a. *Gates County should remain as unchanged as possible over the next 20 years:* Majority agreed this is not important
b. *Gates County should be a place of growth and development:* Majority agreed this is very important

c. *Gates County should remain a place of natural beauty*: Majority agreed this is very important
d. *Gates County should be a place of many cultural opportunities and amenities:* Majority agreed it is important
e. *Gates County should remain mostly residential over the next 20 years*: Majority agreed this is not important
f. *Gates County should have moderate growth while maintaining its current character:* Majority agreed this is very important

5. Are you concerned with vehicle accident problems at any specific locations?
Total of 72% responded no, and 28% responded yes.
If yes, please list locations: Top three were US 158, Hwy 13, and Hwy 32.

6. Is commercial truck traffic negatively affecting your area?
Total of 22% answered no, and 78% answered yes.
If yes, please list locations: Top three were US 158, Hwy 32, and Hwy 37.

7. To what areas would you like to have improved access?
Total of 14% answered ports, total of 17% answered military base, and 97% answered tidewater/Hampton roads.
Other: Top three were Outer Banks, Elizabeth City, and Greenville/Raleigh

8. What roads would you like to have improved access to?
Total of 24% said US 17, 45% said NC 32, 26% said NC 37, 21% said NC 64, 28% said I-95, 46% said Highway 13/11, and finally 41% said US 158
Other: No re-emerging responses, roads need repaving, roads need maintenance

9. Are there areas where you would like to see sidewalks or multi-use (for bicycling or walking) constructed or improved?
Total of 34% said yes, and 66% said no.
Please list locations: Top three were Gatesville, Eure, and Sunbury

10. Do you use the local waterways?
Total of 97% answered no for recreational, 98% answered no for commercial, 99% answered yes for recreational, and 3% answered yes for commercial.

11. If you use Gates County waterways for recreation or commercial activity, please rank the following:

	Not important	Important	Very important	Total	Average rating
Needs Dredging	48%	24%	27%	131	1.79
Trimming vegetation	24%	40%	36%	152	2.13
Debris	16%	38%	47%	154	2.31

Majority of citizens determined that dredging is not important, trimming vegetation is important, and debris is very important.

12. Please rank which of the transportation needs are the greatest in the area. 1 being the least important and 7 being the most important.

Majority of citizens determined the following:

1. Bicycle needs received a ranking of 1.
2. Sidewalks received a ranking of 1.
3. Improved access to shopping area received a ranking of 7.
4. Greater access to residential areas received a ranking of 1.
5. Boat/canoe docking received a ranking of 1.
6. Access to recreation received a ranking of 1.
7. Multi-use path received a ranking of 1.

13. How would you classify your race?

Total of 80% were White, 16% were Black, 0.6% were Native America, 0.3% were Hispanic, 0.6% were Asian, and 2.3% were Other.

14. How many people, including yourself, live in your household?

Total of 23% answered 1, total of 46% answered 2, total of 15% answered 3, total of 10% answered 4, total of 3% answered 5, total of 1% answered 6, and total of 1% answered 7+.

15. What was your household income last year?

Total of 19% make below $30,000. Total of 22% make between $30,000 and $49,999. Total of 14% make between $50,000 and $69,999. Total of 9% make between $70,000 and $89,999. Total of 13% answered $90,000 or above. Total of 24% chose not to answer.

16. What is your age?

Total of 0% answered 20 or under. Total of 12% answered 21-40. Total of 36% answered 41-60%. Total of 51% answered 61 or over.

17. How did you hear about this survey?

There was a total of 289 answered. Majority of the citizens answered water bill or mail.

Public Meetings

Brief summaries of public meetings held within the planning area are given below.

Public Workshop

The first public workshop was held in Gates County Community Center on November 17, 2014 from 4pm-7pm. This meeting was advertised by the county through emails and local contacts. During the sessions the residents of Gates County were provided information on the CTP, the different modes of transportation and the proposed improvements for each mode. There were six citizens who came and voiced their opinions on all the multi-modal maps. Additions to pedestrian and bicycle modes were proposed during the public workshop. These recommendations/additions were considered when editing the draft maps.