Cherokee County
Comprehensive Transportation Plan

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Cherokee County

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Table of Contents

List of Figures

List of Tables

Executive Summary

As one of the fastest growing counties in the state, Cherokee County has become a hot spot for both residential and economic growth in the Atlanta region. This internal growth, in addition to regional background growth will place increasing demand on the county's transportation network. To prepare for this increased demand, comprehensive, long-range planning efforts are necessary. The Comprehensive Transportation Plan (CTP) was prepared to serve as the blueprint for all transportation investments—automobile, transit, freight, pedestrian, and bicycle—by Cherokee County and its municipalities for the next 25 years.

As part of a regional undertaking sponsored by the Atlanta Regional Commission (ARC) and member counties, the Cherokee County CTP process began in May 2006. To strengthen the connection between land use and transportation planning, the CTP process was designed to interact at specific milestones with the ongoing Comprehensive Land Use Plan Update process that began in March 2005. The relationship between these two vital planning processes continued throughout the duration of the CTP development. As a result, future land use policies and recommendations were made with the benefit of current and future transportation system assessments.

The CTP final report is the culmination of the process through which data was collected, observations were made, policies were proposed, and improvements were recommended. In addition to explaining the goals and performance measures for the CTP, the report provides a basis and methodology for future transportation analysis and a blueprint for developing future transportation improvements. Accompanying the document is a collection of analytical tools to enhance ongoing transportation decision-making, such as a refined travel demand forecast model, extensive Geographic Information System (GIS) inventory data and analytical information, and a comprehensive program of improvements. This improvement program can be used as a basis for future ARC calls for projects. To ensure effectiveness and relevance, the CTP document should be updated regularly, with a comprehensive review and associated amendments every five years.

The Cherokee County CTP is an essential part of the regional planning process. The development of the CTP included significant public and stakeholder involvement. Representatives of the CTP study team participated in stand-alone public involvement processes for the transportation plan, as well as many of the public and stakeholder meetings conducted for the Comprehensive Land Use Plan Update. The CTP provides a comprehensive list of improvements in addition to prioritizing projects for inclusion in the RTP. When ARC's call for projects occurs, the County will submit a prioritized list to ARC, each project identified through a rigorous analytical process that demonstrates transportation need.

Goals and Performance Measures

Goals and performance measures, established through the public involvement process, were designed to address Cherokee's transportation vision. Thoughtful goals and effective performance measures ensure that the Plan has a long-range, needs-based perspective able to identify appropriate transportation initiatives responsive to current and future transportation demands. Current federal transportation legislation, SAFETEA-LU (Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users) emphasizes transportation infrastructure investment driven by transportation need identified though analysis and public input. The CTP process followed this guidance with assessment of current and future

transportation needs followed by appropriate project improvements targeted at resolving transportation deficiencies.

Early in the CTP process, transportation goals and performance measures were developed through a coordinated effort between County staff, Project Coordination Committee (PCC) members, elected officials, community stakeholders, and local citizens. Transportation goals provide the structure on which the entire CTP is developed. The goals identify what is important to Cherokee County as it implements the plan over time. In order to conduct meaningful technical analysis of each transportation system element, goal related performance measures were developed. The performance measures provide a means to quantify and assess the transportation system operations, identify deficiencies and test alternative transportation options.

To represent the needs and aspirations for the County, goals and performance measures were based on input from those most familiar with the system. Input from the public involvement and stakeholder meetings was compiled and analyzed, leading to the development of a comprehensive list of goals and performance measures on which to base the project identification and selection process.

The goals established for the CTP guide decisions about how Cherokee's multimodal transportation system can best meet the needs of its growing population in a sustainable manner, while enhancing community economic development, the environment, and citizens' quality of life. The following seven goals aided in the development of potential improvements and strategies in addition to prioritizing needs identified through the modeling process:

- Ensure public safety and security,
- Increase accessibility and connectivity,
- Improve mobility and overall efficiency,
- Support multiple modes of transportation,
- Enhance the environment and quality of life,
- Preserve and maintain existing facilities, and
- Engage in effective public involvement and coordination strategies.

Performance measures are necessary tools in needs-based plan development because they help answer how transportation should be improved to better serve people and commerce, what benefits are returned from the investment in transportation, if appropriate alternatives are identified, and which transportation investments provide the best utilization of resources. Quantitative performance measures were developed to help track system performance over time, providing accountability and linking strategic planning to resource allocation.

To monitor the success of the recommendations set forth in this plan, the County should continue to employ performance measure evaluations. First, the County should track implementation of projects, evaluating whether or not they are meeting the proposed schedule. Once implemented, the projects should be analyzed using the performance measures to assess if the improvement is having its anticipated affect.

Transportation Planning Context and Trends

Addressing transportation needs requires understanding area growth patterns, employment trends and demographic characteristics. Cherokee's population increased approximately 28 percent between 2000 and 2005 and is projected to increase by nearly 128 percent[1] by 2030. Most of the growth will be focused around I-575, with the majority around the City of Canton. Emerging and existing activity centers in the county include the Canton, Ball Ground, and Woodstock areas. According to data from the Georgia Department of Labor, the labor force in Cherokee County grew by 62.2 percent (31,887 workers) between 1990 and 2000 and experienced a 20.1 percent increase of 17,349 workers during the 5-year period from 2000 to 2005. Existing 2005 employment is concentrated around Woodstock, Holly Springs and Canton, with a countywide average employment density of 0.22 jobs per acre in 2005. Employment is anticipated to grow by 81,809 people (about 130 percent) between 2005 and 2030. Employment density is expected to continue to increase in these areas, with an employment density in 2030 of 0.51 jobs per acre. Between 2000 and 2030, the ratio of jobs to population in Cherokee is expected to increase slightly from 0.34 in 2005 to 0.35 in 2030.

Though more jobs will be located in Cherokee in the future as service-producing industries, especially, continue to develop, this low ratio indicates that a substantial portion of the population will continue commuting out of the county to work. Currently, 35.4 percent of the county's employees work within Cherokee, with 25.5 percent commuting to Cobb and 23.6 commuting to Fulton. Of the total number of employed residents of Cherokee, 81.2 percent drive alone to work, which is higher than the regional (76.4 percent) or the state (77.5 percent) averages. The average commute time for Cherokee residents grew from 31.4 minutes to 34.4 minutes between 1990 and 2000. While the statewide average commute time also grew during this period (from 22.7 minutes to 27.7 minutes), Cherokee's average exceeded the statewide average both years. Countywide, the greatest percentage of commuters (23.8 percent) travel to work in 30 to 44 minutes.

Land use is critical to determining future travel demand, and specific transportation system needs are identified through the consideration of existing and future land use circumstances. Prudent land use planning is also important to proactively impact future travel demand. Cherokee County's existing and proposed future land use (via population and employment numbers) was accommodated through the refinement and use of ARC's *Mobility 2030* travel demand model. The model's projections are based on future population, employment and household numbers for the horizon year of 2030.

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[1] These numbers correspond to the "medium" population forecast from the Community Assessment document of the Comprehensive Land Use Plan Update, selected by the County as the likeliest scenario for future growth. Additional "low" and "high" growth alternatives were created, with the "low" forecast corresponding to ARC population forecasts in Metro Atlanta's current adopted long-term Regional Transportation Plan, *Mobility 2030*. The ARC "low" forecast was undertaken in 2005 based on a mixed econometric and cohort component model that evaluates employment and population growth together. The "medium" and "high" forecasts were created using trend line regression based on historic population growth from 1970 to 2004. The primary difference between the "low" and "medium" alternatives is the percentage of future development predicted to occur in unincorporated areas of the County. The *Mobility 2030* "low" forecast assigns a higher percentage of Cherokee's future population growth to cities with existing infrastructure, whereas the "medium" alternative allows for more growth in unincorporated areas throughout the County, thus increasing the total number of Cherokee residents beyond the ARC forecast. In order to maintain continuity with the Comprehensive Land Use Plan, "medium" forecast values are used in the text throughout this document. To satisfy ARC requirements, *Mobility 2030* forecasts are also located in footnotes, where applicable. Thus, using the "low" ARC forecast, the footnoted sentence above would read "Cherokee's population increased approximately 28 percent between 2000 and 2005 and is projected to by nearly 102 percent[1] by 2030." A full technical analysis of population and employment projections is located in the Appendix to the Community Assessment.

Travel Demand Model

The refined Cherokee County travel demand model was used to forecast future trip generation and distribution based on household and employment growth across the county. The level and distribution of growth across the county and region both impact the volume, location and duration of travel demand. Forecasting future travel demand requires development of a travel demand model based on the distribution of various socioeconomic data by Traffic Analysis Zone (TAZ), which are relatively small geographic divisions developed to summarize trip characteristics by area.

With baseline conditions established, the next step of the modeling process consisted of scenario development and analysis. A model reflecting the existing and committed (E+C) network was developed to identify future (2030) needs. The E+C network assumes no additional capacity projects are added to the system beyond those programmed in ARC's 2006-2011 Transportation Improvement Program (TIP). The scenario analysis phase of the Cherokee County CTP project involved the modeling of two transportation improvement scenarios, along with the E+C scenario. Scenario 1 considered a limited set of highway improvements to the E+C scenario. The short list of recommended roadway projects was developed by the project team as capacity addition projects that may alleviate projected corridor deficiencies found during the Needs Assessment. Scenario 2 included a larger set of highway and transit improvements. In addition to including all Scenario 1 projects, Scenario 2 also added a set of additional roadway improvements developed by the project team to create an "enriched roadway improvement scenario." This scenario also included all of the 2030 RTP transit projects.

Transportation Needs

To analyze existing conditions and future transportation needs in Cherokee County, an abundance of quantitative data and qualitative input was collected and planning tools such as GIS and the travel demand model were employed. Data, including accident records, bridge inventory data, pavement conditions, traffic counts, freight movement, railroad information, bicycle and pedestrian facilities, public transportation facility and service characteristics, and airport information roadway characteristics, was collected from numerous local, regional, state and federal sources. This data illustrated the existing condition of Cherokee's transportation network and was utilized in the projection of future needs, which are documented in the following section.

Roadways

Cherokee County has 1710 centerline miles of existing roadway network, which is functionally classified based on the roadway's accessibility and mobility. Interstates provide the greatest mobility but least accessibility while local roads offer extensive accessibility but limited mobility. In Cherokee County, Interstates account for the fewest miles of roadway (1.5 percent) but have the highest average traffic volumes (averaging 91,000 vehicles per day). Arterials, which connect activity centers and carry large volumes of traffic at moderate speeds, account for 7.25 percent of the county's total roadway miles. The AADT on arterial roadways in Cherokee County averages 14,424 vehicles per roadway per day. Accounting for 9.1 percent of the system, collectors gather traffic from streets in residential and commercial areas and distribute it to the arterial system. The AADT on collector roadways in Cherokee County averages 4,749 vehicles. Most of Cherokee's roads (80.7 percent) are local streets, which feed the collector system from low volume residential and commercial areas. The AADT on local roadways in Cherokee County averages 1,090 vehicles.

Roadway congestion was measured using the volume to capacity (v/c) ratio and level of service (LOS). In 2005, approximately 79 percent of Cherokee's roadway network functions at or better than LOS C, 13 percent operates at LOS D, 6 percent at LOS E, and just over 1 percent at LOS F. The roads experiencing the worst congestion include portions of SR 20, SR 140, I-575 Trickum Road, Old Highway 5 and Bascomb Carmel Road. Without significant improvements to the transportation system, the amount of roads operating at an average LOS of C or better drops to 42.2 percent (356.6 miles) of the model network. Similarly, about 20 percent of county roadway miles are expected at LOS D, and 21 percent at LOS E. The portion of roadway network operating at LOS F is forecast to increase to 17 percent in 2030. In addition to those experiencing extreme congestion in 2005, Bells Ferry Road and Kellogg Creek Road are projected be on the list of most congested roads in 2030.

The majority of centerline miles of roadway in Cherokee consist of surface streets and roads. The roadway system provides the vital connection between residences and commercial, industrial, educational, and cultural resources. Needs data demonstrates that Cherokee County's recent growth has strained the surface street network, especially in southern portions of the county. This plan recommends improvements to bring roadways up to current GDOT standards, mitigate congestion and increase safety.

Similar to much of the Atlanta metropolitan region, the southern part of Cherokee County is characterized by urban and suburban mixed land uses. The roadway network in this area has not always kept pace with growth, creating the challenge of ensuring it can accommodate the needs of an urban framework. Although the northern portion of the county remains widely underdeveloped, these areas will likely face increasing development over the next 25 years, straining the existing roadway system. One of the most significant countywide roadway problems in Cherokee is freeway and major arterial congestion, particularly on I-575 and SR 92. The existing Interstate network handles a significant portion of Cherokee's daily traffic and its volume is nearing capacity. Continued development in Cherokee and neighboring counties will result in increased volumes over the next 25 years, which will cause the system to reach its capacity.

The safety of the roadway network was a key issue in developing the CTP. GDOT crash statistics were used to identify and prioritize potential roadway improvements. Corridors with high crash rates included SR 369, SR 372, Towne Lake Parkway, Bascomb Carmel Road, Arnold Mill Road and Eagle Drive. Operational, widening and safety improvements were recommended along these corridors to help reduce future crash rates.

Bridges

Federal regulations require that bridges be maintained in safe condition before federal transportation funds can be authorized to help fund the County's transportation program. Maintaining the bridge network is important to maintain safety and to avoid delays created by diversions when bridges are closed or have weight limit postings. Not only is the movement of goods and people diverted and delayed, but emergency vehicle response time can also be reduced greatly due to bridge restrictions. Bridges are scored according to condition, with repairs and replacements scheduled on a statewide basis.

The Federal Highway Administration (FHWA) established the National Bridge Inventory (NBI) to monitor the condition of bridges on public roads. The National Bridge Inspection Standards (NBIS) require that all bridges carrying public roads be inspected and evaluated for safety biennially. The calculated sufficiency rating, on a scale of 0 to 100, is indicative of the fitness of the bridge to remain in service.

In 2006, GDOT surveyed 149 bridges in Cherokee County, 77 of which are locally owned and maintained. These 77 bridges are relatively new, with a median bridge age of 19 years. Approximately two-thirds of bridges have a rating greater than 75. Six bridges (8%) have a rating less than 50, potentially signifying a need for near-term replacement by Georgia standards. The median sufficiency rating was 88.8.

Freight

Freight traveling through Cherokee County Cherokee County has one major active freight rail line running in a northeast/southwest direction through the county. The Georgia Northeastern Rail Road parallels I-575 and passes through Holly Springs, Woodstock, and Ballground. The Surface Transportation Assistance Act of 1982 (STAA) designated specific routes, based on recommendations by each state, to facilitate the movement of freight. The majority of these national network routes are interstate highways and other major roads. There are 2,425 miles of STAA routes in the state of Georgia. There are 29 miles in Cherokee County that are on the National STAA network including I-75, I-575, SR 20, and Lower Birmingham Road.

To maintain safety, mobility and convenience, truck restrictions can funnel through truck trips to certain routes designed for larger vehicles. Although the Interstate system provides the backbone for goods movement, Cherokee County is limited in its capacity to address Interstate needs beyond where county roads meet the Interstate system at interchanges. Currently, the only designated truck routes in Cherokee are I-575 and the state routes. As industries, and in turn freight movement, continue to increase, additional roadways may need to be designated. However, stakeholders made very few comments on existing freight issues or problem areas, so it is not currently recommended that the county designate any additional routes. A further, detailed study is needed to develop an expanded system of designated and truck-restricted routes to effectively maintain the system.

Bicycle and Pedestrian Needs

Bicycle and pedstrian facilities allow for both recreation and transportation. For those that live within walking or bicycling distance of their place of employment, walking or riding to work can be a viable alternative to driving if sufficient facilities exist. Travelers choosing a form of transportation besides single-occupant vehicles help reduce congestion on county roadways.

There are currently limited dedicated bicycle and pedestrian facilities in the county. Portions of the statewide bicycle network, which is on-road and often without dedicated bicycle lanes, pass through Cherokee. For the most part, automobile drivers and bicyclists share the roadway. This presents challenges on narrow roads with large amounts of adjacent traffic traveling at high speeds. In order to identify potential improvements, an assessment of the suitability of the existing bicycle network was performed. Bicycle suitability needs were evaluated thoroughly in the study's needs assessment report through analyses of both on and off road facilities.

The quantitative bicycle suitability analysis assessed each roadway's ability to accommodate bicycle travel based on information contained in GDOT's Roadway Characteristics (RC) file. The suitability rating is composed of three factors: traffic volume, travel speeds and functional class. On a countywide basis, over 72.8 percent of roadways offer the best conditions for bicyclists, 20.8 percent medium conditions, 5.1 percent difficult conditions, and 1.3 percent very difficult conditions. Roadways that traverse the county in a more direct manner tend to have lower suitability ratings; thus, bicyclists may have to take longer, more circuitous routes to maintain their safety.

Overall, Cherokee County has very few bicycle only facilities, which leads to increased bicycle use on roadways. Specific bicycle facility needs were identified through qualitative input from local stakeholders and the public, as well as from existing plans. These needs resulted in the recommendation of bicycle facilities connecting downtown Woodstock to the Northern Crescent, Holly Springs to Woodstock and Canton to Woodstock.

Sidewalk facilities are sporadically located throughout the county, usually resulting from new development as required by local ordinances and regulations. The existing 337.51 linear miles of sidewalks are largely located within the incorporated areas of the county, with intermittent sidewalks in new developments in unincorporated areas. To meet pedestrian needs identified in the study's needs assessment report, sidewalks are recommended in the vicinity of activity centers such as schools, government buildings, community centers, and hospitals to provide citizens with the opportunity to walk when possible. The minimum sidewalk buffer around activity areas is generally defined as one quarter mile, corresponding to a five minute walk at a speed of three miles per hour. Based on this quarter mile buffer, pedestrian needs were analyzed. Implementing sidewalks at these locations with identified needs would help achieve several of the established transportation goals including increased accessibility, mobility and connectivity and would help support multiple modes of transportation.

To improve pedestrian mobility within Cherokee County, a number of specific sidewalk projects are included in the project list and a tool has been developed to further analyze pedestrian needs. Through the CTP, a sidewalk inventory has been built that the County will use to develop a detailed list of potential pedestrian projects, which is beyond the scope of this project. The GIS inventory will allow the County to analyze the current sidewalk network and identify gaps and potential connections that are not included in the CTP project list.

Transit

Cherokee County has a limited transit system consisting of paratransit demand based service, fixed route service and commuter vanpools. Express commuter bus service is also provided to downtown Atlanta from Canton and Woodstock. In 2003, the Georgia Rail Consultants, sponsored by GDOT, conducted a feasibility study of implementing a 20-mile commuter rail line between Canton and Marietta.

Transit needs for Cherokee County were identified through qualitative and quantitative assessments. The qualitative assessment relied on input from the public, stakeholders and previous studies, while the quantitative evaluation utilized performance measures developed during the study. A majority of the assessment focused on the existing services provided by Canton, as well as vanpools and demand services provided by private partners. As part of the stakeholder and public outreach efforts for the CTP, discussions were held with representatives of all socioeconomic groups, including elderly and disabled persons. The public indicated that increased public transportation was very low on the county's needs list, based primarily on Cherokee's sparse population density and current existing services.

Although transit service does not rank high on the list of needs for Cherokee County, several cost-effective strategies exist which could help ease the future demand on the transportation system. Such strategies include the continued support and expansion of vanpool programs, the implementation of carpool initiatives and the support of additional Transportation Demand Management (TDM) strategies. TDM policies reduce dependence on the automobile, which reduces demand on the regional and local road networks.

Commuting patterns within the county suggest that many (35%) of the County's residents work within Cherokee County. Therefore, TDM strategies implemented by Cherokee's employers could reduce the amount of congestion during peak periods. The County should continue to encourage employer use of carpools, vanpools, transit incentives, and flexible work schedules and support the Clean Air Campaign efforts.

Aviation

Cherokee County has one airport, 47A, located 6 miles northeast of the City of Canton. The airport has one asphalt runway, 04/22, that is 3,412 feet in length and 75 feet wide. The Airport has initiated planning to lengthen and expand the runway to 5,000 feet to accommodate business aircraft. Cherokee County's airport has been classified by GDOT as a Level II facilitiy, an airport capable of accommodating all single and twin-engine general aviation aircraft and some corporate/business jet aircraft. To meet the Level II facility requirements, airports must offer a runway that is at least 5,000 feet long and a non-precision approach. The following improvements are required for the Cherokee airport to meet service objectives identified by GDOT:

- Extend runway by 1,586 feet
- Widen runway by 25 feet
- Construct a full parallel taxiway
- Install Automated Weather/Surface Observing Systems
- Add hangar, apron, and parking space

Project Development Process

Updating the CTP offers Cherokee County the opportunity to periodically reconsider the current program's direction and determine if transportation investments continue to align with community needs. The 2030 CTP update identified anticipated multimodal transportation needs assuming current growth patterns and local expectations for transportation services. A goal of the 2030 CTP is to provide a balanced multimodal transportation system that provides for the efficient movement of people and goods. "Efficient movement" entails examining the full array of improvement options available in Cherokee County, ranging from operational improvements to roadway capacity improvements to providing for improved walking, bicycling, carpooling or transit facilities and services. In addition to the technical analysis results, stakeholder and public input were reviewed during development of transportation projects. A detailed list of all proposed transportation improvements, their locations, associated costs and funding sources, and potential implementation time frame is included in the Appendix.

Transportation improvements included in ARC and GDOT long-range plans have been included in the project development process. Additional roadway improvements are recommended based on the results of the travel demand model and extensive stakeholder and public input. The study considers individual congested segments as well as how the entire system operates. Potential bicycle and pedestrian improvements were developed by reviewing connectivity issues as well as stakeholder and public comments. Future population densities were also analyzed to indicate where future transit services are likely to be needed and/or required based on stakeholder and public input. Upon completion of the finalized project list, a "build run" was performed using the travel demand model to analyze the impact of implementing these projects on the future network.

Roadway Improvements

The large amount of existing congestion on Cherokee roadways, in combination with the fact that the roadway system is the County's most critical transportation asset, requires that the majority of proposed improvements target the roadways. Roadway projects fall into one of two primary categories: capacity or operational. A capacity project enhances the roadway's ability to accommodate traffic and usually means roadway widening, although the addition of new roadways is also included. Capacity projects are most applicable to areas where severe congestion is expected. Operational improvements can include the addition of turn lanes, new acceleration/deceleration lanes, or roadway realignment. Operational projects can also focus on enhancing safety such as intersection improvements, re-striping, signage, guardrail and other strictly safety improvements. Intersection improvements often involve reconfiguring lanes and retiming signals. The list of 147 recommended potential roadway improvements includes 45 widening projects, 20 new locations, 65 safety and operational projects, 16 bridge improvements, and 1 other (Interstate noise barriers).

The proposed roadway projects support the goals established for the CTP. Creating new roadways increases the connectivity and mobility of the system and also adds capacity to help relieve congestion. Many of the operational projects can enhance the safety of the transportation network. Other operational projects can accomplish the goal of preserving and maintaining existing facilities by improving the flow of traffic without reconstruction or the addition of lanes.

Bicycle and Pedestrian Improvements

After roadway projects, bicycle and pedestrian improvements account for the second largest category of projects, with 24. The largest project is the Little River Trail, located near Rope Mill Park. This project will consist of a paved multi-use trail for both bicyclists and pedestrians.

The remaining proposed projects are either improvements to streetscapes or the addition of sidewalks. In general, sidewalk improvements were proposed if the roadway was within a quarter-mile of an activity center or if the new sidewalk was needed to make a connection between two existing sidewalks. The County's policy of requiring sidewalk with new development will continue to add to the sidewalk inventory. The proposed improvements will close gaps in the system and add new links to important destinations. This will accomplish the goals of increased accessibility and connectivity, supporting alternate modes of transportation and enhancing the environment and quality of life.

Transit Improvements

The four proposed transit improvements in the program of projects help increase the effectiveness of existing transit options and include the Canton Intermodal Facility expansion of CATS and GRTA bus service, and a park and ride lot in Waleska. The planned Intermodal Facility in Canton will serve as a transfer station for riders wishing to transfer between the Canton fixed route system and the BRT service that will run from SR 20 to downtown Atlanta. Residential growth in northern portions of the county has created a demand for more park and ride space by commuters destined to downtown Atlanta. A proposed new park and ride lot near the City of Waleska should be conveniently located near I-575 to provide easy access for carpoolers and bus transit users.

The improvements to the transit system will also help the County accomplish several of its transportation goals. The intermodal center, expanded service and park and ride lot will support alternate modes of transportation as well as increase accessibility and connectivity by providing more opportunities for residents to access different types of public transportation.

Monitoring of the CTP

The CTP will serve as an important guide to the County as they continue to work on the transportation program and the ever-increasing demands on the system. On an annual basis, the County should review the program and identify any changes in demand patterns and new developments not anticipated in the plan. Several tools provided through the CTP process, including the refined travel demand model, GIS inventory data, and the prioritized list of recommended projects, will aid in the plan's update, which should occur every five years or more often if circumstances dictate.

Estimated Project Costs

Project costs were estimated using a costing tool developed by ARC. The estimates offer a general idea of overall cost of the project but do not incorporate special factors such as compensation for businesses or special terrain problems. The tool determines the estimated cost of a project by using design year, project type, length, number of lanes, and land uses in the area around the project. The design year is used to determine inflation costs and requires the years of preliminary engineering (PE), right of way acquisition (ROW), construction (CONST), and opening. For projects included in this plan, the years utilized in the costing tool were 2008 for PE, 2009 for ROW, 2010 for CST, and 2011 for opening. The project type ranges from new construction to roadway widening to bicycle lanes, and costs vary by length for each. The number of lanes is used only for widening projects, with the cost determined by the number of lane miles. The final component, land uses around the project, is important because it helps determine the cost to obtain right of way. For the improvements located in incorporated areas, the land use was considered suburban commercial, while improvements in unincorporated areas assumed suburban residential land use.

The total estimated cost for the CTP project list is $1.8 billion. Historically, construction and land acquisition costs have outpaced the growth in available funds. To account for this financial trend, the total cost was escalated to the CTP midpoint year (12 years out). By escalating the project costs to the midpoint year, this method takes into account that some projects will be constructed before this midpoint year, while others will be implemented after this year. An annual 3% increase was applied to the cost of all of the projects for the 12-year period. The total project cost, adjusted for inflation is $2.5 billion. The projected federal, state and local funding totals $516 million, leaving a funding shortfall of $1.9 billion.

Project Prioritization

In light of the substantial gap between available funding and the total cost of the needs based list, projects were prioritized to ensure that the best program of projects is implemented with the limited funds available. The development of the project list included qualitative analyses of how the projects meet the goals established by stakeholders and the public. Quantitative measures were also applied to identify deficiencies in the system and prioritize the improvements. Results from both quantitative and qualitative analyses provided the means by which the projects were scored.

Historic and Projected Funding

Funding levels of the recent past are provided below to give some insight into estimated levels of funding likely to be available into the future. This historical funding analysis develops a financially realistic understanding of the percentage of the recommended project list that is most likely to receive funds considering typical funding levels. With this amount and the prioritized project list, the County can develop a constrained list of projects that best serves the needs of the community and provides the most benefit to the system.

ARC's current Envision 6 2030 RTP and 2008-2013 Transportation Improvement Program (TIP) and other local sources were researched in order to arrive at funding estimates. Only those projects programmed within the 2008-13 TIP (i.e., not long-range improvements) are included in this analysis. Projected SPLOST funds were based on the amount available for transportation in previous programs. To determine a common level of analysis, available funding levels were calculated based on an average annual figure set in current year dollars. The total cost of all projects identified in the CTP, adjusted for inflation, is then compared to available funding levels.

Federal Funds

Current and recent levels of federal funding indicated within ARC's Envision 6 2030 RTP and programmed within the FY 2008-2013 Transportation Improvement Program for Cherokee County improvements are used to estimate the level of federal funds Cherokee County may expect in the future. While it is recognized that federal fund availability fluctuates, using recent funding levels as guidance is assumed to be most accurate. Fifteen projects were funded using money from seven Federal Sources. **Table ES-1** provides detail on Federal funding sources and levels in the 2008-2013 TIP, not including long-range projects.

Table ES.1. Current Federal Funding Sources and Levels, 2008-2013 TIP

Federal Funding Sources	# of Projects	Total TIP Funding	Annual Amount	23 Year Horizon Sum Amount
Bridge (Off-System)	1	$1,088,800	$181,467	$4,173,741
Congestion Mitigation and Air Quality	4	$3,924,832	$654,139	$15,045,197
General Federal Aid	2	$6,324,800	$1,054,133	$24,245,059
National Highway System	1	$13,180,800	$2,196,800	$50,526,400
STP - Statewide Flexible (GDOT)	1	$10,438,729	$1,739,788	$40,015,124
STP - Urban (>200K) (ARC)	3	$2,440,000	$406,667	$9,353,333
STP-Urban Set aside for LCI Projects	3	$3,008,000	$501,333	$11,530,659
TOTAL: 7 sources	**15**	**$40,405,961**	**$6,734,327**	**$154,889,521**

State Funds

The current TIP also details those funds programmed from state sources. Current levels of state funding indicated within ARC's Envision 6 2030 RTP and programmed within FY 2008-2013 TIP were used to estimate the amount of state funds Cherokee County may expect in the future. For developing future funding projections, an annual amount of **$2,235,974** of state funds will be assumed as being available to Cherokee County over the life of the CTP.

Local Funds

SPLOST - Cherokee will collect an estimated $200 million using a Special Purpose Local Option Sales Tax (1%) between January 2006 and December 2011, of which, $80 million (40%), $13 million annually, has been allocated to transportation improvements. The transportation portion of the SPLOST funds also includes infrastructure maintenance and system preservation activities. For the CTP funding projections, the next SPLOST is assumed to dedicate a slightly higher amount of funds to transportation projects. An assumed $15 million will be allocated to transportation, of which, $8,000,000 will go towards capital improvements recommended through the CTP. The remaining funds will continue to support system preservation activities at the current funding level. For developing future funding projections, an annual amount of $8,000,000 is assumed as being available to Cherokee County.

Impact Fees - Cherokee County established an Impact Fee Program in 2000, which charges fees to new developments to defray the cost of public facilities related to the development of that project. Historically, approximately $500,000 of these funds has been allocated to transportation improvements annually. Funding projects for the CTP will assume this level of funding continues through horizon year 2030.

Revenue Projections

Over the 23-year duration of the CTP (2030-horizon year), the approximate sum total of anticipated available federal, state, and local funds is **$516,439,992.** This amount is based on the funding levels and from the following sources as indicated in **Table ES-2**:

Table ES-2. Funding Sources and Projected Availability to 2030

Fund Source	Annual Availability	Total Funds Available to Horizon Year (23 years)
Federal	**$6,734,327**	**$154,889,521**
State	**$2,235,974**	**$51,427,402**
SPLOST	**$8,000,000**	**$251,623,069**[2]
Local Impact Fees	**$500,000**	**$11,500,000**
Developer Contributions	_____	**$47,000,000**
Total	**$17,470,301**	**$516,439,922**

[2] SPLOST total is based on $7 million annually for remainder of current SPLOST and $8 million annually for future SPLOST programs

Due to the magnitude of improvements recommended for the State roadway network in Cherokee County, local funds will not go far to fund these on-system projects. By focusing local funds on projects that would not otherwise receive funding, the County can address a greater portion of the local system's needs. Though local funds are allocated as a match to federal funds in the previous RTP, future projects on the State system may require GDOT to provide the local match, in order for the County to save some of its resources for local, off-system projects.

Although funding allocations vary from year to year by type and amount, historical funding levels can provide insight on the magnitude of funds each project type is likely to receive in the future. Table ES-3 describes how different categories of projects might be funded, considering the anticipated available funds. For the purpose of this analysis, the funding available for each project category was assigned to eligible projects based on their prioritization until funds were depleted. Local funds, except those previously committed to projects in the RTP, were devoted to projects off the state system of roads. The table also provides an estimate of the share of the CTP project list that could be implemented during the study period with the projected funds.

Table ES-3: Potential Funds by Project Category

Project Category	Potential Funding Source	Funding Amount	Portion of Needs List
NHS System	• NHS	**$50.5 million**	**3 out of 21 projects**
Non-NHS, On-System Roadways	• General Federal Aid • STP–Statewide Flexible Fund (GDOT) • STP – Urban (>200K) (ARC) • GDOT Funds • 50% of total CMAQ Funds • Previously committed SPLOST funds	• $24.5 million • $40 million • $9.5 million • $51.5 million • $7 million • $3 million **$135.5 million**	**3 out of 22 [3] projects**
Off-System Roadways	• SPLOST • Impact Fees • STP – Urban Set-aside for LCI Projects • Developer Contributions	• $237 million[4] • $11.5 million • $11.5 million • $47 million **$307 million**	**33 out of 81[5] projects**
Bridges	• Bridge Fund	**$4 million**	**3 out of 15[6] projects**
Bike/ Pedestrian	• SPLOST[7] • 25% of total CMAQ Funds	• $11.5 million • $3.75 million **$15.25 million**	**17 out of 24 projects**
Transit	• 25% of total CMAQ Funds	**$3.75 million**	**3 out of 3 projects**
Total		**$516 million**	**62 out of 166 projects**

[3] This number assumes that federal/state funds will be used to cover local match on Bells Ferry projects in TIP (widening from Southfork Way to Sixes Road). The total match for these projects is $72 million, which would consume almost two complete SPLOST programs.

[4] Based on projected $8,000,000 available annually for capital improvements less the $500,000 set aside annually for pedestrian and bicycle projects and the previously committed SPLOST funds allocated to On-System roadway projects

[5] If no federal/state source is found for Bells Ferry project and local funds are used, 20 of 81 off system projects can be funded by these sources.

[6] Two additional bridge projects are included in the Non-NHS On-System funding category.

[7] Cherokee County assumes an annual allocation of $500,000 to pedestrian and bicycle projects from SPLOST

Transit	• 25% of total CMAQ Funds	**$3.75 million**	**3 out of 3 projects**
Total		**$442.5 million**	**52 out of 166 projects**

Funding Strategies

Identifying and effectively utilizing available transportation funding is a crucial element in planning for and successfully implementing a transportation plan. A variety of funding sources are available; however, each has restrictions and implications. This is especially relevant since historic and anticipated future funding levels available to Cherokee County indicate a shortage of funds available to implement projects deemed necessary to address identified deficiencies and needs.

Generally, funding is provided at the federal, state, and local levels. From these, the primary source for relatively more costly roadway, transit, bicycle and pedestrian projects is federal funding authorized by SAFETEA-LU. State funds are also an important component of transportation funding, particularly for capital projects. Lastly, a local match is usually required for transportation projects that are not on major state or federal routes. Comprehensive transportation plans rely on all levels of funding. Cherokee County has received funds from many different sources and should continue to pursue all available funding opportunities. Appendix D provides detailed descriptions of the variety of funding sources offered by state and federal agencies as well as local funding strategies.

1. Introduction and Purpose

Study Background

An effective transportation system is the backbone of any thriving community. In addition to creating access to desired destinations, the system provides mobility to efficiently move goods, services, and people around and through an area. A quality transportation system enables both employment and population growth. With this growth, demand on the transportation system increases. The type and distribution of transportation demand is determined by land use and density. As Cherokee County continues to grow, efforts must be made to plan for the significant and increasing demands on Cherokee County's transportation system.

As land use and transportation are interdependent drivers of each other, concurrent and comprehensive land use and transportation planning are essential to ensure that the network continues to meet the needs of citizens. As a member of the Atlanta Regional Commission's 10-transportation planning area, Cherokee is involved in the development of the agency's Regional Development Plan (RDP) as well as the Regional Transportation Plan (RTP) and the Transportation Improvement Plan (TIP). The RDP sets forth regional policies to guide local governments in decisions involving future development. These strategies address land use, economic development, the preservation of natural and historic resources, transportation, public facilities, housing and community services. ARC's two primary transportation programming documents are the long-range RTP and the short-range TIP. These documents include a balanced mix of transportation projects related to all modes and system elements, including roadways, bridges, transit, and bicycle and pedestrian facilities. Consideration is also given to safety, transportation demand management and air quality.

As part of a regional undertaking sponsored by the Atlanta Regional Commission (ARC) and member counties, the Cherokee County Comprehensive Transportation Plan (CTP) process began in May 2006. To strengthen the connection between land use and transportation planning, the CTP process was designed to interact at specific milestones with the ongoing Comprehensive Plan Update process that began in March 2005. The relationship between these two vital planning processes continued throughout the duration of the CTP development. As a result, future land use policies and recommendations were made with the benefit of current and future transportation system assessments.

The Cherokee County CTP is an essential part of the regional planning process. The CTP development process included significant public and stakeholder involvement. Representatives of the CTP study team participated in stand-alone public involvement processes for the transportation plan, as well as many of the public and stakeholder meetings conducted for the Comprehensive Plan Update. The CTP provides a comprehensive list of improvements in addition to prioritizing projects for inclusion in the RTP. When ARC's call for projects occurs, the County will submit a prioritized list to ARC, each project identified through a rigorous analytical process that demonstrates transportation need.

Purpose of Report

The CTP final report is the culmination of the process through which data was collected, observations were made, policies were proposed, and improvements were recommended. In addition to explaining the goals and performance measures for the CTP, the report provides a basis and methodology for future transportation analysis and a blueprint for developing future transportation improvements. Accompanying the document is a collection of analytical tools to enhance ongoing transportation decision-making, such as a refined travel demand forecast model, extensive Geographic Information System (GIS) inventory data and analytical information, and a comprehensive program of improvements. This improvement program can be used as a basis for future ARC calls for projects. To ensure effectiveness and relevance, the CTP document should be updated regularly, with a comprehensive review and associated amendments every five years.

2. Planning Goals and Performance Measures

Goals and performance measures, established through the public involvement process, were designed to address Cherokee's transportation vision. Thoughtful goals and effective performance measures ensure that the Plan has a long-range, needs-based perspective able to identify appropriate transportation initiatives responsive to current and future transportation demands. Current federal transportation legislation, SAFETEA-LU (Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users) emphasizes transportation infrastructure investment driven by transportation need identified though analysis and public input. The CTP process followed this guidance with assessment of current and future transportation needs followed by appropriate project improvements targeted at resolving transportation deficiencies.

Relationship to Comprehensive Plan Update

Cherokee County's current Comprehensive Plan Update is titled The Joint Comprehensive Plan for Cherokee County, Ball Ground, and Waleska. To meet Georgia Department of Community Affairs guidelines, it is composed of three parts: a "Community Participation Program", a "Community Assessment", and a "Community Agenda." Components of the plan involved a great amount of coordination with the public as well as the Stakeholder Advisory Committee (SAC).

The Community Participation element of the CTP was a coordinated, comprehensive and inclusive effort to help citizens understand the CTP and share their transportation insights with the study team. Citizens were encouraged to get involved in a variety of ways, including workshops, public meetings and hearings, email messages, telephone, mail, public comment forms, and citizen surveys. Three public CTP meetings attracted a combined attendance of approximately 50 citizens. Surveys distributed via residential water bills generated over 500 responses. Results from the public involvement efforts provided input for developing goals for the future transportation network and prioritizing the final list of projects.

The Community Agenda of the Comprehensive Plan defines the future vision of unincorporated Cherokee County and the cities of Ball Ground and Waleska, and provides strategies for achieving this vision. The following vision for Cherokee County based on input from the citizens as well as the Stakeholder Advisory Committee:

> *A thriving community where life takes on a quiet pace with rural and suburban lifestyles, while striving to create sustainability through the enhancement and encouragement of employment, cultural, shopping services and recreational opportunities in the right places, all of which are supported by appropriate infrastructure and services.*

In addition to the community vision, the Comprehensive Plan development process identified recurring "Core Issues" that characterized the goals for the community. These seven issues are:

- Following the Plan for Sustainable Growth
- Preserving and Enhancing the Sense of Place and Historic Character
- Creating Land Use Patterns that Promote Connectivity and Mobility
- Aging in Place
- Housing Choice and the Spirit of Inclusiveness
- Designing With the Environment
- Balanced Tax Base and Diverse Economic Opportunities

Each issue had related policies, discussion, and implementation strategies. Transportation infrastructure has bearing on all of the issues identified in the Comprehensive Planning process and is mentioned throughout the Plan Update document. Table 2-1 illustrates selected transportation-related highlights of the Comprehensive Plan. From this table, it is readily apparent that land use and transportation planning must be synchronized and comprehensive to achieve the ideals laid out in the community vision.

Table 2-1 Key Transportation-Related Issues, Policies, and Discussion in the Comprehensive Plan Update

Core Issue	Key Policies and Discussion
Following the plan for sustainable growth	Policy: Look at new development proposals comprehensively by considering the benefit to the County or City overall, the character areas and the immediate neighborhood, surrounding land uses, and the availability of infrastructure
	Policy: Coordinate transportation improvements, school locations, parks and open spaces, and other public uses to stabilize and upgrade neighborhoods
	Policy: Encourage mixed-use village developments to provide for a diversity of economic opportunities in a walkable environment
	"Efficient use of public and private infrastructure starts with creating neighborhoods that maximize the use of existing infrastructure. Higher density development, infill development, redevelopment, and the adaptive re-use of existing buildings result in efficient utilization of land resources and more compact urban areas."
	"…Avoid unplanned and dispersed developments that are unrelated to each other, ignore the natural environment, and exist in isolation in random locations. Instead…[provide] a comprehensive circulation system that incorporates multiple modes…"
	"…To protect the capacity of the adjacent roadway, commercial development should be clustered into village nodes separated by other types of development…to discourage strip commercial and to reduce curb cuts."
	"Well planned, well-maintained and efficiently operated infrastructure systems contribute to a beneficial environment for both businesses and residents."
Preserving and Enhancing the Sense of Place and Historic Character	Policy: Public Services, Infrastructure, and Community Facilities should be developed to promote the character of the community, such as the use of swales and ditches in rural areas or the installation of sidewalks in urban and suburban areas
	"Roadways have taken on a much greater role than just transportation corridors; they can greatly affect the overall image of a community, the economic vitality, the recreational potential, the safety and security and our personal outlook on our community. If roadways through a community look bad and function poorly, it affects everything around it. At the same time, if our roadways are attractive and function well, our communities tend increase in monetary and spiritual value."
	"Roadways are endowed with two attributes: capacity and character. 'Capacity' is the number of vehicles that can move safely through a segment of the roadway within a given time period…'Character' is the suitability of a thoroughfare as a setting for pedestrian activities and as a location for a variety of building types…Context-sensitive design solutions for roadways incorporate the appropriate capacity and character elements for the specific situation."
Creating Land Use Patterns that Promote Connectivity and Mobility	Policy: Promote the clustering of uses and compact site development in appropriate areas that is pedestrian-oriented, community-centered, and minimizes vehicular trips with increased internal connectivity.
	Policy: Developments should not be built in isolation; developments should connect with the existing transportation network and adjacent properties.
	Policy: Public Facilities and infrastructure should be able to support new development and redevelopment efforts, particularly in areas of circulation, access, and linkages
	Policy: Encourage neighborhood-serving retail and services in or near neighborhoods to reduce travel time and the number of cars on our roads.
	"Cherokee County's road network and planned improvements are not enough to ensure future connectivity and mobility within the community. This problem needs to be addressed on a multi-faceted level, through roadway improvements, the development of alternative transportation facilities, and integrated community planning."

Core Issue	Key Policies and Discussion
	"Heavily traveled roads have become major barriers for pedestrians… Internal and external pedestrian connectivity and linkages should be an integral part of every new project to provide safe and equitable choices for alternative transportation, such as walking and bicycling… By putting [walking and bicycling] on equal footing with automobiles, the community can reap significant transportation, environmental, and health benefits."
	"Transportation efficiency is enhanced when there are consistent and adequate street connections that allow many routes of travel through the community. Gated communities, private road systems, and…cul-de-sac systems promote disconnections."
Aging in Place	Policy: Encourage senior housing in areas that have good access to services, medical facilities, non-residential development, and are walkable.
	"The demand for specialized senior housing, such as lower maintenance homes and more walkable and mixed-use environments will greatly increase as seniors rely less on the automobile."
Housing Choice and the Spirit of Inclusiveness	"A greater mix of uses and housing choices in neighborhoods focused around human scale and mixed-used centers that are accessible by multiple transportation modes provide an atmosphere of inclusiveness of lifestyle, lifecycle, and economic realities."
	"Master planned developments that incorporate a non-residential component and special considerations to linkages and mixed uses within village enters will enable people of all ages to remain within the County."
	Higher density, multi-family, or mixed-use type development fills an economic need for affordable accommodations… [and] is easily integrated into the more dense character envisioned for the County's primary activity centers and contributes toward the vibrant, pedestrian-oriented, accessible, and mixed-use environment that is desired."
Designing with the Environment	Policy: Specific conservation areas and greenways should be identified in a county-wide plan so that preserved land in existing and new development will interconnect to form a network of protected lands.
	"As development continues to spread across the county, habitat fragmentation is becoming a significant concern… Growth needs to be balanced with the need to retain and protect significant natural resources…"
	"Greenway trails are paved or natural (mulch, gravel, etc.) with a minimum of twelve feet and greenspace on either side for use by pedestrians, horses, and non-motorized vehicles. These trails provide a variety of recreation opportunities and should be connected to provide a network that is easily accessible."
Balanced Tax Base and Diverse Economic Opportunities	Policy: Utilize major transportation corridors…to spur redevelopment.
	"Although the County continues to grow economically, it continues to remain primarily a bedroom community for the Atlanta Metro area, based on an analysis of commuting patterns… A scenario is developing where individuals are commuting out of the county for high-paying jobs, while others are commuting into the county for the more service-oriented jobs."

Goals and Performance Measures

Early in the CTP process, transportation goals and performance measures were developed through a coordinated effort between County staff, Project Coordination Committee (PCC) members, elected officials, community stakeholders, and local citizens. Transportation goals provide the structure on which the entire CTP is developed. The goals identify what is important to Cherokee County as it implements the plan over time. In order to conduct meaningful technical analysis of each transportation system element, goal related performance measures were developed. The performance measures provide a means to quantify and assess the transportation system operations, identify deficiencies and test alternative transportation options.

To represent the needs and aspirations for the County, goals and performance measures were based on input from those most familiar with the system. Input from the public involvement and stakeholder meetings was compiled and analyzed, leading to the development of a comprehensive list of goals and performance measures on which to base the project identification and selection process.

The goals established for the CTP guide decisions about how Cherokee's multimodal transportation system can best meet the needs of its growing population in a sustainable manner, while enhancing community economic development, the environment, and citizens' quality of life. The following seven goals aided in the development of potential improvements and strategies in addition to prioritizing needs identified through the modeling process:

- Ensure public safety and security,
- Increase accessibility and connectivity,
- Improve mobility and overall efficiency,
- Support multiple modes of transportation,
- Enhance the environment and quality of life,
- Preserve and maintain existing facilities, and
- Engage in effective public involvement and coordination strategies.

Performance measures are necessary tools in needs-based plan development because they help answer how transportation should be improved to better serve people and commerce, what benefits are returned from the investment in transportation, if appropriate alternatives are identified, and which transportation investments provide the best utilization of resources. Quantitative performance measures help track system performance over time, providing accountability and linking strategic planning to resource allocation.

Performance measures for the Cherokee CTP provide the means for evaluating the transportation system. They relate to CTP goals, are quantifiable and use readily available data. The measures are also meaningful to the public and policy-makers. Table 2-2 summarizes performance measure recommendations based on stakeholder input, data availability, and input from Cherokee County. Recommended improvements were evaluated using these performance measures and were prioritized based on the results.

To monitor the success of the recommendations set forth in this plan, the County should continue to employ performance measure evaluations. First, the County should track implementation of projects, evaluating whether or not they are meeting the proposed schedule. Once implemented, the projects should be analyzed using the performance measures described in Table 2-2 to assess if the improvement is having its anticipated affect.

Table 2-2 CTP Performance Measures

Goal	Performance Measure
Safety	Roadway crash and fatality rates Pedestrian and bicycle crashes and fatalities
Mobility (Efficiency)	Volume to capacity (v/c) ratio Average vehicle miles of travel (VMT) per person Average vehicle hours of travel (VHT) per person Number of transit passenger boardings
Mobility (Effectiveness)	Delay Level of service (LOS) Percent of miles under congested conditions Trip reduction due to transit
Mobility (Demand)	Origin-destination travel time and patterns (average travel speeds)
Accessibility	Connectivity and gaps between sidewalks and activity centers (parks, schools, malls, hospitals) Population/employment shares within 0.5 mile from bus stops/rail stations and activity centers Frequency of transit service Transit service hours per person
Multimodal Transportation	Roadway suitability for bicycling Linear miles of bicycle facilities Population/employment density within 0.5 mile of bus stops/rail stations and activity centers Number of transit passenger boardings
Environment and Quality of Life	Speed by functional class Connectivity and gaps between sidewalks and activity centers (parks, schools, malls, hospitals) Impacts on wetlands (qualitative assessment) Impacts on historic districts (qualitative assessment)
System Preservation	Percent of roadways/bridges below standard (non-state) Percent of State Highway System with Pavement Condition Evaluation System (PACES) rating lower than 45
Public Involvement	Number of attendees at public involvement meetings Number of attendees at committee meetings News releases Web page materials Surveys received

3. Transportation Planning Context

County Profile

Cherokee County is in the northwestern part of the core 10-county Atlanta region administered by the Atlanta Regional Commission (ARC) Metropolitan Planning Organization (MPO). It is bounded by Pickens County to the north, Dawson and Forsyth counties to the east, Fulton and Cobb counties to the south, and Bartow County to the west. As seen in the County Map in Figure 3-1, the cities of Ball Ground, Canton, Holly Springs, Waleska and Woodstock are located within Cherokee's 434 square miles, as are parts of Mountain Park and Nelson. There is a large, naturally protected area of Army Corps of Engineers controlled property located in the western part of the county near Lake Allatoona.

Demographic Characteristics

The demographic profile of an area provides an indication of the types of transportation infrastructure and services needed there. For instance, public transit is more likely to be needed or used by certain population groups, including low-income, elderly, young and/or non-white persons as well as those households without access to a vehicle. Assessing the geographic distribution of population groups is also a component for meeting federal environmental justice guidelines and regulations. These regulations require that any federally supported investment does not disproportionately impact minority and low-income "environmental justice" communities. The investments should allow all population groups to fully share in the benefits. The transportation planning process should be inclusive and provide a public outreach program to include environmental justice communities in the process.

Table 3-1 provides a summary of 2000 demographic characteristics pertaining to population and environmental justice for Cherokee County. The 10-county ARC Region and Georgia are included for comparison purposes.

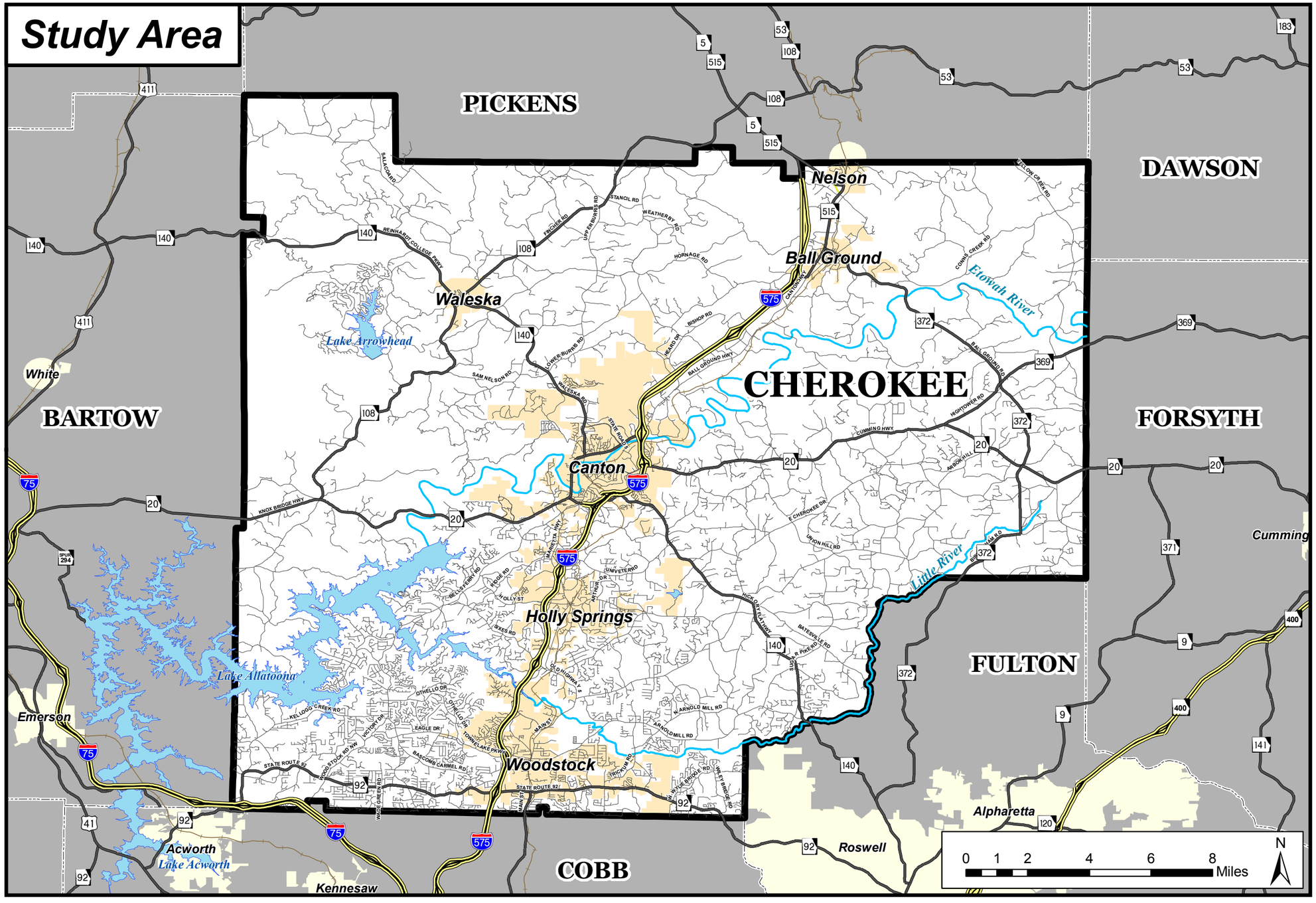
Table 3-1 Comparison of Demographic Characteristics, 2000

Geographic Area			Percent				
	Population	Households	Non-white Persons	Persons Below Poverty	Persons Age 65+	Persons Age 15-19	Households Without Vehicles
Cherokee	141,903	49,495	7.7%	5.3%	6.6%	6.4%	2.9%
10-County ARC Region	3,429,379	1,261,894	41.1%	9.5%	7.3%	6.8%	7.7%
Georgia	8,186,453	3,006,369	34.9%	13.0%	9.3%	7.3%	8.3%

Source: U.S. Census, ARC

Cherokee County Comprehensive Transportation Plan

Study Area



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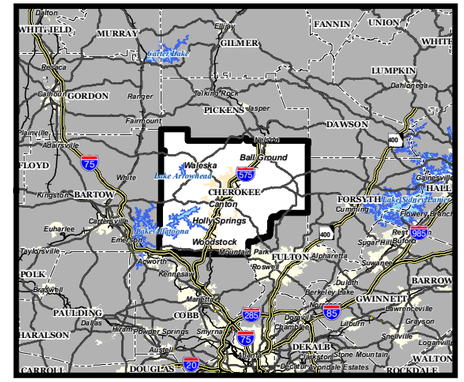

Figure 3-1

Legend

Road Network

- Limited Access Highways
- State Route / U.S. Highway
- Other Roads

Other Layers

- Cherokee County Boundary
- Other County Boundaries
- City Limits (Within Cherokee County)
- Other City Limits
- Lakes
- Railroads
- Rivers

Source: GDOT, and Carter & Burgess, Inc.

This map is intended for planning purposes only.

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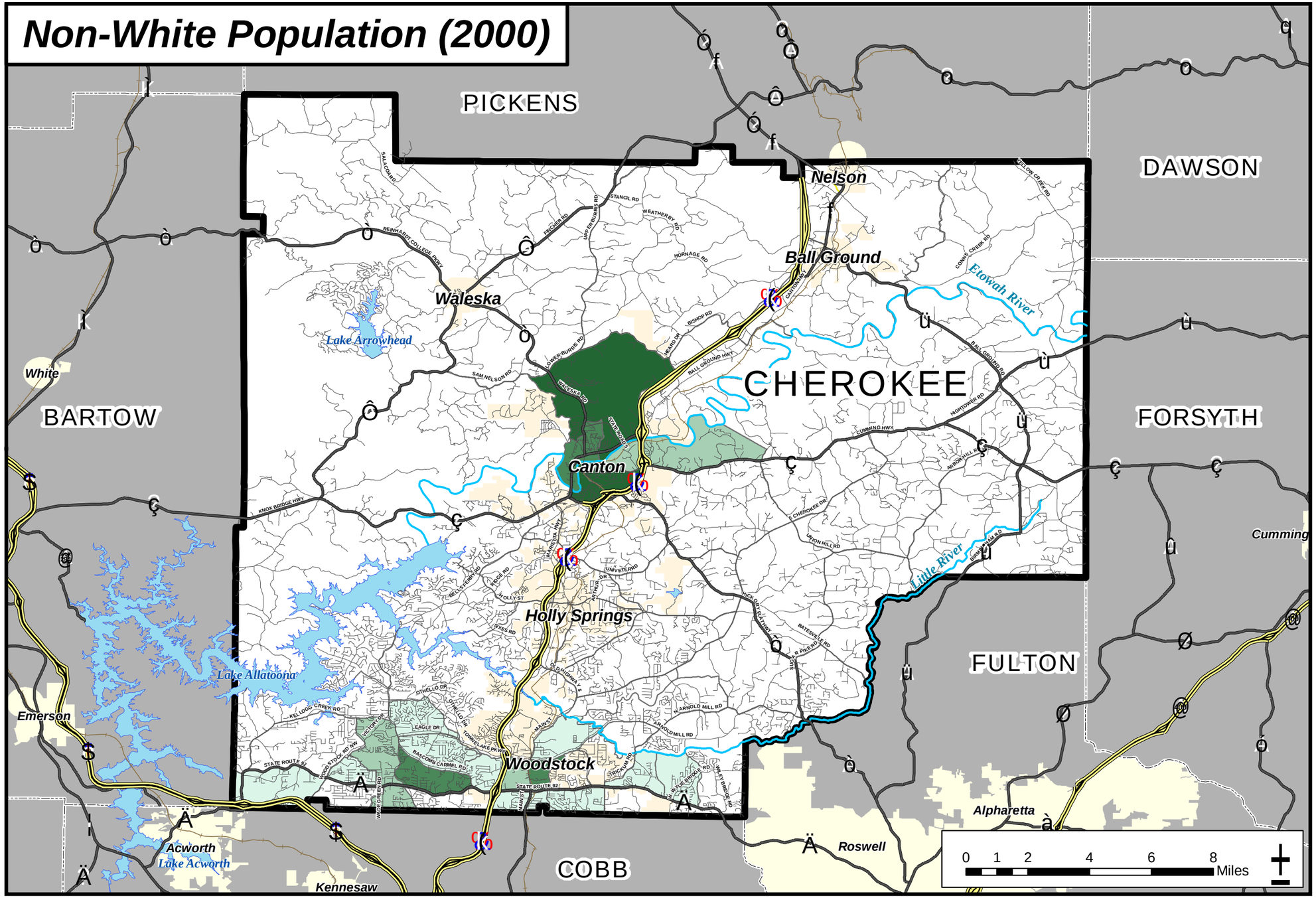
The proportion of non-white persons in Cherokee (7.7 percent) is far less than the region (41.1 percent) and the state (34.9 percent). Of those in Cherokee who consider themselves one race, 2.5 percent identified themselves as African-American, 0.8 percent as Asian, and 4.3 percent as "other". 5.4 percent of the population, of all races, considered themselves Hispanic in origin.

Proportionally, there are fewer persons below poverty in Cherokee (5.3 percent) than the region (9.5 percent) or the state (13.0 percent). Cherokee's 65 and over population of 6.6 percent is only slightly lower than the region (7.3 percent) and the state (9.3 percent). The greatest concentration of persons age 65 and older is in the southeast portion of the county (6.8 percent). Fewer households in Cherokee are without access to vehicles (2.9 percent) than either the region (7.7 percent) or the state (8.3 percent), which correlates with the large number of workers who commute to employment in other counties in the Atlanta Region and the minimal availability of public transit to service those destinations.

Given the projected increase in population over the next 30 years, these segments of the population can also be expected to increase. Figures 3-2 through 3-5 show the distribution of non-white persons, persons below poverty, persons age 65 and older, and households without vehicles, respectively, in Cherokee.

Cherokee County Comprehensive Transportation Plan

Non-White Population (2000)



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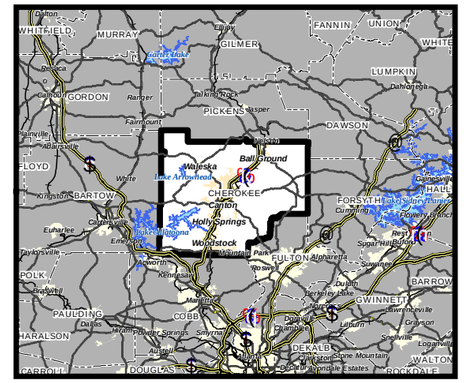

Figure 3-2

Legend

Distribution of Non-White Population by Census Block Group (2000)

- 34.9 - 42.8%
- 26.9 - 34.8%
- 18.9 - 26.8%
- 10.9 - 18.8%
- Below Cherokee County Average (10.8%)

Road Network

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- Other Roads

Other Layers

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- Lakes
- Railroads
- Rivers

Source: U.S. Census (2000), GDOT, and Carter & Burgess, Inc.

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Cherokee County Comprehensive Transportation Plan

Population Below Poverty Level (2000)

PICKENS
DAWSON
BARTOW
CHEROKEE
FORSYTH
FULTON
COBB
Nelson
Ball Ground
Waleska
Canton
Holly Springs
Woodstock
Alpharetta
Roswell
Acworth
Kennesaw
Emerson
White
Cumming
Lake Arrowhead
Lake Allatoona
Lake Acworth
Etowah River
Little River
REINHARDT COLLEGE PKWY
SHALLOWFORD
FINCHER RD
UPPER BURRIS RD
STANCIL RD
WEATHERBY RD
HORNAGE RD
CANTON HWY
BISHOP RD
MEARD DR
BALL GROUND HWY
LOWER BURRIS RD
SAM NELSON RD
WALESKA RD
STATE ROUTE 5
KNOX BRIDGE HWY
MARIETTA HWY
UNIVETE RD
HOLLY ST
BELLS FERRY RD
RIDGE RD
SYKES RD
OTHELLO DR
KELLOGG CREEK RD
PECTOR DR
EAGLE DR
TOWN LAKE PKWY
MAIN ST
WOODSTOCK RD NW
RASCOMB CARMEL RD
WADE GABLE RD
STATE ROUTE 92
STRICKLAND RD
W BUTLER BRIDGE RD
E BUTLER BRIDGE RD
N ARNOLD MILL RD
ARNOLD MILL RD
CUMMING HWY
HIGHTOWER RD
ARBOR HILL RD
E CHEROKEE DR
UNION HILL RD
BIRMINGHAM RD
BATESVILLE RD
R PIKE RD
CONNS CREEK RD
YELLOW CR FERRY RD
BALL GROUND RD

***NOTE: U.S. Census (2000) defines an individual to be below the poverty level when his/her annual income is $8,501 or less.**

0 1 2 4 6 8 Miles

Regional Inset

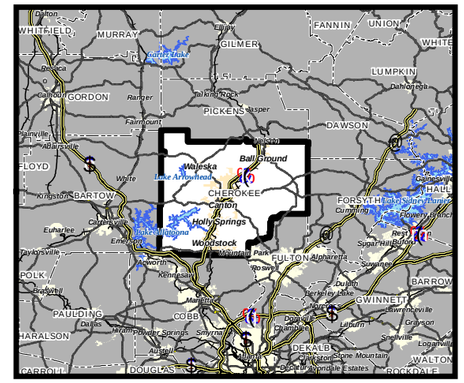

Figure 3-3

Legend

Distribution of Population Below Poverty Level by Census Block Group (2000)*

- 14.4 - 17.1%
- 11.6 - 14.3%
- 8.8 - 11.5%
- 6.0 - 8.7%
- Below Cherokee County Average (5.9%)

Road Network

- Limited Access Highways
- State Route / U.S. Highway
- Other Roads

Other Layers

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- Other County Boundaries
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- Other City Limits
- Lakes
- Railroads
- Rivers

Source: U.S. Census (2000), GDOT, and Carter & Burgess, Inc.

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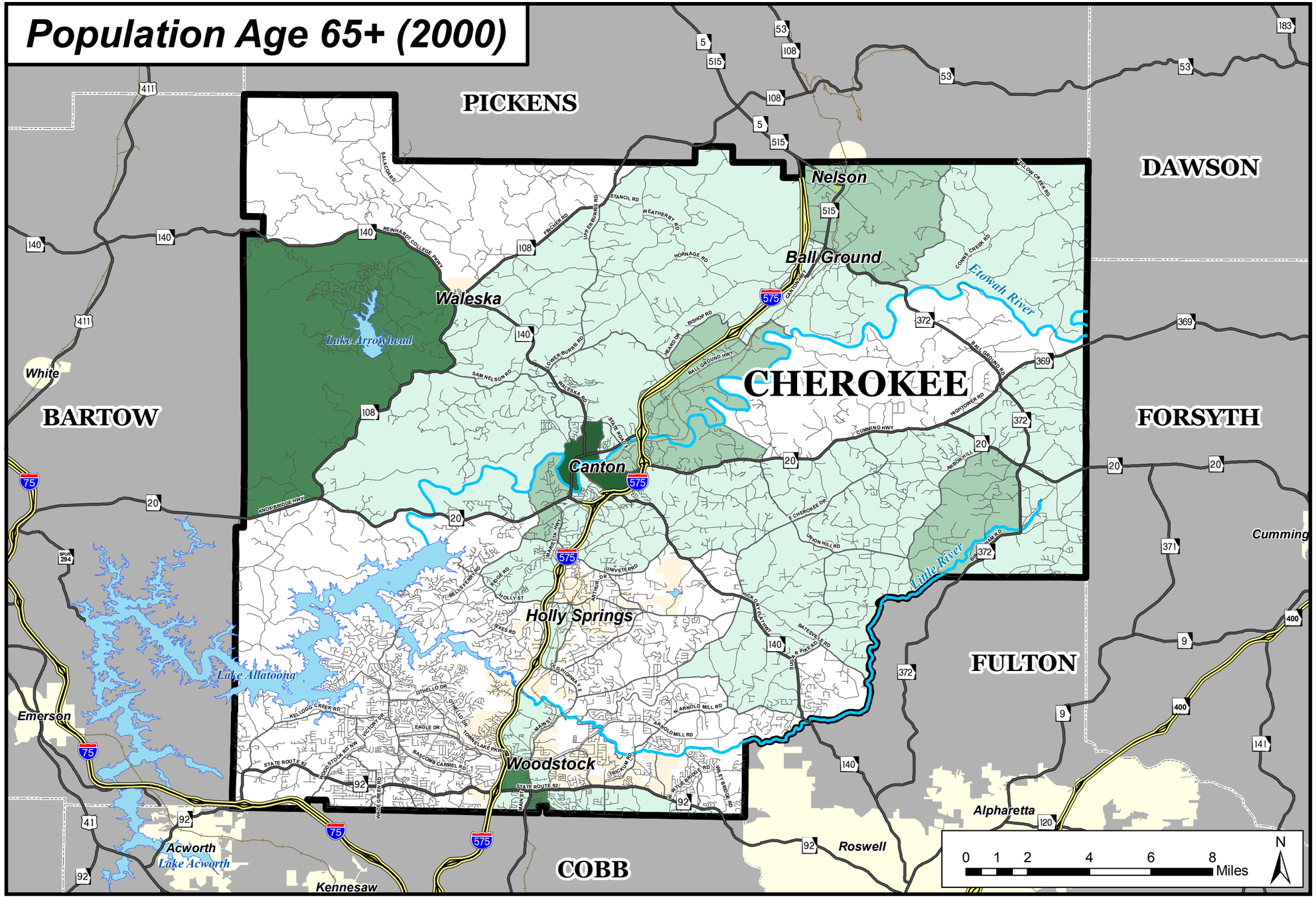
Cherokee County Comprehensive Transportation Plan

Population Age 65+ (2000)



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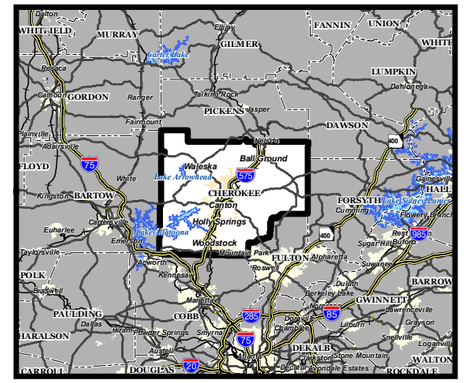

Figure 3-4

Legend

Distribution of Population 65+ by Census Block Group (2000)

- 17.5 - 20.7%
- 14.2 - 17.4%
- 10.9 - 14.1%
- 7.6 - 10.8%
- Below Cherokee County Average (7.5%)

Road Network

- Limited Access Highways
- State Route / U.S. Highway
- Other Roads

Other Layers

- Cherokee County Boundary
- Other County Boundaries
- City Limits (Within Cherokee County)
- Other City Limits
- Lakes
- Railroads
- Rivers

Source: U.S. Census (2000), GDOT, and Carter & Burgess, Inc.

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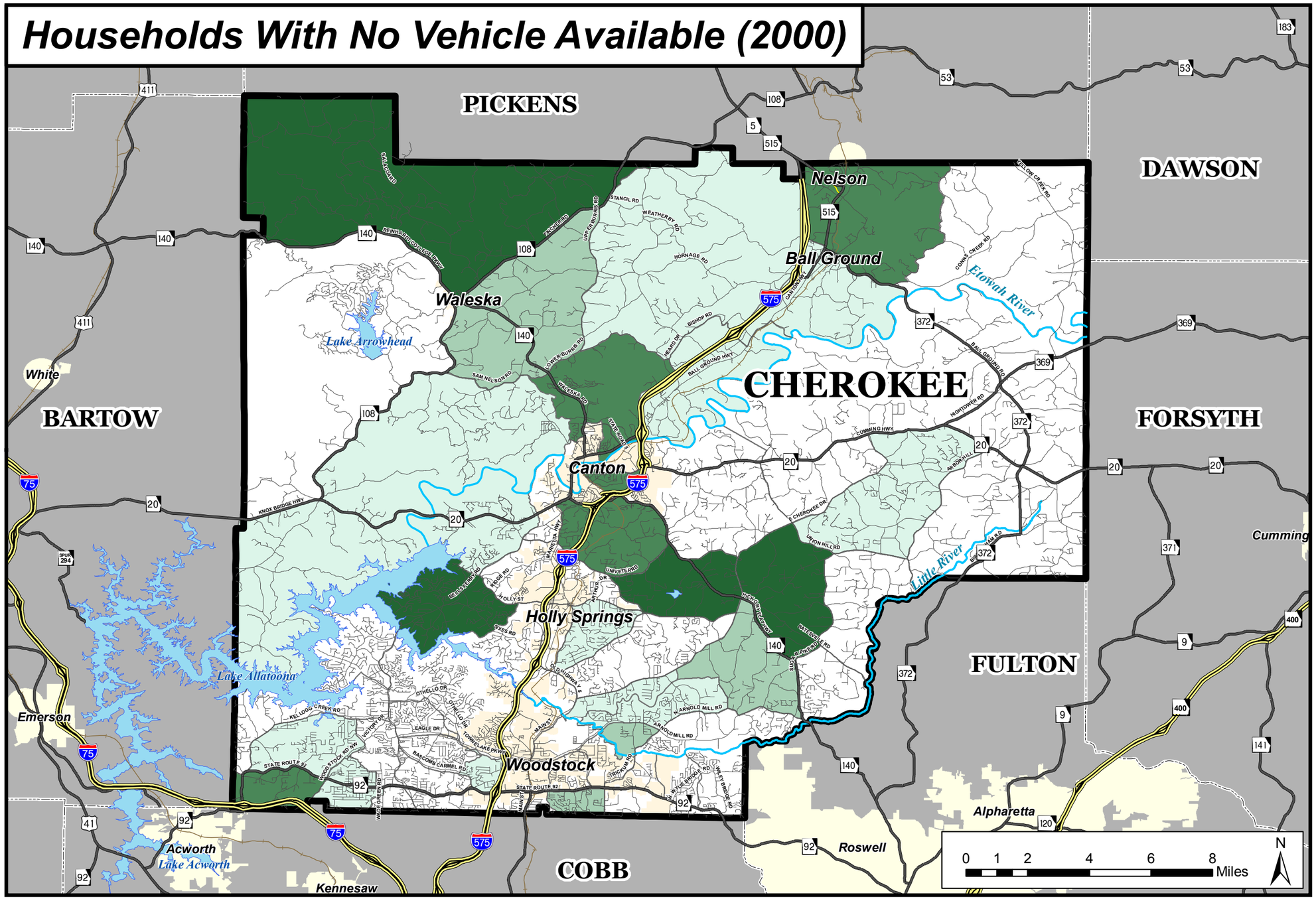
Cherokee County Comprehensive Transportation Plan

Households With No Vehicle Available (2000)



Regional Inset

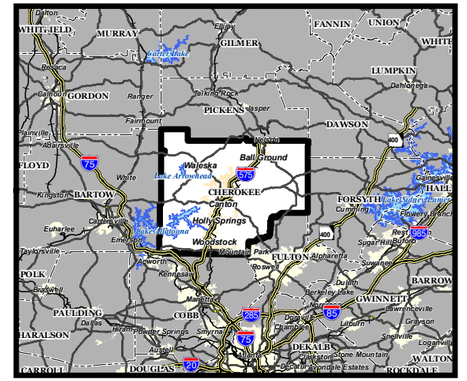


Figure 3-5

Legend

Distribution of Households With No Vehicle Available by Census Block Group (2000)

- 6.7 - 8.1%
- 5.2 - 6.6%
- 3.7 - 5.1%
- 2.2 - 3.6%
- Below Cherokee County Average (2.1%)

Road Network

- Limited Access Highways
- State Route / U.S. Highway
- Other Roads

Other Layers

- Cherokee County Boundary
- Other County Boundaries
- City Limits (Within Cherokee County)
- Other City Limits
- Lakes
- Railroads
- Rivers

Source: U.S. Census (2000), GDOT, and Carter & Burgess, Inc.

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Population Trends

Addressing transportation needs requires understanding area growth patterns and distribution. Identifying high growth versus stable areas helps to determine what kinds of transportation investment may best serve the community. Developing growth areas often require new infrastructure whereas established areas may need maintenance or enhancement investments. Understanding population distribution is also important since transportation needs vary by conditions, from highly developed urban settings to low density residential environments.

Between 1970 and 2000, Cherokee County grew nearly fivefold in population, from 31,059 to 141,903 (see Table 3-2). The greatest growth in recent history occurred between 1980 and 1990 when Cherokee grew by 76 percent (adding 39,301 persons). Since 1970, the county's rate of growth has been relatively high as compared to the Atlanta Region and the state.

Table 3-2 Historic Population Change, 1970 to 2000

Geographic Area	Total Population				Percent Change		
	1970	1980	1990	2000	1970-1980	1980-1990	1990-2000
Cherokee	31,059	51,699	91,000	141,903	66.5%	76.0%	55.9%
10-County ARC Region	1,500,823	1,896,182	2,557,800	3,429,379	26.3%	34.9%	34.1%
Georgia	4,587,930	5,462,989	6,478,149	8,186,453	19.1%	18.6%	26.4%

Source: Atlanta Regional Commission

Cherokee County's 2005 population is estimated at 183,449. By 2030, Cherokee County is expected to have 417,654 residents, a growth rate of nearly 128 percent.[1] Most of the growth will be focused around I-575, with the majority around the City of Canton. Emerging and existing activity centers in the county include the Canton, Ball Ground, and Woodstock areas. Table 3-3 depicts Cherokee County's projected growth through 2030.

[1] These numbers correspond to the "medium" population forecast from the Community Assessment document of the Comprehensive Land Use Plan Update, selected by the County as the likeliest scenario for future growth. Additional "low" and "high" growth alternatives were created, with the "low" forecast corresponding to ARC population forecasts in Metro Atlanta's current adopted long-term Regional Transportation Plan, *Mobility 2030*. The ARC "low" forecast was undertaken in 2005 based on a mixed econometric and cohort component model that evaluates employment and population growth together. The "medium" and "high" forecasts were created using trend line regression based on historic population growth from 1970 to 2004. The primary difference between the "low" and "medium" alternatives is the percentage of future development predicted to occur in unincorporated areas of the County. The *Mobility 2030* "low" forecast assigns a higher percentage of Cherokee's future population growth to cities with existing infrastructure, whereas the "medium" alternative allows for more growth in unincorporated areas throughout the County, thus increasing the total number of Cherokee residents beyond the ARC forecast. In order to maintain continuity with the Comprehensive Land Use Plan, "medium" forecast values are used in the text throughout this document. To satisfy ARC requirements, *Mobility 2030* forecasts are also located in footnotes, where applicable. Thus, using the "low" ARC forecast, the footnoted sentence above would read "Cherokee County's 2005 population was estimated to be 179,653. By 2030, Cherokee County is expected to have 362,414 residents, a growth rate of nearly 102 percent." A full technical analysis of population and employment projections is located in the Appendix to the Community Assessment.

Table 3-3 Population Projections to 2030 for Cherokee County

Geographic Area		Year						
		2000	2005	2010	2015	2020	2025	2030
Cherokee County	Population	143,811	183,449	228,675	277,228	326,589	374,238	417,654
	Households	49,495	65,209	82,501	100,912	119,191	136,046	150,222
10-County ARC Region	Population	3,429,379	3,813,709	4,038,777	4,311,483	4,591,877	4,886,473	5,261,534
	Households	1,262,401	1,421,506	1,497,636	1,627,334	1,757,524	1,892,715	2,047,169
Georgia	Population	8,186,453	8,868,675	9,550,897	10,233,118	10,915,340	11,597,562	12,279,784

Source: Community Assessment, Atlanta Regional Commission, US Census

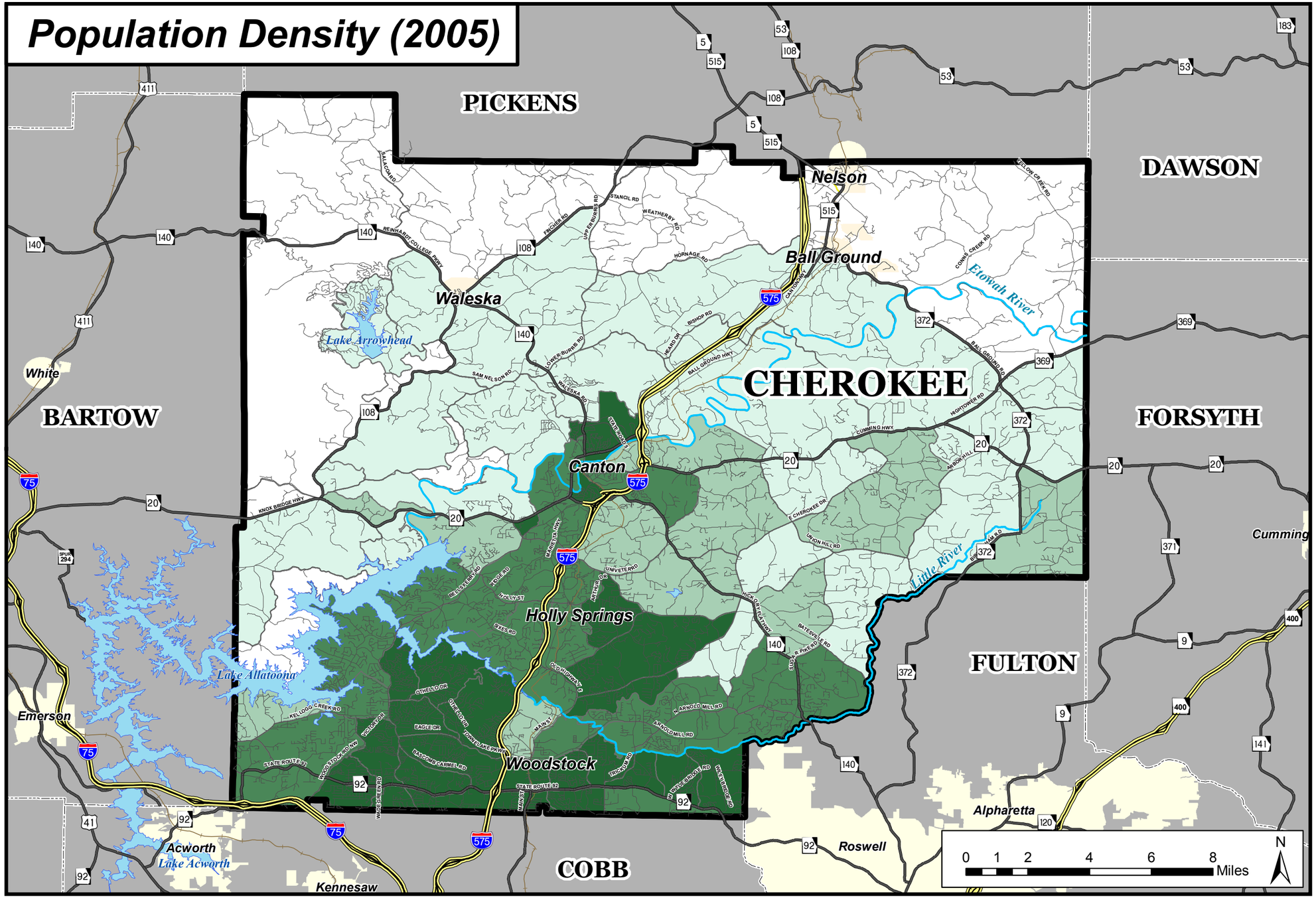
As a quickly developing county, Cherokee must strive to implement needed infrastructure while maintaining current facilities and activity centers. As growth occurs, there is a need for new development strategies such as overlay districts and other urban design strategies.

As indicated in Figure 3-6, the most dense areas of Cherokee County are the southern portion and along the I-575 corridor. The population density currently exceeds 1,000 people per square mile in some areas, particularly near the cities of Woodstock and Holly Springs as well as in the southeastern corner of the county. Canton also has a density that reaches above 1,000 people per square mile. Growth in the northern portion of the county has increased densities from less than 100 people per square mile to between 100 and 250 people per square mile. These areas are expected to become increasingly dense by 2030.

Cherokee's population increased approximately 28 percent between 2000 and 2005, growing from 143,811 in 2000 to 183,449 in 2005. Projecting this data, the US Census Bureau estimates a 2010 Cherokee population of 228,675 people, over three times the 17.2 percent growth rate expected to be experienced by the state as a whole. The county's population is expected to continue to increase significantly through 2030. Figure 3-7 illustrates forecast population distribution for 2030. The 2000 population density of 0.51 persons per acre is expected to increase by 190 percent to 1.48 persons per acre by 2030.

Cherokee County Comprehensive Transportation Plan

Population Density (2005)



Regional Inset

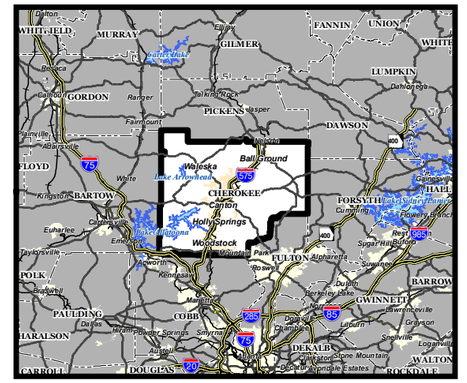


Figure 3-6

Legend

Population Density (Population per Square Mile) by TAZ - 2005

- 1,001 and Above
- 501 - 1,000
- 251 - 500
- 101 - 250
- 100 and Below

Road Network

- Limited Access Highways
- State Route / U.S. Highway
- Other Roads

Other Layers

- Cherokee County Boundary
- Other County Boundaries
- City Limits (Within Cherokee County)
- Other City Limits
- Lakes
- Railroads
- Rivers

Source: ARC, Charles River Associates, and Carter & Burgess, Inc.

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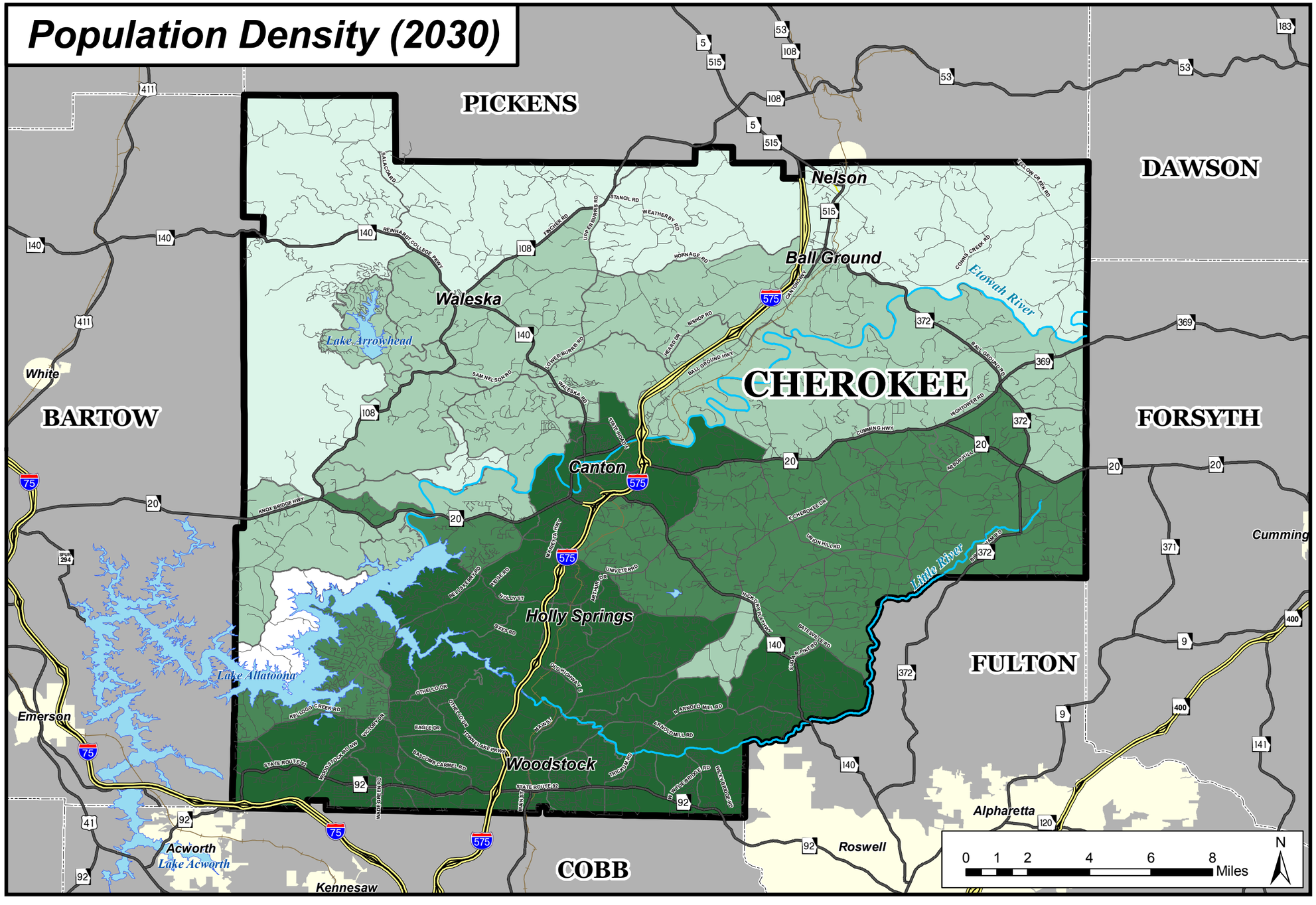
Cherokee County Comprehensive Transportation Plan

Population Density (2030)



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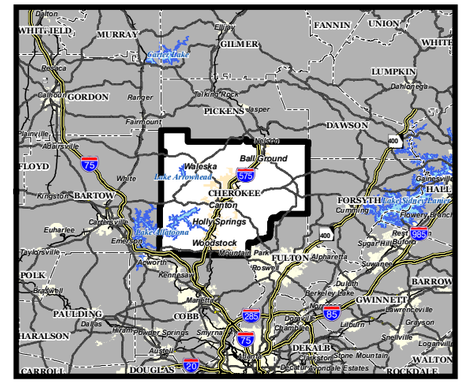

Figure 3-7

Legend

Population Density (Population per Square Mile) by TAZ - 2030

- 1,001 and Above
- 501 - 1,000
- 251 - 500
- 101 - 250
- 100 and Below

Road Network

- Limited Access Highways
- State Route / U.S. Highway
- Other Roads

Other Layers

- Cherokee County Boundary
- Other County Boundaries
- City Limits (Within Cherokee County)
- Other City Limits
- Lakes
- Railroads
- Rivers

Source: ARC, Charles River Associates, and Carter & Burgess, Inc.

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Employment Trends

Giving consideration to employment growth components is important in transportation planning because different types of employment categories typically generate different types and levels of trips. For example, areas with more retail trade generate more traffic than areas with finance, insurance and real estate. Similarly, growth in the transportation and wholesale trade categories indicates the increased importance of freight movement in a community. Employment growth generates work trips and creates commuting patterns, which can result in congestion in the transportation system.

According to data from the Georgia Department of Labor, the labor force in Cherokee County grew by 62.2 percent (31,887 workers) between 1990 and 2000, from 51,282 to 83,169. As Table 3-4 also indicates, the labor force experienced a 20.1 percent increase of 17,349 workers during the 5-year period from 2000 to 2005.

Table 3-4 Labor Force and Employment Status, 1990-2005

Year	Labor Force (# people)	Unemployment Rate
1990	51,282	3.9%
1995	64,541	3.4%
2000	83,169	2.5%
2005	100,518	4.0%

Source: Georgia Department of Labor

A comparison between the county's most recent annual employment data (2005) and the prior decade (1995) is shown in Table 3-5. The distribution of employment by industry type indicates that Cherokee's greatest share of employment is in service producing industries, which grew from 55.4 percent of all employment in 1995 to 63.2 percent in 2005. Growth in the service producing industries has been exhibited in Professional, Management, Legal, Information & Educational Services, Health Care & Social Services, and Finance, Insurance & Real Estate categories. Government employment (local, state and federal) decreased slightly, from 17.9 percent in 1995 to 15.9 percent in 2005, as did employment in the goods producing industries, dropping from 26.5 percent in 1995 to 20.9 percent in 2005, primarily in manufacturing. The fact that the number of employed residents of Cherokee County is more than twice the number of jobs available in the county indicates that most residents are employed elsewhere.

Table 3-5 Cherokee County Industry Mix, 1995 and 2005

Employment Type[1]	1995		2005	
	Average Monthly Employment	Percent[2]	Average Monthly Employment	Percent[2]
Goods Producing Industries	**~ 6,150**	**26.5%**	**8,948**	**20.9%**
Agricultural, Forestry, Fishing, & Hunting	553	2.4%	107	0.2%
Mining	*	*	63	0.1%
Construction	2,083	9.0%	4,260	9.9%
Manufacturing	3,453	14.9%	4,518	10.5%
Service Producing Industries	**12,858**	**55.4%**	**27,079**	**63.2%**
Wholesale Trade	1,468	6.3%	1,949	4.5%
Retail Trade	5,611	24.2%	7,272	17.0%
Transportation, Communication & Utilities	918	4.0%	1,136	2.7%
Finance, Insurance & Real Estate	954	4.1%	2,057	4.8%
Professional, Management, Legal, Information & Educational Services[3]	1,611	6.9%	4,698	11.0%
Health Care & Social Services	1,354	5.8%	3,380	7.9%
Other Services	942	4.1%	6,588	15.4%
Unclassified	*	*	**53**	**0.1%**
Government	**4,157**	**17.9%**	**6,807**	**15.9%**
TOTAL	**23,208**	**100%**	**42,866**	**100%**

Source: Georgia Department of Labor

[1]Note: Classification of employment changed between 1995 and 2005 from Standard Industrial Classification (SIC) to the North American Industrial Classification System (NAICS). Some categories are not directly comparable, particularly in the services industries.

[2]Due to rounding, percentages may not total precisely 100.0%.

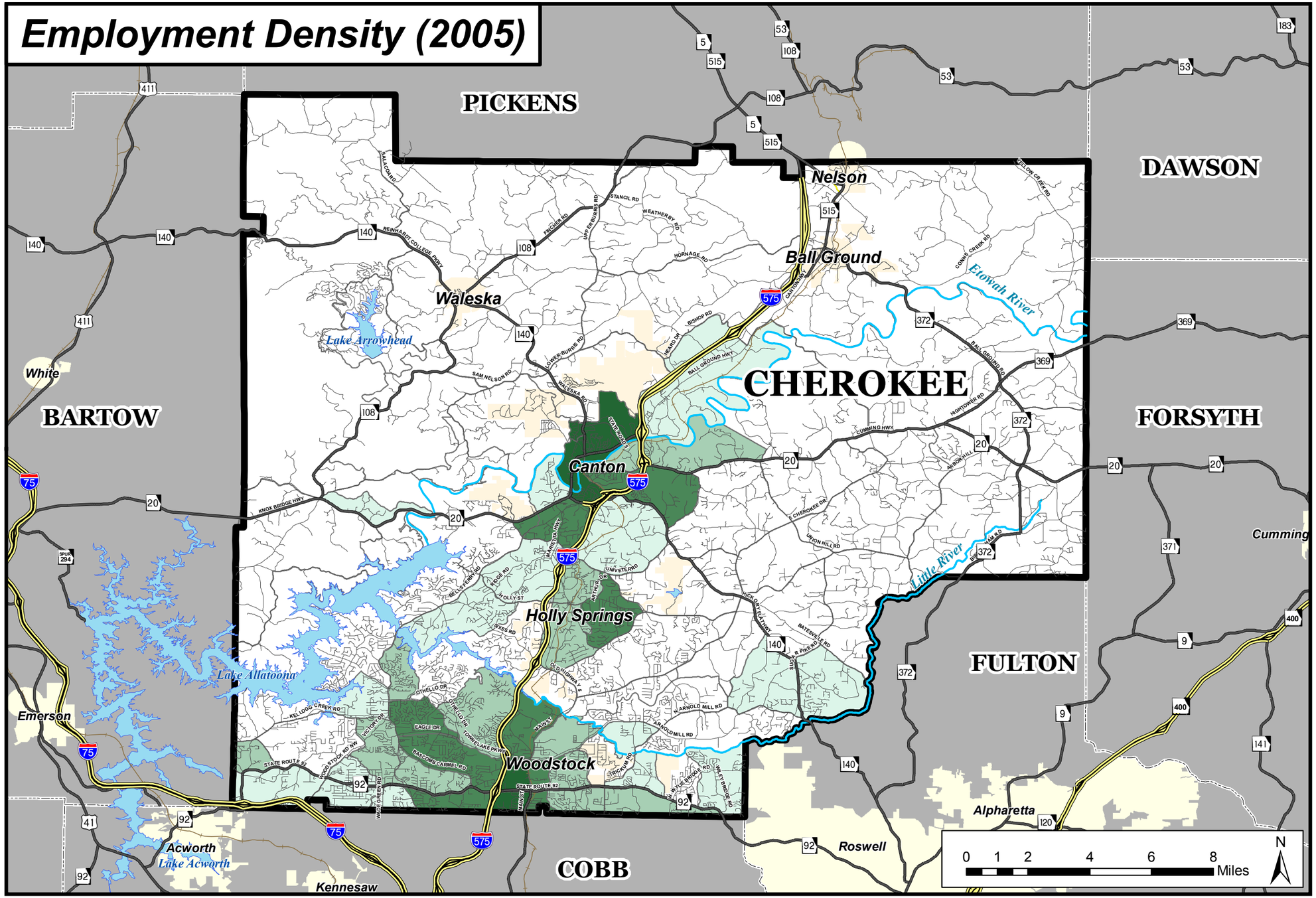
[3]Legal services was a separate category in 1995; Educational services data was not available for 1995; Information services is a category new for NAICS.

* Confidential data relating to individual employers, which cannot be released.

Existing and future employment distribution is an important consideration since workplaces serve as a starting or ending point for many vehicular trips, including home-to-work trips, school trips, shopping trips and medical trips. Existing and future employment density is shown in Figures 3-8 and 3-9, respectively.

Cherokee County Comprehensive Transportation Plan

Employment Density (2005)



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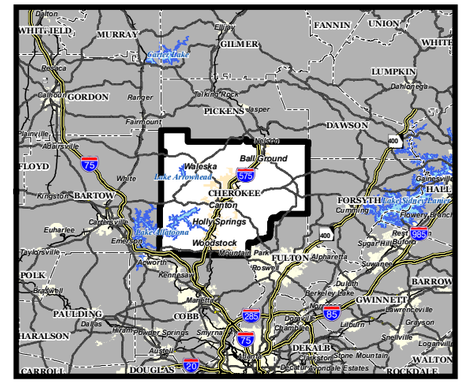

Figure 3-8

Legend

Employment Density (Persons Employed per Square Mile) by TAZ - 2005

- 1,001 and Above
- 501 - 1,000
- 251 - 500
- 101 - 250
- 100 and Below

Road Network

- Limited Access Highways
- State Route / U.S. Highway
- Other Roads

Other Layers

- Cherokee County Boundary
- Other County Boundaries
- City Limits (Within Cherokee County)
- Other City Limits
- Lakes
- Railroads
- Rivers

Source: ARC, Charles River Associates, and Carter & Burgess, Inc.

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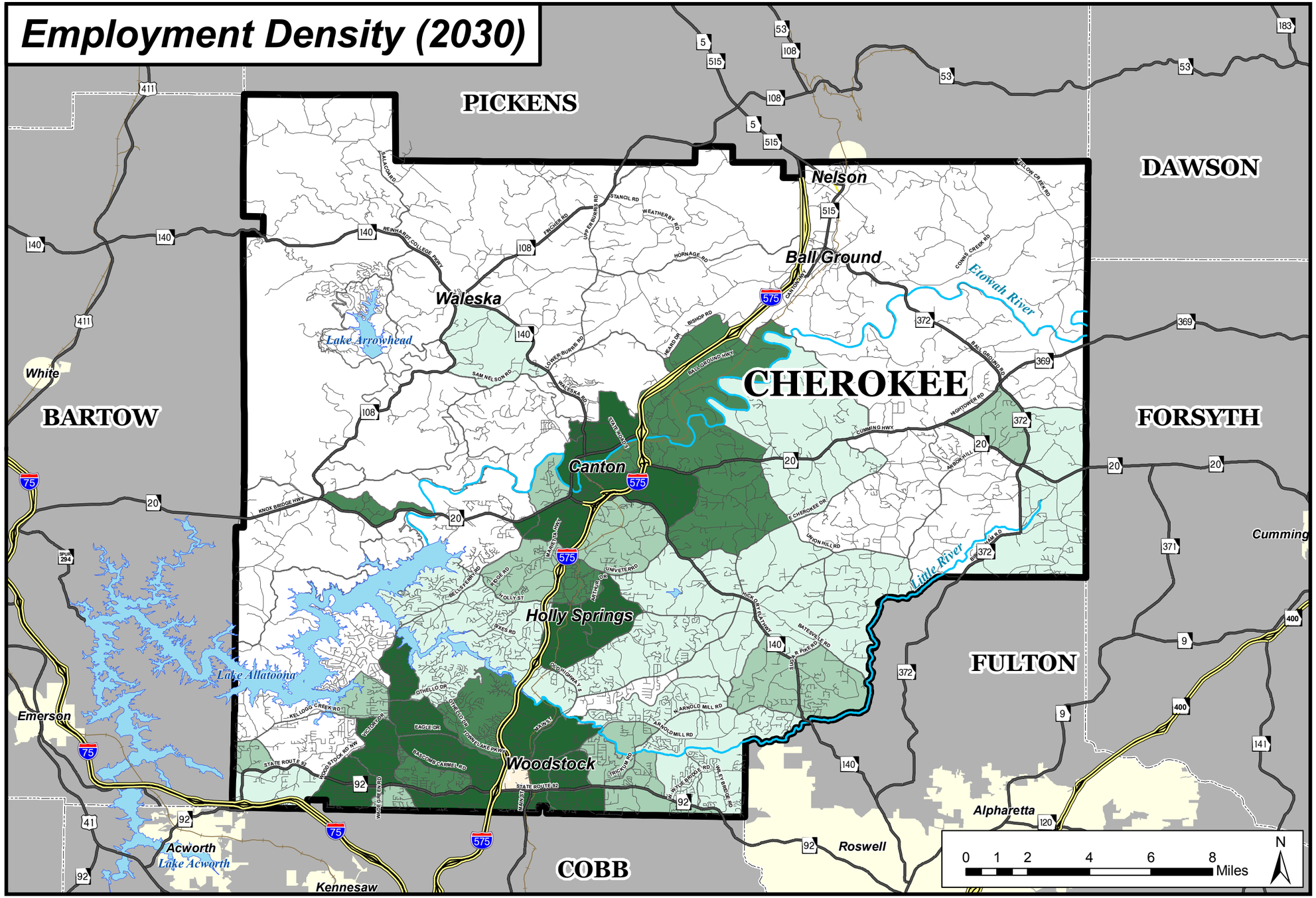
Cherokee County Comprehensive Transportation Plan

Employment Density (2030)



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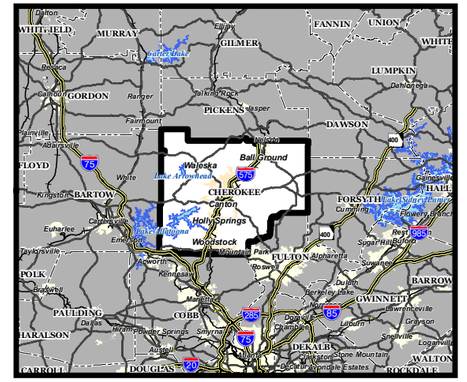

Figure 3-9

Legend

Employment Density (Persons Employed per Square Mile) by TAZ - 2030

- 1,001 and Above
- 501 - 1,000
- 251 - 500
- 101 - 250
- 100 and Below

Road Network

- Limited Access Highways
- State Route / U.S. Highway
- Other Roads

Other Layers

- Cherokee County Boundary
- Other County Boundaries
- City Limits (Within Cherokee County)
- Other City Limits
- Lakes
- Railroads
- Rivers

Source: ARC, Charles River Associates, and Carter & Burgess, Inc.

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Table 3-6 depicts employment forecasts through 2030. Existing 2005 employment is concentrated around Woodstock, Holly Springs and Canton, with a countywide average employment density of 0.22 jobs per acre in 2005. Employment is anticipated to grow by 81,809 people (about 130 percent) between 2005 and 2030. Employment density is expected to continue to increase in these areas, with an employment density in 2030 of 0.51 jobs per acre. Increased density is likely to be seen around Waleska and in the southeast portion of the county. [2]

Table 3-6 Employment Forecast by Industry Sector, 2030

	2005		2030	
Employment Type	**Average Monthly Employment[1]**	**Percent**	**Average Monthly Employment[1]**	**Percent**
Goods Producing Industries	**12,565**	**19.89%**	**27,831**	**19.20%**
Agricultural, Forestry, Fishing & Hunting	708	1.12%	709	0.49%
Mining	*	*	n/a	n/a
Construction	7,687	12.17%	20,599	14.21%
Manufacturing	4,170	6.60%	6,523	4.50%
Service Producing Industries	**42,965**	**68.02%**	**99,505**	**68.64%**
Wholesale Trade	2,867	4.54%	6,777	4.67%
Retail Trade	12,779	20.23%	26,169	18.05%
Transportation, Communication & Utilities	1,851	2.93%	5,337	3.68%
Finance, Insurance & Real Estate	6,036	9.56%	12,838	8.86%
All Services	19,432	30.77%	48,384	**33.37%**
Government	**7,632**	**12.08%**	**17,635**	**12.16%**
TOTAL	**63,162[2,3]**	**100%**	**144,971[2,3]**	**100%**
	Number	**Jobs per…**	**Number**	**Jobs per…**
Households	65,209	0.97	150,222	0.97
Population	183,449	0.34	417,654	0.35

Source: Community Assessment, Woods and Poole (Medium Forecast)
[1]Note: Includes 2nd jobs and part-time sole proprietors
[2]ARC Mobility 2030 estimates for total county employment are 35,750 and 108,978, for 2000 and 2030, respectively. This estimate is of workers and primary jobs only.
[3]Utilizing Woods and Poole methodology for the "low" ARC population forecast yields 61,848 jobs (including part-time and sole proprietors) in 2005, and 125,598 jobs in 2030.
* Confidential data relating to individual employers, which cannot be released.

[2] Alternative text with ARC estimates: Table 3-6 depicts employment forecasts through 2030. Existing 2005 employment is concentrated around Woodstock, Holly Springs and Canton, with a countywide average employment density of 0.2 jobs per acre in 2005. Employment is anticipated to grow by 85,938 people (about 240 percent) between 2000 and 2030. Employment density is expected to continue to increase in these areas, with an employment density in 2030 of 0.4 jobs per acre. Increased density is likely to be seen around Waleska and in the southeast portion of the county. [2]

One method of evaluating population and employment trends over time is to consider how many jobs per person exist in the area. Identifying the jobs to population balance is useful for transportation planning because it gives some indication of the types and level of commute trips into and out of a geographic area. Between 2000 and 2030, the ratio of jobs to population in Cherokee is expected to increase slightly from 0.34 in 2005 to 0.35 in 2030. Though more jobs will be located in Cherokee in the future as service-producing industries, especially, continue to develop, this low ratio indicates that a substantial portion of the population will continue commuting out of the county to work.

The counties of employment for Cherokee residents and the counties of residence for Cherokee workers are shown in Tables 3-7 and 3-8, respectively. As Table 3-7 indicates, the largest percentage of Cherokee residents were employed in Cherokee in 2000 (35.4 percent), followed by significant numbers in Cobb (25.5 percent) and Fulton (23.6 percent) counties. Table 3-8 indicates that a substantial majority of Cherokee workers were also residents of Cherokee in 2000 (64.5 percent). Cobb was the top county of origin for non-resident workers commuting into Cherokee with 12.9 percent, followed by Pickens with 5.4 percent and Bartow and Fulton with 2.8 percent each.

Table 3-7 County of Employment for Cherokee Residents, 2000

County of Work	2000	
	Number	Percent
Cherokee	26,239	35.4%
Cobb	18,911	25.5%
Fulton	17,494	23.6%
DeKalb	2,898	3.9%
Gwinnett	2,037	2.7%
Forsyth	1,961	2.7%
Other	4,452	6.3%
Total	73,992	100.0%

Source: US Census
Note: Due to rounding, percentages may not total precisely 100.0%.

Table 3-8 County of Residence for Persons Working in Cherokee, 2000

County of Residence	2000	
	Number	Percent
Cherokee	26,239	64.5%
Cobb	5,234	12.9%
Pickens	2,191	5.4%
Bartow	1,154	2.8%
Fulton	1,129	2.8%
Gwinnett	582	1.4%
Gilmer	527	1.3%
Paulding	459	1.1%
Other	3,196	7.9%
Total	40,711	100.0%

Source: US Census
Note: Due to rounding, percentages may not total precisely 100.0%.

Land Use

Land use is critical to determining future travel demand, and specific transportation system needs are identified through the consideration of existing and future land use circumstances. Prudent land use planning is also important to proactively impact future travel demand. Cherokee County's existing and proposed future land use (via population and employment numbers) was accommodated through the refinement and use of ARC's *Mobility 2030* travel demand model. The model's projections are based on future population, employment and household numbers for the horizon year of 2030.

Cherokee County has recently updated its Comprehensive Land Use Plan. Information generated as a part of that process as well as this CTP update has been used to inform each effort. An example of such in the CTP development process was taking future land use and population into account when determining need for different public transit services as well as appropriate freight routes through the county.

Cherokee County's Comprehensive Land Use Plan Update is depicted in Figure 3-10. Both Cherokee's land use plan and ARC's Unified Growth Policy Map (Figure 3-11) designate a large percentage of the county's land area as suburban neighborhoods and rural areas. Small nodes of "town center" type land use characterize the cities of Woodstock, Canton, Holly Springs, Ball Ground and Waleska. These maps also served as tools to analyze the recommended road widening projects. Overlaying both maps with the proposed projects offered insight on the relationship between these projects and the land uses that surround them. In most cases, roadway expansion projects were located in suburban areas. However, some of these improvements spanned rural sections of the County. These roads recommended for widening serve as regional roadway network links, connecting various towns and activity centers. Therefore, although local traffic on these roads may not justify the improvement, regional travel patterns prove the need for expansion.

Figure 3-10 Cherokee County Comprehensive Land Use Plan Update Map

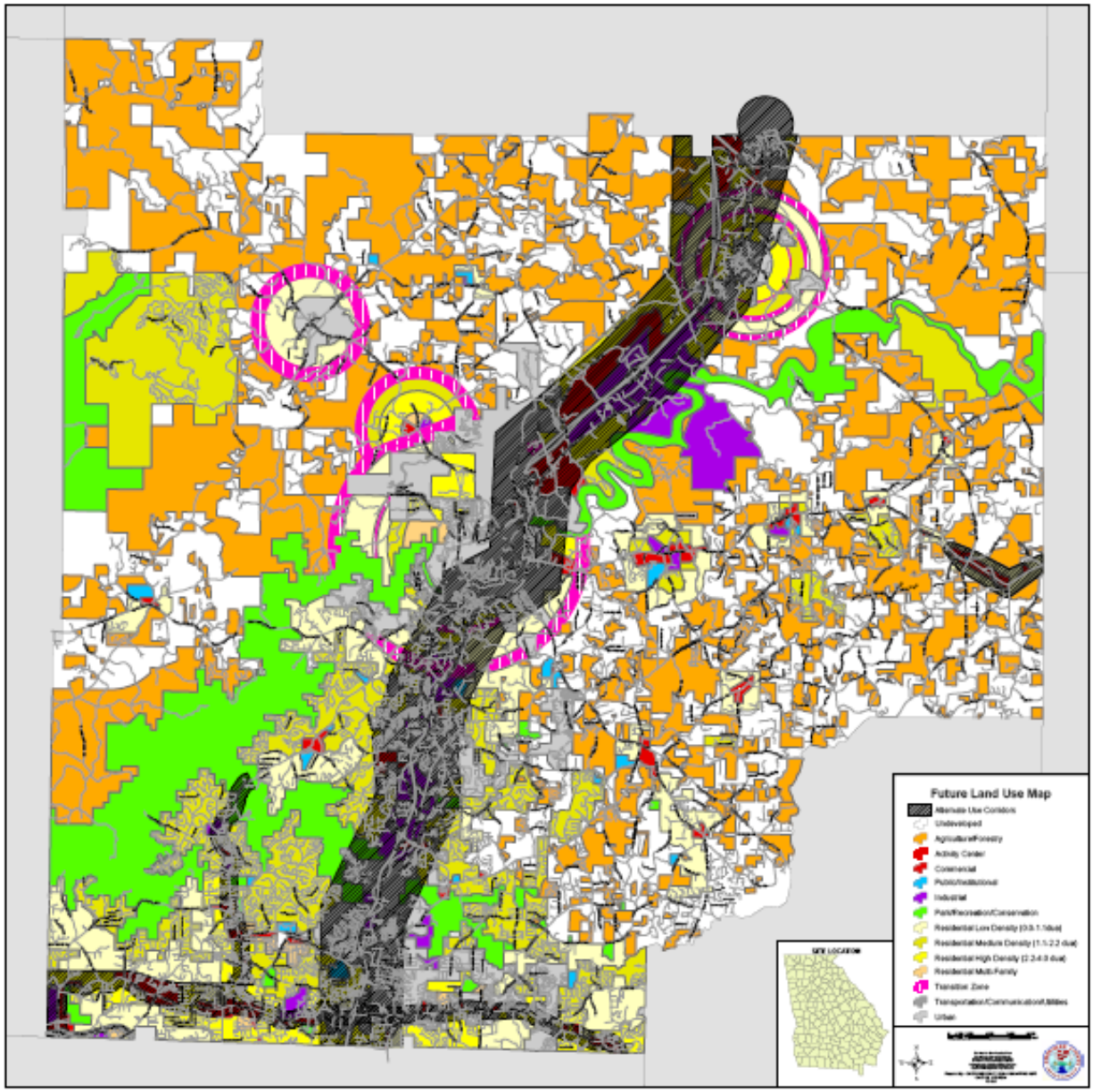
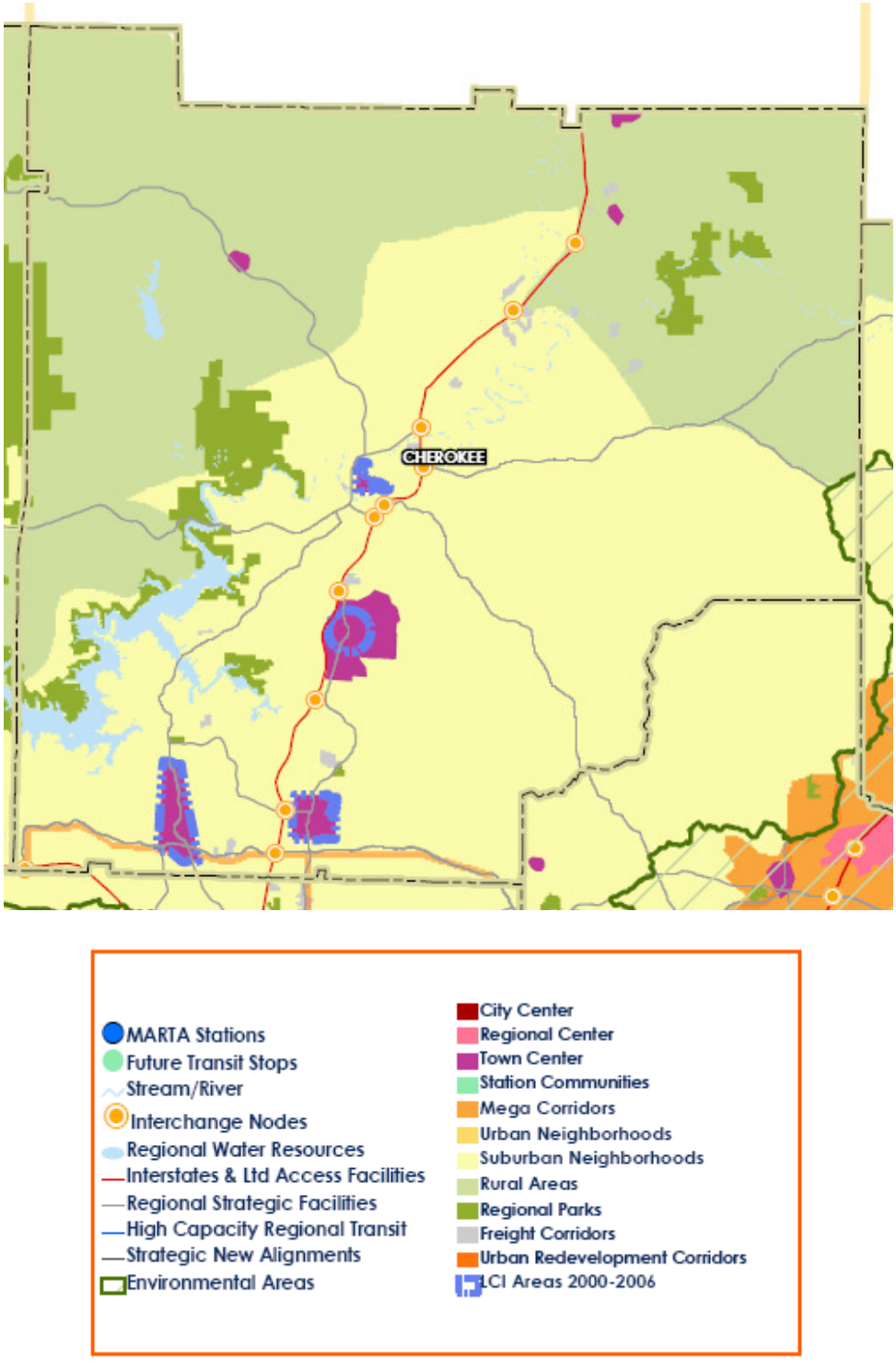


Figure 3-11 Cherokee County Land Use in ARC's Unified Growth Policy Map



Transportation

Roadways

The Georgia Department of Transportation (GDOT) is responsible for classifying all roads in the public road system by their geographic location in rural, small urban, or urban areas according to the character of service they are intended to provide. Functional classification was determined for each road in the network using GDOT's classification system as a means to identify service characteristics.

Classification is a necessary step toward assessing and evaluating the effectiveness of the roadway network. Individual roads depend on surrounding and intersecting roads to create a functioning network or transportation system. Functional classification assists in describing the existing and future road network by categorizing the role of various types of roads in the network. Classifications used and their major features are described below. Figure 3-12 shows Cherokee County roadways by functional classification.

Interstates – Defined as significant highways that feature limited access and continuous, high-speed movements for a wide variety of traffic types. Interstate 75 runs 2.4 miles in southwest Cherokee County, and Interstate 575 covers 23.61 miles, bisecting the county from north to south. Interstates make up 1.5 percent of the County's total centerline miles. The Average Annual Daily Traffic (AADT) on interstate roadways in Cherokee County averages 91,000 vehicles per roadway per day.

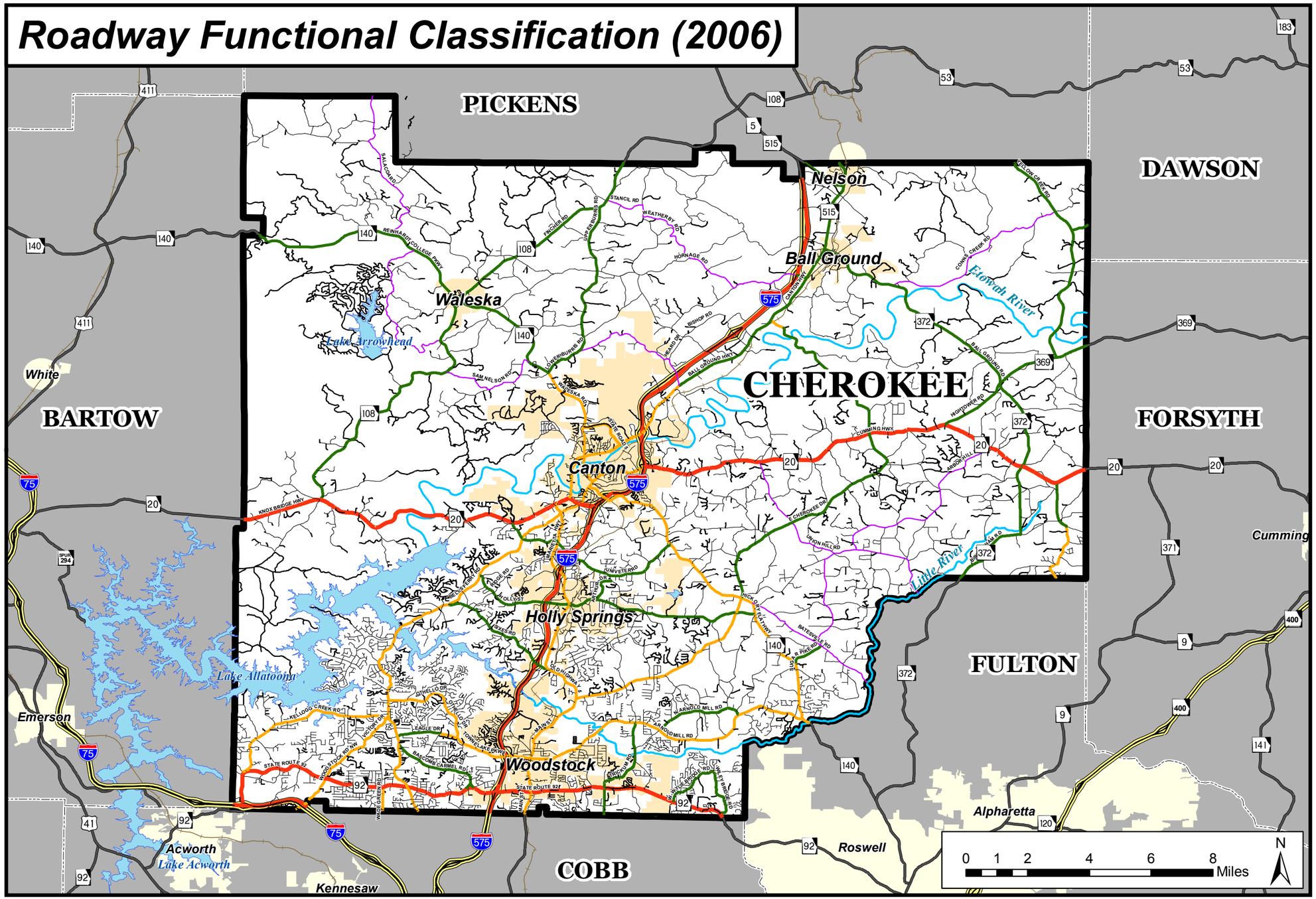
Arterials – Classified as major or minor, these roads connect activity centers and carry large volumes of traffic at moderate speeds. The arterial system in Cherokee County totals approximately 126.1 miles, or 7.25 percent, of its total roadway miles. Examples of principle arterials in Cherokee County are SR 92 and SR 20. The AADT on arterial roadways in Cherokee County averages 14,424 vehicles per roadway per day.

Collectors – Typically allow access to activity centers from residential areas. Their purpose is to collect traffic from streets in residential and commercial areas and distribute it to the arterial system. The collector system in Cherokee County incorporates 158.2 miles, or 9.1 percent, of the total roadway system. The AADT on collector roadways in Cherokee County averages 4,749 vehicles.

Local Streets – Feed the collector system from low volume residential and commercial areas. Usually local streets are found in subdivisions and rural areas. There are 1,402.5 miles, or 80.66 percent, of roads classified as local in Cherokee County. The AADT on local roadways in Cherokee County averages 1,090 vehicles.

Cherokee County Comprehensive Transportation Plan

Roadway Functional Classification (2006)



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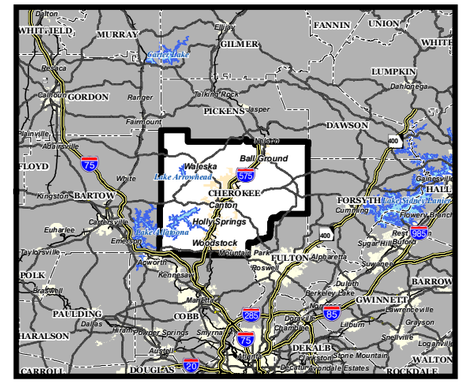

Figure 3-12

Legend

GDOT Roadway Functional Classification (2006)
- Principal Arterial
- Minor Arterial
- Major Collector
- Minor Collector
- Local

Road Network
- Limited Access Highways
- State Route / U.S. Highway
- Other Roads

Other Layers
- Cherokee County Boundary
- Other County Boundaries
- City Limits (Within Cherokee County)
- Other City Limits
- Lakes
- Railroads
- Rivers

Source: Cherokee County and Carter & Burgess, Inc.

This map is intended for planning purposes only.

March 2008

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National Highway System

The National Highway System (NHS) was established by the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991 to serve as a network of highways that could link together different modes of transportation such as major shipping ports, airports, intermodal facilities, and public transportation. The linking of these transportation systems allows the NHS to form a quality system important to the nation's economy, defense, and mobility. Interstate 575, I-75, and SR 92 are the only NHS routes in Cherokee County.

The advantage of NHS is that it encourages states to focus on a limited number of high priority routes and to concentrate on improving them with federal aid funds. At the same time, the states can incorporate design and construction improvements that address their traffic needs safely and efficiently. With NHS, states can choose from a range of improvements. They can make operational changes, such as implementing a program to locate and remove disabled vehicles that are impeding smooth traffic flow. States can employ available technological improvements, such as intelligent transportation systems (ITS), which will help reduce congestion and keep traffic moving without major roadway expansion. Federal NHS funds are apportioned to states based on mileage of principal arterials, vehicle miles traveled on arterials, and amounts of diesel fuel used on highways in the state.

Speed Limits and Number of Lanes

Posted speed limits throughout Cherokee County range from five miles per hour (mph) to 65 mph. Approximately 10 percent of roadway lane miles in Cherokee County are signed for 55 miles per hour (mph) or greater speed limit, 14 percent have a speed limit of 40 to 50 mph, 24 percent have speed limits from 30 to 35 mph, and 53 percent of roadways have a speed limit less than 30 mph.

Of the total lane miles of roadway in Cherokee County, 92.48 percent are two-lane roads while 3.58 percent are four-lane roads. The remaining 3.94 percent of roadways represent other various lane configurations.

Existing Traffic Volumes

GDOT prepares existing traffic volume field counts and reports annual average daily traffic counts throughout the county. Historic traffic count data was reviewed to determine what changes have occurred in the recent past. Traffic counts from 2005 were compared with counts from ten years prior in 1996. The highest traffic volume changes occurred on SR 108 between SR 20 and SR 140, on SR 20 near Forsyth County, and along SR 92 towards Fulton County. The range of growth has been from negative seven percent to 113 percent. The only drop in traffic volumes is found along SR 140 in northwest Canton. Overall, the greatest daily volumes are found on I-575 (between 29,200 and 85,110 vehicles) and on I-75 (116,000 vehicles). Table 3-9 summarizes various traffic volume changes throughout Cherokee County

Table 3-9: Cherokee County Traffic Volumes

Highway Station No.)	Count Location	1996 AADT	2005 AADT	Percent Change
I-75 (150)	Southwest Cherokee County	77,300	116,000	50%
SR 92 (72)	Southwest Cherokee County	15,200	15,280	1%
SR 92 (78)	West of Woodstock	23,100	33,200	44%
SR 92 (82)	East of Woodstock	23,800	33,950	43%
SR 92 (84)	Southeast Cherokee County	20,400	35,310	73%
I-575 (235)	Woodstock, north of SR 92	-0-	85,110	
SR 140 (114)	Southeast Cherokee County	9,900	13,830	40%
SR 20 (42)	Near Bartow County	7,600	9,930	31%
SR 20 (46)	West of Canton	8,800	12,680	44%
I-575 Bypass (40)	Canton, on I-575 Bypass	13,900	17,460	26%
I-575 (239)	Canton, South of I-575 Bypass	-0-	71,420	
I-575 (249)	Canton, North of I-575 Bypass	-0-	29,200	
SR 140 (104)	Canton, North of SR 5 BU	12,600	11,740	-7%
SR 20 (58)	East of Canton	12,700	17,790	40%
SR 20 (66)	Near Forsyth County	10,200	15,280	50%
SR 369 (128)	West of SR 372	5,500	7,740	41%
SR 369 (132)	East of SR 372, near Forsyth County	4,200	8,960	113%
SR 372 (140)	North of SR 369	Not avail	7,850	
SR 108 (86)	Between SR 20 and SR 140	900	1,790	99%
SR 140 (94)	Northeast of Waleska, near Bartow Co	Not avail	2,410	
SR 108 (92)	Northwest of Waleska, near Pickens Co	2,200	2,950	34%
I-575/SR 5 (241)	South of SR 372	-0-	57,910	
SR 5 BU (38)	North of Ball Ground	7,600	10,960	44%
SR 5 BU (40)	Near Pickens County	-0-	4,310	

Source: Georgia DOT Traffic Count Data

Park and Ride Lots

Park and ride lots are an important element of the region's transportation system, providing carpooling opportunities and express bus pick-up and drop-off points. There are currently two park and ride lots in Cherokee County. The first lot is a 173-space lot located in the City of Canton on SR 5 at Boling Park on the Etowah River. The second lot is located in the City of Woodstock on Towne Lake Parkway at the Woodstock Community Church. Both lots are serviced by GRTA Xpress Route #490.

Public Transportation

Cherokee County has a limited public transit system consisting of paratransit demand based service, fixed route service and commuter vanpools. Express commuter bus service is also provided to downtown Atlanta from Canton and Woodstock.

The City of Canton offers a free bus system. The system uses 5 buses with capacities ranging from 15-20 and a trolley with a capacity of 20+. The system has a monthly ridership of over 5,000 passengers on its two fixed routes. There is no fare charged to users.

In November of 2007, Cherokee County assumed operations of the City of Canton Transit System. The fixed route system within the City limits consists of 2 buses with capacities ranging from 15 to 20 riders. The system has a monthly ridershilp of over 5,000 passengers on two fixed routes.

CATS also offers a vanpool service that matches up citizens for daily vanpool commutes. The system is a public/private partnership between the County and Van Pool Services Incorporated (VPSI). There are currently eight CATS routes, mainly in the southern portion of the county. Six of the routes end in Midtown Atlanta, two in the Cumberland area, and one in Doraville. The system operates 15-passenger vans and each route is typically sponsored by a corporation.

In January 2007, a joint partnership was developed between the Georgia Regional Transportation Authority's (GRTA's) Xpress commuter coach service and Cherokee County's CATS to run express bus service from Canton and Woodstock to downtown and Midtown Atlanta. The Xpress route, Route 490, will be part of CATS under an agreement with the County Commission. Previous express bus services were provided by Cobb Community Transit (CCT) via Route 575. The renumbered Route 490 continues to pick up at Boling Park off Highway 5 in Canton and at Woodstock Community Church off Towne Lake Parkway in Woodstock before heading to stops at the Civic Center MARTA station, Prior Street at Alabama Street, and Mitchell Street at Capitol Square in Midtown/downtown Atlanta.

Service is provided Monday through Friday from Cherokee County at 5:45 AM, 6:15 AM and 6:45 AM, with return service from downtown Atlanta at 4:00 PM, 5:15 PM and 6:00 PM. Scheduled one-way travel times range from 1:20 to 1:50 between Canton and Capitol Square. Individual one-way and round-trip fares cost $3 and $5, respectively. Fare cards may also be purchased for $80 (31-day), $45 (20-ride) or $85 (40-ride).

Cherokee County is included in the GDOT Commuter Rail Study with Canton as one of the northern termini. In 2003, the Georgia Rail Consultants, sponsored by GDOT, conducted a feasibility study of implementing a 20-mile commuter rail line between Canton and Marietta.

Commute Characteristics

Examining the commuting patterns of residents helps to guide transportation improvement investments. Typically, a transportation plan addresses the movement of people and goods by each transportation mode within the area. In most urban areas, trips are accomplished via a system of highway, transit, rail, airport, pedestrian and bicycle facilities. The appropriate level of analysis for each mode is a function of the role it plays within the area.

Table 3-10 shows the work commute mode split from the U.S. Census. As compared to the state and the Atlanta region, Cherokee residents are less likely to use non-drive alone modes during their daily commute. More commuters drive alone for work trips in Cherokee (81.2 percent) than the region (76.4 percent) or the state (77.5 percent). Similarly, fewer commuters are carpooling (11.8 percent) in Cherokee than in the region (13.5 percent) or the state (14.5 percent). Only 0.4 percent of commuters taking transit to work versus 4.3 percent for the region and 2.3 percent statewide. Besides lack of availability, several factors contribute to the lack of transit use, including income, age, and other socioeconomic aspects of the population.

Table 3-10 Manner of Commute, 2000

Geographic Area	Workers Age 16 and Over	Drive Alone	Carpool	Public Transit	Walk	Other	Work at Home
Cherokee	74,075	81.2%	11.8%	0.4%	0.6%	1.0%	4.9%
ARC 10-County Region	1,733,135	76.4%	13.5%	4.3%	1.3%	1.0%	3.6%
Georgia	3,832,803	77.5%	14.5%	2.3%	1.7%	1.1%	2.8%

Source: U.S. Census 2000
Note: Due to rounding, percentages may not total precisely 100.0%

The average commute travel time for Cherokee residents grew from 31.4 minutes to 34.4 minutes between 1990 and 2000. While the statewide average commute time also grew during this period (from 22.7 minutes to 27.7 minutes), Cherokee's average exceeded the statewide average both years. As Table 3-11 shows, the proportion of Cherokee commuters with travel times less than 30 minutes decreased between 1990 and 2000, while commutes exceeding 60 minutes increased by the greatest proportion, from 13.2 percent to 16.4 percent. Countywide, the greatest percentage of commuters (23.8 percent) travel to work in 30 to 44 minutes. Increasing the employment base in the county and decreasing the distance that residents commute will help to improve travel times.

Table 3-11 Travel Time to Work for Cherokee Residents, 1990 and 2000

Year	Non-Home-Based Workers	<10 Minutes	10-19 Minutes	20-29 Minutes	30-44 Minutes	45-60 Minutes	>60 Minutes
1990	46,325	8.2%	20.4%	16.4%	24.6%	17.1%	13.2%
2000	70,459	7.9%	19.2%	16.3%	23.8%	16.5%	16.4%

Note: Due to rounding, percentages may not total precisely 100.0%.

Aviation

Cherokee County has one airport, 47A, located 6 miles northeast of the City of Canton. The airport has one asphalt runway, 04/22, that is 3,412 feet in length and 75 feet wide. The Airport has initiated planning to lengthen and expand the runway to 5,000 feet to accommodate business aircraft.

The facility is lighted for nighttime flight operations and has two instrument approaches for operations in less than favorable conditions. The nearby Canton Non-Directional Beacon (NDB) provides one instrument approach to Runway 04 while Global Positioning System, GPS, provides the other approach. Runway 22 has no instrument approach procedures. There are 106 aircraft based at 47A, 86 of which are single engine airplanes, 16 are multi-engine, 2 helicopters, and 2 ultralights. There is an average of 57 flights per day, 57% of which is general aviation. Fuel, both 100LL and Jet A, is also available on site from a Fixed Base Operator.

Rail and Over-the-Road Freight

Cherokee County has one major active freight rail line running in a northeast/southwest direction through the county. The Georgia Northeastern Rail Road parallels I-575 and passes through Holly Springs, Woodstock, and Ballground. The Georgia Rail Passenger Program (GRPP) envisions future commuter rail service between Atlanta and Canton along this line with a station stop in Holly Springs.

The Surface Transportation Assistance Act of 1982 (STAA) designated specific routes, based on recommendations by each state, to facilitate the movement of freight. The majority of these national network routes are interstate highways and other major roads. Georgia created STAA Access Routes to assist truck traffic in reaching terminals and delivery points more directly.

There are 2,425 miles of STAA routes in the state of Georgia. There are 29 miles in Cherokee County that are on the National STAA network including I-75, I-575, SR 20, and Lower Birmingham Road.

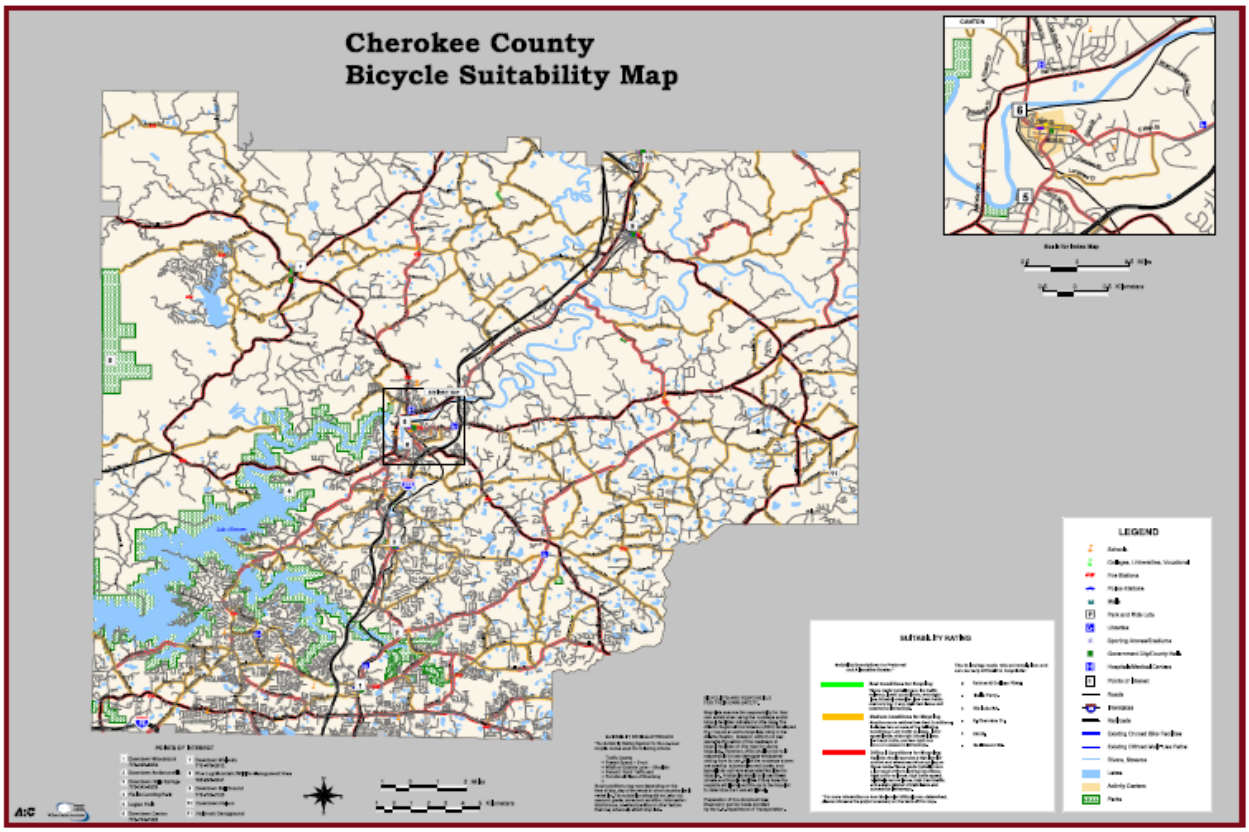
Bicycle and Pedestrian Facilities

ARC defines roadway suitability for bicycling using the following criteria:

- Traffic volume
- Travel speeds
- Functional classification
- Outside lane and shoulder width
- Percent truck traffic

Scores are assigned to roadways based on the criteria to determine the level of difficulty for bicycling on county roadways. Figure 3-15 shows the suitability of Cherokee County roadways for bicycling.

Figure 3-13 Bicycle Suitability Map (2003)

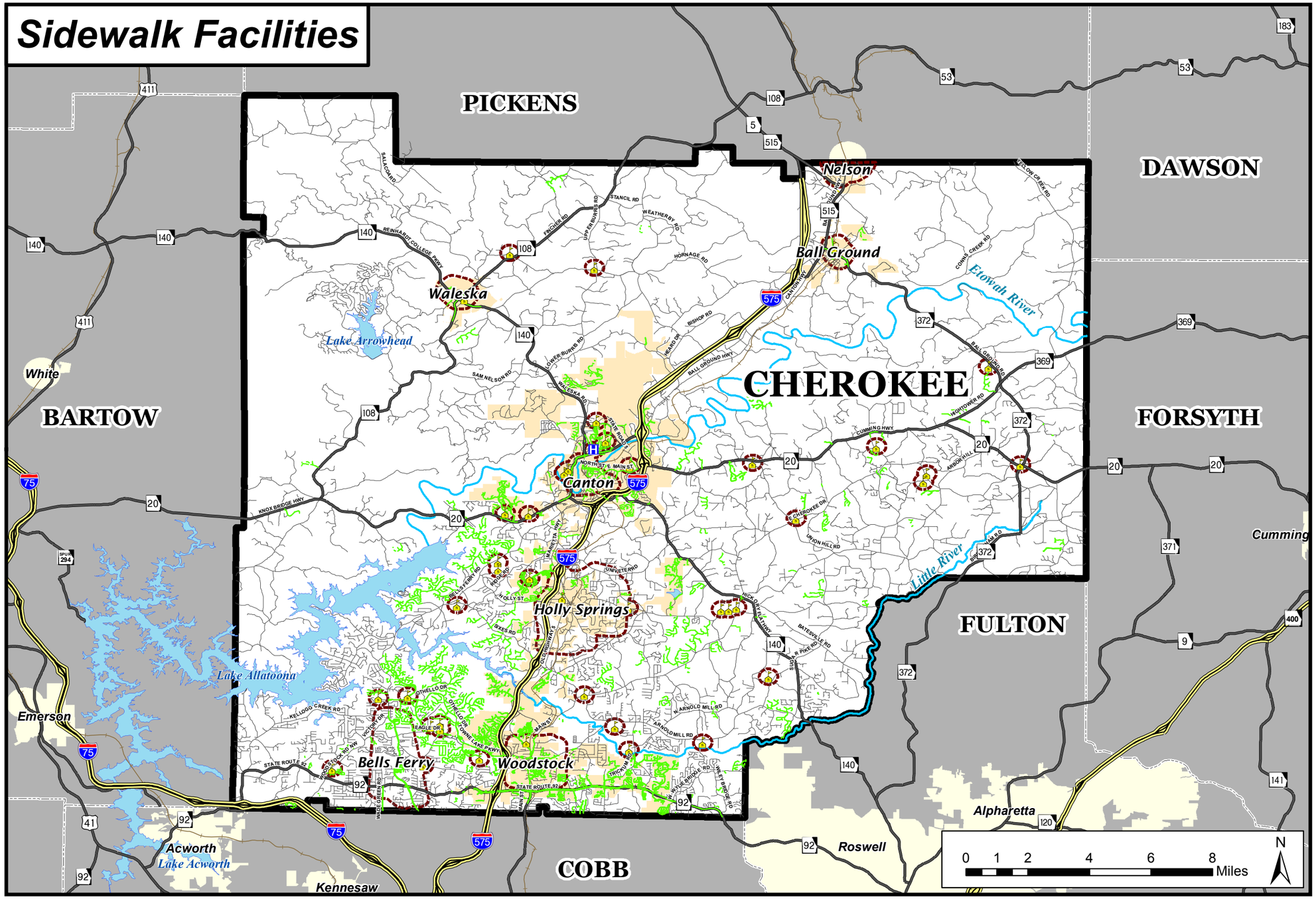


One state assigned bicycle facility passes though Cherokee County. State Bicycle Route 70 (Northern Crescent) runs along the southeast corner of the county, from Cobb County to Fulton County, following Trickum Road (CR 387), SR 92, Wiley Bridge Road (CR 398), and Cox Road (CR 396). No County facilities exist.

The inventory of existing pedestrian facilities (sidewalks) is depicted in Figure 3-14. Generally, the existing facilities are located in newer subdivisions east of Woodstock and sporadically within parts of the cities. There is a total of 337.51 linear miles of sidewalk in the County.

Cherokee County Comprehensive Transportation Plan

Sidewalk Facilities



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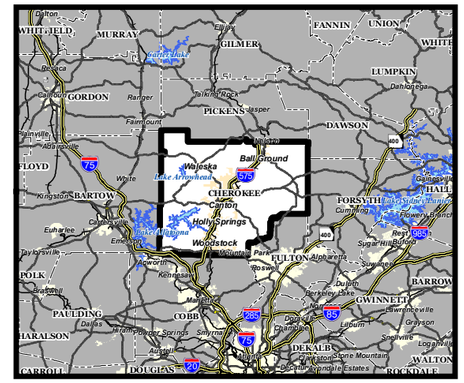

Figure 3-14

Legend

Existing Sidewalk Facilities
- Sidewalk

Pedestrian Traffic Generators
- School
- Hospital
- 1/4 Mile Buffer of ARC Activity Centers, Hospitals, and Schools

Road Network
- Limited Access Highways
- State Route / U.S. Highway
- Other Roads

Other Layers
- Cherokee County Boundary
- Other County Boundaries
- City Limits (Within Cherokee County)
- Other City Limits
- Lakes
- Railroads
- Rivers

Source: Cherokee County, and Carter & Burgess, Inc.

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4. Needs Analysis Results

Travel Demand Modeling

The refined Cherokee County travel demand model was used to forecast future trip generation and distribution based on household and employment growth across the county. The level and distribution of growth across the county and region both impact the volume, location and duration of travel demand. Forecasting future travel demand requires development of a travel demand model based on the distribution of various socioeconomic data by Traffic Analysis Zone (TAZ), which are relatively small geographic divisions developed to summarize trip characteristics by area.

Socioeconomic data is maintained within the TAZ geography. For development of Cherokee's CTP, this geography included 95 TAZ. The original ARC model contained 90 TAZ for Cherokee; however, 5 additional TAZ were created to ensure Cherokee's population and employment growth was captured sufficiently to project future county-level transportation needs. The model contains 785.4 miles of roadway network, including 48.6 miles added to the original ARC base model. Figure 4-1 shows the model geography for the refined Cherokee County travel demand model.

The assumed socioeconomic data input into the 2000 and 2030 models were developed by ARC as part of the 2030 Regional Transportation Plan (RTP). The four data categories are:

- Population – Includes total population and population of school-aged children (population between ages 5 and 15).
- Household – Includes total households (occupied housing units) and total housing units.
- Employment – Includes total number of employees and number of employees for each of the five employment categories (manufacturing/transportation, retail, services, government and agricultural/mining/construction).
- School enrollment – Includes number of grade school students at the location of the school, number of university students at the location of the university, and total school enrollment (grade school students plus university students). University student enrollment includes community, technical or vocational colleges, and universities.

The model was used to evaluate current (2005) and future (2030) travel conditions for the Cherokee County network. A model reflecting the existing and committed (E+C) network was developed to identify future (2030) needs. The E+C network assumes no additional capacity projects are added to the system beyond those programmed in ARC's 2006-2011 Transportation Improvement Program (TIP). To understand changes between the base year and future E+C network, model generated performance measures for each scenario were compared. Fundamental system-wide performance measures included forecasted traffic volumes, volume to capacity (v/c) ratios, vehicle miles of travel (VMT) and vehicle hours of travel (VHT). The model also provides an ability to analyze other modes, such as transit, through modal split results. Model results, based on established growth forecasts, indicate that Cherokee County's E+C roadway network will not easily accommodate increasing traffic despite regional transit improvements and corridor plans proposed by the county and ARC.

Cherokee County Comprehensive Transportation Plan

Model Geography

PICKENS
DAWSON
BARTOW
CHEROKEE
FORSYTH
FULTON
COBB
Nelson
Ball Ground
Waleska
Canton
Holly Springs
Woodstock
Alpharetta
Roswell
Acworth
Kennesaw
White
Emerson
Cumming
Lake Arrowhead
Lake Allatoona
Lake Acworth
Etowah River
Little River

0 1 2 4 6 8 Miles

N

Regional Inset

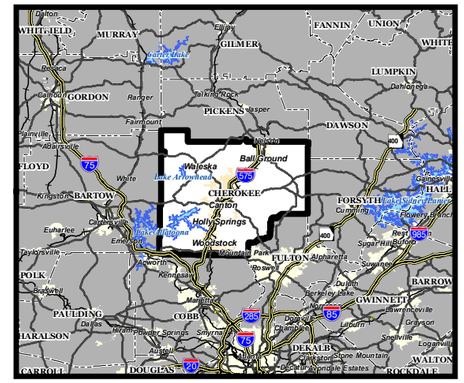

Figure 4-1

Legend

Model Geography (Cherokee CTP)

- Traffic Analysis Zone (TAZ) Boundary

Road Network

- Limited Access Highways
- State Route / U.S. Highway
- Other Roads

Other Layers

- Cherokee County Boundary
- Other County Boundaries
- City Limits (Within Cherokee County)
- Other City Limits
- Lakes
- Railroads
- Rivers

Source: ARC, Charles River Associates, and Carter & Burgess, Inc.

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With baseline conditions established, the next step of the modeling process consisted of scenario development and analysis. The scenario analysis phase of the Cherokee County CTP project involved the modeling of two transportation improvement scenarios, along with the E+C scenario. Scenario 1 considered a limited set of highway improvements to the E+C scenario. The short list of recommended roadway projects was developed by the project team as capacity addition projects that may alleviate projected corridor deficiencies found during the Needs Assessment. Scenario 2 included a larger set of highway and transit improvements. In addition to including all Scenario 1 projects, Scenario 2 also added a set of additional roadway improvements developed by the project team to create an "enriched roadway improvement scenario." This scenario also included all of the 2030 RTP transit projects. A detailed description of the modeling process can be found in Appendix A.

Existing Roadway Conditions (2005)

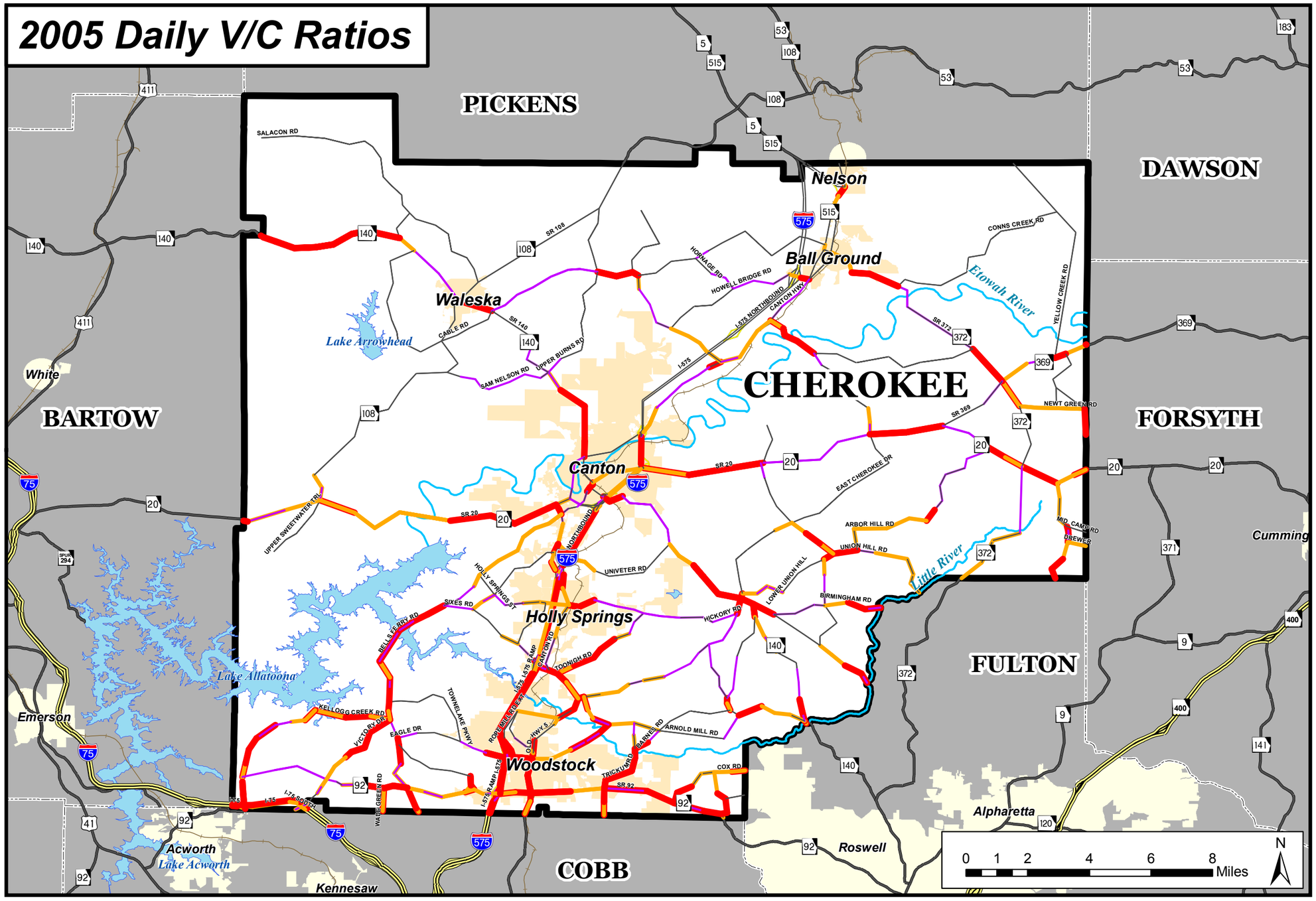
Existing conditions were determined by comparing 2005 traffic volumes to roadway capacities based on functional classification and number of lanes. The v/c ratio compares the amount of traffic on a facility to its total available capacity. A v/c ratio of less than 0.85 is considered an acceptable LOS in an urban environment, indicating that the road can handle additional volume and remain within capacity. A v/c ratio of 1.0 or greater indicates that the road has reached or exceeded its capacity and additional traffic volume will result in congested conditions. Figure 4-2 shows the year 2005 v/c ratios on Cherokee's roadway network. A breakdown by level of service reveals approximately 79 percent of Cherokee's roadway network functions at or better than LOS C, 13 percent operates at LOS D, 6 percent at LOS E, and just over 1 percent at LOS F. This is an indication that state, county and local jurisdictions cannot completely address roadway needs and deficiencies as they emerge. Table 4-1 lists the most congested roadways in 2005.

Table 4-1 Most Congested Roadways, 2005

Roadway	Segment
SR 20	Holbrook Campground Road to SR 372
SR 140	Joseph Brown Memorial Highway to Amos Road
I-575	Cobb County line to Sixes Road
Trickum Road	SR 92 to Barnes Road
Old Highway 5	SR 92 to Arnold Mill Road
Old Highway 5	Old Rope Mill Road to East Cherokee Drive
Bascomb Carmel Road	SR 92 to Dupree Road
SR 140	Bartow County line to Salacoa Road

Cherokee County Comprehensive Transportation Plan

2005 Daily V/C Ratios



Regional Inset

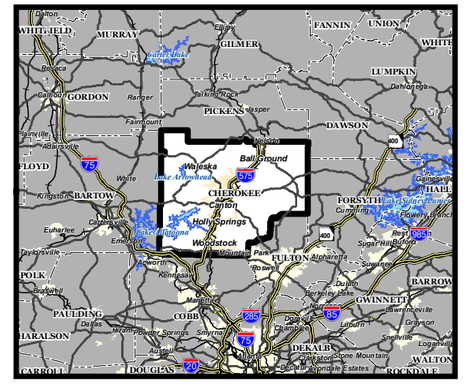


Figure 4-2

Legend

2005 Daily V/C Ratios

- V/C Ratio: > 1.0 (LOS F)
- V/C Ratio: 0.86 - 1.0 (LOS E)
- V/C Ratio: 0.76 - 0.85 (LOS D)
- V/C Ratio: <= 0.70 (LOS A to C)

Other Road Network

- Limited Access Highways
- State Route / U.S. Highway
- Other Roads

Other Layers

- Cherokee County Boundary
- Other County Boundaries
- City Limits (Within Cherokee County)
- Other City Limits
- Lakes
- Railroads
- Rivers

Source: ARC, Charles River Associates, and Carter & Burgess, Inc.

This map is intended for planning purposes only.

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Future Roadway Conditions (2030 E+C)

In addition to knowing how well the existing transportation system functions, it is equally important to understand likely future demand on the transportation system. An industry practice to assess future travel demand assumes no additional improvements to the existing transportation system (e.g., road widenings or new roadways) will occur beyond what is currently under construction or funded. This scenario is called an existing plus committed (E+C) network. For purposes of this analysis and as part of the Cherokee County CTP, the E+C transportation system is what currently exists on the ground today plus right-of-way (ROW) and construction (CST) projects contained within ARC's Fiscal Year (FY) 2006-2011 TIP. Table 4-2 identifies capacity-adding projects contained in the E+C modeled network.

Table 4-2 2030 E+C Projects

Roadway	Begin	End
SR 92	I-75	Wade Green Road
Bells Ferry Road: Segment 1	Southfork Way	Little River north of Victoria Road

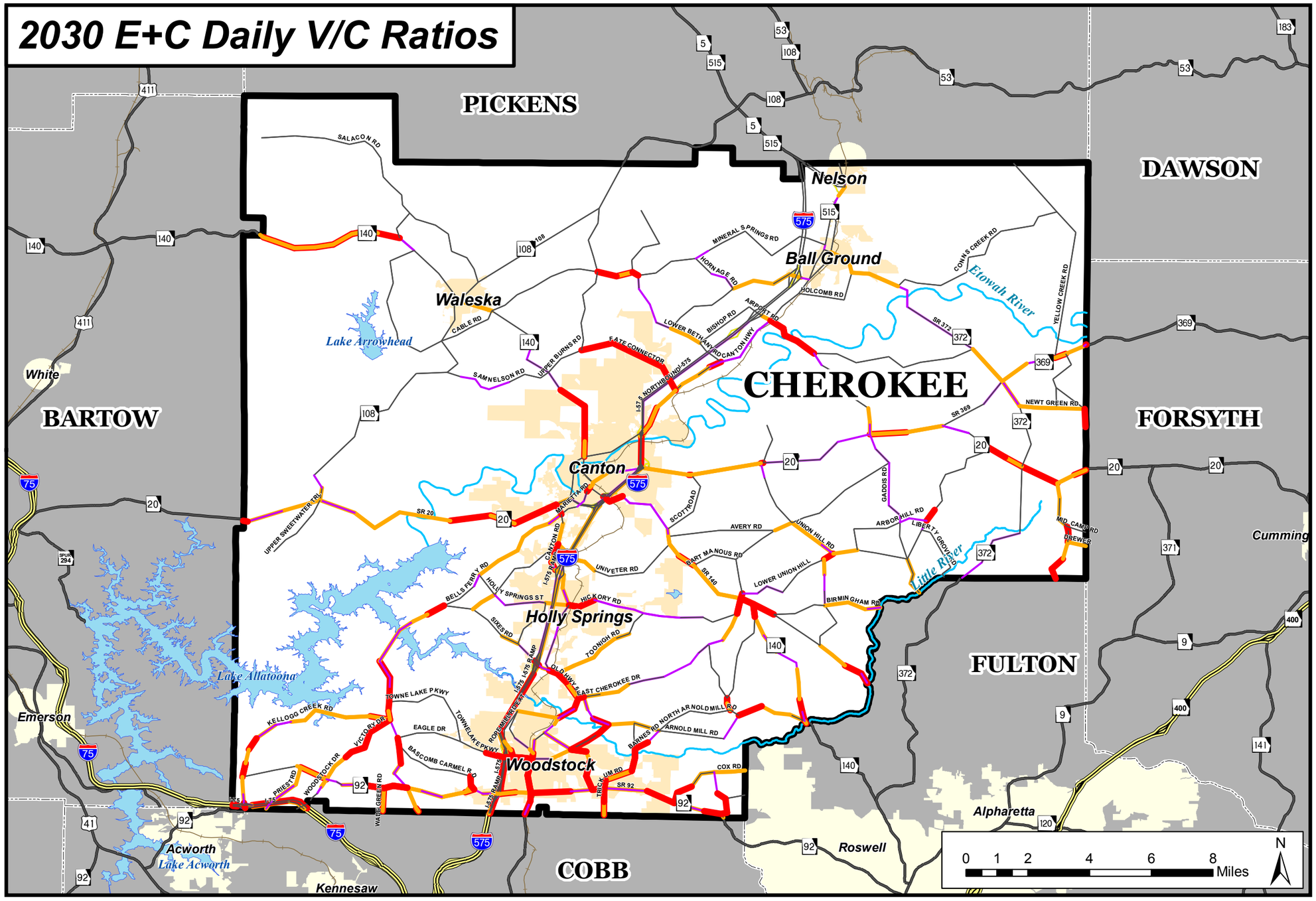
Source: ARC

The 2030 E+C model developed for Cherokee County allowed for a detailed assessment of the v/c ratios for the county's transportation network. As a large-area planning tool, the model forecasts the performance of major roads in the county but does not incorporate all local roads. Wherever possible, alternative means were used to assess network impacts of significant local roads. Figure 4-3 shows congestion based on v/c ratios projected for Cherokee's E+C roadway network in 2030.

In 2030, the average LOS is expected to be LOS C or better on 42.2 percent (356.6 miles) of the model network, a reduction from 79 percent in the 2005 model. Similarly, about 20 percent of county roadway miles are expected at LOS D, and 21 percent at LOS E. The portion of roadway network operating at LOS F is forecast to increase from just over 1 percent in 2005 to 17 percent in 2030. Table 4-3 lists the most congested roadways in 2030.

Cherokee County Comprehensive Transportation Plan

2030 E+C Daily V/C Ratios



Regional Inset

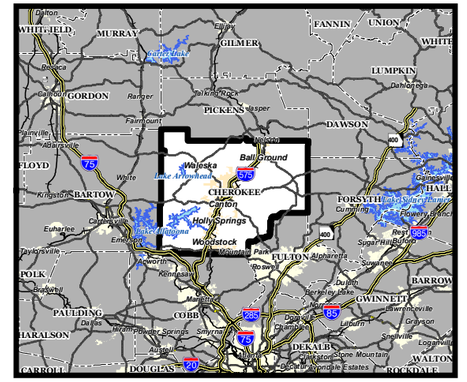


Figure 4-3

Legend

2030 E+C Daily V/C Ratios

- V/C Ratio: > 1.0 (LOS F)
- V/C Ratio: 0.86 - 1.0 (LOS E)
- V/C Ratio: 0.76 - 0.85 (LOS D)
- V/C Ratio: <= 0.70 (LOS A to C)

Other Road Network

- Limited Access Highways
- State Route / U.S. Highway
- Other Roads

Other Layers

- Cherokee County Boundary
- Other County Boundaries
- City Limits (Within Cherokee County)
- Other City Limits
- Lakes
- Railroads
- Rivers

Source: ARC, Charles River Associates, and Carter & Burgess, Inc.

This map is intended for planning purposes only.

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Table 4-3 Most Congested Roadway Segments, 2030

Roadway	Segment
SR 20	Holbrook Campground Road to SR 372
I-575	Cobb County line to Sixes Road
Trickum Road	SR 92 to Barnes Road
Old Highway 5	SR 92 to Arnold Mill Road
Bascomb Carmel Road	SR 92 to Dupree Road
Old Highway 5	Old Rope Mill Road to East Cherokee Drive
SR 20	Joseph Brown Memorial Highway to Fincher Road
Kellogg Creek Road	SR 92 to New Hope Road
Bells Ferry Road	Bascomb Carmel Road to Eagle Drive

Vehicle Miles Traveled and Vehicle Hours Traveled

An objective in developing an efficient transportation system is slowing the growth in trip lengths and congestion on the roadway network. VMT and VHT are useful measures for gauging progress in achieving this objective. VMT is derived from the total number of vehicles multiplied by the annual average daily miles driven, while VHT is the average daily time of all vehicles on the roadway network during a typical day.

Table 4-4 illustrates modeled VMT and VHT for Cherokee County. The 2005 modeled daily VMT on the county's roadway network was 4,395,957. By 2030, this figure is anticipated to grow to nearly 7,736,728, an increase of 76 percent. VHT is forecast to increase from 125,856 in 2005 to 349,678 in 2030, a 178 percent increase. The greater rate of VHT indicates much greater growth in time spent in vehicles compared to growth in trips and trip-lengths.

Table 4-4 Comparison of Daily VMT and VHT, 2005 and 2030

Geography	Modeled Daily VMT			Modeled Daily VHT		
	2005	2030 E+C	Percent Change	2005	2030 E+C	Percent Change
Cherokee	4,395,957	7,736,728	76%	125,856	349,678	178%

Roadway Needs

Surface Streets

The majority of centerline miles of roadway in Cherokee consist of surface streets and roads. The roadway system provides the vital connection between residences and commercial, industrial, educational, and cultural resources. Needs data demonstrates that Cherokee County's recent growth has strained the surface street network, especially in southern portions of the county.

The majority of severely congested roads in Cherokee are state routes; however, some County roadways experience major overcapacity problems. Several surface streets with major congestion issues include Arnold Mill Road, Bascomb Carmel Road, Old Highway 5, SR 20, SR 92, SR 140, Towne Lake Parkway, Sixes Road and Trickum Road. Because of lower design speeds, different driving characteristics, and less standardized designs, crash rates are often higher on surface streets. This plan recommends improvements to bring roadways up to current GDOT standards, mitigate congestion and increase safety.

Interstates and Highways

Similar to much of the Atlanta metropolitan region, the southern part of Cherokee County is characterized by urban and suburban mixed land uses. The roadway network in this area has not always kept pace with growth, creating the challenge of ensuring it can accommodate the needs of an urban framework. Although the northern portion of the county remains widely underdeveloped, these areas will likely face increasing development over the next 25 years, straining the existing roadway system.

One of the most significant countywide roadway problems in Cherokee is freeway and major arterial congestion, particularly on I-575 and SR 92. The existing Interstate network handles a significant portion of Cherokee's daily traffic and its volume is nearing capacity. Continued development in Cherokee and neighboring counties will result in increased volumes over the next 25 years. Figure 4-3 , above, indicates that I-575 between the Cobb County line and Sixes Road will have volumes well in excess of capacity by 2030, with v/c ratios exceeding 1.25 on the most southern segments.

Safety

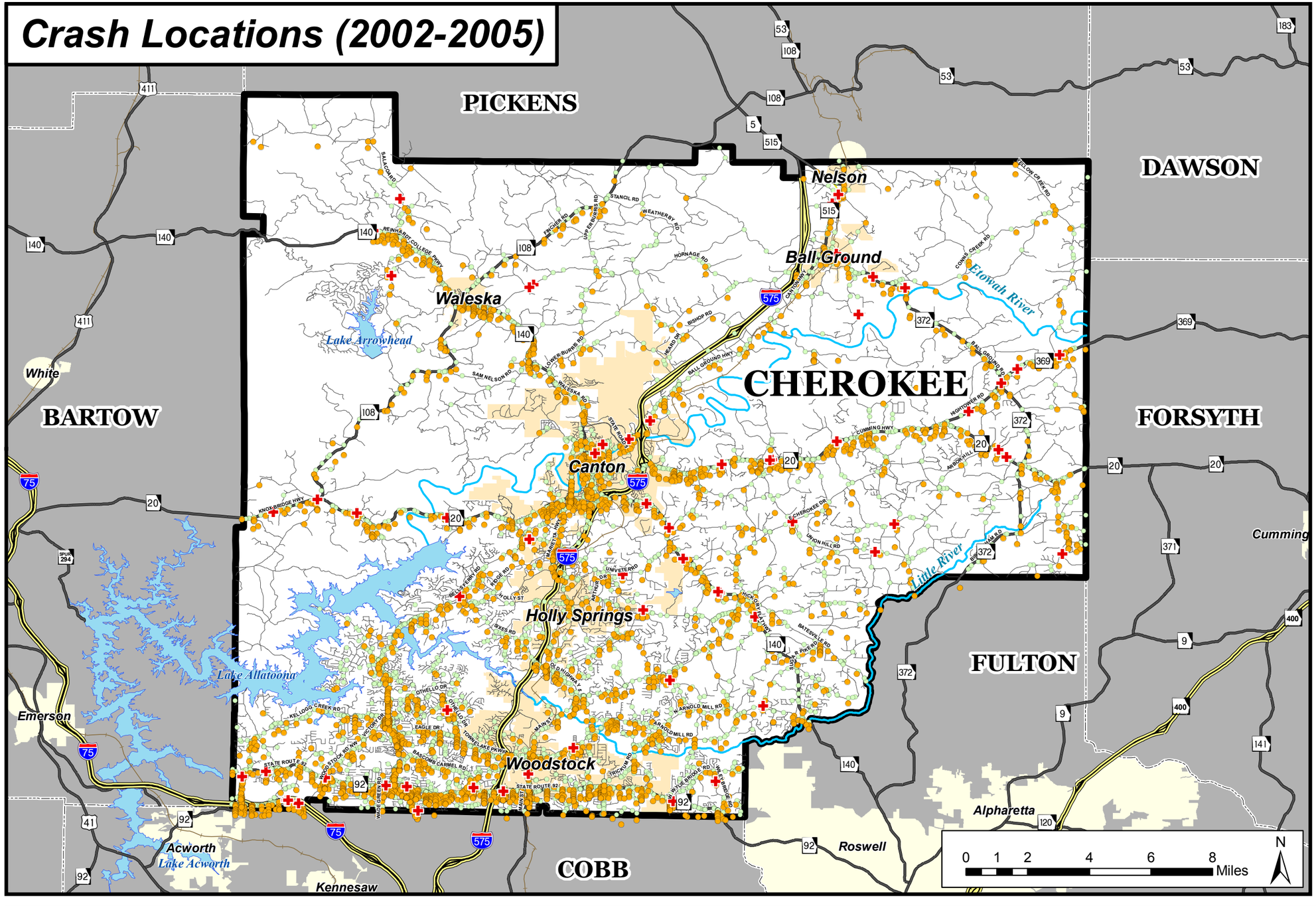
Cherokee County, its municipalities, GDOT, and the traveling public share responsibility for maintaining a safe transportation system. Safety has also traditionally been a federal concern, and factors included in federal guidance address the need to increase the safety and security of the transportation system for motorized and non-motorized users.

Given its criticality, an evaluation using GDOT crash data was conducted to identify roadway segments and intersections with safety concerns. Analysis of the crash rate of a roadway segment offers insights into design and operational needs, access management deficiencies or congestion issues. The most recent and accurate crash records maintained by GDOT (2002-2005) were compiled and mapped. Figure 4-4 shows the locations of non-injury, injury and fatality crashes countywide during that period.

These crash statistics were used to identify and prioritize potential roadway improvements. Corridors with high crash rates included SR 369, SR 372, Towne Lake Parkway, Bascomb Carmel Road, Arnold Mill Road and Eagle Drive. Operational, widening and safety improvements were recommended along these corridors to help reduce future crash rates.

Cherokee County Comprehensive Transportation Plan

Crash Locations (2002-2005)



Regional Inset

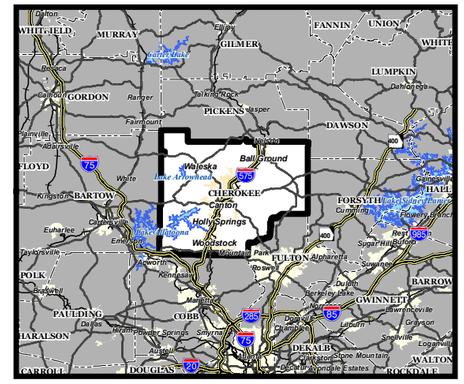


Figure 4-4

Legend

Crash Locations (2002-2005)
Per GDOT Crash Database 2002-2005

- Crash Locations With One or More Fatalities
- Crash Locations With One or More Injuries
- Non-Fatal/Non-Injury Crash Location

Road Network

- Limited Access Highways
- State Route / U.S. Highway
- Other Roads

Other Layers

- Cherokee County Boundary
- Other County Boundaries
- City Limits (Within Cherokee County)
- Other City Limits
- Lakes
- Railroads
- Rivers

Source: GDOT Crash Database (2002-2005), and Carter & Burgess, Inc.

This map is intended for planning purposes only.

Bridges

Federal regulations require that bridges be maintained in safe condition before federal transportation funds can be authorized to help fund the County's transportation program. Maintaining the bridge network is important to maintain safety and to avoid delays created by diversions when bridges are closed or have weight limit postings. Not only is the movement of goods and people diverted and delayed, but emergency vehicle response time can be reduced greatly due to bridge restrictions. Bridges are scored according to condition, with repairs and replacements scheduled on a statewide basis.

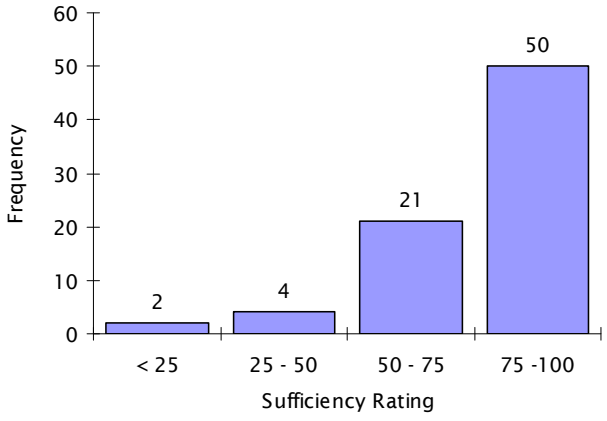
The Federal Highway Administration (FHWA) established the National Bridge Inventory (NBI) to monitor the condition of bridges on public roads. The NBI identifies bridge characteristics including age, sufficiency and composition. Structural deficiency and functional obsolescence are calculated using the federal definition for these terms. Generally, structural deficiency refers to the inadequate capability of the bridge structure, while functional obsolescence is related to insufficient geometric capability of the bridge to carry traffic, including inadequate deck geometry, underclearance or approach roadway alignment.

The National Bridge Inspection Standards (NBIS) require that all bridges carrying public roads be inspected and evaluated for safety biennially. Additionally, each bridge must be rated for its safe load capacity. If the maximum legal load exceeds the operating load, the bridge must be immediately strengthened, closed, or posted. The calculated sufficiency rating, on a scale of 0 to 100, is indicative of the fitness of the bridge to remain in service.

In 2006, GDOT surveyed 149 bridges in Cherokee County, 77 of which are locally owned and maintained. These 77 bridges are relatively new, with a median bridge age of 19 years. 69% of the bridges are less than 25 years of age, while another 14% were initially built within the last 50 years. The remaining 13 bridges (17%) are between 50 and 75 years old. Load limits were posted for 12 of the 77 county-owned bridges.

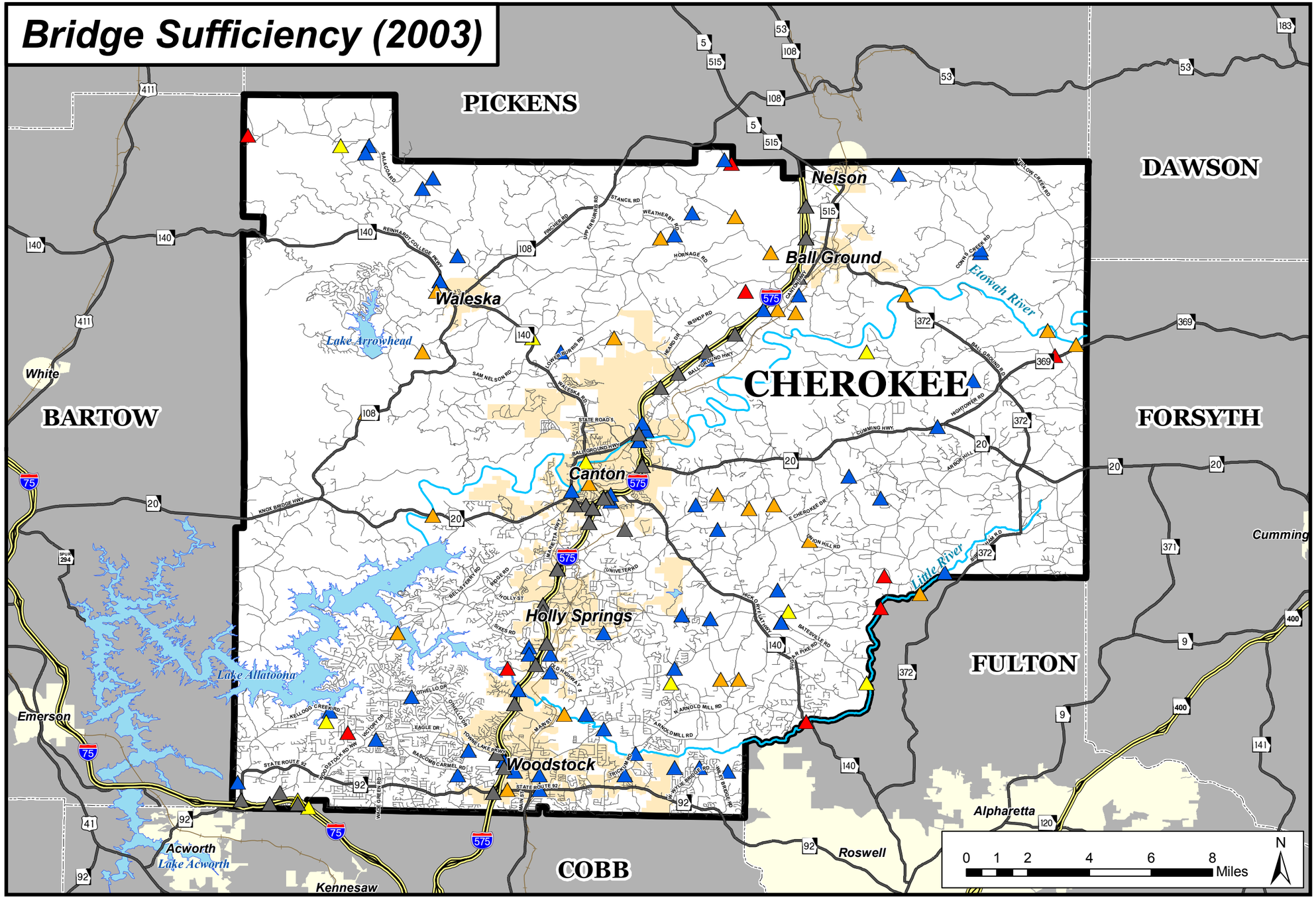
Each bridge has an associated sufficiency rating that contributes to its overall assessed condition and evaluation of rehabilitation or replacement needs. Figure 4-5 shows the distribution of sufficiency ratings among the County-owned bridges. Approximately two-thirds of bridges have a rating greater than 75. Six bridges (8%) have a rating less than 50, potentially signifying a need for near-term replacement by Georgia standards. The median sufficiency rating was 88.8. Figure 4-6 illustrates the County's bridge sufficiency ratings by location. Bridges needs were identified and prioritized based on sufficiency ratings and age.

Figure 4–5 Bridge Sufficiency Ratings



Cherokee County Comprehensive Transportation Plan

Bridge Sufficiency (2003)



Regional Inset

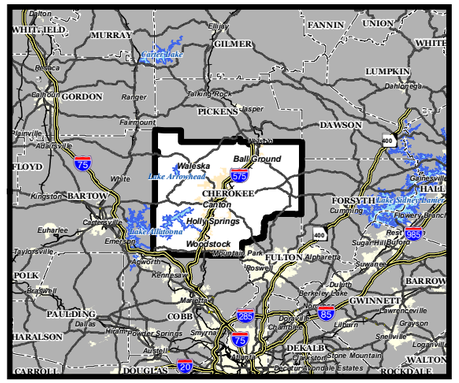


Figure 4-6

Legend

2003 National Bridge Inventory Sufficiency Rating

- 80.1 - 100.0%
- 70.1 - 80%
- 50.1 - 70%
- Below 50% (Bridge Insufficient)
- Data Unavailable

Road Network

- Limited Access Highways
- State Route / U.S. Highway
- Other Roads

Other Layers

- Cherokee County Boundary
- Other County Boundaries
- City Limits (Within Cherokee County)
- Other City Limits
- Lakes
- Railroads
- Rivers

Source: NBI (2003), GDOT, and Carter & Burgess, Inc.

This map is intended for planning purposes only.

Bicycle and Pedestrian Needs

Bicycle and pedstrian facilities allow for both recreation and transportation. For those that live within walking or bicycling distance of their place of employment, walking or riding to work can be a viable alternative to driving if sufficient facilities exist. Travelers choosing a form of transportation besides single-occupant vehicles help reduce congestion on county roadways.

Bicycle

There are currently limited dedicated bicycle and pedestrian facilities in the county. Portions of the statewide bicycle network, which is on-road and often without dedicated bicycle lanes, pass through Cherokee. For the most part, automobile drivers and bicyclists share the roadway. This presents challenges on narrow roads with large amounts of adjacent traffic traveling at high speeds. In order to identify potential improvements, an assessment of the suitability of the existing bicycle network was performed. Bicycle suitability needs were evaluated thoroughly in the study's needs assessment report.

The quantitative bicycle suitability analysis assessed each roadway's ability to accommodate bicycle travel based on information contained in GDOT's Roadway Characteristics (RC) file. The suitability rating is composed of three factors: traffic volume, travel speeds and functional class. Table 4-5 shows the numeric value for each factor and associated measure.

Table 4-5 Bicycle Suitability Rating by Factor

Factor	Measures	Suitability Rating
Traffic Volume	Less than 2,500 vpd per lane	4
	Between 2,500 and 5,000 vpd per lane	2
	More than 5,000 vpd per lane	0
Travel Speeds	Less than or equal to 30 mph	4
	Between 30 and 40 mph	2
	Greater than 40 mph	0
Functional Class	Local streets/collectors	4
	Minor arterials	2
	Other(major arterials and highways)	0

After determining a rating for each factor along a roadway section, the sum of the three scores is divided by three. The section then receives a descriptive rating based on the averaged score as follows:

- 3.0-4.0: Best conditions
- 2.0-2.9: Medium conditions
- 1.0-1.9: Difficult conditions
- <1.0: Very difficult conditions

The suitability of Cherokee's roadway network for bicycling is depicted in Figure 4-7. On a countywide basis, over 72.8 percent of roadways offer the best conditions for bicyclists, 20.8 percent medium conditions, 5.1 percent difficult conditions, and 1.3 percent very difficult conditions. Roadways that traverse the county in a more direct manner tend to have lower suitability ratings; thus, bicyclists may have to take longer, more circuitous routes to maintain their safety.

Identified Bicycle Facility Needs by Location

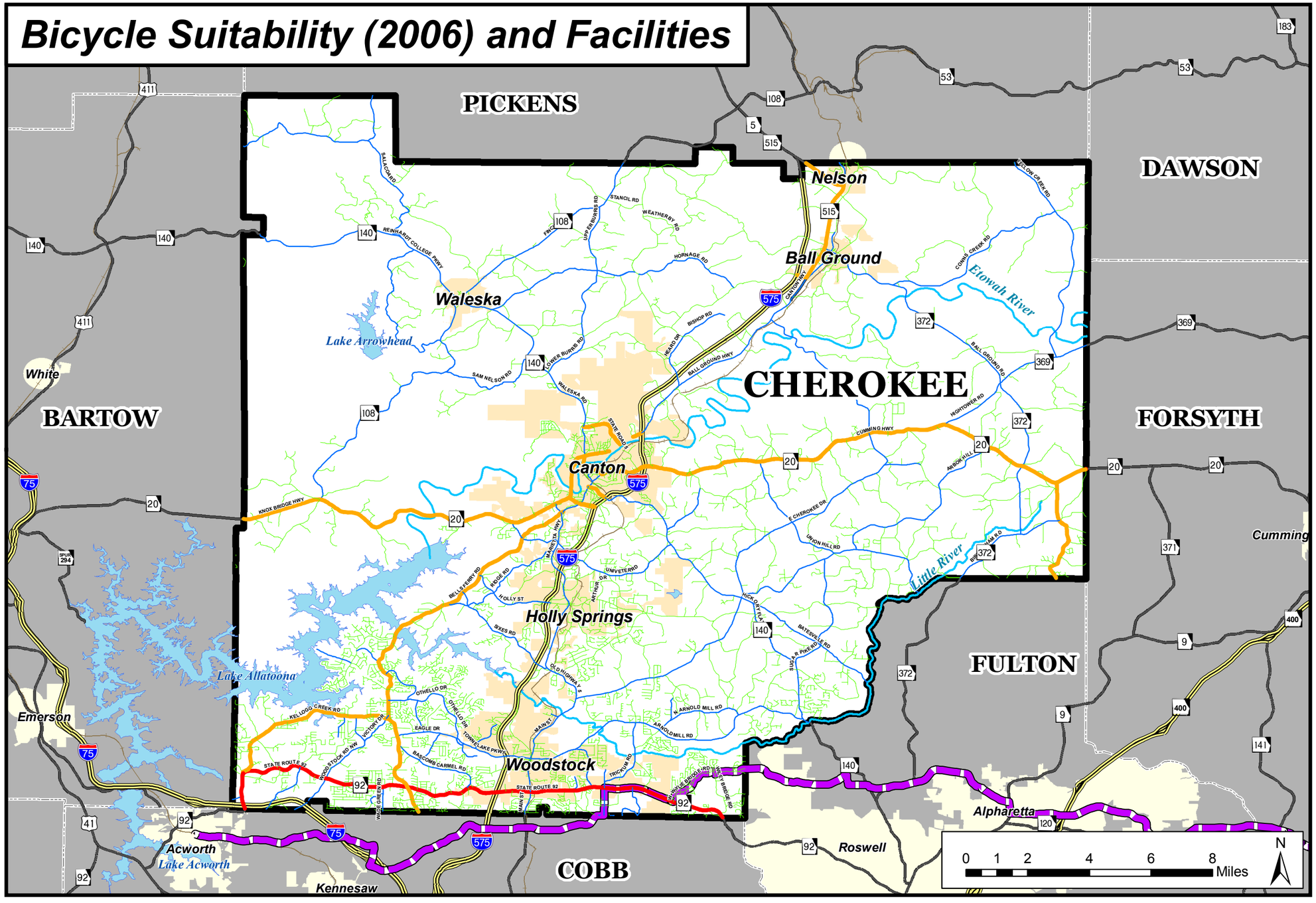
Overall, Cherokee County has very few bicycle only facilities, which leads to increased bicycle use on roadways. Location specific bicycle facility needs, indicated in Table 4-6, were identified through qualitative input from local stakeholders and the public, as well as from existing plans.

Table 4-6 Bicycle Facility Needs

Location	Identified Need
Woodstock	Create trail to connect downtown Woodstock to existing Northern Crescent
Holly Springs	Connect Holly Springs to Woodstock/Northern Crescent
Canton	Connect Canton to Woodstock/Northern Crescent

Cherokee County Comprehensive Transportation Plan

Bicycle Suitability (2006) and Facilities



This map was developed to assist cyclists in determining the most suitable route for their level of riding. However, it is up to the rider to determine their own skill level, and it is recommended that any individual bicycling have an understanding of bicycling rules and bicycling safety. Regardless of the rating, a cyclist should always exercise caution and awareness when riding.

Traffic Volume	Less than 2500 vehicles per day per lane	4
	Between 2500 and 5000 vehicles per day per lane	2
	More than 5000 vehicles per day per lane	0
Travel Speeds	Less than or equal to 30 mph	4
	Between 30 and 40 mph	2
	Greater than 40 mph	0
Functional Class	Local Streets/Collectors	4
	Minor Arterials	2
	Other (major artertials and highways)	0
Outside Lane and Shoulder Width	Greater than or equal to 17 feet	4
	13 - 17 feet	2
	Less than 13 feet	0
Percent Truck Traffic	Less than or equal to 3 percent	4
	Between 3 - 8 percent	2
	Greater than 8 percent	0

The score of each suitability factor on a route (0, 2 or 4) was added together and divided by five (5). The following table defines how the final score correlates to level of bicycling difficulty.

3 - 4.0	Best conditions for bicycling	Green
2 - 2.9	Medium conditions for bicycling	Blue
1 - 1.9	Difficult conditions for bicycling	Orange
< 1	Very Difficult conditions for bicycling	Red

Figure 4-7

Legend

Bicycle Suitability (2006)

- 3.0 - 4.0 (Best Conditions For Bicycling)
- 2.0 - 2.9 (Medium Conditions For Bicycling)
- 1.0 - 1.9 (Difficult Conditions For Bicycling)
- < 1.0 (Very Difficult Conditions For Bicycling)

Other Road Network

- Limited Access Highways (Bicycling Prohibited)
- State Route / U.S. Highway

Other Layers

- Northern Crescent State Bicycle Route
- Railroads
- City Limits (Within Cherokee County)
- Other City Limits
- Lakes
- Other County Boundaries
- Cherokee County Boundary
- Rivers

Source: ARC, GDOT RC File (2006), GDOT, and Carter & Burgess, Inc.

This map is intended for planning purposes only.

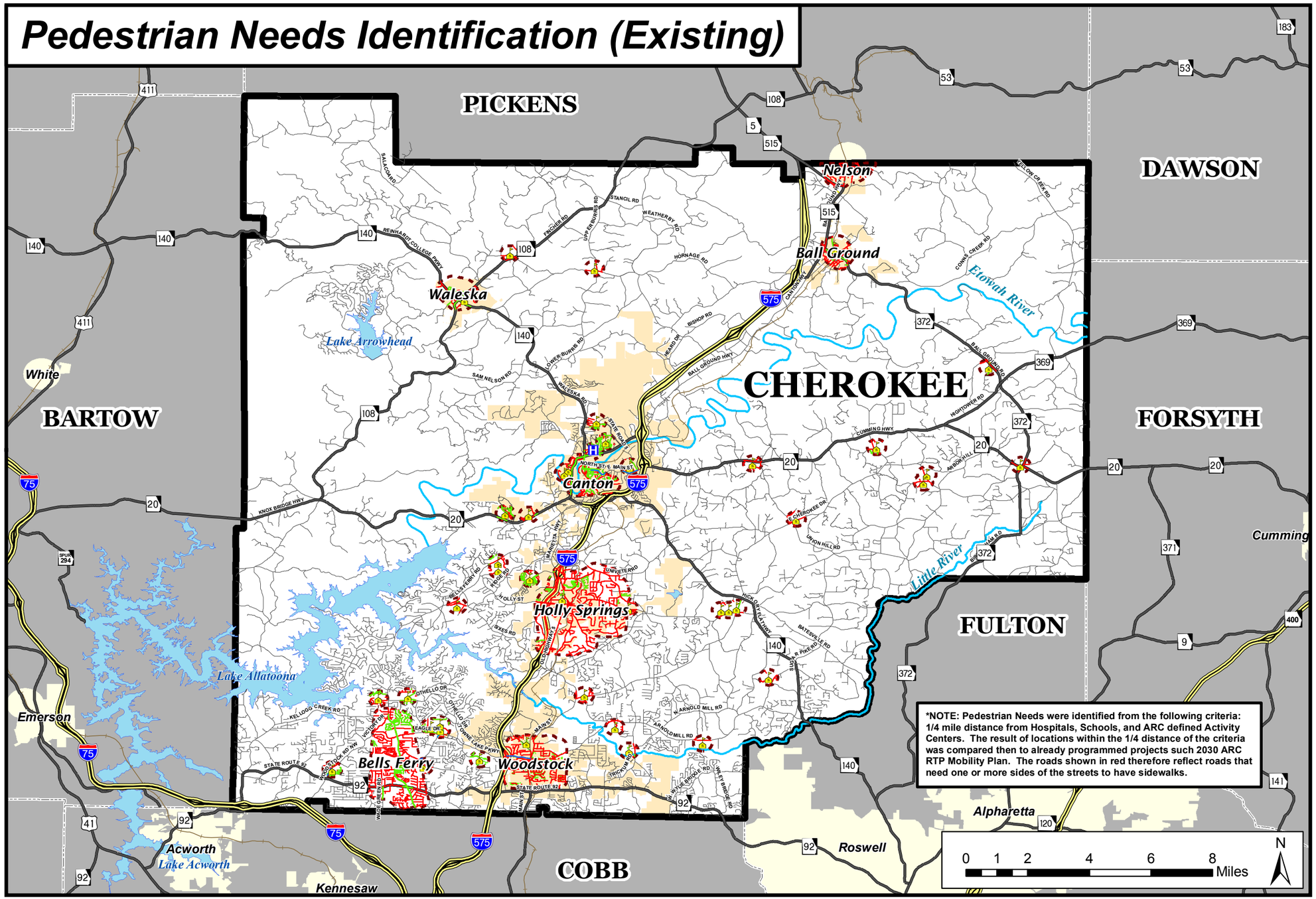
Pedestrian

Sidewalk facilities are sporadically located throughout the county, usually resulting from new development as required by local ordinances and regulations. Existing sidewalks are largely located within the incorporated areas of the county, with intermittent sidewalks in new developments in unincorporated areas. To meet pedestrian needs identified in the study's needs assessment report, sidewalks are recommended in the vicinity of activity centers such as schools, government buildings, community centers, and hospitals to provide citizens with the opportunity to walk when possible. The minimum sidewalk buffer around activity areas is generally defined as one quarter mile, corresponding to a five minute walk at a speed of three miles per hour. Based on this quarter mile buffer, pedestrian needs are shown in Figure 4-8. Providing sidewalks at these locations will allow individuals the opportunity to walk instead of driving to many destinations within the County. Implementing these sidewalks would, therefore, help achieve several of the established transportation goals including increased accessibility, mobility and connectivity and the support of multiple modes of transportation.

To improve pedestrian mobility within Cherokee County, a number of specific sidewalk projects are included in the project list and a tool has been developed to further analyze pedestrian needs. Through the CTP, a sidewalk inventory has been built that the County will use to develop a detailed list of potential pedestrian projects, which is beyond the scope of this project. The GIS inventory will allow the County to analyze the current sidewalk network and identify gaps and potential connections that are not included in the CTP project list.

Cherokee County Comprehensive Transportation Plan

Pedestrian Needs Identification (Existing)



Regional Inset

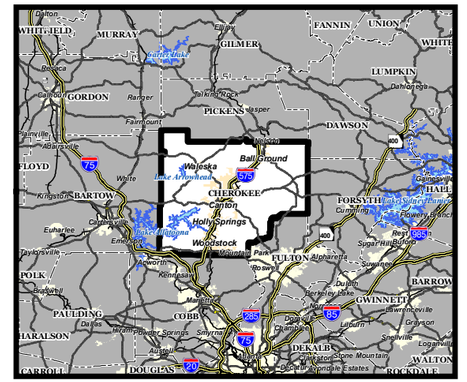


Figure 4-8

Legend

Pedestrian Needs (Existing)*
- Identified Pedestrian Needs

Pedestrian Needs Analysis Features
- School
- Hospital
- 1/4 Mile Buffer of ARC Activity Centers, Hospitals, and Schools
- Existing Sidewalks

ARC 2030 RTP Projects (Pedestrian Only)
- Programmed Pedestrian Facility

Road Network
- Limited Access Highways
- State Route / U.S. Highway
- Other Roads

Other Layers
- Cherokee County Boundary
- Other County Boundaries
- City Limits (Within Cherokee County)
- Other City Limits
- Lakes
- Railroads
- Rivers

Source: GDOT Crash Database (2002-2005), and Carter & Burgess, Inc.

This map is intended for planning purposes only.

Transit and Aviation Needs

Transit

Regularly scheduled, fixed route transit service is most appropriate in areas with high population densities and common trip destinations. Demand response transit service is more appropriate in areas with population densities that are too low to maintain sufficient ridership for regularly scheduled service.

For the large part, Cherokee's population densities are too low to support countywide regularly scheduled, fixed route transit service. Fixed route service is provided in the City of Canton, which has higher densities. In addition, the countywide demand response system, called CATS (Cherokee Area Transit Service), provides service for seniors and disabled people. Transportation is provided for a minimal charge to places such as government offices, doctor offices and grocery stores. The service is supported and operated by the County. As Cherokee's population continues to age, this service will likely be expanded.

The Georgia Regional Transportation Authority (GRTA) also operates express commuter bus service into and out of the Atlanta Central Business District during the morning and afternoon peak hours. Xpress Route 490 currently has three inbound and three outbound trips daily with stops at Boling Park in Canton and the Community Church in Woodstock. Morning trips depart every 30 minutes, with the first leaving Canton at 5:45 AM and Woodstock at 6:05 AM. The afternoon trips depart the Civic Center MARTA Station at 4:15 PM, 5:30 PM, and 6:15 PM, arriving at Woodstock between 5:00 PM and 7:25 PM and Canton between 5:20 PM and 7:50 PM. Later trips require more time due to congestion on metro Atlanta interstates and the lack of preferential treatment for buses on the majority of the route.

The planned Intermodal Center in Canton will serve as a hub for both existing and future transit modes in the area. GRTA Xpress bus routes as well as the Canton fixed route system will likely have connections to the center. If future commuter rail service links to the county, it also will likely have a stop or termination point at the center.

There are two park and ride lots in Cherokee County . The first is located in the City of Canton, on SR 5 at the Etowah River, and consists of 173 spaces. The second is located in the City of Woodstock, on Town Lake Parkway at the Woodstock Community Church. There are no current plans to expand either lot or to construct new lots in the county.

Transit needs for Cherokee County were identified through qualitative and quantitative assessment. The qualitative assessment relied on input from the public, stakeholders and previous studies, while the quantitative evaluation utilized performance measures developed during the study. A majority of the assessment focused on the existing services provided by the County as well as the Canton, as well as vanpools and demand services provided by private partners.

As part of the stakeholder and public outreach efforts for the CTP, discussions were held with representatives of all socioeconomic groups, including elderly and disabled persons. The public indicated that increased public transportation was very low on the county's needs list, based primarily on Cherokee's sparse population density and current existing services.

Although transit service does not rank high on the list of needs for Cherokee County, several cost-effective strategies exist which could help ease the future demand on the transportation system. Such strategies include the continued support and expansion of vanpool programs, the

implementation of carpool initiatives and the support of additional Transportation Demand Management (TDM) strategies. TDM policies reduce dependence on the automobile, reduce demands on the regional and local road network, and improve connections between modes to allow seamless trips.

Commuting patterns within the county suggest that many (35%) of the County's residents work within Cherokee County. Therefore, TDM strategies implemented by Cherokee's employers could reduce the amount of congestion during peak periods. The County should continue to encourage employer use of carpools, vanpools, transit incentives, and flexible work schedules and support the Clean Air Campaign efforts.

Aviation

Cherokee County's airport has been classified by GDOT as a Level II facilitiy, an airport capable of accommodating all single and twin-engine general aviation aircraft and some corporate/business jet aircraft. To meet the Level II facility requirements, airports must offer a runway that is at least 5,000 feet long and a non-precision approach. The following improvements are required for the Cherokee airport to meet service objectives identified by GDOT:

- Extend runway by 1,586 feet
- Widen runway by 25 feet
- Construct a full parallel taxiway
- Install Automated Weather/Surface Observing Systems
- Add hangar, apron, and parking space

Truck and Rail Freight Needs

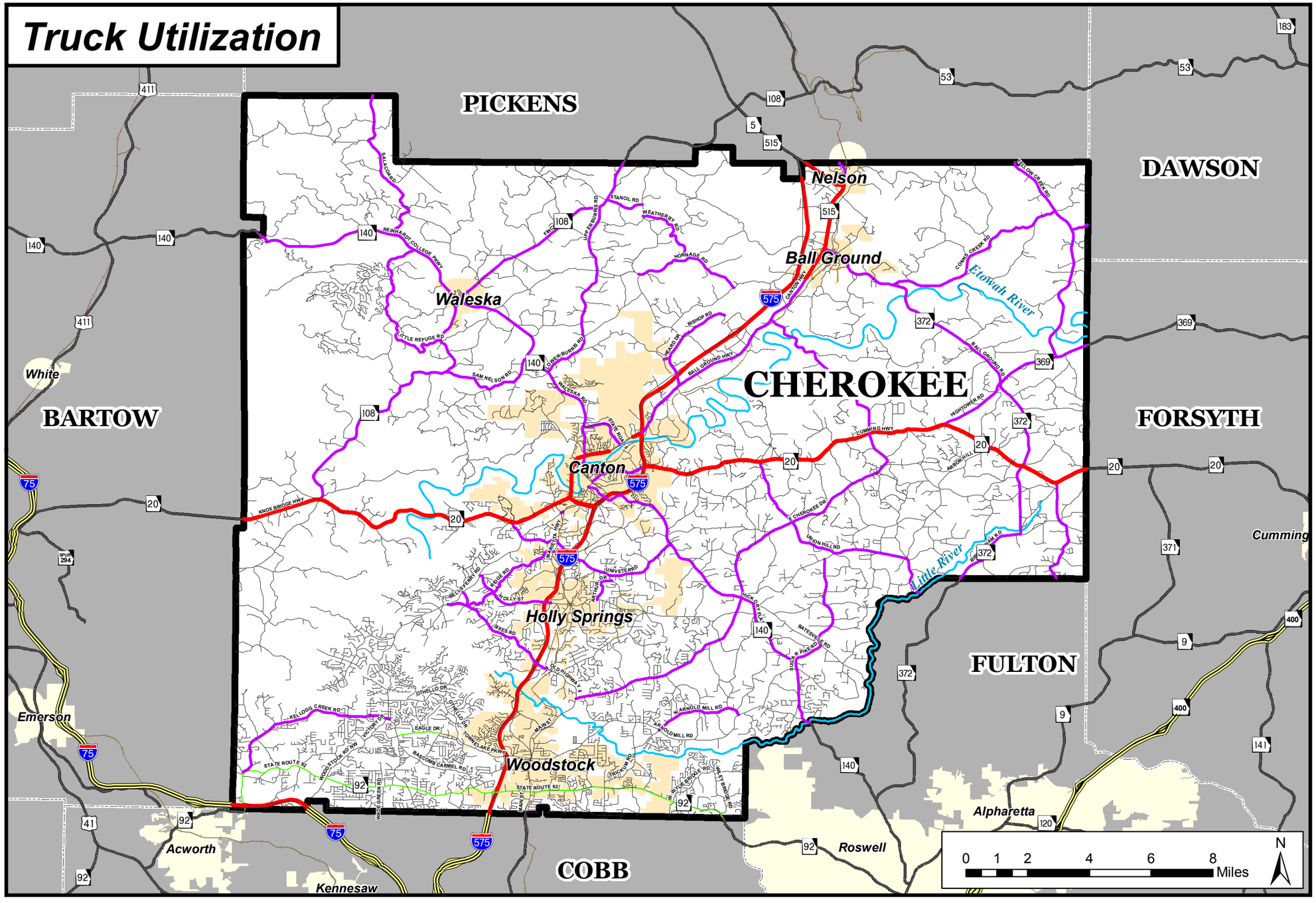
While the movement of people is often the focus in a transportation plan, the movement of goods is important to ensure effective economic development that brings employment opportunities to the community. I-575 provides a foundation for the truck network in Cherokee County, and centrally located industries have been encouraged to develop within close proximity to Interstate access. Figure 4-9 shows truck utilization for roads across the county.

Roadway freight needs mirror the capacity, operations and safety needs of moving people. Freight movement within and through the county is driven by economic factors associated with an increasingly global distribution network. National trends indicate continued growth in moving freight via large trucks. Addressing future congestion and operational needs to facilitate goods movement in Cherokee will be an ongoing challenge. Another issue will be monitoring the compatibility of goods movement with existing and future residential development.

To maintain safety, mobility and convenience, truck movement limitations can funnel through truck trips to certain routes that travel compatible areas designed for larger vehicles. Although the Interstate system provides the backbone for goods movement, Cherokee County is limited in its capacity to address Interstate needs beyond where county roads meet the Interstate system at interchanges. Currently, the only designated truck routes in Cherokee are I-575 and the state routes (see Figure 4-10). As industries, and in turn freight movement, continue to increase, additional roadways may need to be designated. However, stakeholders made very few comments on existing freight issues or problem areas, so it is not currently recommended that the county designate any additional routes. A further, detailed study is needed to develop an expanded system of designated and truck-restricted routes to effectively maintain the system.

Cherokee County Comprehensive Transportation Plan

Truck Utilization



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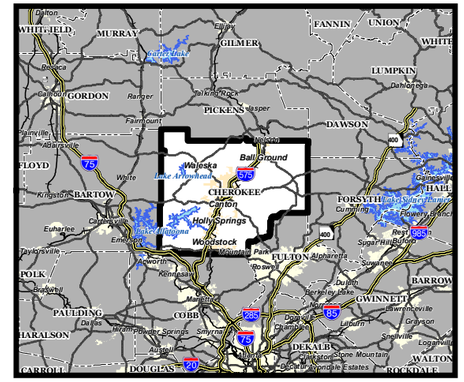


Figure 4-9

Legend

Truck Utilization (2004)

- 10.1 - 15.0%
- 5.1 - 10.0%
- 3.1 - 5.0%
- <= 3.0%

Other Road Network

- Limited Access Highways
- State Route / U.S. Highway

Other Layers

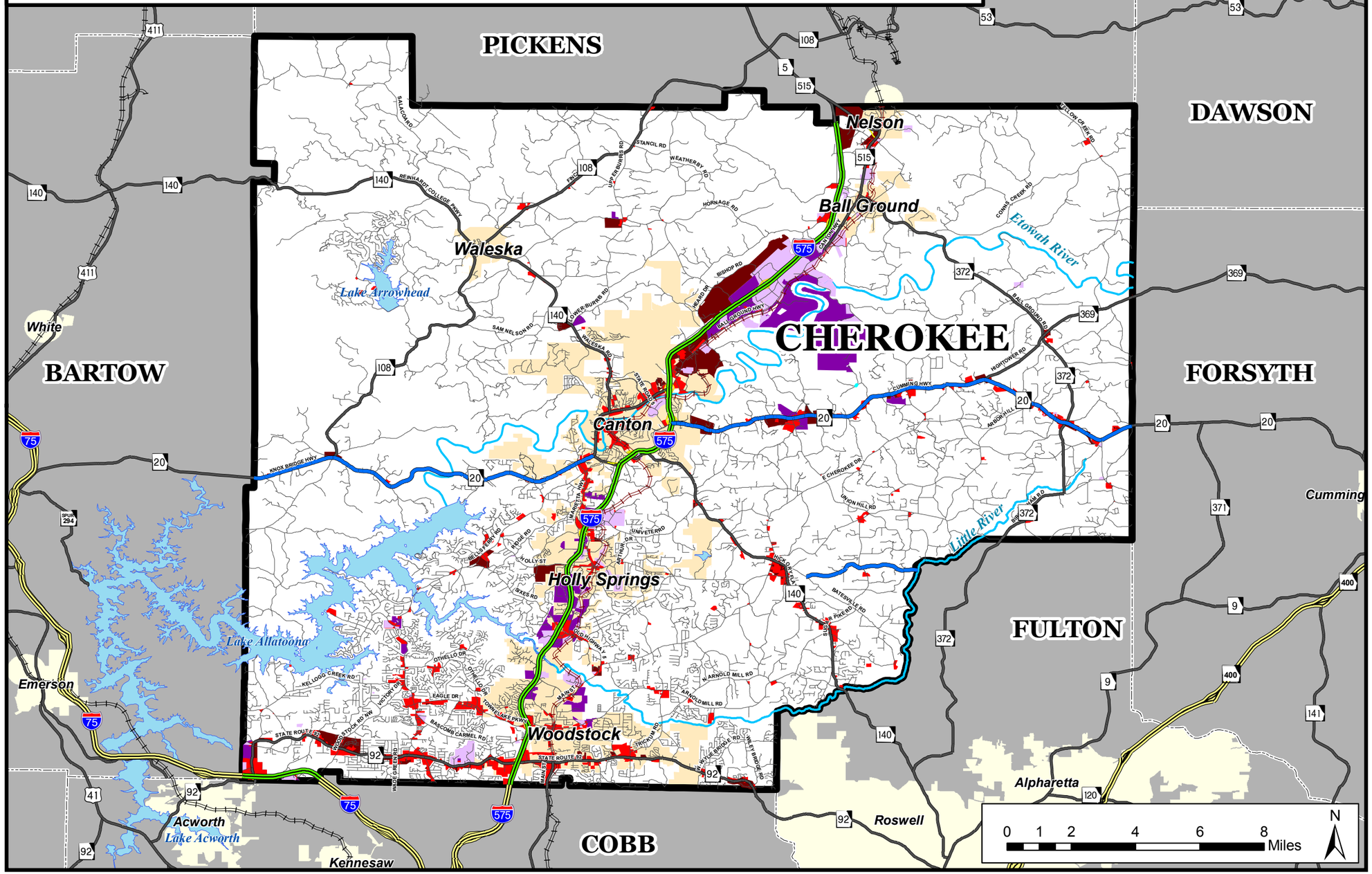
- Railroads
- City Limits (Within Cherokee County)
- Other City Limits
- Lakes
- Other County Boundaries
- Cherokee County Boundary
- Rivers

Source: GDOT RC File (2004), and Carter & Burgess, Inc.

This map is intended for planning purposes only.

Cherokee County Comprehensive Transportation Plan

Designated Truck Routes and Potential Destinations



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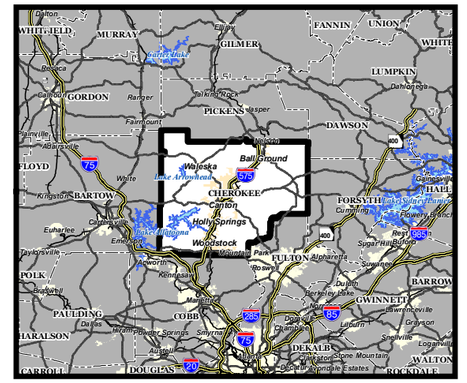

Figure 4-10

Legend

Designated Freight Routes and Potential Destinations

Truck Routes (2006) - GDOT RC File

- Interstate Routes (Through Cherokee)
- Designated Access Routes for Oversize Trucks Allowing Single and Twin Trailers

Potential Freight Destinations (ARC and Cherokee County)

- Commercial (Existing)
- Commercial (Future Land Use Plan)
- Industrial (Existing)
- Industrial (Future Land Use Plan)

Railroad Ownership

- Georgia Northeastern Railroad

Road Network

- Limited Access Highways
- State Route / U.S. Highway

Other Layers

- Cherokee County Boundary
- Other County Boundaries
- City Limits (Within Cherokee County)
- Other City Limits
- Lakes
- Other Railroads
- Rivers

Source: GDOT RC File (2006), ARC, Cherokee County, and Carter & Burgess, Inc.

This map is intended for planning purposes only.

March 2008

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5. Project Recommendations

Project Development Process

Updating the CTP offers Cherokee County the opportunity to periodically reconsider the current program's direction and determine if transportation investments continue to align with community needs. The 2030 CTP update identified anticipated multimodal transportation needs assuming current growth patterns and local expectations for transportation services.

A goal of the 2030 CTP is to provide a balanced multimodal transportation system that provides for the efficient movement of people and goods. "Efficient movement" entails examining the full array of improvement options available in Cherokee County, ranging from operational improvements to roadway capacity improvements to providing for improved walking, bicycling, carpooling or transit facilities and services. In addition to the technical analysis results, stakeholder and public input were reviewed during development of transportation projects.

Transportation improvements included in ARC and GDOT long-range plans have been included in the project development process. Additional roadway improvements are recommended based on the results of the travel demand model and extensive stakeholder and public input. The study considers individual congested segments as well as how the entire system operates. Potential bicycle and pedestrian improvements were developed by reviewing connectivity issues as well as stakeholder and public comments. Future population densities were also analyzed to indicate where future transit services are likely to be needed and/or required based on stakeholder and public input. A detailed list of all proposed transportation improvements, their locations, associated costs, and funding sources and potential implementation time frame is located in Appendix B. Upon completion of the finalized project list, a "build run" was performed using the travel demand model to analyze the impact of implementing these projects on the future network.

Funding shortfalls could hinder the implementation of the proposed projects. Therefore, steps were taken to ensure that projects with the greatest potential benefit to the transportation system would be situated at the top of the list to receive necessary funding. The development of the project list included qualitative analyses of how the projects meet the goals established by stakeholders and the public. Quantitative measures were also applied to identify deficiencies in the system and prioritize the improvements.

Roadway Improvements

The large amount of existing congestion on Cherokee roadways, in combination with the fact that the roadway system is the County's most critical transportation asset, requires that the majority of proposed improvements target the roadways. Roadway projects fall into one of two primary categories: capacity or operational. A capacity project enhances the roadway's ability to accommodate traffic and usually means roadway widening, although the addition of new roadways is also included. Capacity projects are most applicable to areas where severe congestion is expected. Operational improvements can include the addition of turn lanes, new acceleration/deceleration lanes, or roadway realignment. Operational projects can also focus on enhancing safety such as intersection improvements, re-striping, signage, guardrail and other strictly safety improvements. Intersection improvements often involve reconfiguring lanes and retiming signals. The list of 147 recommended potential roadway improvements includes 45 widening projects, 20 new locations, 65 safety and operational projects, 16 bridge improvements, and 1 other (Interstate noise barriers).

The proposed roadway projects support many of the goals established for the CTP. Creating new roadways increases the connectivity and mobility of the system and also adds capacity to help relieve congestion. Many of the operational projects can enhance the safety of the transportation network. Other operational projects can accomplish the goal of preserving and maintaining existing facilities by improving the flow of traffic without reconstruction or addition of lanes.

Bicycle and Pedestrian Improvements

After roadway projects, bicycle and pedestrian improvements account for the second largest category of projects, with 24. The largest project is the Little River Trail, located near Rope Mill Park. This project will consist of a paved multi-use trail for both bicyclists and pedestrians.

The remaining proposed projects are either improvements to streetscapes or the addition of sidewalks. In general, sidewalk improvements were proposed if the roadway was within a quarter-mile of an activity center or if the new sidewalk was needed to make a connection between two existing sidewalks. The County's policy of requiring sidewalk with new development will continue to add to the sidewalk inventory. The proposed improvements will close gaps in the system and add new links to important destinations. This will accomplish the goals of increased accessibility and connectivity, supporting alternate modes of transportation and enhancing the environment and quality of life.

Transit Improvements

The four proposed transit improvements in the program of projects help increase the effectiveness of existing transit options and include the Canton Intermodal Facility, expansion of CATS and GRTA bus service, and a park and ride lot in Waleska. The Canton Intermodal Facility will serve as a transfer station for riders wishing to transfer between the County's transit system and the BRT service that will run down the I-575 HOV lanes from SR 20 to downtown Atlanta. Residential growth in northern portions of the county has created a demand for more park and ride space by commuters destined to downtown Atlanta. A proposed new park and ride lot near the City of Waleska should be conveniently located near I-575 to provide easy access for carpoolers and bus transit users.

The improvements to the transportation system will also help the County accomplish several of its transportation goals. The intermodal center, expanded service and park and ride lots will support alternate modes of transportation as well as increase accessibility and connectivity by providing more opportunities for residents to access different types of public transportation.

Intergovernmental Cooperation

Municipalities in Cherokee County play an important role in creating and maintaining an efficient transportation system by focusing land use patterns and encouraging new development installation of infrastructure. Continuing regular meetings between the municipality and county staffs to discuss implementation issues, best planning practices and other policy implementation will prove successful. Issues originating from locations where municipal and county lands are adjacent can also be addressed.

Cherokee County can provide some planning assistance to smaller cities in developing appropriate codes and overlays to implement their plans. Infrastructure investments such as streetscapes, bikeways and greenways can be coordinated to ensure continuity, and priorities can be synthesized so that interdependent County and municipal projects proceed on similar

time frames. Communication and coordination between the County and its municipalities are very important to helping all local governments promote focused land use patterns. Joint and coordinated efforts are needed to ensure compatible and complementary land use strategies are used throughout the county.

The County should also continue to coordinate planning efforts with surrounding counties and regional and state agencies. To address local issues with GDOT and regional groups such as ARC, GRTA and the Transit Planning Board, a unified front by the County, municipalities, School Board and private sector on transportation and land use planning issues will be more effective than working separately. Coordination between the County and municipalities will offer the environment for increasingly effective decision-making and more efficiency in the transportation network. Transportation funding is scarce and must be allocated in a problem-solving environment.

Land Use Planning Policies and Tools

Cherokee County currently employs a number of policies to encourage growth and development in its existing activity centers, and other innovative policies are available to build upon these efforts. It is the current policy to provide a balanced distribution of regional and community commercial and mixed use office centers. Together with these policies, the CTP mutually supports an efficient transportation system and compact activity centers. The intent of all these policies is to promote increased development in those areas best served by transportation infrastructure, especially transit infrastructure, while decreasing or minimizing development in those areas that are least served by existing infrastructure. Both sides of the equation are important – to promote increased development and density in activity centers in a focused development pattern, and to promote decreased development and density in the more remote areas of the County.

Activity, Commercial and Employment Centers

Numerous activity centers including employment, commercial and civic centers and smaller cities with central business districts have developed within Cherokee County. The County should continue to support a mix of dwelling types, sizes and prices within the vicinity of major employment centers and major commuter routes. Retail development should be provided in close proximity to employment centers to reduce noontime peak congestion.

New commercial strip development should be discouraged in the more congested corridors, as it worsens traffic congestion. Improved pedestrian and transit (where available) access to commercial development is encouraged to reduce the dependence on auto travel in congested corridors. In all commercial strip corridors, the number of curb cuts should be limited. Shared parking, larger parcels, or internally connected parcels of commercial development can help limit the number of curb cuts.

Major regional centers of employment and commercial activity should have excellent transportation access. Ideally, access should be provided from multiple directions to reduce dependence on a few at-capacity routes into these areas. Congestion is common along these commercial corridors due to their strip commercial nature. Cherokee County should pursue redevelopment into mixed use; new residences can be located in close proximity to commercial development, reducing the need for lengthy automobile trips.

Mixed-Use Development and Redevelopment

Redevelopment of commercial corridors should be encouraged so that convenient retail services near existing residential communities continue to serve community needs. Mixed use along commercial corridors should also be encouraged as it permits shorter trip lengths and a higher use of commercial lands with a high level of transportation access.

Transit-Oriented Development

Transit-oriented development (TOD) is a planning strategy to make the most valuable use of land around a transit stop. TOD generally promotes pedestrian friendly, mixed-use, dense development. Locating destinations and residences within easy walking distance of a transit stop effectively promotes transit use. Likewise, office and institutional uses located near transit nodes increase accessibility to employment centers. TOD is a key strategy in coordinating land use patterns and transportation investments. By applying the appropriate provisions to areas around transit stops, TOD can be effectively promoted in Cherokee County. Often a TOD can be further realized by studying the specific land use and transportation conditions around a particular station and customizing implementation activities to those conditions.

Pedestrian Community Districts

Pedestrian Community Districts (PCD) are also an appropriate tool for promoting the growth of existing activity centers and can help reinforce or extend existing commercial centers. PCDs promote mixed-use, pedestrian friendliness and a mix of housing densities. The PCDs can be used to promote intense land use in appropriate places, such as within and adjacent to existing activity centers, thus promoting the County's overall land use strategy.

Livable Centers Initiative Studies

ARC's Livable Centers Initiative (LCI) Program is another excellent policy strategy for promoting development in existing activity centers and a focused land use pattern. The LCI program provides matching funds for planning studies to promote redevelopment and infill in existing activity centers, while paying special attention to transportation issues including promoting alternative transportation modes. To date, four LCI studies have been completed in Cherokee County in Woodstock, Canton, Holly Springs, and along the Bells Ferry corridor. Each LCI study provides its own implementation program of projects, and following through on implementation will help to promote a focused land use pattern in the County. Cherokee communities should continue to pursue further LCI studies in appropriate areas.

Conservation Subdivisions

Cherokee County should also examine encouraging development of Conservation Subdivisions in the County. While most of the previous strategies promote development within activity centers, conservation subdivisions are a tool to limit development in areas less served by transportation infrastructure. Conservation subdivisions can also be used to focus development within a walkable footprint, thus reducing the automobile dependency of residential areas. Conservation subdivisions are just one of a number of coordinated tools that can be used to promote a focused land use pattern.

Transportation Policies and Tools

The key element for transportation policy development is the continued balancing and integration of land use and transportation to maximize the efficiency of the existing system and future improvements. Maintenance of the current system should continue to be funded. In addition, the following strategies can help maximize the utilization of the existing transportation network.

Transportation Demand Management

Transportation Demand Management (TDM) strategies can assist with managing the transportation demand in the County. TDM policies reduce dependence on the automobile, reduce demands on the regional and local road network, and improve connections between modes to allow seamless trips. The County should encourage employer use of carpools, vanpools, transit applications, flexible work schedules and support the Clean Air Campaign efforts.

Access Management

Access management is the management of vehicular access to land development, while preserving the flow of traffic on the surrounding road system in terms of safety, capacity, and speed. Access management applies to all types of roads and streets and includes setting access policies, regulations, and permit requirements through the planning and regulatory processes. The primary purpose of developing access management plans, strategies, and regulations is to ultimately minimize traffic flow impacts from access and egress activity from adjacent developments.

Access management involves the control, location, spacing, design, and operation of such infrastructure elements as driveways, medians, interchanges, street connections, auxiliary lanes, and traffic signals. Consistent land use and transportation relationships throughout the county should be encouraged by the county and municipalities. To effectively manage vehicular access in a manner consistent with adjacent land uses, development design, and travel needs, corridor specific vehicular access standards should be developed and adopted for key travel corridors throughout the county. The GDOT 2004 manual of Regulations for Driveway and Encroachment Control should be utilized during this process.

Benefits associated with access management include increased public safety, extended roadway life, reduced traffic congestion, support for alternative transportation modes and improved appearance and quality of the built environment. To balance mobility with economic development, access management plans should be developed for new roads and capacity projects to preserve operations of corridors as land uses change.

Complete Streets

Strengthen regulations ensuring "complete streets," the concept of planning, designing and constructing roadway facilities that accommodate pedestrian and bicycle modes. Appropriate design features promoting safe walking and bicycling can be more efficiently incorporated as roadway projects are programmed and scheduled, however, some retrofitting of existing roadways may be considered.

Monitoring of the CTP

The CTP will serve as an important guide to the County as they continue to work on the transportation program and the ever-increasing demands on the system. On an annual basis, the County should review the program and identify any changes in demand patterns and new developments not anticipated in the plan. Several tools provided through the CTP process, including the refined travel demand model, GIS inventory data, and the prioritized list of recommended projects, will aid in the plan's update, which should occur every five years or more often if circumstances dictate.

6. Financial Analysis and Implementation Strategy

Estimated Project Costs

Project costs were estimated using a costing tool developed by ARC. The estimates offer a general idea of overall cost of the project but do not incorporate special factors such as compensation for businesses or special terrain problems. The tool determines the estimated cost of a project by using design year, project type, length, number of lanes, and land uses in the area around the project. The design year is used to determine inflation costs and requires the years of preliminary engineering (PE), right of way acquisition (ROW), construction (CONST), and opening. For projects included in this plan, the years utilized in the costing tool were 2008 for PE, 2009 for ROW, 2010 for CST, and 2011 for opening. The project type ranges from new construction to roadway widening to bicycle lanes, and costs vary by length for each. The number of lanes is used only for widening projects, with the cost determined by the number of lane miles. The final component, land uses around the project, is important because it helps determine the cost to obtain right of way. For the improvements located in incorporated areas, the land use was considered suburban commercial, while improvements in unincorporated areas assumed suburban residential land use.

The total estimated cost for the CTP project list is $1.8 billion. Historically, construction and land acquisition costs have outpaced the growth in available funds. To account for this financial trend, the total cost was escalated to the CTP midpoint year (12 years out). By escalating the project costs to the midpoint year, this method takes into account that some projects will be constructed before this midpoint year, while others will be implemented after this year. An annual 3% increase was applied to the cost of all of the projects for the 12-year period. The total project cost, adjusted for inflation is $2.5 billion. The projected federal, state and local funding totals $516 million, leaving a funding shortfall of $1.9 billion.

Project Prioritization

In light of the substantial gap between available funding and the total cost of the needs based list, projects were prioritized to ensure that the best program of projects is implemented with the limited funds available. The goals and performance measures developed by the public and key stakeholders were used to prioritize the recommended projects. Results from both quantitative and qualitative analyses provided the means by which the projects were scored.

Results from the transportation model were used to prioritize capacity-enhancing projects such as road widening projects. From the 2005 and projected 2030 v/c ratios, the year at which each project location was expected to exceed LOS D (v/c >0.85) was calculated. Projects were then prioritized by year, with those reaching LOS D first receiving higher priority for funding.

Many of the capacity-enhancing projects geographically overlapped one or more other proposed projects. In most cases, implementing such projects simultaneously would provide both financial and scheduling benefits. Therefore, safety improvements, sidewalks and other projects located along corridors proposed for improvements in the first step were grouped with these capacity projects.

Although the prioritized list of capacity and geographically related non-capacity projects included a majority of the proposed improvements, many projects were left unprioritized by this method. These projects were then separated into groups by project type. Within each category, projects received scores based on various performance measures. Pedestrian and

bicycle projects were scored based on their proximity to schools and downtown areas. Operational improvements received scores based on the crash rates and existing v/c ratios. If located on a congested corridor, bridge widenings were prioritized as operational improvements in addition to being ranked by bridge sufficiency rating and age. The final prioritized project list, provided in Appendix C, can serve as a tool for future project selection as funds become available.

Historic and Projected Funding

Funding levels of the recent past are provided below to give some insight into estimated levels of funding likely to be available into the future. This historical funding analysis develops a financially realistic understanding of the percentage of the recommended project list that is most likely to receive funds considering typical funding levels. With this amount and the prioritized project list, the County can develop a constrained list of projects that best serves the needs of the community and provides the most benefit to the system.

ARC's current Envision 6 2030 RTP and 2008-2013 Transportation Improvement Program (TIP) and other local sources were researched in order to arrive at funding estimates. Only those projects programmed within the 2008-13 TIP (i.e., not long-range improvements) are included in this analysis. Projected SPLOST funds were based on the amount available for transportation in previous programs. To determine a common level of analysis, available funding levels were calculated based on an average annual figure set in current year dollars. The total cost of all projects identified in the CTP, adjusted for inflation, is then compared to available funding levels.

Federal Funds

Current and recent levels of federal funding indicated within ARC's Envision 6 2030 RTP and programmed within the FY 2008-2013 Transportation Improvement Program for Cherokee County improvements are used to estimate the level of federal funds Cherokee County may expect in the future. While it is recognized that federal fund availability fluctuates, using recent funding levels as guidance is assumed to be most accurate. Fifteen projects were funded using money from seven Federal Sources. **Table 6-1** provides detail on Federal funding sources and levels in the 2008-2013 TIP, not including long-range projects.

Table 6.1. Current Federal Funding Sources and Levels, 2008-2013 TIP

Federal Funding Sources	# of Projects	Total TIP Funding	Annual Amount	23 Year Horizon Sum Amount
Bridge (Off-System)	1	$1,088,800	$181,467	$4,173,741
Congestion Mitigation and Air Quality	4	$3,924,832	$654,139	$15,045,197
General Federal Aid	2	$6,324,800	$1,054,133	$24,245,059
National Highway System	1	$13,180,800	$2,196,800	$50,526,400
STP - Statewide Flexible (GDOT)	1	$10,438,729	$1,739,788	$40,015,124
STP - Urban (>200K) (ARC)	3	$2,440,000	$406,667	$9,353,333
STP-Urban Set aside for LCI Projects	3	$3,008,000	$501,333	$11,530,659
TOTAL: 7 sources	**15**	**$40,405,961**	**$6,734,327**	**$154,889,521**

State Funds

The current TIP also details those funds programmed from state sources. Current levels of state funding indicated within ARC's Envision 6 2030 RTP and programmed within FY 2008-2013 TIP were used to estimate the amount of state funds Cherokee County may expect in the future. For developing future funding projections, an annual amount of **$2,235,974** of state funds will be assumed as being available to Cherokee County over the life of the CTP.

Local Funds

SPLOST

Cherokee will collect an estimated $200 million using a Special Purpose Local Option Sales Tax (1%) between January 2006 and December 2011, of which $80 million (40%), $13 million annually, has been allocated to transportation improvements. The transportation portion of the SPLOST funds also includes infrastructure maintenance and system preservation activities. For the CTP funding projections, the next SPLOST is assumed to dedicate a slightly higher amount of funds to transportation projects. An assumed $15 million will be allocated to transportation, of which, $8,000,000 will go towards capital improvements recommended through the CTP. The remaining funds will continue to support system preservation activities at the current funding level. For developing future funding projections, an annual amount of **$8,000,000** is assumed as being available to Cherokee County.

Impact Fees

Cherokee County established an Impact Fee Program in 2000, which charges fees to new developments to defray the cost of public facilities related to the development of that project. Historically, approximately **$500,000** of these funds has been allocated to transportation improvements annually. Funding projects for the CTP will assume this level of funding continues through horizon year 2030.

Revenue Projections

Over the 23-year duration of the CTP (2030-horizon year), the approximate sum total of anticipated available federal, state, and local funds is **$516,439,992.** This amount is based on the funding levels and from the following sources as indicated in **Table 6-2**:

Table 6-2. Funding Sources and Projected Availability to 2030

Fund Source	Annual Availability	Total Funds Available to Horizon Year (23 years)
Federal	$6,734,327	$154,889,521
State	$2,235,974	$51,427,402
SPLOST	$8,000,000	$251,623,069[3]
Local Impact Fees	$500,000	$11,500,000
Developer Contributions	_____	$47,000,000
Total	$17,470,301	$516,439,992

Due to the magnitude of improvements recommended for the State roadway network in Cherokee County, local funds will not go far to fund these on-system projects. By focusing local funds on projects that would not otherwise receive funding, the County can address a greater portion of the local system's needs. Though local funds are allocated as a match to federal funds in the previous RTP, future projects on the State system may require GDOT to provide the local match, in order for the County to save some of its resources for local, off-system projects.

Although funding allocations vary from year to year by type and amount, historical funding levels can provide insight on the magnitude of funds each project type is likely to receive in the future. Table 6-3 describes how different categories of projects might be funded, considering the anticipated available funds. For the purpose of this analysis, the funding available for each project category was assigned to eligible projects based on their prioritization until funds were depleted. Local funds, except those previously committed to projects in the RTP, were devoted to projects off the state system of roads. The table also provides an estimate of the share of the CTP project list that could be implemented during the study period with the projected funds.

[3] SPLOST total is based on $7 million annually for remainder of current SPLOST and $8 million annually for future SPLOST programs

Table 6-3: Potential Funds by Project Category

Project Category	Potential Funding Source	Funding Amount	Portion of Needs List
NHS System	• NHS	**$50.5 million**	**3 projects out of 21**
Non-NHS, On-System Roadways	• General Federal Aid • STP–Statewide Flexible Fund (GDOT) • STP – Urban (>200K) (ARC) • GDOT Funds • 50% of total CMAQ Funds • Previously committed SPLOST funds	• $24.5 million • $40 million • $9.5 million • $51.5 million • $7 million • $3 million **$135.5 million**	**3 projects out of 22** [4]
Off-System Roadways	• SPLOST • Impact Fees • STP – Urban Set-aside for LCI Projects • Developer Contributions	• $237 million[5] • $11.5 million • $11.5 million • $47 million **$307 million**	**33 projects out of 81**[6]
Bridges	• Bridge Fund	**$4 million**	**3 projects out of 15**[7]
Bike/ Pedestrian	• SPLOST[8] • 25% of total CMAQ Funds	• $11.5 million • $3.75 million **$15.25 million**	**17 projects out of 24**
Transit	• 25% of total CMAQ Funds	**$3.75 million**	**3 out of 3**
Total		**$516 million**	**62 out of 166**

The substantial funding gap supports the need to separate projects on the GDOT roadway network from those on the local system. By assuming that federal and state funds will be identified to cover projects on the state system, the County can concentrate local funds on the remaining projects. Using this funding scenario, the SPLOST program, Impact Fees and developer contributions would provide just under one third (29%) of the money necessary to implement these local projects.

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[4] This number assumes that federal or state funds will be used to cover local match on Bells Ferry projects in TIP (widening from Southfork Way to Sixes Road). The total match for these projects is $72 million, which would consume almost two complete SPLOST programs.

[5] Based on projected $8,000,000 available annually for capital improvements less the $500,000 set aside annually for pedestrian and bicycle projects and the previously committed SPLOST funds allocated to On-System roadway projects

[6] If no alternate source is found for Bells Ferry improvements and local funds are used, 20 of 81 off system projects can be funded by these sources.

[7] Two additional bridge projects are included in the Non-NHS On-System funding category.

[8] Cherokee County assumes an annual allocation of $500,000 to pedestrian and bicycle projects from SPLOST

Funding Strategies

Identifying and effectively utilizing available transportation funding is a crucial element in planning for and successfully implementing a transportation plan. A variety of funding sources are available; however, each has restrictions and implications. This is especially relevant since historic and anticipated future funding levels available to Cherokee County indicate a shortage of funds available to implement projects deemed necessary to address identified deficiencies and needs.

Generally, funding is provided at the federal, state, and local levels. From these, the primary source for relatively more costly roadway, transit, bicycle and pedestrian projects is federal funding authorized by SAFETEA-LU. State funds are also an important component of transportation funding, particularly for capital projects. Lastly, a local match is usually required for transportation projects that are not on major state or federal routes. Comprehensive transportation plans rely on all levels of funding. Cherokee County has received funds from many different sources and should continue to pursue all available funding opportunities. Appendix D provides detailed descriptions of the variety of funding sources offered by state and federal agencies as well as local funding strategies.

APPENDIX A. Travel Demand Model Documentation

Cherokee County Comprehensive Transportation Plan
Travel Modeling Activities

Introduction

This brief technical report describes the enhancements that were made to the Atlanta Regional Commission (ARC) regional travel forecasting model to address Cherokee County modeling needs during the preparation of a Comprehensive Transportation Plan for the county.

The Cherokee County travel demand model served as an important tool during the analysis of potential Cherokee County transportation system improvements. This travel demand model was adapted from the final form ARC 20-county travel forecasting model system, received in September 2007. The ARC model is an advanced state-of-practice four-step model system.

The ARC makes its travel demand model available for use in transportation studies such as this CTP. ARC staff includes modeling personnel who serve as a valuable resource to the modeling community in the metropolitan Atlanta region. The CTP project team requested and received the ARC model system, and interacted with ARC modeling staff throughout the course of this study.

This document describes the travel demand modeling activities conducted during the CTP. It includes four sections that describe in turn:

- the adaptation and validation of the model to Cherokee County transportation conditions,
- the application of the model to analyze the performance of and potential improvements to the Cherokee County transportation system,
- the performance measures used in the evaluation of the Cherokee County transportation system; and
- recommendations for the on-going maintenance of the Cherokee County model.

Adaptation and Validation

The ARC travel forecasting model includes scripts needed to execute TP+ software as well as files of socio-economic and network data corresponding to five-year intervals from 2000 to 2030. To validate the ARC model's performance for the purpose of our study, we applied it to the 2005 socio-economic and network data files and compared the resulting outputs to corresponding traffic data in Cherokee County.

To assess the ARC model's highway travel predictions, we selected five screenline locations as shown in Figure 1 below. These screenlines were selected for a variety of reasons, as follows:

N: intercepts traffic traveling primarily in a north/south direction in the northern portion of Cherokee County
S: intercepts traffic traveling primarily in a north/south direction in the southern portion of Cherokee County, especially to/from Cobb County
W: intercepts traffic traveling primarily in an east/west direction in the western portion of Cherokee County, especially to/from Bartow County
C: intercepts traffic traveling primarily in an east/west direction in central Cherokee County
E: intercepts traffic traveling primarily in an east/west direction in the eastern portion of Cherokee County

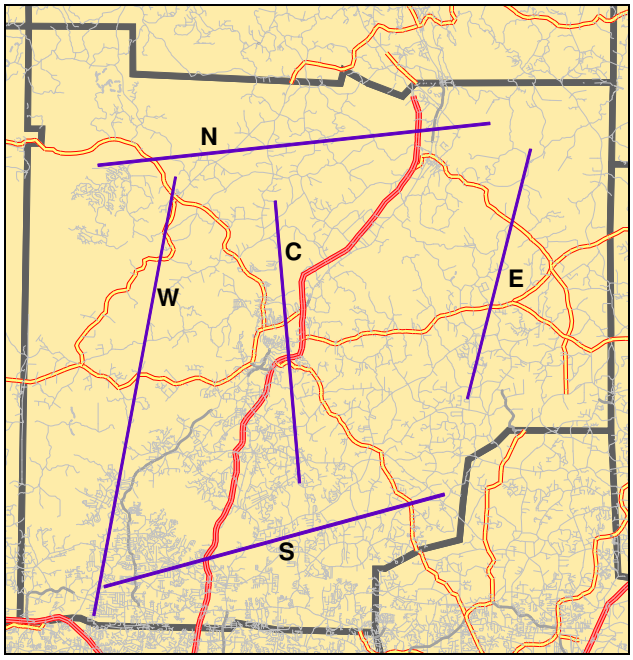

Figure 1: Cherokee County Highway Screenlines

Annual average daily traffic (AADT) levels for these screenlines were obtained from the Georgia Department of Transportation (GDOT) traffic data website. Table A.1 displays the base year GDOT traffic count data, the corresponding outputs from the unadjusted ARC model, and the absolute and relative difference between the two. Table A.1 indicates the forecasts of the unadjusted ARC model closely match actual traffic figures for Cherokee County. Even the W screenline with the largest percentage difference of 13% is well within maximum desirable deviation in screenline volumes of roughly 30% for this level of screenline traffic, according to NCHRP 255.

Table A.1: Base Year Traffic Data and Unadjusted ARC Model Outputs

Screenline	2005 AADT	Model	Difference	% Difference
N	44,070	41,763	-2,307	-5%
S	125,200	114,361	-10,839	-9%
W	51,080	57,579	6,499	13%
C	85,730	89,168	3,438	4%
E	25,390	26,224	834	3%
Total	**331,470**	**329,095**	**-2,375**	**-1%**

In order to advance the ARC model's applicability to travel in Cherokee County, we considered a number of model adaptations. In all cases, these adaptations concerned the model's socio-economic and network data for Cherokee County, and did not involve the modeling relationships themselves[9]. Our review and adaptation of the data were intended to better reflect actual conditions in Cherokee County, as they influence travel behavior. Our initial review of the ARC model's forecast identified good agreement for the highway mode between actual and model outputs; there was no Cherokee County transit service in 2005 to validate. Since the original model did a good job of matching actual performance, we focused our adaptation efforts on ensuring an accurate representation of current network conditions and providing a sound base for analyzing future transportation improvements.

To this end, we began our model adaptation by reviewing the highway network coverage in Cherokee County. During this review, we identified a handful of arterial highways that were not originally coded in the ARC model; we added these roads to the network. Table 2 below identifies the Cherokee County arterials that we added to the network. Our review of the Cherokee County highway network also identified a limited number of links for which the distance attribute contained an incorrect value[10]; we corrected the distance attribute on these links.

Table A.2: Cherokee County Arterial Highways added to Network

Facility Name	From	To
Scott Rd.	SR 140	SR 20
Neese Rd.	Arnold Mill Rd.	SR 92
Priest Rd.	Cherokee Baker Rd.	SR 92
Fate Conn Road	Lower Burris Rd.	Canton Hwy.
Bishop Rd. / Airport Drive	Lower Bethany Rd.	Canton Hwy.
Flatbottom Rd./Holcomb Rd. / Northridge Rd.	Canton Hwy.	SR 372
Avery Road	SR 140	East Cherokee Dr.
Bart Manous Rd.	SR 140	East Cherokee Dr.
Gaddis Rd.	East Cherokee Dr.	Union Hill Rd.
Old Lathemtown Rd.	Union Hill Rd.	Arbor Hill Rd.
Liberty Grove Rd.	Old Lathemtown Rd.	SR 372

[9] Changes to fundamental model relationships could potentially invalidate the applicability of the ARC model at the regional level.

[10] Most of these discrepancies appear to have resulted from prior link splitting.

To help the model accurately reflect how trips load onto the network, particularly considering future developments, we considered dividing a number of ARC model traffic analysis zones (TAZ) in Cherokee County. We received inputs from the project team and the client to help us identify candidate TAZ to split. We also reviewed the level of trip making for each TAZ; zones that are large in area and have high levels of trips are good candidates for splitting. Finally, we reviewed Census block boundaries and corresponding Census 2000 block population.

Based on these factors, we subdivided 5 zones in Cherokee County, as depicted in Figure 2.

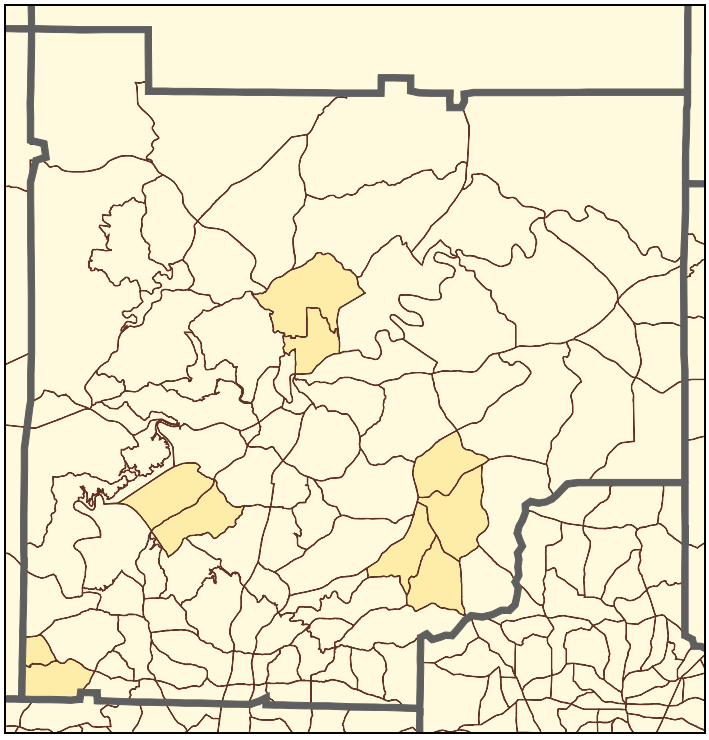

Figure 2: ARC Model Zone Splitting

To accommodate the modified TAZ structure, it was necessary to update a number of the ARC model input and parameter files, as follows:

- Modifications to the highway network
  - We added centroids for the new TAZ, and re-coded centroid connectors for the split TAZ;
  - We increased the numbering of all external TAZ by 5 to ensure that all the internal TAZ (including the new ones) are numbered with lower numbers than the external TAZ;
- Modifications to socio-economic data
  - We determined the 2000 Census population contained in each portion of the split TAZ (using Census block population tabulations), and used the corresponding fractions to allocate the ARC zone population;

- We generally allocated employment between the portions of a split zone based on the population shares of each portion, except for TAZ 1490 where all employment was allocated to the southern TAZ, which contains major employment centers in Canton, including the Northside Hospital-Cherokee

- Other files
  - We made adjustments as required to support the updated TAZ numbering.

We then ran the adapted model and again compared the highway outputs against the corresponding baseline data.

Table 3 shows the highway screenline volumes, the initial and adapted model forecasts, and the absolute and relative differences between the screenline volumes and the adapted model outputs.

Table A.3: Base Year Traffic Data and Adapted ARC Model Outputs

Screenline	2005 AADT	Initial Model	Adapted Model	Difference from Actual	% Difference from Actual
N	44,070	41,763	42,776	-1,294	-3%
S	125,200	114,361	114,763	-10,437	-8%
W	51,080	57,579	58,048	6,968	14%
C	85,730	89,168	88,159	2,429	3%
E	25,390	26,224	25,195	-195	-1%
Total	**331,470**	**329,095**	**328,941**	**-2,529**	**-1%**

As noted above, the main intentions of the model adaptation were to ensure the accuracy of the highway network coding and to provide a more refined representation of trip loading onto the network. It was not surprising then that the adaptations led to very similar model output traffic volumes as the unadjusted model. The volume differences between the initial and adapted models are generally small, although they do represent an even closer matching of existing conditions for four of the five screenlines.

Based on these very satisfactory highway volume results, we retained the model adaptations described above, and considered them to be validated.

Travel Demand Model Analyses

The Cherokee County CTP involved two distinct phases of travel demand model analyses. The first was conducted as part of the needs assessment, while the second was the scenario testing used to help analyze the performance of transportation improvements.

Needs Assessment

The adapted and validated model was first used to assess the transportation system needs of Cherokee County. The needs assessment included transportation forecasts for both 2005 and the 2030 Existing plus Committed (E+C) scenario. The 2030 E+C scenario was represented as the ARC model's year 2030 socio-economic inputs along with the year 2010 highway and transit networks. For the 2030 E+C scenario, we applied the same model adaptations made to the year 2005 scenario, and also corrected an additional set of highway link distance attributes, similar to the distance correction performed in the base year Cherokee County model adaptation.

Scenario Evaluation

The scenario analysis phase of the Cherokee County CTP project involved the modeling of two transportation improvement scenarios, along with the Existing plus Committed scenario. Travel modeling activities performed in this phase used the version of the Atlanta Regional Commission (ARC) 20-county travel forecasting model system that was adapted to conditions in Cherokee County and described above.

2030 Existing plus Committed

For the needs assessment report, we analyzed the 2030 E+C scenario. We represented the 2030 E+C in this analysis as the ARC model's year 2030 socio-economic inputs along with the year 2010 highway and transit networks. Following the needs assessment, the CTP project team conducted an evaluation of proposed Cherokee County transportation improvements, during which time we determined the current list of committed projects. Accordingly, we updated the E+C network to ensure that all Cherokee County SPLOST and TIP committed projects were represented in our E+C network. In addition, we added elements of the I-75 / I-575 BRT / HOV project to the revised E+C scenario.

This revised E+C scenario served as the comparison base for the scenario analysis phase of the project. The improvement scenarios analyzed were developed by adding project improvements to the E+C base. Generally, the project improvements considered belong to one of the following categories:

1. Capacity – capacity projects include lane additions to an existing road, or the construction of a new road; these projects were represented in the network by increasing the number of lanes or inserting new links with the appropriate connections to other network roads.
2. Operational, can be modeled – these projects include operational improvements, such as adding left turn lanes or traffic signal coordination, that are intended to increase the travel speed and capacity. We represented these types of improvements by adjusting the facility type of the impacted links, which has the effect of increasing link speeds and capacities.
3. Operational, cannot be modeled – these are operational improvements, such as access management or interchange capacity, that cannot be reflected in the travel demand model because the model would be insensitive to the change or the maximum link performance already existed in the network (for example, access management added to a road already coded as Principal Arterial Class 1, the type of arterial highway represented with the highest speeds and capacities represented in the travel demand model).

4. Transit – these projects include new or improved transit service, and were added to the transit network with the attributes (frequencies, etc.) that define the route.

Alternative Scenarios

Scenario 1 considered a limited set of highway improvements to the E+C scenario. The short list of recommended roadway projects was developed by the project team as capacity addition projects that may alleviate projected corridor deficiencies found during the Needs Assessment. The list of roadway projects is presented in Table A.4 below.

Table A.4: Scenario 1 Highway Improvements

Roadway	Boundaries	Improvement
Bells Ferry Road	Little River Bridge to Sixes Road	Capacity
Bells Ferry Road	North of Sixes Road to SR 20 (Knox Highway)	Capacity
Bluffs Parkway	Riverstone Boulevard to Fate Conn Road	New location
Butterworth Road/Univeter Road	SR 20 to SR 140	Operational
Canton Highway (Old Hwy 5/Main Street)	Sixes Road to Rabbit Hill Road	Widening
Canton West Parkway	SR 5/SR 140 at North Etowah Drive to SR 108 in vicinity of Lost Town Trail southeast of Lake Arrowhead	New location
Centennial Parkway	Priest Road to Woodstock Road	New location
Commerce Parkway	SR 140 in vicinity of Russell King Lane to SR 20 in vicinity of Governors Walk Drive	New location
Dobbs Road Extension	Arnold Mill Road to Gunnin Road	New location
East Cherokee Drive	Main Street (Old Hwy 5) to SR 20	Widening; Operational
East Cherokee Drive	SR 20 to Ball Ground Highway	Widening
Hickory Flat Road Extension	SR 140/Hickory Flat Highway at SR 20/Marietta Road to Marietta Street west of SR 20	Widening
Hickory Flat Road Extension	Marietta Road to Waleska Street	New location
Holbrook Campground Road	SR 20 to Fulton County	Widening; Operational
Holly Street/Hickory Road	Bells Ferry Road to SR 140	Widening; Operational
I-575	Cobb County line to Riverstone Parkway/Ball Ground Highway	Widening
I-575	Sixes Road to SR 20	Widening (HOV lanes)
I-575	SR 20 to Riverstone Parkway/Ball Ground Highway (SR 5BU)	Widening (HOV lanes)
I-575	SR 20 to SR 5BU	Widening (auxiliary lanes)
I-575	At Pickens County line	Widening (new interchange)

Roadway	Boundaries	Improvement
I-75	Cobb County (Barrett Parkway/SR 5 Conn) to Cobb County (Glade Road)	Widening
Laurel Canyon Connector	Canton West Parkway to SR 140	New location
Marietta Highway	Bells Ferry Road to Ridge Road	Widening
Mill Creek Road	East Cherokee Drive to Arnold Mill Road	Widening; Operational
Neese Road	Unincorporated portion from north of Brentwood Lane to south of Driftwood Lane/Washington Avenue	Widening
SR 140	Lower Burris Road to Riverstone Parkway	Widening
SR 140	Marietta Road to I-575	Capacity
SR 140	I-575 to Fulton County line	Operational; Capacity
SR 140	CR 766 (MP 10.75) to CR 52 (MP 7.86), crosses Sardis Creek	Widening
SR 140	EB MP 0.75 to MP 2.0 (WB MP 4.8 to 6.0)	Widening
SR 20	Bartow County line to I-575	Widening
SR 20	I-575 to Forsyth County line	Widening
SR 369	At 5 locations & Forsyth	Widening

Scenario 2 included a larger set of highway and transit improvements. In addition to including all Scenario 1 projects, Scenario 2 also added a set of additional roadway improvements developed by the project team to create an "enriched roadway improvement scenario", and the 2030 RTP transit projects. The additional roadway projects developed for Scenario 2 are presented in Table A.5.

Table A.5: Scenario 2 Highway Improvements

Roadway	Boundaries	Improvement
Arnold Mill Road Extension	Main Street (Old Hwy 5) at Ridgewalk to Arnold Mill Road at Neese Road	New location
Industrial Connector (new location)	Mountain Brook Industrial to Hickory Springs Industrial Drive (Holly Springs Extension to Hickory Rd)	New location
Northpoint Parkway Extension	SR 92 to Priest Road	New location
Reservoir Boulevard	Reinhardt College Parkway to Great Sky	New location
Valley Street Extension (new location)	Current southern terminus of Valley Street to Howell Bridge Road East	Capacity/New Location
Arnold Mill Road	At Mill Creek Road	Intersection
Batesville Road	SR 140 to Fulton County line	Operational
Bells Ferry Road	Bells Ferry Place to Victoria Road	ITS-Other
Canton Highway (Old Hwy 5/Main Street)	At Hickory Road and Holly Street	Operational
East Cherokee Drive	Main Street to Ball Ground Highway	Operational
Hames Road	SR 92 to Jamerson Road	Operational
Holly Street/Hickory	Boyd Street to Hickory Street	Operational

Roadway	Boundaries	Improvement
Road		
Kellogg Creek Road	SR 92 to Bells Ferry Road	Operational
Rhine Road	Upper Sweetwater Road to SR 20	Roadway improvements
SR 20	At Arbor Hill Road	Intersection
SR 20	At Butterworth Road	Intersection
SR 108	At Cable Road	Intersection
SR 140	At Sugar Pike Road	Operational
SR 140	At Mauldin Lane and Univeter Road	Operational
SR 369	SR 20 to Forsyth County line	Operational
SR 372	SR 20 to Canton Highway/Ball Ground Highway	Operational
SR 372	Conns Creek Road to Ball Ground Bypass	Operational
Towne Lake Parkway	I-575 to Towne Lake Hills	Operational
Towne Lake Parkway	At I-575	Intersection
Towne Lake Parkway	I-575 to Main Street (Old Hwy 5)	Operational
Trickum Road	At Barnes Road	Intersection
Union Hill Road	At Lower Union Hill Road	Intersection
Victory Drive	Woodstock Road to Kellogg Creek Road/Bells Ferry Road	Operational
Waleska Bypass (East Grady St)	On east side from SR 108 south of Grady Street to SR 108 north of Grady Street	New location
Willoughby & Sewell Tract Parkway	Upper Sweetwater Road to SR 20	Capacity/new location

Performance Measurement

To gauge the transportation system performance, measures were computed at the levels of individual corridors/transit routes, the county and the Atlanta metropolitan region as a whole. These performance results have been presented and discussed in the main body of the CTP report. While the specific measures used to evaluate the performance may differ at the different geographic levels, the basic performance measures were computed from model outputs for all phases of the project.

At the regional and county levels, the transportation system performance was evaluated with a set of measures that included the following:

- **Travel time index (TTI)** – the ratio of forecasted travel times (including congestion) to free-flow travel times. The ARC has designated TTI as one of its preferred measures of effectiveness.
- **Daily Delay Hours** – measure of travel under congested conditions that indicate the degree of congestion present. Daily Delay indicates the amount of congestion in hours. Because TTI is a ratio of congested and free-flow travel times, Daily Delay can be thought of as a building block of TTI since it indicates the difference between congested and free-flow travel times.
- **Vehicle Miles of Travel (VMT)** – used as a measure of utilization of roadway system denoting level of travel consumption.

- **Vehicle Hours of Travel (VHT)** – used as an indication of system travel efficiency and level of congestion. For both VMT and VHT, it is important to understand how an improvement may result in higher VMT and VHT. Due to the functioning of the feedback loop of the ARC model, a network improvement may make longer trips more accessible, and thus increase average trip lengths, which sometimes may result in higher VMT and VHT values. This situation is common in regional travel demand models with a feedback loop that includes trip distribution.
- **Transit Mode Share** – a measure that identifies the percentage of total trips that use a transit mode.
- **Average Distance (by trip type)** – a measure that indicates the average lengths of trips by trip mode (SOV, HOV, walk to transit, or drive to transit).

The calculation of highway corridor performance measures required the identification of all highway network links contained in each corridor. With all links belonging to each corridor identified, we generated the following performance measures:

- **PM peak period VC ratio** – used to provide an indication of the level of service during the peak travel period. VC ratios for each link were combined together using a weighted average of VMT.
- **PM peak period Overcapacity** – provides an indication of the magnitude of the capacity shortfall for links experiencing a shortfall. It was calculated as the average amount of overcapacity (volume minus capacity) for links whose volume exceeds their capacity.
- **Percent Overcapacity** – provides an indication of the extent of capacity shortfall of a corridor. It was calculated as the percentage of corridor links that are over capacity.
- **PM peak period average volume** – indicates the usage level of a corridor during the peak period, and is particularly beneficial to identify when a scenario results in more or less corridor use. It is calculated by dividing the total corridor PM peak VMT by the total corridor length.
- **Daily average volume** – indicates the usage level of a corridor throughout the day, and is a useful measure to indicate when a scenario results in more or less corridor use. It is calculated by dividing the total corridor VMT by the total corridor length.
- **Travel Time Index** – a comparison between the forecasted travel conditions and free-flow conditions. The ARC has designated TTI as one of its preferred measures of effectiveness, and therefore we review it at the corridor level in addition to at the county and regional levels. An increase in a corridor TTI does not necessarily indicate poor performance of a corridor project, since some improvements may improve free-flow travel speeds and attract more traffic, which may result in more delay and a higher TTI. Such a situation highlights the "network effects" of a transportation project, where corridor performance may appear worse but performance at the county or regional level may be improved due to the project.
- **Daily Delay** – a measure of travel under congested conditions, indicating the degree of congestion that is occurring. Because TTI is a ratio of congested and free-flow travel times, Daily Delay can be considered a building block of TTI since it indicates the difference between congested and free-flow travel times.
- **PM peak period average speed** – used to indicate the average speed of travel during the peak period. The average speed was calculated by dividing the total corridor VMT by total corridor VHT for the PM peak period.
- **Daily average speed** – used to indicate the average speed of travel over the course of the day. The average speed was calculated by dividing the total daily corridor VMT by total daily corridor VHT.

- **PM peak period corridor travel time** – represents the travel time of the entire corridor during the PM peak period.
- **Daily corridor travel time** – represents the daily travel time of the entire corridor.

The above measures were calculated for the major Cherokee County corridors, and the changes in these measures between the scenarios and the E+C base were used as an indication of the performance of the improvement projects included in the scenarios.

In addition to the evaluation of highway project improvements at the corridor level, we also reviewed the performance of individual transit projects. Specifically, we processed travel demand model outputs to provide the daily number of transit route passenger boardings of each transit project evaluated.

As part of the analysis conducted in preparation for the identification of projects to test, we also reviewed the traffic patterns using a handful of Cherokee County roads. We used the "select link analysis" technique to isolate the trips that travel across specific highway network links and summarized those trips into county-county flows. We performed this analysis for the following four locations:

1. I-575 - North of Cobb County Line
2. SR 20 - East of I-575
3. SR 140 - West of Intersection with East Cherokee Dr.

Model Maintenance

The complexity of transportation forecasting models is such that considerable computing capacity and specialized staff (typically with a Master's degree in transportation planning and prior experience in modeling) are required to apply, maintain and improve them; this is certainly true of county-level models adapted from the ARC regional model. Unless a transportation agency sustains an on-going model-based planning effort, these resources would typically not be fully utilized.

For this reason, it is not common for urban areas or other jurisdictions to have their own transportation modeling staff until their size reaches "metropolitan" level or greater. It is much more common for such areas to rely on consultant support, as needed, to assist their staff in developing and using their transportation forecasting model.

APPENDIX B. Recommended Transportation Improvements

Appendix B:
Cherokee Comprehensive Transportation Plan
Constrained Project List

Corridor	Extents	Project ID	Project Type	Project Source	Jurisdiction/ Sponsor	Estimated Cost	Local Match
Short Term Projects with Committed SPLOST Funding							
Arnold Mill Road	At Mill Creek Road		Intersection	County Capital Improvements	Cherokee	**$835,000**	$835,000
Bells Ferry Road	Bells Ferry Place to Victoria Road	CH-010A1/0006792	ITS-Other(Signal upgrade)	ARC's 2008-2013 TIP	Cherokee	**$216,040**	$43,208
Bells Ferry Road	Bridge over Little River	CH-010B/630975	Bridge widening	ARC's 2008-2013 TIP	GDOT	**$9,233,000**	$2,000,000
Bells Ferry Road	At Ridge Road		Intersection	ARC's 2008-2013 TIP	Cherokee	**$550,000**	$550,000
Canton Highway (Old Hwy 5/Main Street)	Sixes Road to Rabbit Hill Road		Widening (local and/or developer contributions)	Developer Projects	Holly Springs	**$1,841,760**	$750,000
Canton Intermodal Facility (Transfer Station)	Canton	CH-AR-261/0006859	Transit facilities	ARC's 2008-2013 TIP	Canton	**$425,000**	$85,000
Centennial Parkway	Priest Road to Woodstock Road		New location (local and/or developer contributions)	Developer Projects	Developer	**$4,341,240**	$0
East Cherokee Drive	At Lower Union Hill Road		Intersection	County Capital Improvements	Cherokee	**$550,000**	$550,000
East Cherokee Drive	At Main Street (Old Hwy 5)		Intersection	County Capital Improvements	Cherokee	**$500,000**	$500,000
Howell Bridge Road (SR 5BU)	At Sharp Mountain Creek	CH-199/671951	Bridge upgrade	ARC's 2008-2013 TIP	Cherokee	**$1,461,000**	$100,000
Kellogg Creek Road	At Woodstock Road		Intersection	County Capital Improvements	Cherokee	**$400,000**	$400,000
Kellogg Creek Road	Bridge over Owl Creek		Bridge	County Capital Improvements	Cherokee	**$270,000**	$270,000
Northpoint Parkway Extension	SR 92 to Priest Road		New location (local and/or developer contributions)	Developer Projects	Developer	**$4,212,000**	$0
SR 108	At Cable Road		Intersection	County Capital Improvements	Cherokee	**$200,000**	$0
SR 140	at East Cherokee Drive		Intersection	County Capital Improvements	Cherokee	**$750,000**	$750,000
SR 140	At Byrd Mountain Lane/Lower Burris Road/Puckett Creek Road		Intersection	County Capital Improvements	Cherokee	**$550,000**	$550,000
SR 20	At Butterworth Road		Intersection	County Capital Improvements	Cherokee	**$175,000**	$175,000
SR 20	At East Cherokee Drive		Intersection	County Capital Improvements	Cherokee	**$600,000**	$600,000
SR 20	At SR 108, White Road and Mount Carmel Church Lane	CH-209/662650	Safety (intersection improvement)	HSIP - GDOT Safety Funds	GDOT	**$1,384,000**	$0
Towne Lake Parkway	I-575 to Towne Lake Hills (13 locations within 0.5 miles of I-575)	CH-208/0006720	ITS-Other (Signal interconnection and coordination)	ARC's Envision 6 RTP	Cherokee	**$230,000**	$46,000
Trickum Road	At Barnes Road		Intersection	County Capital Improvements	Cherokee	**$550,000**	$550,000
Wade Green Road	Cobb County line to SR 92	0008095	Enhancement (TE-landscape/beautify)	GDOT TPRO Projects	Cherokee	**$94,000**	$94,000
					Total =	**$29,368,040**	**$8,848,208**

Appendix B:
Cherokee Comprehensive Transportation Plan
Constrained Project List

Corridor	Extents	Project ID	Project Type	Project Source	Jurisdiction/ Sponsor	Estimated Cost	Local Match
Additional Short (2010) and Mid Range (2020) Projects							
Arnold Mill Road	In Woodstock (Main Street to Park Avenue)	S006928	Operational (intersection improvements)	GDOT TPRO Projects	Woodstock	**$153,256**	$153,256
Arnold Mill Road	Park Avenue to SR 140	CH-188/0006038	Operational (roadway)	GDOT TPRO Projects	Cherokee	**$9,328,000**	$9,328,000
Arnold Mill Road Extension	Main Street (Old Hwy 5) at Ridgewalk to Arnold Mill Road at Neese Road	CH-167/CH-168	New location	ARC's Envision 6 I	Cherokee	**$32,459,502**	$32,459,502
East Main Street	Canton	CH-216/0003778	Enhancement (pedestrian lighting)	GDOT TPRO Projects	Canton	**$520,000**	$20,000
Hickory Flat Road	Marietta Road to I-575	CH-AR-240/0002846	Pedestrian facility	ARC's 2008-2013 TIP	Canton	**$1,200,000**	$240,000
Hickory Flat Road Extension	Marietta Road to Waleska Street	CH-202/0006042	New location	ARC's Envision 6 RTP	Canton	**$3,871,000**	$1,892,600
Industrial Connector	Mountain Brook Industrial to Hickory Springs Industrial Drive (Holly Springs Extension to Hickory Rd)	CH-215	New location	ARC's Envision 6 RTP	Holly Springs	**$8,089,200**	$8,089,200
Jordan Road	At railroad crossing just east of Ball Ground Highway (SR 5BU/SR 372)	0007106	Safety (RRX warning device)	GDOT TPRO Projects	GDOT	**$150,000**	$0
Main Street	Towne Lake Parkway to Serenade Lane	CH-AR-259/0006994	Pedestrian facility	ARC's 2008-2013 TIP	Woodstock	**$1,020,000**	$204,000
Marietta Road	At Hickory Flat Road	CH-206/0006719	Operational	ARC's 2008-2013 TIP	Canton	**$555,000**	$111,000
Marietta Road	Marietta Highway to East Marietta Street	CH-AR-BP011/0004495	Pedestrian facility	ARC's 2008-2013 TIP	Canton	**$1,269,000**	$253,800
Palm Road	At Toonigh Creek	S007025	Culvert (replacement)	GDOT TPRO Projects	Holly Springs	**$88,030**	$88,030
Riverstone Parkway (SR 5BU)	At SR 140 Conn, Canton Mill Lane, and Old Ball Ground Highway	CH-207/0006791	ITS-Other(Signal upgrade)	ARC's 2008-2013 TIP	Canton	**$1,230,000**	$246,000
SR 369	At Board Tree Creek	0007028	Bridge	GDOT TPRO Projects	GDOT	**$420,000**	$0
SR 140	Arnold Mill Road to Mountain Road/Earney Road	CH-140F/632840	Operational (turn lanes)	ARC's 2008-2013 TIP	GDOT	**$2,191,000**	$0

Appendix B:
Cherokee Comprehensive Transportation Plan
Constrained Project List

Corridor	Extents	Project ID	Project Type	Project Source	Jurisdiction/ Sponsor	Estimated Cost	Local Match
Additional Short (2010) and Mid Range (2020) Projects							
I-75	Bartow County line to Cobb County line		Widening	ARC's Envision 6 RTP	GDOT	**$10,234,560**	$0
I-75	Cobb County (Chastain Road) to SR 92	CO-AR-302/0005128	Noise Barriers	GDOT TPRO Projects	GDOT	**$13,200,000**	$0
Bells Ferry Road	Southfork Way to Little River Bridge	CH-010A2/630977	Widening	ARC's 2008-2013 TIP	Cherokee	**$56,796,000**	$38,788,000
Trickum Road	Cobb County line to Arnold Mill Road		Widening	Additional Potential Projects	Cherokee	**$17,316,000**	$17,316,000
Trickum Road	At Wagon Trail Road		Intersection	County Capital Improvements	Cherokee	**$270,000**	$270,000
I-575	At Ridgewalk Parkway	CH-AR-225/0006043	Interchange	ARC's 2008-2013 TIP	GDOT	**$16,476,000**	$0
SR 140	Bartow County (East Valley Road) to Garland Mountain Trail	BT-019/0006036	Widening (passing lanes)	GDOT TPRO Projects	GDOT	**$2,152,000**	$0
Sixes Road	I-575 to Canton Highway (Old SR 5)	CH-190/0002637	Widening	ARC's 2008-2013 TIP	Cherokee	**$2,070,000**	$0
Sixes Road	At I-575	CH-189/0006041	Bridge widening	ARC's Envision 6 RTP	GDOT	**$17,026,335**	$0
SR 20	At Arbor Hill Road		Intersection	County Capital Improvements	Cherokee	**$325,000**	$325,000
SR 20	I-575 to Scott Road	CH-020A1/632790	Operational (passing lanes)	ARC's 2008-2013 TIP	GDOT	**$13,048,411**	$0
SR 140	EB MP 0.75 to MP 2.0 (WB MP 4.8 to 6.0)	642040-	Widening (passing lanes)	GDOT TPRO Projects	GDOT	**$2,213,000**	$0
SR 140	Little Refuge Road to Shoal Creek	CH-186B/0006037	Widening (passing lanes)	GDOT TPRO Projects	GDOT	**$700,000**	$0
SR 140	Fulton County line (Ranchette Road) to Mountain Road	FN-232A/721305	Widening	GDOT TPRO Projects	GDOT	**$43,027,082**	$0
SR 140	At Little River (Fulton County line)	FN-232B/721308	Bridge (replacement)	GDOT TPRO Projects	GDOT	**$3,131,000**	$0
Neese Road	SR 92 to Arnold Mill Road (incorporated portions only)		Widening (local and/or developer contributions)	Additional Potential Projects	Woodstock	**$600,000**	$600,000
Neese Road	Unincorporated portion from north of Brentwood Lane to south of Driftwood Lane/Washington Avenue		Widening	Additional Potential Projects	Cherokee	**$2,340,000**	$2,340,000
Mill Creek Road	East Cherokee Drive to Arnold Mill Road		Widening	Additional Potential Projects	Cherokee	**$3,276,000**	$3,276,000
SR 20	At Etowah River (4.5 miles west of Canton)	CH-203/632900	Bridge upgrade	ARC's 2008-2013 TIP	GDOT	**$4,204,000**	$0
SR 372	At Etowah River (2.3 miles SE of Ball Ground)	CH-204/642400	Bridge upgrade	ARC's 2008-2013 TIP	GDOT	**$3,702,000**	$0
Waleska Street	Main/North Street to SR 5BU	CH-AR-241/0002847	Bicycle/pedestrian facility	ARC's 2008-2013 TIP	Canton	**$1,540,000**	$308,000
					Total =	**$276,191,376**	**$116,308,388**

Appendix B:
Cherokee Comprehensive Transportation Plan
Constrained Project List

Corridor	Extents	Project ID	Project Type	Project Source	Jurisdiction/ Sponsor	Estimated Cost	Local Match
Long Range (2030) Projects							
Bells Ferry Road	Little River Bridge to Sixes Road	CH-010C/642260	Widening	ARC's 2008-2013 TIP	Cherokee	**$46,792,556**	$34,014,956
SR 140	SR 5BU to Lower Burris Road	CH-140C/630942	Widening	ARC's Envision 6 RTP	GDOT	**$40,721,600**	$0
SR 20	Scott Road to SR 369	CH-020B/0003681	Widening	ARC's Envision 6 RTP	GDOT	**$79,560,000**	$0
I-575	Towne Lake Parkway to SR 5BU	AR-917/611150	Widening	ARC's Envision 6 RTP	GDOT	**$23,650,000**	$0
SR 140	East Cherokee Drive to I-575	CH-140D2/0006040	Widening	ARC's Envision 6 RTP	GDOT	**$67,817,000**	$0
SR 140	East Cherokee Road to Mountain Road	CH-140E3/621240	Widening	ARC's Envision 6 RTP	GDOT	**$41,039,000**	$0
SR 20	Bartow County (I-75) to I-575	CH-020A2/0007836	Widening	ARC's Envision 6 RTP	GDOT	**$96,082,000**	$0
SR 372 Spur	SR 5BU at Howell Bridge Road to SR 372 south of Ball Ground	CH-180/0002525	New location	GDOT TPRO Projects	GDOT	**$10,700,000**	$4,700,000
Canton Highway (Old Hwy 5/Main Street)	Woodstock City limit to Holly Springs City limit	CH-181/662620	Safety (intersection improvement)	GDOT TPRO Projects	Holly Springs	**$3,800,000**	$500,000
Howell Bridge Road (SR 5BU)	At Ball Ground Highwy and Old Canton Road	AR-118A/0003946	Safety (intersection improvement)	GDOT TPRO Projects	GDOT	**$784,488**	$0
I-575	At Pickens County line	CH-211/610830	Widening (new interchange -- SB flyover bridge)	GDOT TPRO Projects	GDOT	**$8,212,000**	$0
SR 369	At 5 locations & Forsyth	0001337	Widening (passing lanes)	GDOT TPRO Projects	GDOT	**$14,800,000**	$0
Holbrook Campground Road	SR 20 to Fulton County		Widening	Additional Potential Projects	Cherokee	**$16,570,240**	$16,570,240
Bells Ferry Road	North of Sixes Road to SR 20 (Knox Highway)	CH-010D/0006039	Widening	ARC's Envision 6 RTP	Cherokee	**$43,501,000**	$34,970,000
Woodstock Road	Cobb County line to Victory Drive		Widening	Additional Potential Projects	Cherokee	**$12,640,800**	$12,640,800
					Total =	**$506,670,684**	**$103,395,996**

Appendix B:
Cherokee Comprehensive Transportation Plan
Aspirations List

Corridor	Extents	Project ID	Project Type	Project Source	Jurisdiction/ Sponsor	Estimated Cost	Local Match
Road Widening							
I-575	Cobb County line (I-75) to Sixes Road	AR-H-005/713640	Widening (HOV lanes)	GDOT TPRO Projects	GDOT	**$109,000,000**	$0
I-75	Cobb County (Barrett Parkway/SR 5 Conn) to Cobb County (Glade Road)	0007892	Widening	GDOT TPRO Projects	GDOT	**$104,205,000**	$0
I-575	Sixes Road to SR 20	AR-H-0056/0003434	Widening (HOV lanes)	ARC's Envision 6 RTP	GDOT	**$139,000,000**	$0
SR 372	At 3 locations - Ball Ground-SR 369	0001338	Widening (passing lanes)	ARC's Envision 6 RTP	GDOT	**$8,500,000**	$0
Holly Street/Hickory Road	Bells Ferry Road to SR 140		Widening	Additional Potential Projects	Cherokee	**$37,450,880**	$37,450,880
I-575	SR 20 to SR 5BU	CH-AR-230/611260	Widening (auxiliary lanes)	GDOT TPRO Projects	GDOT	**$697,981**	$0
I-575	SR 20 to Riverstone Parkway/Ball Ground Highway (SR 5BU)	AR-H-007/0007827	Widening (HOV lanes)	GDOT TPRO Projects	GDOT	**$25,000,000**	$0
East Cherokee Drive	Main Street (Old Hwy 5) to SR 20		Widening	Additional Potential Projects	Cherokee	**$66,280,960**	$66,280,960
Marietta Highway	Bells Ferry Road to Ridge Road		Widening (local and/or developer contributions)	Additional Potential Projects	Canton	**$8,544,000**	$8,544,000
East Cherokee Drive	SR 20 to Ball Ground Highway		Widening	Additional Potential Projects	Cherokee	**$10,234,560**	$10,234,560
SR 140	CR 766 (MP 10.75) to CR 52 (MP 7.86), crosses Sardis Creek	641900-	Widening	GDOT TPRO Projects	GDOT	**$5,839,000**	$0
SR 140	Marietta Road to I-575		Widening	Additional Potential Projects	GDOT	**$4,806,000**	$0
					Total =	**$519,558,381**	**$122,510,400**

Appendix B:
Cherokee Comprehensive Transportation Plan
Aspirations List

Corridor	Extents	Project ID	Project Type	Project Source	Jurisdiction/ Sponsor	Estimated Cost	Local Match
Operational							
Railroad Street	Canton	CH-AR-242A/0002848	Widening and trail (LCI project)	GDOT TPRO Projects	Canton	**$2,100,000**	$100,000
SR 140	Bartow County line to Salacoa Road		Operational	Additional Potential Projects	GDOT	**$9,072,000**	$0
SR 20	I-575 to SR 369		Operational	ARC's Envision 6 RTP	GDOT	**$59,904,000**	$0
SR 20	Fields Landing Drive to Butterworth Road		Operational	Additional Potential Projects	GDOT	**$3,024,000**	$0
SR 372	Canton Highway (SR 5) to SR 20 (Cumming Highway)	CH-165/0005970	Operational (roadway)	ARC's Envision 6 RTP	GDOT	**$3,154,000**	$0
SR 372	Conns Creek Road to Ball Ground Bypass		Operational	Additional Potential Projects	GDOT	**$2,376,000**	$0
Canton Highway (Old Hwy 5/Main Street)	Arnold Mill Road Extension to Rabbit Hill Road		Operational	ARC's Envision 6 RTP	Holly Springs	**$3,510,000**	$3,510,000
East Cherokee Drive	Main Street to Ball Ground Highway		Operational (turn lanes & geometry)	County Capital Improvements	Cherokee	**$3,150,000**	$3,150,000
SR 92	Lovejoy Lane to Main Street (Old Hwy 5)		Operational	Additional Potential Projects	GDOT	**$3,456,000**	$0
SR 92	Main Street (Old Hwy 5) to Cobb County line (east)		Operational	Additional Potential Projects	GDOT	**$11,880,000**	$0
Towne Lake Parkway	I-575 to Towne Lake Hills		Operational	ARC's Envision 6 RTP	Cherokee	**$4,320,000**	$4,320,000
SR 372	SR 20 to Canton Highway/Ball Ground Highway		Operational	ARC's Envision 6 RTP	GDOT	**$21,384,000**	$0
Towne Lake Parkway	I-575 to Main Street (Old Hwy 5)		Operational	Developer Projects	Woodstock	**$1,512,000**	$1,512,000
Canton Highway (Old Hwy 5/Main Street)	Cobb County line to Ridgewalk/Arnold Mill Road Extension		Operational	Additional Potential Projects	Woodstock	**$2,262,000**	$2,262,000
SR 369	SR 20 to Forsyth County line		Operational	Additional Potential Projects	GDOT	**$10,368,000**	$0
Victory Drive	Woodstock Road to Kellogg Creek Road/Bells Ferry Road		Operational (reconstruction)	County Capital Improvements	Cherokee	**$1,550,000**	$1,550,000
Toonigh Road	Canton Road (Old Hwy 5) to Hickory Road		Operational	Additional Potential Projects	Cherokee	**$6,912,000**	$6,912,000
Wiley Bridge Road/West Wiley Bridge Road	SR 92 at Wigley Road to SR 92 near Knotts Pointe Drive		Operational (reconstruction)	County Capital Improvements	Cherokee	**$2,300,000**	$2,300,000
Lower Birmingham Road	Batesville Road to Fulton County line		Operational	Additional Potential Projects	Cherokee	**$6,696,000**	$6,696,000
Bascomb Carmel Road	Bells Ferry Road to SR 92		Operational (reconstruction)	County Capital Improvements	Cherokee	**$3,950,000**	$3,950,000
Upper Sweetwater Road	Macedonia Rd to SR 20		Widening (local and/or developer contributions)	Developer Projects	Developer	**$8,594,880**	$8,594,880
Union Hill Road	At Lower Union Hill Road		Intersection	County Capital Improvements	Cherokee	**$550,000**	$550,000

Appendix B:
Cherokee Comprehensive Transportation Plan
Aspirations List

Corridor	Extents	Project ID	Project Type	Project Source	Jurisdiction/ Sponsor	Estimated Cost	Local Match
Operational (cont)							
Batesville Road	SR 140 to Fulton County line		Operational	Additional Potential Projects	Cherokee	**$3,839,000**	$3,839,000
Marietta Road	Butterworth Road to SR 140 Extension		Operational	Additional Potential Projects	Cherokee	**$3,456,000**	$3,456,000
Fate Conn Road	Lower Burris Road to Ball Ground Highway		Operational	Additional Potential Projects	Cherokee	**$8,424,000**	$8,424,000
Cox Road	West Wylie Bridge Road to Fulton County line		Operational	Additional Potential Projects	Cherokee	**$432,000**	$432,000
Hames Road	SR 92 to Jamerson Road		Operational (geometry)	County Capital Improvements	Cherokee	**$1,500,000**	$1,500,000
Earney Road	SR 140 to Batesville Road		Operational (reconstruction)	County Capital Improvements	Cherokee	**$1,400,000**	$1,400,000
Ragsdale Road	SR 92 to Trickum Road		Operational (ROW and reconstruction)	County Capital Improvements	Cherokee	**$1,100,000**	$1,100,000
Old Dawsonville Road	SR 372 to Mountain Brook Way		Operational	Developer Projects	Ball Ground	**$2,376,000**	$1,188,000
Jett Road	Hames Road to Jamerson Road		Operational (geometry)	County Capital Improvements	Cherokee	**$1,320,000**	$1,320,000
Gaddis Road	East Cherokee Drive to Arbor Hill Road		Operational (reconstruction)	County Capital Improvements	Cherokee	**$3,950,000**	$3,950,000
Keeter Road	Holly Street to Ridge Road		Operational (reconstruction)	County Capital Improvements	Cherokee	**$850,000**	$850,000
Little Road	Hickory Road to Vaughn Road		Operational (reconstruction)	County Capital Improvements	Cherokee	**$1,450,000**	$1,450,000
Steels Bridge Drive	Bells Ferry Road to terminus near Allatoona Lake		Operational (reconstruction)	County Capital Improvements	Cherokee	**$675,000**	$675,000
Garland Mountain Trail	SR 140 to northern terminus		Operational (ROW and reconstruction)	County Capital Improvements	Cherokee	**$1,500,000**	$1,500,000
Rope Mill Lane East	Sixes Road to Canton Highway		Operational (ROW and reconstruction)	County Capital Improvements	Cherokee	**$400,000**	$400,000
Rhine Road	Upper Sweetwater Road to SR 20		Roadway improvements (local and/or developer contributions)	Developer Projects	Developer	**$2,592,000**	$1,296,000
Woodall Rd	Macedonia Rd to Bartow County line (to SR 20)		Roadway improvements (local and/or developer contributions)	Developer Projects	Developer	**$2,376,000**	$1,188,000
Butterworth/Univeter Road	SR 20 to Hwy 5		Widening	Additional Potential Projects	Cherokee	**$5,218,320**	$5,218,320
					Total =	**$341,501,200**	**$84,593,200**

Appendix B:
Cherokee Comprehensive Transportation Plan
Aspirations List

Corridor	Extents	Project ID	Project Type	Project Source	Jurisdiction/ Sponsor	Estimated Cost	Local Match
Bike/Ped							
Canton Main Street Pedestrian Connector		TEE-0008-00(093)	Bike/ped facility	GDOT TPRO Projects	Canton	**$1,425,000**	$1,425,000
Hickory Street	Holly Springs Parkway to Hickory Springs Industrial		Sidewalk	County Capital Improvements	Holly Springs	**$720,870**	$720,870
Holly Springs Parkway	Public Safety Building to Crossroads School		Sidewalk	County Capital Improvements	Holly Springs	**$871,560**	$871,560
Hickory Road	Stringer Road to SR 140		Sidewalk	County Capital Improvements	Cherokee	**$583,950**	$583,950
East Cherokee Drive	Hickory Road to SR 140		Sidewalk	County Capital Improvements	Cherokee	**$975,000**	$975,000
Holly Street	Childers Rd to Holly Springs Parkway		Sidewalk	County Capital Improvements	Holly Springs	**$871,560**	$871,560
Jackson Street	Holly Springs Parkway to Hickory Springs Industrial		Sidewalk	County Capital Improvements	Holly Springs	**$857,790**	$857,790
East Grady Street	SR 108 south to existing sidewalk		Sidewalk	Developer Projects	Waleska	**$583,950**	$145,500
SR 108	South from existing sidewalk		Sidewalk	Developer Projects	Waleska	**$291,000**	$416,580
Nelson Pedestrian Enhancements			Bike/ped facility	GDOT TPRO Projects	Nelson	**$833,160**	$833,160
Towne Lake Parkway	Eagle Drive to Bells Ferry Road		Sidewalk	GDOT TPRO Projects	Cherokee	**$750,000**	$750,000
Woodstock Greenway			Bike/ped facility	ARC 's Envision 6	Woodstock	**$699,000**	$699,000
Little River Bicycle Bridge	Little River		Bike/ped facility	County Capital Improvements	Woodstock	**$126,000**	$126,000
Little River Trail	Rope Mill Park		Bike/ped facility	County Capital Improvements	Woodstock	**$2,265,450**	$2,265,450
Canton Highway (Old Hwy 5/Main Street)	Cobb County line to Stockwood Drive		Sidewalk	County Capital Improvements	Cherokee	**$275,000**	$275,000
Toonigh Road	Canton Highway to Hickory Road		Sidewalk	County Capital Improvements	Cherokee	**$1,475,000**	$1,475,000
Ball Ground Downtown			Streetscape	GDOT TPRO Projects	Ball Ground	**$1,050,100**	$1,050,100
Old Canton Road	SR 372 to Northridge Road		Streetscape (GDOT TE Program)	Developer Projects	Ball Ground	**$1,198,800**	$599,400
					Total =	**$15,853,190**	**$14,940,920**
Bridge							
Vaughn Road	Bridge over Little River Mill Creek		Bridge	County Capital Improvements	Cherokee	**$1,000,000**	$1,000,000
Waters Road	Bridge over Little River Mill Creek		Bridge	County Capital Improvements	Cherokee	**$1,000,000**	$1,000,000
Transart Parkway	Bridge over Toonigh Creek		Bridge	County Capital Improvements	Cherokee	**$1,050,000**	$1,050,000
Epperson Drive/Road	Bridge over Canton Creek and secondary stream east of Scott Road		Bridge	County Capital Improvements	Cherokee	**$2,050,000**	$2,050,000
Kemp Drive	Bridge over Kellogg Creek		Bridge	County Capital Improvements	Cherokee	**$500,000**	$500,000
Palm Road	At Toonigh Creek	S007024	Bridge (replacement)	GDOT TPRO Projects	Holly Springs	**$1,440,000**	$1,440,000
Lower Dowda Mill Road	Bridge over Rock Creek/Cagle Branch		Bridge	County Capital Improvements	Cherokee	**$2,000,000**	$2,000,000
					Total =	**$9,040,000**	**$9,040,000**

Appendix B:
Cherokee Comprehensive Transportation Plan
Aspirations List

Corridor	Extents	Project ID	Project Type	Project Source	Jurisdiction/ Sponsor	Estimated Cost	Local Match
New Location							
Canton West Parkway	SR 5/SR 140 at North Etowah Drive to SR 108 in vicinity of Lost Town Trail southeast of Lake Arrowhead	CH-217	New location (local and/or developer contributions)	Developer Projects	Developer	**$32,700,000**	$16,350,000
Dobbs Road Extension	Arnold Mill Road to Gunnin Road		New location (local and/or developer contributions)	Developer Projects	Woodstock	**$7,310,400**	$3,655,200
Commerce Parkway	SR 140 in vicinity of Russell King Lane to SR 20 in vicinity of Governors Walk Drive		New location (local and/or developer contributions)	Developer Projects	Canton	**$8,000,000**	$4,000,000
Hickory Flat Road Extension	SR 140/Hickory Flat Highway at SR 20/Marietta Road to Marietta Street west of SR 20		New location (local and/or developer contributions)	Developer Projects	Canton	**$2,924,160**	$1,462,080
Waleska Bypass	On east side from SR 108 south of Grady Street to SR 108 north of Grady Street		New location	Additional Projects	Waleska	**$2,523,680**	$2,523,680
Laurel Canyon Connector	Canton West Parkway to SR 140		New location (local and/or developer contributions)	Developer Projects	Canton	**$10,721,920**	$5,360,960
Valley Street Extension (new location)	Current southern terminus of Valley Street to Howell Bridge Road East		New location	Developer Projects	Ball Ground	**$2,628,000**	$1,314,000
Willoughby & Sewell Tract Parkway	Upper Sweetwater Road to SR 20		New location (local and/or developer contributions)	Developer Projects	Developer	**$6,139,200**	$3,069,600
Dupree Road Extension	Eastern terminus to Hedgewood development at Fowler Street		New location (local and/or developer contributions)	Developer Projects	Woodstock	**$2,436,800**	$1,218,400
Brown Industrial Parkway Extension	Brown Industrial Parkway to Riverstone Parkway		New location (local and/or developer contributions)	Developer Projects	Canton	**$12,000,000**	$6,000,000
Skyridge Drive Extension (new location)	Northern terminus to South Main Street (Old Hwy 5)		New location (local and/or developer contributions)	Developer Projects	Woodstock	**$876,000**	$438,000
					Total =	**$88,260,160**	**$45,391,920**
Transit							
SR 108	Park and ride lot at Waleska City Hall		Park and ride lot	Developer Projects	Waleska	**$506,533**	$506,533
CATS Transit Expansion	Expansion of service area and/or fleet		Service expansion	Additional Projects	Cherokee	**$1,460,189**	$0
GRTA Xpress Bus Service	Additional (4th+) run(s)		Additional runs	Additional Projects	Cherokee	**$20,000**	$0
					Total =	**$1,986,722**	**$506,533**

APPENDIX C. Prioritized Project List

Appendix C: Cherokee County Comprehensive Transportation Plan

Prioritized Project List - Capacity Projects along with Corresponding Non-Capacity Projects

Corridor	Extents	Project ID	Sponsor	Project Type	Project Source						Project Cost				Funding Source	
					ARC's 2008-2013 TIP	ARC's Envision 6 RTP	GDOT TPRO Projects	County Capital Improvements	Additional Potential Projects	Developer Projects	PE $	ROW $	Const $	SUM$	State/ Federal	Local Match
I-575	Cobb County line (I-75) to Sixes Road	AR-H-005/713640	GDOT	Widening (HOV lanes)			X				$7,000,000	$7,000,000	$95,000,000	**$109,000,000**	$109,000,000	$0
I-575	At Ridgewalk Parkway	CH-AR-225/00060	GDOT	New interchange	X						$0	$3,500,000	$12,976,000	**$16,476,000**	$16,476,000	$0
I-75	Bartow County line to Cobb County line		GDOT	Widening		X					$588,000	$3,178,560	$6,468,000	**$10,234,560**	$10,234,560	$0
I-75	Cobb County (Chastain Road) to SR 92	CO-AR-302/00051	GDOT	Noise Barriers			X				$1,200,000		$12,000,000	**$13,200,000**	$13,200,000	$0
I-75	Cobb County (Barrett Parkway/SR 5 Conn) to Cobb County (Glade Road)	0007892	GDOT	Widening			X				$9,080,000	$4,325,000	$90,800,000	**$104,205,000**	$104,205,000	$0
Bells Ferry Road	Southfork Way to Little River Bridge	CH-010A2/630977	Cherokee	Widening	X						$0	$38,788,000	$18,008,000	**$56,796,000**	$18,008,000	$38,788,000
Bells Ferry Road	Bridge over Little River	CH-010B/630975	GDOT	Bridge widening	X		X				$0	$2,000,000	$7,233,000	**$9,233,000**	$7,223,000	$2,000,000
Bells Ferry Road	Little River Bridge to Sixes Road	CH-010C/642260	Cherokee	Widening	X		X				$882,000	$33,132,956	$12,777,600	**$46,792,556**	$12,777,600	$34,014,956
Bells Ferry Road	At Ridge Road		Cherokee		X			X			$550,000	$0	$550,000	**$550,000**	$0	$550,000
Bells Ferry Road	Bells Ferry Place to Victoria Road	CH-010A1/000679	Cherokee	ITS-Other(Signal upgrade)	X						$0	$0	$216,040	**$216,040**	$172,832	$43,208
SR 140	SR 5BU to Lower Burris Road	CH-140C/630942	GDOT	Widening		X					$0	$23,720,000	$17,001,600	**$40,721,600**	$40,721,600	$0
SR 140	At Byrd Mountain Lane/Lower Burris Road/Puckett Creek Road		Cherokee	Intersection				X			$0	$0	$550,000	**$550,000**	$0	$550,000
Trickum Road	Cobb County line to Arnold Mill Road		Cherokee	Widening					X		$832,500	$7,326,000	$9,157,500	**$17,316,000**	$0	$17,316,000
Trickum Road	At Barnes Road		Cherokee	Intersection				X			$0	$0	$550,000	**$550,000**	$0	$550,000
Trickum Road	At Wagon Trail Road		Cherokee	Intersection				X			$0	$0	$270,000	**$270,000**	$0	$270,000
I-575	Sixes Road to Riverstone Parkway/Ball Ground Highway		GDOT	Widening		X					$3,864,000	$20,887,680	$42,504,000	**$67,255,680**	$67,255,680	$0
SR 140	Bartow County (East Valley Road) to Garland Mountain Trail	BT-019/0006036	GDOT	Widening (passing lanes)			X				$196,000	$650,000	$1,306,000	**$2,152,000**	$2,152,000	$0
SR 140	Bartow County line to Salacoa Road		GDOT	Operational					X		$756,000	$0	$8,316,000	**$9,072,000**	$9,072,000	$0
Sixes Road	I-575 to Canton Highway (Old SR 5)	CH-190/0002637	Cherokee	Widening	X						$0	$0	$2,070,000	**$2,070,000**	$2,070,000	$0
Sixes Road	At I-575	CH-189/0006041	GDOT	Bridge widening		X					$0	$2,900,600	$14,125,735	**$17,026,335**	$17,026,335	$0
SR 20	SR 369 to Forsyth County (SR 371)	FT-061A/0002862	GDOT	Widening			X				$2,920,561	$80,957,000	$15,000,000	**$98,877,561**	$98,877,561	$0
SR 20	Scott Road to SR 369	CH-020B/0003681	GDOT	Widening		X					$0	$45,000,000	$34,560,000	**$79,560,000**	$79,560,000	$0
SR 20	I-575 to Scott Road	CH-020A1/632790	GDOT	Operational (passing lanes)	X						$0	$0	$13,048,411	**$13,048,411**	$13,048,411	$0
SR 20	I-575 to SR 369		GDOT	Widening		X					$2,880,000	$25,344,000	$31,680,000	**$59,904,000**	$59,904,000	$0
SR 20	At East Cherokee Drive		Cherokee	Intersection				X			$0	$0	$600,000	**$600,000**	$0	$600,000
SR 20	At Arbor Hill Road		Cherokee	Intersection				X			$0	$0	$325,000	**$325,000**	$0	$325,000
SR 140	East Cherokee Drive to I-575	CH-140D2/000604	GDOT	Widening		X					$0	$25,460,000	$42,357,000	**$67,817,000**	$67,817,000	$0
SR 140	At East Cherokee Drive		Cherokee	Intersection				X			$0	$0	$750,000	**$750,000**	$0	$750,000
SR 140	East Cherokee Road to Mountain Road	CH-140E3/621240	GDOT	Widening		X					$0	$15,901,000	$25,138,000	**$41,039,000**	$41,039,000	$0
SR 140	Arnold Mill Road to Mountain Road/Earney Road	CH-140F/632840	GDOT	Operational (turn lanes)	X						$0	$0	$2,191,000	**$2,191,000**	$2,191,000	$0
SR 140	EB MP 0.75 to MP 2.0 (WB MP 4.8 to 6.0)	642040-	GDOT	Widening (passing lanes)			X				$198,000	$35,000	$1,980,000	**$2,213,000**	$2,213,000	$0
SR 140	Little Refuge Road to Shoal Creek	CH-186B/0006037	GDOT	Widening (passing lanes)			X				$65,000	$200,000	$435,000	**$700,000**	$700,000	$0
SR 140	Fulton County line (Ranchette Road) to Mountain Road	FN-232A/721305	GDOT	Widening			X				$3,682,082	$8,886,000	$30,459,000	**$43,027,082**	$43,027,082	$0
SR 140	At Little River (Fulton County line)	FN-232B/721308	GDOT	Bridge (replacement)			X				$15,000	$376,000	$2,740,000	**$3,131,000**	$3,131,000	$0
Neese Road	SR 92 to Arnold Mill Road (incorporated portions only)		Woodstock	Widening (local and/or developer contributions)						X	$0	$0	$600,000	**$600,000**	$0	$600,000
Neese Road	Unincorporated portion from north of Brentwood Lane to south of Driftwood Lane/Washington Avenue		Cherokee	Widening					X		$112,500	$990,000	$1,237,500	**$2,340,000**	$0	$2,340,000
I-575	Towne Lake Parkway to SR 5BU	AR-917/611150	GDOT	Widening			X				$2,150,000	$0	$21,500,000	**$23,650,000**	$23,650,000	$0
Arnold Mill Road	At Mill Creek Road		Cherokee	Intersection				X			$0	$0	$835,000	**$835,000**	$0	$835,000
Mill Creek Road	East Cherokee Drive to Arnold Mill Road		Cherokee	Widening					X		$157,500	$1,386,000	$1,732,500	**$3,276,000**	$0	$3,276,000
I-575	Sixes Road to SR 20	AR-H-0056/00034	GDOT	Widening (HOV lanes)			X				$7,000,000	$17,000,000	$115,000,000	**$139,000,000**	$139,000,000	$0
SR 20	Bartow County (I-75) to I-575	CH-020A2/000783	GDOT	Widening		X					$4,610,000	$13,832,000	$77,640,000	**$96,082,000**	$96,082,000	$0
SR 20	At Etowah River (4.5 miles west of Canton)	CH-203/632900	GDOT	Bridge upgrade	X						$0	$241,000	$3,963,000	**$4,204,000**	$4,204,000	$0
SR 20	At SR 108, White Road and Mount Carmel Church Lane	CH-209/662650	GDOT	Safety (intersection improvement)			X				$100,000	$100,000	$1,184,000	**$1,384,000**	$1,384,000	$0
SR 20	Fields Landing Drive to Butterworth Road		GDOT	Operational					X		$252,000	$0	$2,772,000	**$3,024,000**	$3,024,000	$0
SR 20	At Butterworth Road		Cherokee	Intersection				X			$0	$0	$175,000	**$175,000**	$0	$175,000
Holbrook Campground Road	SR 20 to Fulton County		Cherokee	Widening					X		$952,000	$5,146,240	$10,472,000	**$16,570,240**	$0	$16,570,240
Arnold Mill Road Extension	Main Street (Old Hwy 5) at Ridgewalk to Arnold Mill Road at Neese Road	CH-167/CH-168	Cherokee	New location		X		X			$1,000,000	$5,374,702	$26,084,800	**$32,459,502**	$0	$32,459,502
SR 372	At 3 locations - Ball Ground-SR 369	0001338	GDOT	Widening (passing lanes)			X				$500,000	$3,000,000	$5,000,000	**$8,500,000**	$8,500,000	$0
SR 372	At Etowah River (2.3 miles SE of Ball Ground)	CH-204/642400	GDOT	Bridge upgrade	X						$0	$80,000	$3,622,000	**$3,702,000**	$3,702,000	$0
SR 372	Canton Highway (SR 5) to SR 20 (Cumming Highway)	CH-165/0005970	GDOT	Operational (roadway)			X				$294,000	$900,000	$1,960,000	**$3,154,000**	$3,154,000	$0
SR 372	Conns Creek Road to Ball Ground Bypass		GDOT	Operational					X		$198,000	$0	$2,178,000	**$2,376,000**	$2,376,000	$0
Bells Ferry Road	North of Sixes Road to SR 20 (Knox Highway)	CH-010D/0006039	Cherokee	Widening		X					$853,000	$21,000,000	$21,648,000	**$43,501,000**	$8,531,000	$34,970,000
Woodstock Road	Cobb County line to Victory Drive		Cherokee	Widening					X		$675,000	$4,540,800	$7,425,000	**$12,640,800**	$0	$12,640,800

Appendix C: Cherokee County Comprehensive Transportation Plan

Prioritized Project List - Capacity Projects along with Corresponding Non-Capacity Projects

Corridor	Extents	Project ID	Sponsor	Project Type	Project Source						Project Cost				Funding Source	
					ARC's 2008-2013 TIP	ARC's Envision 6 RTP	GDOT TPRO Projects	County Capital Improvements	Additional Potential Projects	Developer Projects	PE $	ROW $	Const $	SUM$	State/ Federal	Local Match
Holly Street/Hickory Road	Bells Ferry Road to SR 140		Cherokee	Widening					X		$2,324,000	$12,562,880	$22,564,000	**$37,450,880**	$0	$37,450,880
Hickory Road	Stringer Road to SR 140		Cherokee	Sidewalk				X			$22,400	$315,150	$246,400	**$583,950**	$0	$583,950
Holly Street	Childers Rd to Holly Springs Parkway		Holly Springs	Sidewalk				X			$9,600	$756,360	$105,600	**$871,560**	$0	$871,560
I-575	SR 20 to SR 5BU	CH-AR-230/61126(	GDOT	Widening (auxiliary lanes)			X				$100,000	$0	$597,981	**$697,981**	$697,981	$0
I-575	SR 20 to Riverstone Parkway/Ball Ground Highway (SR 5BU)	AR-H-007/000782	GDOT	Widening (HOV lanes)			X				$0	$0	$25,000,000	**$25,000,000**	$25,000,000	$0
Canton Highway (Old Hwy 5/Main Street)	Sixes Road to Rabbit Hill Road		Holly Springs	Widening (local and/or developer contributions)						X	$135,000	$221,760	$1,485,000	**$1,841,760**	$0	$750,000
Canton Highway (Old Hwy 5/Main Street)	Arnold Mill Road Extension to Rabbit Hill Road		Holly Springs	Operational		X					$292,500	$0	$3,217,500	**$3,510,000**	$0	$3,510,000
Canton Highway (Old Hwy 5/Main Street)	Woodstock City limit to Holly Springs City limit	CH-181/662620	Holly Springs	Safety (intersection improvement)			X				$300,000	$500,000	$3,000,000	**$3,800,000**	$3,300,000	$500,000
East Cherokee Drive	Main Street (Old Hwy 5) to SR 20		Cherokee	Operational (turn lanes & geometry)					X		$3,808,000	$20,584,960	$41,888,000	**$66,280,960**	$0	$66,280,960
East Cherokee Drive	Main Street to Ball Ground Highway		Cherokee	Widening				X			$0	$0	$3,150,000	**$3,150,000**	$0	$3,150,000
East Cherokee Drive	At Lower Union Hill Road		Cherokee	Intersection				X			$0	$0	$550,000	**$550,000**	$0	$550,000
East Cherokee Drive	At Main Street (Old Hwy 5)		Cherokee	Intersection				X			$0	$0	$500,000	**$500,000**	$0	$500,000
East Cherokee Drive	Hickory Road to SR 140		Cherokee	Sidewalk				X			$0	$0	$975,000	**$975,000**	$0	$975,000
Marietta Highway	Bells Ferry Road to Ridge Road		Canton	Widening (local and/or developer contributions)					X		$448,000	$3,168,000	$4,928,000	**$8,544,000**	$0	$8,544,000
East Cherokee Drive	SR 20 to Ball Ground Highway		Cherokee	Widening					X		$588,000	$3,178,560	$6,468,000	**$10,234,560**	$0	$10,234,560
SR 140	CR 766 (MP 10.75) to CR 52 (MP 7.86), crosses Sardis Creek	641900-	GDOT	Widening			X				$505,000	$280,000	$5,054,000	**$5,839,000**	$5,839,000	$0
Upper Sweetwater Road	Macedonia Rd to SR 20		Developer	Operational						X	$630,000	$1,034,880	$6,930,000	**$8,594,880**	$0	$8,594,880
SR 140	Marietta Road to I-575		GDOT	Widening					X		$252,000	$1,782,000	$2,772,000	**$4,806,000**	$4,806,000	$0
Riverstone Parkway (SR 5BU)	At SR 140 Conn, Canton Mill Lane, and Old Ball Ground Highway	CH-207/0006791	Canton	ITS-Other(Signal upgrade)	X						$0	$0	$1,230,000	**$1,230,000**	$984,000	$246,000
Railroad Street	Canton	CH-AR-242A/0002	Canton	Widening and trail (LCI project)			X				$100,000	$0	$2,000,000	**$2,100,000**	$2,000,000	$100,000
Waleska Street	Main/North Street to SR 5BU	CH-AR-241/00028	Canton	Bicycle/pedestrian facility	X						$0	$0	$1,540,000	**$1,540,000**	$1,232,000	$308,000
SR 92	Lovejoy Lane to Main Street (Old Hwy 5)		GDOT	Operational					X		$288,000	$0	$3,168,000	**$3,456,000**	$3,456,000	$0
SR 92	Main Street (Old Hwy 5) to Cobb County line (east)		GDOT	Operational					X		$990,000	$0	$10,890,000	**$11,880,000**	$11,880,000	$0

Appendix C: Cherokee County Comprehensive Transportation Plan

Prioritized Project List - Capacity Projects along with Corresponding Non-Capacity Projects

Corridor	Extents	Project ID	Sponsor	Project Type	Project Source						Project Cost				Funding Source	
					ARC's 2008-2013 TIP	ARC's Envision 6 RTP	GDOT TPRO Projects	County Capital Improvements	Additional Potential Projects	Developer Projects	PE $	ROW $	Const $	SUM$	State/ Federal	Local Match
SR 369	At Board Tree Creek	0007028	GDOT	Bridge			X				$34,000	$50,000	$336,000	**$420,000**	$420,000	$0
Howell Bridge Road (SR 5BU)	At Sharp Mountain Creek	CH-199/671951	Cherokee	Bridge upgrade	X						$0	$100,000	$1,361,000	**$1,461,000**	$1,361,000	$100,000
Palm Road	At Toonigh Creek	S007025	Holly Springs	Culvert (replacement)			X				$0	$0	$88,030	**$88,030**	$0	$88,030
East Main Street	Canton	CH-216/0003778	Canton	Enhancement (pedestrian lighting)			X				$20,000	$0	$500,000	**$520,000**	$500,000	$20,000
Wade Green Road	Cobb County line to SR 92	0008095	Cherokee	Enhancement (TE-landscape/beautify)			X				$0	$0	$94,000	**$94,000**	$0	$94,000
Towne Lake Parkway	I-575 to Towne Lake Hills (13 locations within 0.5 miles of I-575)	CH-208/0006720	Cherokee	ITS-Other (Signal interconnection and coordination)		X					$0	$0	$230,000	**$230,000**	$184,000	$46,000
Canton West Parkway	SR 5/SR 140 at North Etowah Drive to SR 108 in vicinity of Lost Town Trail southeast of Lake Arrowhead	CH-217	Canton	New location (local and/or developer contributions)					X	X	$0	$2,700,000	$30,000,000	**$32,700,000**	$0	$16,350,000
SR 372 Spur	SR 5BU at Howell Bridge Road to SR 372 south of Ball Ground	CH-180/0002525	GDOT	New location			X				$500,000	$4,200,000	$6,000,000	**$10,700,000**	$6,000,000	$4,700,000
Hickory Flat Road Extension	Marietta Road to Waleska Street	CH-202/0006042	Canton	New location		X					$323,000	$1,398,000	$2,150,000	**$3,871,000**	$1,978,400	$1,892,600
Industrial Connector	Mountain Brook Industrial to Hickory Springs Industrial Drive (Holly Springs Extension to Hickory Rd)	CH-215	Holly Springs	New location		X			X		$378,000	$882,000	$6,829,200	**$8,089,200**	$0	$8,089,200
Arnold Mill Road	In Woodstock (Main Street to Park Avenue)	S006928	Woodstock	Operational (intersection improvements)			X				$0	$0	$153,256	**$153,256**	$0	$153,256
Marietta Road	At Hickory Flat Road	CH-206/0006719	Canton	Operational	X						$0	$0	$555,000	**$555,000**	$444,000	$111,000
Arnold Mill Road	Park Avenue to SR 140	CH-188/0006038	Cherokee	Operational (roadway)			X				$583,000	$2,915,000	$5,830,000	**$9,328,000**	$0	$9,328,000
Main Street	Towne Lake Parkway to Serenade Lane	CH-AR-259/00069	Woodstock	Pedestrian facility	X						$0	$0	$1,020,000	**$1,020,000**	$816,000	$204,000
Hickory Flat Road	Marietta Road to I-575	CH-AR-240/00028	Canton	Pedestrian facility	X			X			$0	$0	$1,200,000	**$1,200,000**	$960,000	$240,000
Marietta Road	Marietta Highway to East Marietta Street	CH-AR-BP011/000	Canton	Pedestrian facility	X						$0	$0	$1,269,000	**$1,269,000**	$1,015,200	$253,800
Jordan Road	At railroad crossing just east of Ball Ground Highway (SR 5BU/SR 372)	0007106	GDOT	Safety (RRX warning device)			X				$10,000	$0	$140,000	**$150,000**	$150,000	$0
Howell Bridge Road (SR 5BU)	At Ball Ground Highwy and Old Canton Road	AR-118A/0003946	GDOT	Safety (intersection improvement)			X				$67,000	$49,000	$668,488	**$784,488**	$784,488	$0
Canton Intermodal Facility (Transfer Station)	Canton	CH-AR-261/00068	Canton	Transit facilities	X						$0	$0	$425,000	**$425,000**	$340,000	$85,000
I-575	At Pickens County line	CH-211/610830	GDOT	Widening (new interchange -- SB flyover bridge)			X				$1,187,000	$3,000,000	$4,025,000	**$8,212,000**	$8,212,000	$0
SR 369	At 5 locations & Forsyth	0001337	GDOT	Widening (passing lanes)			X				$800,000	$6,000,000	$8,000,000	**$14,800,000**	$14,800,000	$0
Towne Lake Parkway	I-575 to Towne Lake Hills		Cherokee	Operational		X					$360,000	$0	$3,960,000	**$4,320,000**	$0	
Towne Lake Parkway	I-575 to Main Street (Old Hwy 5)		Woodstock	Operational						X	$126,000	$0	$1,386,000	**$1,512,000**	$0	
Canton Highway (Old Hwy 5/Main Street)	Cobb County line to Ridgewalk/Arnold Mill Road Extension		Woodstock	Operational					X		$188,500	$0	$2,073,500	**$2,262,000**	$0	
SR 369	SR 20 to Forsyth County line		GDOT	Operational					X		$864,000	$0	$9,504,000	**$10,368,000**	$10,368,000	
Victory Drive	Woodstock Road to Kellogg Creek Road/Bells Ferry Road		Cherokee	Operational (reconstruction)				X			$0	$0	$1,550,000	**$1,550,000**	$0	
Kellogg Creek Road	Bridge over Owl Creek		Cherokee	Bridge				X			$0	$0	$270,000	**$270,000**	$0	
Toonigh Road	Canton Road (Old Hwy 5) to Hickory Road		Cherokee	Operational					X		$576,000	$0	$6,336,000	**$6,912,000**	$0	
Wiley Bridge Road/West Wylie Bridge Road	SR 92 at Wigley Road to SR 92 near Knotts Pointe Drive		Cherokee	Operational (reconstruction)				X			$0	$0	$2,300,000	**$2,300,000**	$0	
Kellogg Creek Road	At Woodstock Road		Cherokee	Intersection				X			$0	$0	$400,000	**$400,000**	$0	
Lower Birmingham Road	Batesville Road to Fulton County line		Cherokee	Operational					X		$558,000	$0	$6,138,000	**$6,696,000**	$0	
Bascomb Carmel Road	Bells Ferry Road to SR 92		Cherokee	Operational (reconstruction)				X			$0	$0	$3,950,000	**$3,950,000**	$0	
Union Hill Road	At Lower Union Hill Road		Cherokee	Intersection				X			$0	$0	$550,000	**$550,000**	$0	
Batesville Road	SR 140 to Fulton County line		Cherokee	Operational					X		$131,000	$2,243,000	$1,465,000	**$3,839,000**	$0	
Marietta Road	Butterworth Road to SR 140 Extension		Cherokee	Operational					X		$288,000	$0	$3,168,000	**$3,456,000**	$0	
Fate Conn Road	Lower Burris Road to Ball Ground Highway		Cherokee	Operational					X		$702,000	$0	$7,722,000	**$8,424,000**	$0	
SR 108	At Cable Road		Cherokee	Intersection				X			$0	$0	$200,000	**$200,000**	$0	
Cox Road	West Wylie Bridge Road to Fulton County line		Cherokee	Operational					X		$36,000	$0	$396,000	**$432,000**	$0	
Hames Road	SR 92 to Jamerson Road		Cherokee	Operational (geometry)				X			$0	$0	$1,500,000	**$1,500,000**	$0	
Earney Road	SR 140 to Batesville Road		Cherokee	Operational (reconstruction)				X			$0	$0	$1,400,000	**$1,400,000**	$0	
Ragsdale Road	SR 92 to Trickum Road		Cherokee	Operational (ROW and reconstruction)				X			$0	$0	$1,100,000	**$1,100,000**	$0	
Old Dawsonville Road	SR 372 to Mountain Brook Way		Ball Ground	Operational						X	$198,000	$0	$2,178,000	**$2,376,000**	$0	
Jett Road	Hames Road to Jamerson Road		Cherokee	Operational (geometry)				X			$110,000	$0	$1,210,000	**$1,320,000**	$0	
Gaddis Road	East Cherokee Drive to Arbor Hill Road		Cherokee	Operational (reconstruction)				X			$0	$0	$3,950,000	**$3,950,000**	$0	
Keeter Road	Holly Street to Ridge Road		Cherokee	Operational (reconstruction)				X			$0	$0	$850,000	**$850,000**	$0	
Little Road	Hickory Road to Vaughn Road		Cherokee	Operational (reconstruction)				X			$0	$0	$1,450,000	**$1,450,000**	$0	
Steels Bridge Drive	Bells Ferry Road to terminus near Allatoona Lake		Cherokee	Operational (reconstruction)				X			$0	$0	$675,000	**$675,000**	$0	
Garland Mountain Trail	SR 140 to northern terminus		Cherokee	Operational (ROW and reconstruction)				X			$0	$0	$1,500,000	**$1,500,000**	$0	
Rope Mill Lane East	Sixes Road to Canton Highway		Cherokee	Operational (ROW and reconstruction)				X			$0	$0	$400,000	**$400,000**	$0	
Rhine Road	Upper Sweetwater Road to SR 20		Developer	Roadway improvements (local and/or developer contributions)						X	$216,000	$0	$2,376,000	**$2,592,000**	$0	

Appendix C: Cherokee County Comprehensive Transportation Plan

Prioritized Project List - Capacity Projects along with Corresponding Non-Capacity Projects

Corridor	Extents	Project ID	Sponsor	Project Type	Project Source						Project Cost				Funding Source	
					ARC's 2008-2013 TIP	ARC's Envision 6 RTP	GDOT TPRO Projects	County Capital Improvements	Additional Potential Projects	Developer Projects	PE $	ROW $	Const $	SUM$	State/ Federal	Local Match
Woodall Rd	Macedonia Rd to Bartow County line (to SR 20)		Developer	Roadway improvements (local and/or developer contributions)						X	$198,000	$0	$2,178,000	**$2,376,000**	$0	
Butterworth/Univeter Road	SR 20 to Hwy 5		Cherokee	Widening					X		$382,500	$628,320	$4,207,500	**$5,218,320**	$0	
Canton Main Street Pedestrian Connector		TEE-0008-00(093)	Canton	Bike/ped facility			X				$175,000	$0	$1,250,000	**$1,425,000**	$0	
Hickory Street	Holly Springs Parkway to Hickory Springs Industrial		Holly Springs	Sidewalk				X			$12,800	$567,270	$140,800	**$720,870**	$0	
Holly Springs Parkway	Public Safety Building to Crossroads School		Holly Springs	Sidewalk				X			$9,600	$756,360	$105,600	**$871,560**	$0	
Jackson Street	Holly Springs Parkway to Hickory Springs Industrial		Holly Springs	Sidewalk				X			$3,200	$819,390	$35,200	**$857,790**	$0	
East Grady Street	SR 108 south to existing sidewalk		Waleska	Sidewalk						X	$22,400	$315,150	$246,400	**$583,950**	$0	
SR 108	South from existing sidewalk		Waleska	Sidewalk						X	$16,000	$99,000	$176,000	**$291,000**	$0	
Nelson Pedestrian Enhancements			Nelson	Bike/ped facility			X				$6,400	$756,360	$70,400	**$833,160**	$0	
Towne Lake Parkway	Eagle Drive to Bells Ferry Road		Cherokee	Sidewalk				X			$0	$0	$750,000	**$750,000**	$0	
Woodstock Greenway			Woodstock	Bike/ped facility			X				$12,000	$98,000	$589,000	**$699,000**	$0	
Little River Bicycle Bridge	Little River		Woodstock	Bike/ped facility				X			$60,000	$0	$66,000	**$126,000**	$0	
Little River Trail	Rope Mill Park		Woodstock	Bike/ped facility				X			$110,000	$945,450	$1,210,000	**$2,265,450**	$0	
Canton Highway (Old Hwy 5/Main Street)	Cobb County line to Stockwood Drive		Cherokee	Sidewalk				X			$0	$0	$275,000	**$275,000**	$0	
Toonigh Road	Canton Highway to Hickory Road		Cherokee	Sidewalk				X			$0	$0	$1,475,000	**$1,475,000**	$0	
Ball Ground Downtown			Ball Ground	Streetscape			X				$94,100	$36,000	$920,000	**$1,050,100**	$0	
Old Canton Road	SR 372 to Northridge Road		Ball Ground	Streetscape (GDOT TE Program)						X	$65,000	$418,800	$715,000	**$1,198,800**	$0	
Vaughn Road	Bridge over Little River Mill Creek		Cherokee	Bridge				X			$0	$0	$1,000,000	**$1,000,000**	$0	
Waters Road	Bridge over Little River Mill Creek		Cherokee	Bridge				X			$0	$0	$1,000,000	**$1,000,000**	$0	
Transart Parkway	Bridge over Toonigh Creek		Cherokee	Bridge				X			$0	$0	$1,050,000	**$1,050,000**	$0	
Epperson Drive/Road	Bridge over Canton Creek and secondary stream east of Scott Road		Cherokee	Bridge				X			$0	$0	$2,050,000	**$2,050,000**	$0	
Kemp Drive	Bridge over Kellogg Creek		Cherokee	Bridge				X			$0	$0	$500,000	**$500,000**	$0	
Palm Road	At Toonigh Creek	S007024	Holly Springs	Bridge (replacement)			X				$120,000	$0	$1,320,000	**$1,440,000**	$0	
Lower Dowda Mill Road	Bridge over Rock Creek/Cagle Branch		Cherokee	Bridge				X			$0	$0	$2,000,000	**$2,000,000**	$0	
Dobbs Road Extension	Arnold Mill Road to Gunnin Road		Woodstock	New location (local and/or developer contributions)						X	$420,000	$2,270,400	$4,620,000	**$7,310,400**	$0	
Commerce Parkway	SR 140 in vicinity of Russell King Lane to SR 20 in vicinity of Governors Walk Drive		Canton	New location (local and/or developer contributions)						X	$0	$0	$8,000,000	**$8,000,000**	$0	
Hickory Flat Road Extension	SR 140/Hickory Flat Highway at SR 20/Marietta Road to Marietta Street west of SR 20		Canton	New location (local and/or developer contributions)						X	$168,000	$908,160	$1,848,000	**$2,924,160**	$0	
Waleska Bypass	On east side from SR 108 south of Grady Street to SR 108 north of Grady Street		Waleska	New location					X		$160,000	$603,680	$1,760,000	**$2,523,680**	$0	
Northpoint Parkway Extension	SR 92 to Priest Road		Developer	New location (local and/or developer contributions)						X	$202,500	$1,782,000	$2,227,500	**$4,212,000**	$0	
Centennial Parkway	Priest Road to Woodstock Road		Developer	New location (local and/or developer contributions)						X	$252,000	$1,362,240	$2,727,000	**$4,341,240**	$0	
Laurel Canyon Connector	Canton West Parkway to SR 140		Canton	New location (local and/or developer contributions)						X	$616,000	$3,329,920	$6,776,000	**$10,721,920**	$0	
Valley Street Extension (new location)	Current southern terminus of Valley Street to Howell Bridge Road East		Ball Ground	New location						X	$120,000	$1,188,000	$1,320,000	**$2,628,000**	$0	
Willoughby & Sewell Tract Parkway	Upper Sweetwater Road to SR 20		Developer	New location (local and/or developer contributions)						X	$450,000	$739,200	$4,950,000	**$6,139,200**	$0	
Dupree Road Extension	Eastern terminus to Hedgewood development at Fowler Street		Woodstock	New location (local and/or developer contributions)						X	$140,000	$756,800	$1,540,000	**$2,436,800**	$0	
Brown Industrial Parkway Extension	Brown Industrial Parkway to Riverstone Parkway		Canton	New location (local and/or developer contributions)						X	$0	$0	$12,000,000	**$12,000,000**	$0	
Skyridge Drive Extension (new location)	Northern terminus to South Main Street (Old Hwy 5)		Woodstock	New location (local and/or developer contributions)						X	$40,000	$396,000	$440,000	**$876,000**	$0	
SR 108	Park and ride lot at Waleska City Hall		Waleska	Park and ride lot						X	$18,150	$240,000	$248,383	**$506,533**	$0	
CATS Transit Expansion			Cherokee	Expansion of service area and/or fleet					X		$0	$0	$1,460,189	**$1,460,189**	$0	
GRTA Xpress Bus Service			Cherokee	Additional (4th+) run(s)					X		$0	$0	$20,000	**$20,000**	$0	

APPENDIX C. Cherokee County Comprehensive Transportation Plan

Prioritized Non-Capacity Projects

Operational Projects			Factors for Prioritization		
Corridor	**Extents**	**Project ID**	**Congestion**	**Safety**	**Total**
Towne Lake Parkway	I-575 to Towne Lake Hills		5	4	**9**
Arnold Mill Road	In Woodstock (Main Street to Park Avenue)	S006928	5	3	**8**
SR 372	SR 20 to Canton Highway/Ball Ground Highway		3	5	**8**
Towne Lake Parkway	I-575 to Main Street (Old Hwy 5)		5	3	**8**
Canton Highway (Old Hwy 5/Main Street)	Cobb County line to Ridgewalk/Arnold Mill Road Extension		4	4	**8**
SR 369	SR 20 to Forsyth County line		3	5	**8**
Victory Drive	Woodstock Road to Kellogg Creek Road/Bells Ferry Road		5	3	**8**
Kellogg Creek Road	Bridge over Owl Creek		5	3	**8**
Marietta Road	At Hickory Flat Road	CH-206/0006719	5	3	**8**
Arnold Mill Road	Park Avenue to SR 140	CH-188/0006038	3	4	**7**
Toonigh Road	Canton Road (Old Hwy 5) to Hickory Road		4	3	**7**
Wiley Bridge Road/West Wylie Bridge Road	SR 92 at Wigley Road to SR 92 near Knotts Pointe Drive		4	3	**7**
Kellogg Creek Road	At Woodstock Road		5	2	**7**
Kellogg Creek Road	SR 92 to Bells Ferry Road	CH-187/631210	4	3	**7**
Lower Birmingham Road	Batesville Road to Fulton County line		4	2	**6**
Bascomb Carmel Road	Bells Ferry Road to SR 92		~~2~~	4	**6**
Union Hill Road	At Lower Union Hill Road		5	1	**6**
Batesville Road	SR 140 to Fulton County line		4	1	**5**
Marietta Road	Butterworth Road to SR 140 Extension		3	2	**5**
Fate Conn Road	Lower Burris Road to Ball Ground Highway		3	1	**4**
SR 108	At Cable Road		1	3	**4**
Cox Road	West Wylie Bridge Road to Fulton County line		2	1	**3**
Hames Road	SR 92 to Jamerson Road		1	2	**3**
Earney Road	SR 140 to Batesville Road		1	2	**3**
Ragsdale Road	SR 92 to Trickum Road		1	2	**3**
Old Dawsonville Road	SR 372 to Mountain Brook Way		1	1	**2**
Jett Road	Hames Road to Jamerson Road		1	1	**2**
Gaddis Road	East Cherokee Drive to Arbor Hill Road		1	1	**2**
Keeter Road	Holly Street to Ridge Road		1	1	**2**
Little Road	Hickory Road to Vaughn Road		1	1	**2**
Steels Bridge Drive	Bells Ferry Road to terminus near Allatoona Lake		1	1	**2**
Garland Mountain Trail	SR 140 to northern terminus		1	1	**2**
Rope Mill Lane East	Sixes Road to Canton Highway		1	1	**2**
Rhine Road	Upper Sweetwater Road to SR 20		1	1	**2**
Woodall Rd	Macedonia Rd to Bartow County line (to SR 20)		1	1	**2**

Scoring Criteria for Congestion	
Operates at LOS 5 in 2005	5
> 50% of corridor operates at LOS F in 2005	4
< 50% of corridor operates at LOS F in 2005 or 100% F in 2030	3
All or part of the corridor operates at LOS E in 2005	2
Corridor experiences little to no congestion	1

Scoring Criteria for Safety	
High Density of crashes/mile with one or more fatalities	5
High Density of crashes/mile or medium crash density with one or more fatalities	4
Medium density of crashes/mile	3
Low to Medium Density of Crashes/mile	2
Low Density of Crashes/mile	1

APPENDIX C. Cherokee County Comprehensive Transportation Plan

Prioritized Non-Capacity Projects

Bike/Ped Projects			Factors for Prioritization		
Corridor	**Extents**	**Project ID**	**School**	**Downtown**	**Total**
Canton Main Street Pedestrian Connector		TEE-0008-00(093)	1	1	2
Hickory Street	Holly Springs Parkway to Hickory Springs Industrial		1	1	2
Holly Springs Parkway	Public Safety Building to Crossroads School		1	1	2
Jackson Street	Holly Springs Parkway to Hickory Springs Industrial		1	1	2
Ball Ground Downtown			1	1	2
Old Canton Road	SR 372 to Northridge Road		1	1	2
East Grady Street	SR 108 south to existing sidewalk		2		2
SR 108	South from existing sidewalk		2		2
Nelson Pedestrian Enhancements			1		1
Towne Lake Parkway	Eagle Drive to Bells Ferry Road		1		1
Woodstock Greenway			0		0
Little River Bicycle Bridge	Little River		0	0	0
Little River Trail	Rope Mill Park		0	0	0
Canton Highway (Old Hwy 5/Main Street)	Cobb County line to Stockwood Drive		0	0	0
Toonigh Road	Canton Highway to Hickory Road		0	0	0
Main Street	Towne Lake Parkway to Serenade Lane	CH-AR-259/00069	0	0	0
Hickory Flat Road	Marietta Road to I-575	CH-AR-240/00028	0	0	0
Marietta Road	Marietta Highway to East Marietta Street	CH-AR-BP011/000	0	0	0

APPENDIX C. Cherokee County Comprehensive Transportation Plan

Prioritized Non-Capacity Projects

Bridge Projects			Factors for Prioritization		
Corridor	**Extents**	**Project ID**	**Sufficiency Rating**	**Age**	**Total**
Howell Bridge Road (SR 5BU)	At Sharp Mountain Creek	CH-199/671951	4	5	9
Lower Dowda Mill Road	Bridge over Rock Creek/Cagle Branch		3	5	8
SR 369	At Board Tree Creek	0007028	5	3	8
Vaughn Road	Bridge over Little River Mill Creek		3	5	8
Waters Road	Bridge over Little River Mill Creek		4	4	8
Transart Parkway	Bridge over Toonigh Creek		5	2	7
Epperson Drive/Road	Bridge over Canton Creek and secondary stream east of Scott Road		3	3	6
Kemp Drive	Bridge over Kellogg Creek		5	1	6
Palm Road	At Toonigh Creek	S007024	1	5	6

New Location			Factors for Prioritization		
Corridor	**Extents**	**Project ID**	**v/c**		
Dobbs Road Extension	Arnold Mill Road to Gunnin Road		4		
Commerce Parkway	SR 140 in vicinity of Russell King Lane to SR 20 in vicinity of Governors Walk Drive		4		
Hickory Flat Road Extension	SR 140/Hickory Flat Highway at SR 20/Marietta Road to Marietta Street west of SR 20		3		
Waleska Bypass	On east side from SR 108 south of Grady Street to SR 108 north of Grady Street		2		
Northpoint Parkway Extension	SR 92 to Priest Road		2		
Centennial Parkway	Priest Road to Woodstock Road		2		
Laurel Canyon Connector	Canton West Parkway to SR 140		2		
Valley Street Extension (new location)	Current southern terminus of Valley Street to Howell Bridge Road East		1		
Willoughby & Sewell Tract Parkway	Upper Sweetwater Road to SR 20		1		

Scoring Criteria for Sufficiency Rating	
Sufficiency Rating <50	5
Sufficiency Rating = 50 to 60	4
Sufficiency Rating = 60 to 70	3
Sufficiency Rating = 70 to 80	2
Sufficiency Rating = 80+	1

Scoring Criteria for Bridge Age	
Constructed before 1950	5
Constructed between 1960 and 1970	4
Constructed between 1960 and 1970	3
Constructed between 1970 and 1980	2
Constructed after 1980	1

Scoring Criteria for v/c	
v/c > 0.6	5
v/c = 0.5 to 0.6	4
v/c = 0.4 to 0.5	3
v/c = 0.2 to 0.4	2
v/c < 0.2	1

APPENDIX D. Funding Sources

Potential Federal Funding Sources

As the region's designated Metropolitan Planning Organization (MPO), ARC is responsible for developing the long-range Regional Transportation Plan (RTP) and short-range Transportation Improvement Program (TIP), which list federal funding towards transportation projects. All federal funding categories require that the project sponsor contribute a portion of the project's cost, called a "match." The percent contribution required varies by federal funding category, as noted in the descriptions that follow. Matching funds for projects on the state system can be provided by GDOT.

Federal Funds Programmed by GDOT

- National Highway System (NHS) – Provides funding for roads on the National Highway System, which includes roads deemed most important to interstate travel and national defense, roads connecting to other modes of transportation, or roads essential for inter-state and global commerce. These include the Interstate highway system and selected principal arterials such as SR 20 and SR 92. NHS funds can also be used, within NHS corridors, for activities such as transit, park and ride lots and bicycle and pedestrian facilities. Up to 10 percent of a state's NHS apportionment may be dedicated to safety and traffic operations projects and financed 100 percent federally; the remaining NHS funds require a minimum 20 percent match.

- Interstate Maintenance (IM) – Provides funding for maintenance activities, as well as HOV lanes and other non-SOV improvements. Up to 10 percent of a state's IM apportionment may be dedicated to safety and traffic operations projects and financed 100 percent federally; the remaining IM funds require a minimum 10 percent match.

- Surface Transportation Program (STP) – Provides funding for a wide variety of projects including highways, transit, and other modes such as bicycle and pedestrian facilities. STP funds can be used on any roadway classified above a local road or a rural minor collector. The STP funds require a minimum 20 percent match.

  - STP Rural (<200K) – Funds for areas with a population under 200,000.
  - STP Enhancement – A set-aside for transportation enhancement activities such as providing facilities for bicyclists and pedestrians, landscaping and historic preservation. A minimum of 10 percent of each state's overall STP allocation must be used for such projects. GDOT programs these funds on a statewide basis using a competitive submittal and evaluation process.
  - STP Statewide – The primary STP category, these funds do not have any specific geographic or use restrictions beyond those applicable to the overall program.

- Highway Safety Improvement Program (HSIP) – A newly established program (pulled from the STP core program) with flexibility provided to allow states and regions to target funds to their most critical safety needs. About 10 percent of the total amount available will be distributed to the Railway-Highway Crossing program, with another 10 percent set aside annually for construction and operational improvements on high-risk rural roads. The HSIP requires states to develop and implement a strategic highway safety plan and submit annual reports that describe at least 5 percent of their most hazardous locations, progress in implementing highway safety improvement projects, and their effectiveness in reducing fatalities and injuries.

- Safe Routes to School – Federal funds available for pedestrian and bicycle projects within two miles of a school. These funds are distributed through GDOT and are available for grades kindergarten through eight. Funding can be assigned to each individual school by following the program's two steps. First, the school must develop a plan which includes a program for promoting bicycling and walking and any proposed infrastructure projects. Funding is available for up to $10,000 per school (up to $100,000 per system) to develop these plans. The second step is to implement the plan. Safe Routes to School funding is also available for this step. Infrastructure projects, which can be sidewalks, bicycle lanes or crosswalks, have a funding limit of $500,000 while non-infrastructure projects, which can include publicity programs, activities and indirect costs, have a funding limit of $10,000. GDOT is developing specific guidelines for the program through a special Safe Routes to School Office. The funding is limited to $16 million through 2009; therefore, the application process will be highly competitive. The Safe Routes to School Office is expected to issue its first call for applications in late 2007.

- Highway Bridge Replacement and Rehabilitation Program – Provides funding for any public bridge replacement or rehabilitation. Included in this category are funds for both on- and off-Federal-aid system bridges.

- High Priority Projects Program – Provides designated funding for specific projects identified by Congress and commonly referred to as "earmarks." SAFETEA-LU includes over 6,000 of these projects, each with a specified amount of funding over the remaining years of SAFETEA-LU. The designated funding can only be used for the project as described in the law.

- FTA Section 5311 Non-Urbanized Area Formula Program – Provides funding for transit capital, operating and planning assistance in rural areas. GDOT is the designated recipient for the state and sub-allocates funds to eligible transit service providers. Areas of the Atlanta region outside the urbanized area but within the metropolitan planning area are eligible to receive these funds. A 10 percent match is required for expenditures related to CAAA and ADA compliance, with a 20 percent match required for all other expenditures in this funding category.

Federal Funds Programmed by ARC

- Surface Transportation Program (STP Urban) – This is the one subcategory of STP funds not allocated directly to GDOT for programming. As an MPO with a population over 200,000, ARC is entitled to program these funds to implement a wide variety of highway, transit, bicycle, pedestrian, transportation demand management and air quality projects, studies and programs. Funds for construction projects can be used on any roadway classified as a minor arterial or above. A minimum match of 20 percent is required.

- Congestion Mitigation and Air Quality (CMAQ) Improvement Program – Provides funding for projects contributing to attainment of national ambient air quality standards. Types of projects eligible for CMAQ funds include transit improvements, shared-ride services, traffic flow improvements, transportation demand management strategies, pedestrian and bicycle facilities and programs, and alternative fuel programs. Up to 10 percent of a state's CMAQ apportionment may be dedicated to safety and traffic operations projects and financed 100 percent federally; the remaining CMAQ funds require a minimum 20 percent match. CMAQ funds are programmed through a collaborative process which also

involves the state CMAQ partners (GDOT, GRTA and Georgia Environmental Protection Division (EPD)).

Other Agencies

- Urbanized Area Formula Program: FTA Section 5307 – Provides funding for capital investment, operating and planning assistance within the urbanized area. MARTA is the designated recipient for the entire Atlanta region; funds are then sub-allocated to other transit service providers based on a process which reflects population by county and the amount of service being provided. Funds are programmed by the individual transit agencies. A match of 10 percent is required for expenditures related to CAAA and ADA compliance, or 20 percent for all other expenditures in this funding category.

- Clean Fuels Formula Grant Program: FTA Section 5308 – Provides funding for the purchase of alternative fuel transit vehicles, the conversion of existing vehicles to alternative fuels, and the development of facilities to service clean fuel vehicles. Funds are allocated by FTA on a formula basis and programmed by the recipient transit agency. A minimum of 20 percent match is required.

- New Starts Program: FTA Section 5309 – Provides funding for any new fixed guideway system which utilizes and occupies a separate right-of-way or rail line for the exclusive use of mass transportation and other high occupancy vehicles, or which uses a fixed centenary system and a right of way usable by other forms of transportation. This includes, but is not limited to, rapid rail, light rail, commuter rail, automated guideway transit, people movers, and exclusive facilities for buses (such as bus rapid transit) and other high occupancy vehicles. Funds are awarded by FTA through a competitive process to eligible transit agencies, and programmed by the recipient transit agency. According to a new federal regulation, the match required for transit New Starts funds will be 50 percent of the project cost.

- Grants for Transportation for Elderly Persons and Persons with Disabilities: FTA Section 5310 – Discretionary funds to provide transit services for these population groups. Funds are awarded by FTA and programmed by the Georgia Department of Human Resources (DHR). A match of 10 percent is required for expenditures related to CAAA and ADA compliance, or 20 percent for all other expenditures in this funding category.

- Jobs Access and Reverse Commute: FTA Section 5316 – Continued under SAFETEA-LU, JARC's purpose is to develop transportation services designed to transport welfare recipients and low income individuals to and from jobs and to develop transportation services for residents of urban centers and rural and suburban areas to suburban employment opportunities. Emphasis is placed on projects that use mass transportation services. Grants may finance capital projects and operating costs of equipment, facilities, and associated capital maintenance items related to providing access to jobs; promote use of transit by workers with nontraditional work schedules; promote use by appropriate agencies of transit vouchers for welfare recipients and eligible low income individuals; and promote use of employer-provided transportation including the transit pass benefit program.

- New Freedom Program: FTA Section 5317 – A new program of formula-based transit grants under SAFETEA-LU, the New Freedom Program is part of a larger, government-wide "New Freedom Initiative" that President Bush has been promoting since his first presidential campaign. Formally established in 2001 through Presidential Executive

Order, the New Freedom Initiative is a means to integrate persons with disabilities into the workforce, and into daily community life, through a variety of strategies carried out by the federal departments of Labor, Health and Human Services, Housing and Urban Development, Education, Justice, Veterans Affairs, and now Transportation. Grantees are selected competitively by the designated recipient, the states. Areas with over 200,000 population can be eligible as designated recipients.

- Growing States and High Density States: FTA Section 5340 – Another new program of formula-based transit grants established by SAFETEA-LU, these funds are distributed into a single apportionment with the 5307 funds. Separate formulas are used to apportion Section 5307 and Section 5340 funds to urbanized areas. Under the 5340 formula, half of the funds are made available under the Growing States factors and are apportioned based on state population forecasts for 15 years beyond the most recent Census. Amounts apportioned for each state are then allocated to urbanized and rural areas based on the state's urban/rural population ratio. The High Density States factors distribute the other half of the funds to states with population densities greater than 370 people per square mile, with the funds apportioned only to urbanized areas within those states. The SAFETEA-LU Conference Report instructs FTA to merge the urbanized area amounts for the 5307 and 5340 formulas into a single apportionment when it publishes program apportionments. The distribution or sub-allocation of Sections 5307 and 5340 funds within an urbanized area is a local responsibility.

- Recreational Trails Program – Provides funds to develop and maintain recreational trails for motorized and non-motorized recreational trail users. Funds are programmed by the Georgia Department of Natural Resources (DNR).

State of Georgia Funds

- Georgia Community Streetcar Development and Revitalization Act (SB 150) – Provides for the creation of a program within the State Road and Tollway Authority (SRTA) to receive and distribute available federal grant funds for new streetcar projects.

- Fast Forward Bond Program – A $15.5 billion state transportation program announced by Governor Sonny Perdue in 2005, the core of the program is designed to relieve traffic congestion and consists of about $4.5 billion of projects which will have their construction dates accelerated through the sale of bonds. The remainder is comprised of the regular work of GDOT. Potential projects in the Atlanta region were identified from ARC's 2030 Aspirations Plan and GDOT's regular Work Program. Those projects likely to have the greatest congestion relief benefit were selected for inclusion in a $3 billion GARVEE (Grant Anticipation Revenue Vehicle) bond program, to be supplemented by up to an additional $1.5 billion of GO (General Obligation) and GRB (Guaranteed Revenue Bond) bonds in the future. Projects for the GARVEE program were selected by consensus of GDOT, GRTA, ARC and SRTA, then forwarded to the Governor's office for approval. It is important to note that these bonds are not a new source of funding. The bonds act as new cash flow mechanisms allowing the state to borrow money to fund projects in the short term. These funds will be paid back over the long term from the same fund sources traditionally used to pay for transportation infrastructure.

- Motor Fuel Funds – Georgia has only one dedicated source of funding for transportation improvements, the motor fuel tax. Further, by state Constitution, this funding source can only be used to build, improve and maintain roads and bridges. Georgia's motor

fuel excise tax (7.5 cents per gallon and a 4 percent sales tax) ranks as one of the lowest in the United States.

Local Funds

Locally collected revenue sources used to fund transportation projects include:

- General Fund
- Special Local Option Sales Tax (SPLOST) – A one-cent sales tax approved by voters, the money can be used for infrastructure development and maintenance but not operating costs. SPLOST referendums must have an associated time table.
- Impact Fee – A one-time fee charged in association with a new development designed to cover part of the cost of providing public facilities to support the development. The impact fee amount charged to a particular development must be directly tied to the amount of new infrastructure the development will require. Impact fees are often employed as a way to steer development into appropriate areas (those areas already best served by existing infrastructure). Impact fees should also be tied to a specific capital improvement program, so that it is clear which projects the impact fees will finance. In short, impact fees can be complex to develop and administer, but they are effective in tying financing for new transportation infrastructure to new development.

Other Possible Funding Sources

- Tax Allocation Districts – A strategy for funding infrastructure projects in a limited area targeted for accelerated growth. Infrastructure projects are financed from the growth of property taxes based on new development and increased property values. Establishing a TAD and creating a plan for the district can spark redevelopment in the TAD area, which in turn serves to finance TAD bond funds. Funds can be spent on a number of projects in the TAD area, including transportation projects. Therefore, TAD planning promotes redevelopment while also helping to create a dedicated source of infrastructure funding for that area. New pedestrian and bicycle facilities and streetscapes are typical TAD projects, though TAD funds are often used for non-transportation infrastructure as well. TADs are an appropriate tool for financing some types of transportation projects, especially in connection with the denser redevelopment of a particular area such as an activity center.
- Community Improvement District – A strategy for funding infrastructure projects in a limited area at the discretion of existing property interests. CIDs are essentially self-taxing areas, where property owners organize to raise funds to improve property values in the area. CIDs may organize to market an area, work to increase safety in that area, and collect and use funds for all types of transportation projects. CIDs are an innovative source of funding for transportation projects, but the scope of their activities is limited by property owner interests and a defined geographic area.

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