Georgia Department of Transportation
Office of Planning

SR 52/MORRISON MOORE PARKWAY SUBAREA STUDY

NEEDS ASSESSMENT REPORT

DRAFT

Prepared for:

Georgia Department of Transportation

Prepared by:

JACOBS™

Atlanta, GA

Version (2.0): March 2011

Table of Contents

List of Tables

List of Figures

1.0 INTRODUCTION

The Georgia Department of Transportation (GDOT) in partnership with the City of Dahlonega is undertaking the SR 52/Morrison Moore Parkway (SR 52/MMP) Subarea Study to analyze solutions to address the mobility and accessibility needs along the SR 52/MMP Corridor and other major roadways in the subarea. A major objective of the study is to identify and recommend transportation improvements necessary to meet existing and future transportation needs through the year 2035. To this end, a SR 52/MMP Subarea Travel Demand Model (TDM) is being developed to assess travel trends and assist in the evaluation of potential improvements. Transportation projects considered in this study will be identified based on the existing and future travel needs, crash analysis, relevant previous studies, as well as public and stakeholder input. A Stakeholder Advisory Committee (SAC) made up of key local officials, planning staff and community representatives has been established to provide guidance on technical and policy issues. This group will be engaged at key milestones over the course of the study.

1.1 Purpose of Report

The purpose of this report is to provide an inventory of the factors that influence the transportation system in the subarea. These factors include the demographics, community facilities, the natural environment, land uses and development patterns in the subarea. The major findings from this report will identify the transportation needs of the subarea that, in turn, will provide the basis for the goals and objectives of the SR52/MMP Subarea Study.

1.2 Study Process

As shown in **Figure 1-1** on the following page, this study is organized into seven tasks. The study process is non-linear and interactive, with each task providing feedback into the overall analysis.

Stakeholder Outreach – This task refers to the on-going public involvement and community outreach program throughout the study process, starting with the establishment of a Stakeholder Advisory Committee (SAC), stakeholder engagement through interviews, and the development of fact sheets and project websites.

Data Collection – A complete and thorough inventory of data related to transportation will be collected and analyzed. These data items include traffic counts, accident data, existing and future land uses, census information, and environmental data. The analysis results will be used to establish the baseline in which potential projects are identified and evaluated.

Needs Assessment – This needs assessment task involves the use of the findings from the baseline inventory to develop a comprehensive list of transportation needs in the subarea. The needs assessment will identify existing and future travel deficiencies and other mobility issues in the subarea. As part of this task, a step-down approach will be used to develop a subarea travel demand model to assess travel trends and assist in the evaluation of potential improvements.

Develop Alternative Future Strategies – The alternative strategies developed from this study will take into account the recommendations from the existing local and state

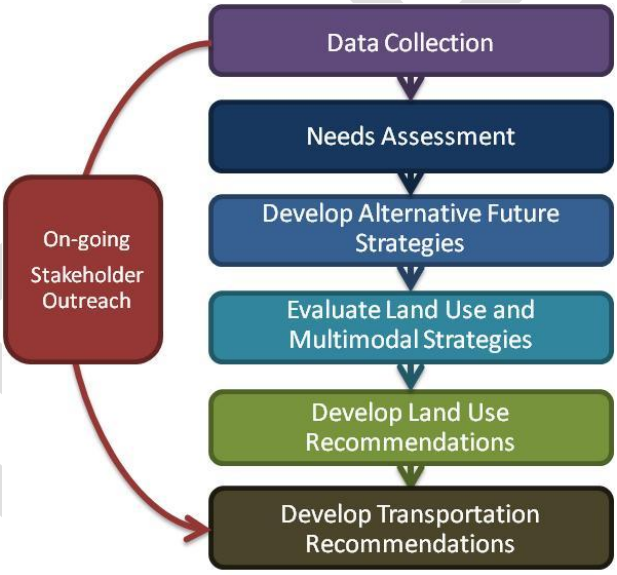
adopted plans. In addition to vehicular mobility, the multimodal strategies will also consider improvements to access management, parking, and pedestrian and bicycle traffic.

Evaluate Land Use and Multimodal Strategies – This task involves the use of the travel demand model and other identified performance measures to evaluate potential impact of existing and future land uses/development on the travel corridors.

Develop Land Use Recommendations – A list of land use and development policies will be recommended based on the previous evaluation results.

Develop Transportation Recommendations – A list of multimodal transportation improvements will be developed which considers the technical analysis efforts and stakeholder input throughout the course of the study. The project list will include preliminary cost estimation and potential funding sources. The associated policy recommendations will foster an environment that will support the transportation projects.

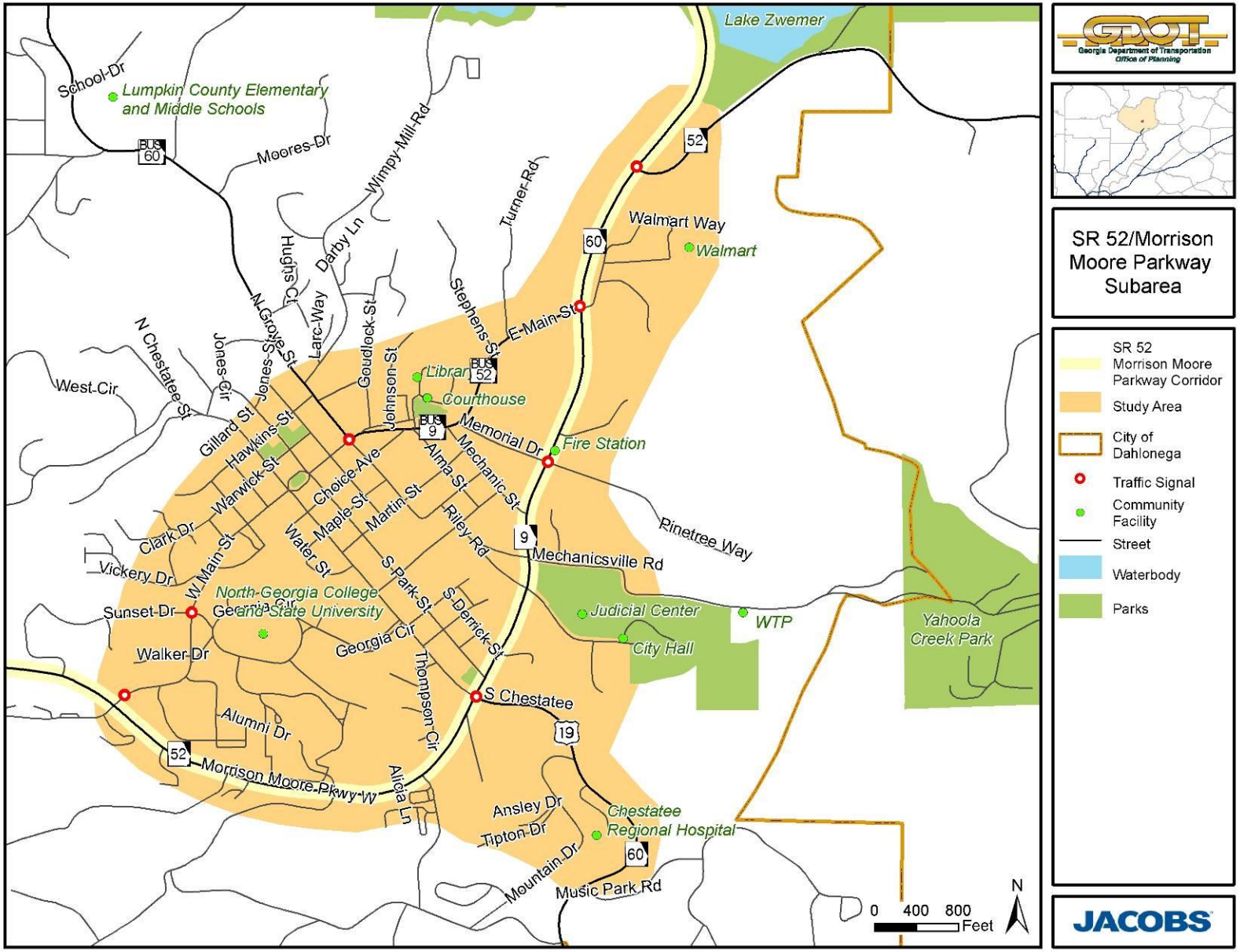
Figure 1-1: Study Process



1.3 Overview of Subarea

As illustrated in **Figure 1-2**, SR 52/MMP Subarea is located wholly within the City of Dahlonega. The subarea consists of Downtown Dahlonega, North Georgia College and State University (NGCSU) and areas east of the SR 52/MMP bypass to include major institutions such as the Chestatee Regional Hospital, new Judicial Center, City Hall, and the Walmart. Major roadways included in the subarea are the SR 52/MMP bypass, US 19/SR 60/S. Chestatee Street, E. Main Street and W. Main Street. Potential impacts to these major facilities will be the focus of this study.

Figure 1-2: Study Area Map



1.4 Review of Previous Studies

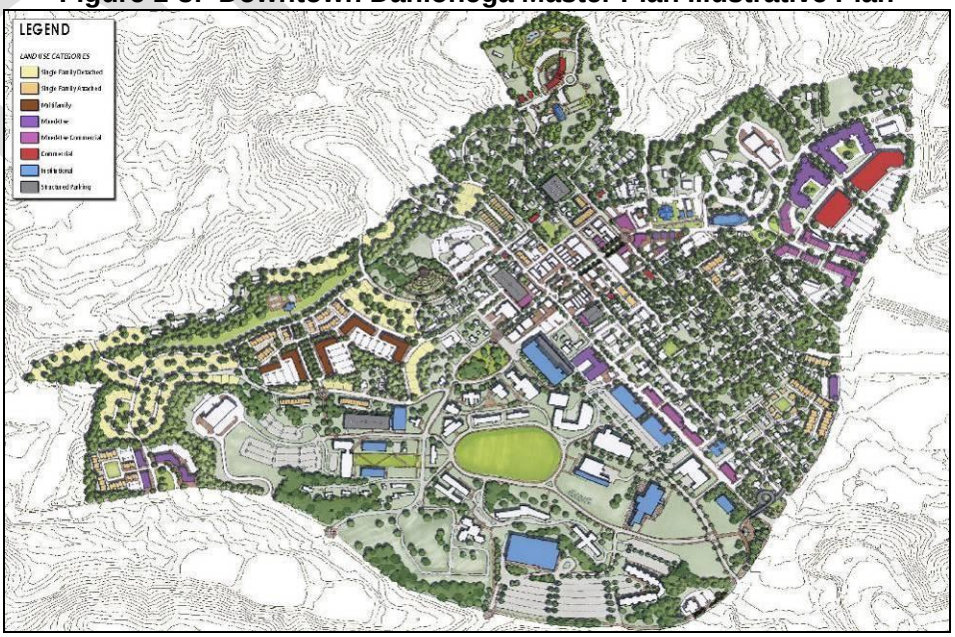
This section provides an overview of previous studies and planning initiatives within the study area by the City of Dahlonega and Lumpkin County as well as their various planning partners. These studies provide useful background information on the land use, demographics, and planned improvements in the study area. The findings and recommendations from these studies will be used as a basis for determining the transportation needs in the SR 52/MMP subarea. These studies are summarized here with an emphasis on their relevance to the SR 52/MMP subarea. It should be noted that neither the City of Dahlonega nor Lumpkin County has performed a transportation study or adopted a transportation plan at this time.

- Downtown Dahlonega Master Plan (2008)
- Lumpkin County Comprehensive Plan (2005) and Partial Update (2009) – City of Dahlonega, Georgia, Comprehensive Plan (2005) and Partial Update (2009)
- Parking Plan for the City of Dahlonega (2010)
- North Georgia College and State University Master Plan (2009)

Downtown Dahlonega Master Plan (2008)

This plan presents recommendations intended to contribute to the sustained and future vitality of Downtown Dahlonega. The master plan study focused on the City's Public Square and its surroundings, as evidenced in the Illustrative Plan shown in **Figure 1-3** below. This plan recommends the preservation of the existing historic street grids, including the conversion of one-way streets to two-way facilities and the construction of limited new streets to complete the grids where necessary. It also recommended the construction of a new roadway system for the proposed University Heights neighborhood development and proposed streetscaping on East and West Main Street; North and South Chestatee Street; Park Street; North and South Grove Street and Riley Road; Memorial Drive; and Park Street and Jones Street.

Figure 1-3: Downtown Dahlonega Master Plan Illustrative Plan

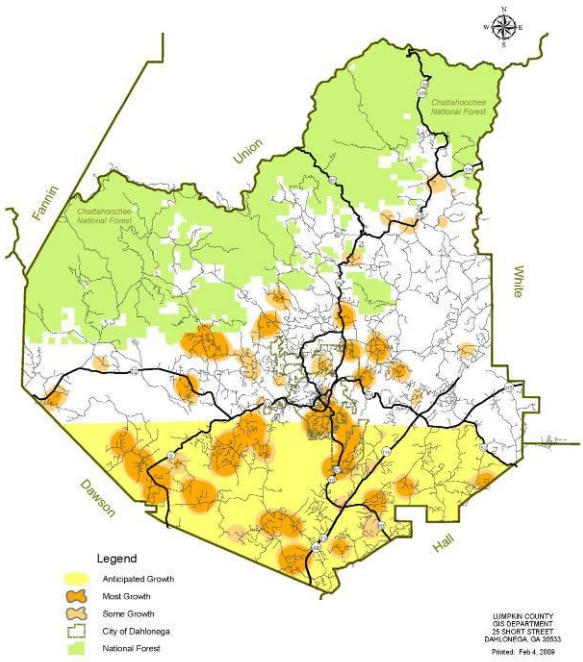


The plan places emphasis on historic preservation and compatibility for new development in the Historic Core and Historic Neighborhoods, and proposes a new historic district in its Historic Neighborhood section. The plan also proposes redevelopment, intensification of uses, and infill development in other areas of Downtown. Specifically, the plan calls for a new civic core including the existing county offices, a new library, and enhanced visual arts campus; a new municipal center at historic McKinney house; a new conference center and retreat with lodging; and a new small inn across from Community House.

Lumpkin County Comprehensive Plan (2005) and Partial Update (2009)

The *Lumpkin County Comprehensive Plan* (2005) found that Lumpkin County is one of the fastest growing counties in the Georgia Mountains area, with a. 44.2% increase in population from 1990 to 2000. The plan projects Lumpkin County's population to be 34,925 by the year 2010 and 66,661 by the year 2025.

Figure 1-4: Areas of Recent and Anticipated Growth (*Lumpkin County Comprehensive Plan)*



The plan notes that Lumpkin County has one airport and a recently established rural on-demand transit program. Sidewalks are only available within the City of Dahlonega and recreational pedestrian trails are limited to national forest areas and the North Georgia College and State University campus in Dahlonega, GA. The plan reports that in 2002, SR 52 had only one area that experienced deficient LOS: between SR 9/SR 60 and House Road the roadway has an LOS D. It was projected that by 2012 SR 52 from SR 9/SR60 to House Road would operate at LOS F and from House Road to SR 115/Long Branch Road at LOS D. By 2022 SR 52 from SR 9 to SR 115/Long Branch Road is projected to operate at LOS F.

The plan found that Dahlonega contains the highest density of development within the County and is its main commercial node as well as the location of the majority of public and institutional uses in Lumpkin County. The plan reports that commercial nodes are found along SR 52. The Plan states that future, rapid development is anticipated south of SR 52, including an area directly south of the study area that is part of the City of Dahlonega.

The *Partial Update* reported that there were needs in Lumpkin County for master plans for transportation, utilities and infrastructure, and parks and recreation facilities and for consideration for measures to improve planning and community development with the City of Dahlonega. It states that ongoing County policy will be to work with the City of Dahlonega to continue developing downtown as an economic and tourism center as part of a regional effort to bring jobs to Lumpkin County. Areas of Recent and Anticipated Growth from the update can be found in **Figure 1-4** above.

City of Dahlonega, Georgia, Comprehensive Plan (2005) and Partial Update (2009)

The *City of Dahlonega Comprehensive Plan* found that the city grew by almost 18 percent from 1990-2000, and is projected to grow by more than 35 percent from 2000-2010 and by more than 100 percent 2000-2025. The plan notes that the student population and others are not included in official population counts of the City. With these populations included, the functional population of the City can top 22,000.

The plan sets forth long-range transportation recommendations not included in the Construction Work Program (CWP). These are the widening of Burnt Stand Road, the widening of Long Branch Extension, and the Extension of GA 400. The extension of GA 400 is planned to occur in three parts. The first would extend the roadway from its current location to SR 52 by 2015; the second, from SR 52 to Frogtown Road by 2025; and the third, from Frogtown Road to SR 11/US 129 by 2025. The plan also recommends a joint transportation study for the county and city.

The plan recognizes that future land use will be shaped by the City's desire for and emphasis on non-residential growth. Future land uses in the study area are shown in **Figure 4-4** on page 4-6. GDOT planned transportation improvements indicate that commercial areas along the SR 60 corridor to the south towards GA 400, along SR 52 toward the existing commercial node to the northeast, and on SR 9 to the west of the city will continue to expand.

The *City of Dahlonega Comprehensive Plan Partial Update* notes that development within the City limits is largely limited to infill and redevelopment, and that some annexation may occur. Specifically, Greenbriar, Riley Road, and North Grove areas would benefit from investment and revitalization, and the Mohawk Industries facility remains vacant and should ideally be reused for major commercial or light industrial activity. The plan lists among the projects in its Short term Work Program the development, in tandem with GDOT, of a Bicycle and Pedestrian Plan for the City of Dahlonega.

Parking Plan for the City of Dahlonega (2010)

The *Parking Plan for the City of Dahlonega* found that "parking conditions in Dahlonega can be difficult" because "off-street parking areas are difficult to find and most of the on-street parking spaces are full." Over the next ten years, parking demand is projected to steadily increase but no new parking facilities are planned. This plan recommends that the City implement shared parking, or the pooling of parking resources among various owners. It also recommends that parking in the two central lots and on-street parking in the city's core cease to be free and that time limits be enforced. To this end, it recommends the introduction of meters and improved signage, as well as the hiring of a parking enforcement officer and a fine system, albeit one that allows for fine forgiveness for visitors. Finally, the plan recommends the conversion of the vacant, dirt lot adjacent to the elementary school to surface parking for up to 100 spaces.

North Georgia College and State University Master Plan (2009)

The purpose of the *North Georgia College and State University Master Plan* was to build on the campus's existing strengths by encouraging compact development for a future campus that supports teaching and learning and creates spaces for pedestrian activity and campus life. The plan recommends the realignment of the current NGCSU gateway road from South Chestatee Street to create a more direct visual and physical connection

with the Drill Field and allow space for the expansion of Memorial Hall. It also recommends the realignment of the road leading to the Recreation Center parking deck from the south and the rerouting of the road adjacent to the military housing quadrangle. The plan notes that, long-term, the University is contemplating creating a new gateway road from the Morrison Moore Connector.

The plan places an emphasis on improving the pedestrian environment on campus. To this end, it calls for the removal of all parking from along the Drill Field to allow an expansion of the sidewalks and the planting of street trees, as well as the creation of a series of new pedestrian paths and improved sidewalks. It also recommends the removal of vehicular access (exception of handicapped parking and emergency vehicle access) from the road behind Barnes Hall so that this area may become a major pedestrian promenade linking Hoag Student Center west to Rogers Hall and across West Main Street to the West Campus. The plan recommends that the University work with the City to increase the visibility of pedestrian crosswalks across West Main Street and to improve sidewalks along the street from the Morrison Moore Connector to downtown. A map of the master plan can be found in **Figure 1-5** below.

Figure 1-5: NGCSU Master Plan Envisioned Growth

2.0 DEMOGRAPHICS AND FORECASTS

This section presents information pertaining to the people living and working in the study area, and by extension, the City of Dahlonega and Lumpkin County. This information about the characteristics of the area's population and employment aids in understanding the nature of travel within, to, and through the SR 52/MMP study area.

2.1 Demographic Profile

The study area lies wholly within the city of Dahlonega. Therefore, the information presented within this section, regarding age, occupation, and income, deals with the City of Dahlonega, for which demographic data such as these are readily available. The study area Census data subset includes:

- Census Tract 960100, Block Groups 1, 2,3, 4, and 5;
- Census Tract 960201, Block Groups 5 and 6; and
- Census Tract 960202, Block Groups 1, 2, 3 and 4.

2.1.1 Population

The population of the city of Dahlonega grew at increasing rates over each decade in the period from 1970 to 2000. As can be seen in **Table 2-1** below, the population grew by seven percent from 1970 to 1980, by nine percent from 1980 to 1990, and by 18 percent from 1990 to 2000.

Table 2-1: Population Change in the City of Dahlonega (1970 to 2000)

1970	1980	1985	1990	1995	2000	Change, 1970-1980	Change, 1980-1990	Change, 1990-2000
2,658	2,844	2,955	3,086	3,296	3,638	7.0%	8.5%	17.9%

Source: City of Dahlonega Comprehensive Plan, 2005-2025

By 2000, the city population of 3,638 accounted for 17.3 percent of Lumpkin County's population of 21,016 (**Table 2-2** below). Yet in 1990, the City had accounted for a 21.2 percent of total County population. Lumpkin County's 44.2 percent population growth eclipsed that occurring in Dahlonega proper during the 1990s. That the county growth has been stronger than city growth indicates that the SR 52 Corridor Study should take into account the role of the studied segment of SR 52 within the regional transportation system, as well as its effectiveness within the study area.

Table 2-2: Population Change in the City of Dahlonega and Lumpkin County, 1990-2000.

Area	1990 Population	2000 Population	Growth Rate
Dahlonega	3,086	3,638	17.9%
Lumpkin County	14,573	21,016	44.2%

Source: City of Dahlonega Comprehensive Plan, 2005-2025

2.1.2 Households

There were approximately 1,060 households in Dahlonega in 2000, with an average household size of 2.3 persons. Given the presence of the college in the study area, it is no surprise that non-family households accounted for 46.4 percent of all Dahlonega households, while non-family households accounted for just 28.8 percent of county households. **Table 2-3** on page 2-2 presents household information for Dahlonega and Lumpkin County.

Table 2-3: Households in Dahlonega and Lumpkin County, 1990-2000

	Total Households		Family Households		Non-Family Households		Persons Per Household	
	1990	2000	1990	2000	1990	2000	1990	2000
Dahlonega	777	1,060	505	568	272	492	2.4	2.3
Lumpkin County	4,976	7,537	3,872	5,363	1,105	2,174	2.7	2.6

Source: City of Dahlonega Comprehensive Plan, 2005-2025

2.1.3 Age

As can be seen from **Table 2-4**, the median age in the City of Dahlonega in 2000 was 22.4, which was slightly higher than the median age in 1970. From 1970 to 2000, however, the median age of Lumpkin County and the state of Georgia rose considerably, to 32.5 and 33.4, respectively. The City of Dahlonega Comprehensive Plan (2005) attributes the disparity in median age between city and county to the median age in Dahlonega being primarily influenced by the growth of North Georgia College and State University, while the median age in the county is influenced by a retirement population.

Table 2-4: Median Age

	1970	1980	1990	2000
Dahlonega	21.8	21.5	22.6	22.4
Lumpkin County	23.9	27.1	30.3	32.5
State of Georgia	25.9	28.6	31.6	33.4

Source: City of Dahlonega Comprehensive Plan, 2005-2025

In fact, in a breakdown of the of the city's 2000 population by age, the largest segment, accounting for 30.2 percent of total population, is made up of 18 to 20 year-olds. In contrast, Dahlonega's entire population over the age of 65 accounts for 11.7 percent of the population. The influence of this sector of the population is notable within the City of Dahlonega and within the study area, particularly in the pedestrian traffic in and around the university, and the need for crosswalks and pedestrian signals across major roadways to service them. **Table 2.5** presents the Dahlonega population by age.

Table 2-5: Dahlonega Population by Age 1980-2000

	1980	Percent 1980	1990	Percent 1990	2000	Percent 2000
0-4	120	4.2	204	6.6	141	3.9
5-13	232	8.2	196	6.3	237	6.5
14-17	142	5.0	82	2.6	95	2.6
18-20	834	29.3	798	25.6	1,100	30.2
21-24	360	12.7	435	14.0	554	15.2
25-34	295	10.4	407	13.1	400	11.0
35-44	192	6.8	206	3.3	272	7.5
45-54	174	6.1	234	7.5	288	7.9
55-64	185	6.5	162	5.2	191	5.3
65+	310	10.9	390	12.5	427	11.7
Total	2,844		3,114		3,638	

Source: City of Dahlonega Comprehensive Plan, 2005-2025

2.1.4 Employment

According to Georgia Department of Labor (GDOL) data, three of the five largest Lumpkin County employers, Chestatee Regional Hospital, North Georgia College and State University, and Wal-Mart, have a presence in the study area. The other two, Timken Company and Medical Management Concepts, LLC, have Dahlonega locations just northwest of the study area. However, North Georgia College and State University is the only Lumpkin County company to rank among the top ten employers in the region. The other nine are found in neighboring Hall County. This indicates that Dahlonega serves as the employment capital of Lumpkin County, but not the wider region. Commuting statistics from GDOL support this conclusion. While Lumpkin County residents make up 69.6 percent of Lumpkin County employees, just 51.4 percent of employed county residents work in Lumpkin County.

In general, the provision of services accounts for 51 percent of current Lumpkin County employment; the production of goods, 16.5 percent, and state, local, and federal government jobs, 32.4 percent. The county's transition into the service-based tourism economy is evident in the 13.3 percent of jobs that come from the accommodation and food services sector, and the presence of the Chestatee Regional Hospital in the 13.2 percent of jobs in the health care and social assistance sector. As the largest goods-producing sector, manufacturing makes up 10.9 percent of total employment. **Table 2-6** provides information about employment in Lumpkin County by sector.

Table 2-6: Lumpkin County Employment by Industry

	Employees	Percent of Total
Goods-Producing	**999**	**16.5**
Agriculture, Forestry, Fishing and Hunting	17	0.3
Construction	306	5.1
Manufacturing	658	10.9
Food	43	0.7
Transportation Equipment	100	1.7
Furniture and Related Product	27	0.4
Service - Providing	**3,082**	**51.0**
Utilities	20	0.3
Wholesale Trade	115	1.9
Retail Trade	648	10.7
Transportation and Warehousing	56	0.9
Information	41	0.7
Finance and Insurance, Real Estate and Rental and Leasing	150	2.5
Professional, Scientific, and Technical Services, Administrative and Support and Waste Management and Remediation	333	5.5
Health Care and Social Assistance	795	13.2
Arts, Entertainment, Recreation, Accommodation and Food Services	806	13.3
Other Services (except Public Administration)	98	1.6
Total - Government	**1,955**	**32.4**
ALL INDUSTRIES	**6,042**	**100.0**

Source: Georgia Department of Labor, 2010

2.1.5 Income

In 1990, the median household income for Dahlonega was $25,074 and for Lumpkin County, $26,116. The city and county median incomes approximated 86.4 and 90 percent of statewide median income. While the 1990 figures for city and county are similar, by 2000, median household income in Dahlonega, at $28,636, approximated 67.5 percent of the statewide average, while Lumpkin County, at $39,167, approximated 92.3 percent. **Table 2-7** reports median household income for Dahlonega, Lumpkin County and the state of Georgia, 1990-2000. Note that the Census data does not reflect the incomes of students who live on campus.

Table 2-7: Median Household Income in Dahlonega, Lumpkin County and Georgia 1980-2000.

	1990	Percent of State income, 1990	2000	Percent of State income, 2000
Dahlonega	$25,074	86.4	$28,636	67.5
Lumpkin County	$26,116	90.0	$39,167	92.3
Georgia	$29,021	100	$42,433	100

Source: City of Dahlonega Comprehensive Plan, 2005-2025

2.1.6 Environmental Justice Populations

This section details potential impacts that may arise as a result major transportation improvements in the study area. Environmental Justice is the avoidance of unnecessary

and unfair impacts to minority or low-income neighborhoods in the selection or construction of transportation improvements. This document locates these neighborhoods in an effort to avoid negative impacts from potential project recommendations.

Census 2000 data from the P4 and P92 sample datasets were utilized to provide a quantitative analysis of the study area with respect to minority, ethnic, low-income, elderly and disabled populations, and households without vehicles. For this study, data was gathered and mapped at the block-group level for all categories.

2.1.6.1 Minority Populations

Minority populations are protected by Environmental Justice procedures. Title VI of the Civil Rights Act of 1964 and related statutes assure that individuals are not excluded from participation in, denied the benefit of, or subjected to discrimination under any program or activity receiving federal financial assistance on the basis of race, color, national origin, age, sex, and disability. Executive Order (EO) 12898 Federal Actions to Address Environmental Justice to Minority Populations and Low Income Populations requires federal agencies to consider impacts to minority and low income populations as part of environmental analyses to ensure that these populations do not receive a disproportionately high number of adverse human health impacts as a result of a federally funded project. In 1998, FHWA issued a guidance document that established policies and procedures for complying with EO 12898 in relation to federally-funded transportation projects. This guidance defines a "disproportionately high and adverse effect" as one that is predominantly borne by, suffered by, or that is appreciably more severe or greater in magnitude than the adverse effect that would be suffered by the non-minority population and/or non-low-income population.

Minority persons are defined as those people belonging to the following groups: Black or African American, American Indian or Alaska Native, Asian, Native Hawaiian or Other Pacific Islander, and Hispanic or Latino. It is important to note that while the first five groups are defined as races, Hispanic or Latino is defined as an ethnicity by the Office of Management and Budget as well as Census 2000. As such, people of this minority group can belong to any racial group but are still considered minorities in this case.

In 2000, minority persons made up 12.2 percent of the study area population, as shown in **Table 2-8** below. This is a lower share than the statewide average of 37 percent, but higher than the countywide population of six percent. As can be seen in **Figure 2-1** on page 2-7, the percentage of minorities is not uniform across the study area population.

Table 2-8: 2000 Minority Population Comparisons

	SR 52 Study Area	Lumpkin County	State of Georgia
Total Population	1600	21,016	8,186,500
Minority Population	195	1,256	3,057,800
Percent Minority	12.2%	6.0%	37%

Source: US Census 2000

While a great deal of the study area and its environs are less than three percent minority, the neighborhood between Goudlock Street and Wimpy Mill Road is over fifty percent minority, as are three smaller portions of the study area. The neighborhood

surrounding Pinetree Way and the large collection of neighborhoods that abut Main Street are 20 to 50 percent minority. Transportation improvements recommended by this plan in these areas should avoid disproportional, negative impacts on minority neighborhoods.

2.1.6.2 Low-Income Populations

Like minority populations, low-income populations are protected from discrimination in the alternative selection process by Environmental Justice procedures. Low-income persons are defined as those whose median household income is at or below the U.S. Department of Health and Human Services poverty guidelines in Census 2000 data.

In the study area, 22.6 percent of households are considered low income, which is greater than the statewide average of 12.6 percent and the county average of 13.5 percent. The proportion of low-income households, however, varies among neighborhoods. While the majority of the study area falls within a Census block group with over 25 percent low-income households, other block groups have as few as five percent low-income households. **Table 2-9** below lists low-income populations, and **Figure 2-2** on page 2-8 illustrates low-income households in the study area by Census block group.

Table 2-9: 2000 Low-income Household Comparisons

	SR 52 Study Area	Lumpkin County	State of Georgia
Total Households	266	7,752	3,007,678
Low-income households	61	1,043	380,240
Percent low income households	22.9%	13.5%	12.6%

Source: US Census 2000

Figure 2-1: Minority Populations in the Subarea

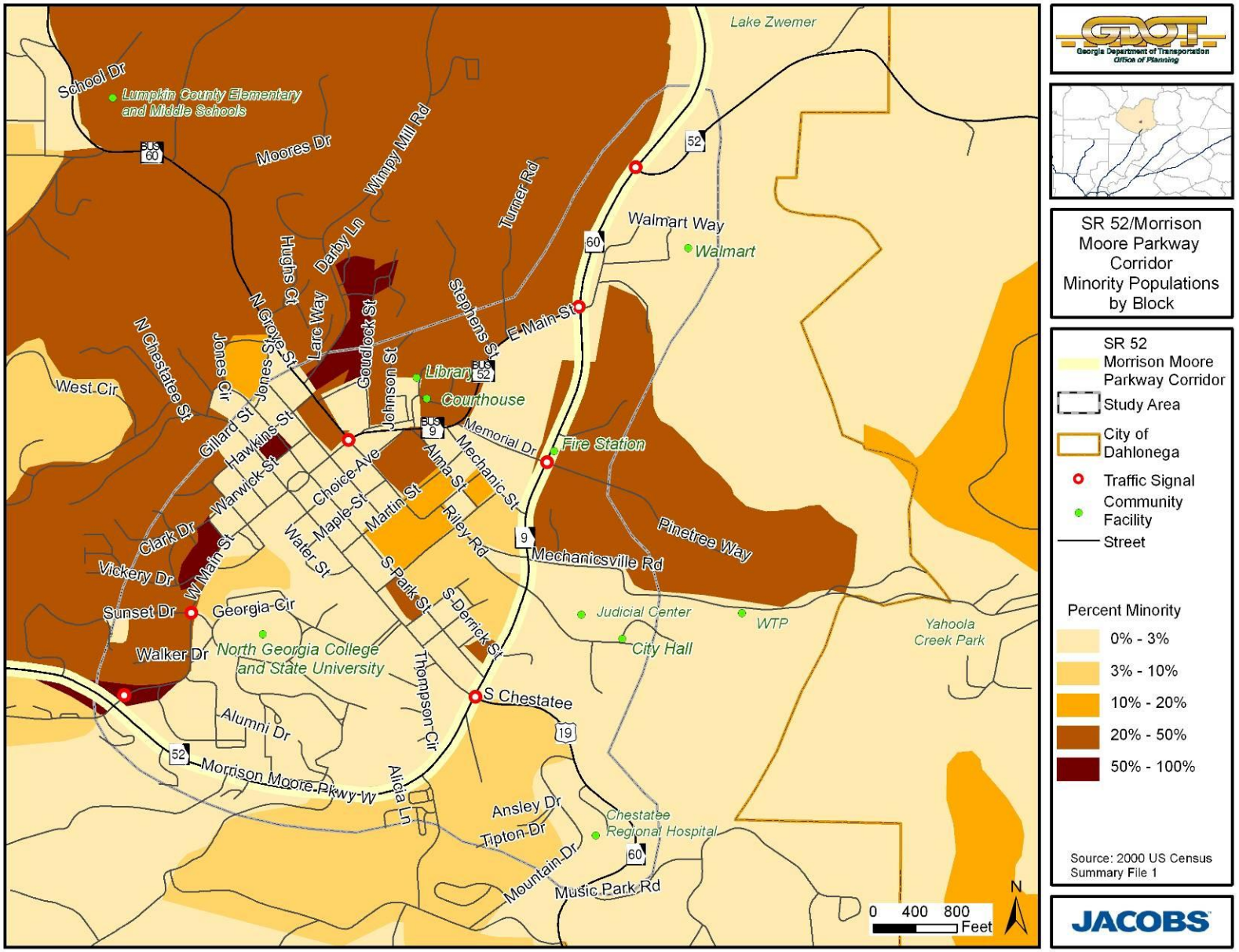
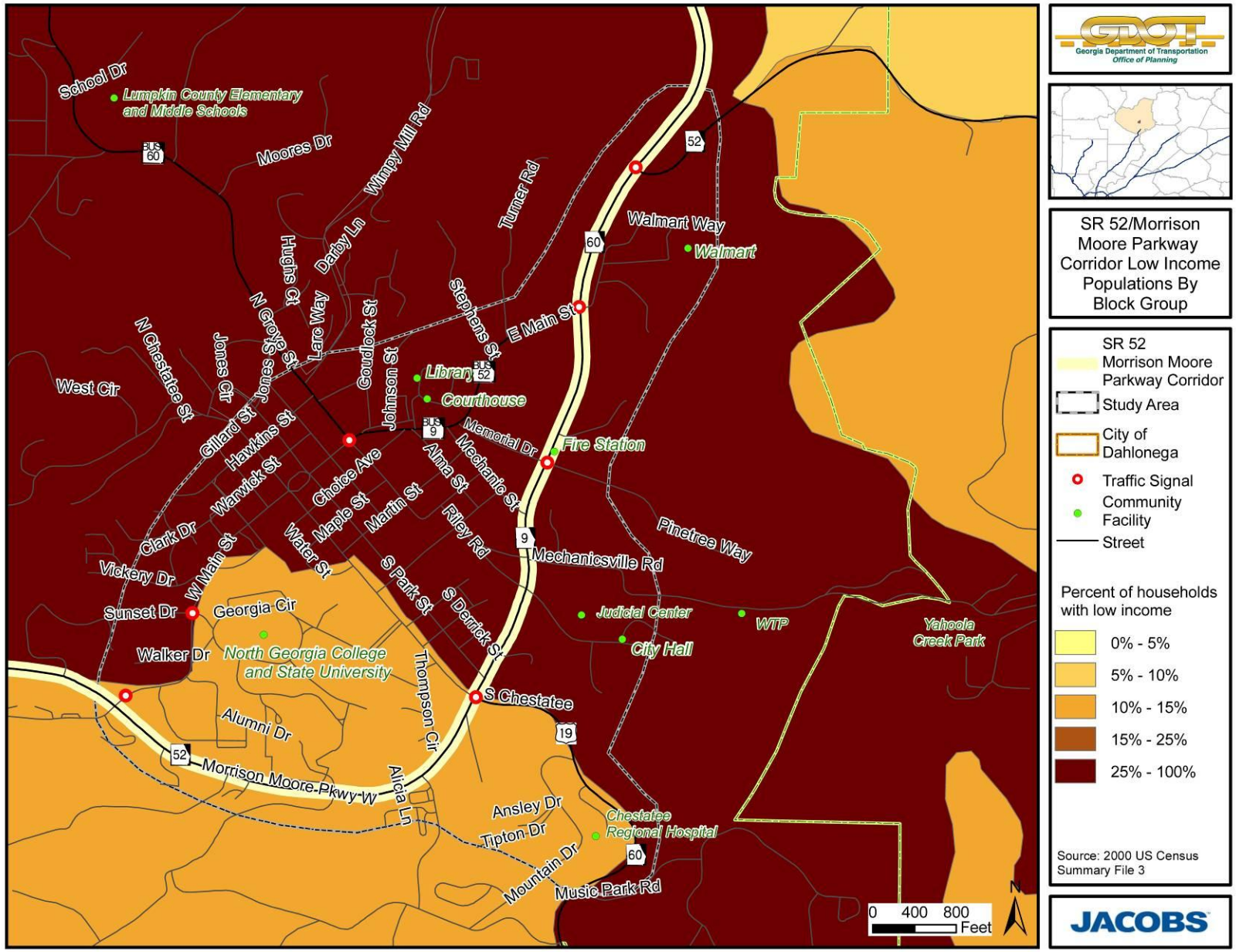


Figure 2-2: Low Income Households in the Subarea



2.2 POPULATION FORECASTS

For the sake of consistency with other demographic data presented in this report, the population forecasts presented in **Table 2-10** have been derived from the City of Dahlonega Comprehensive Plan (2005-2025). Annual growth rate from 2005 to 2025 has been used to extrapolate out to year 2035, which is the planning horizon year for this study. Establishing a valid and reasonable 2035 population forecast is relevant because it is directly tied to future travel conditions and the improvements needed to support the anticipated impact on the transportation system.

As described in Section 2.1, population growth in the City of Dahlonega fell short of that of Lumpkin County in the 1970s, 1980s and 1990s. Accordingly, while Dahlonega population is projected to experience strong growth through 2025, its growth rates are still lower than the overall growth in the county. While Dahlonega made up 17 percent of the county's population in 2000, it is projected to make up 11 percent of county population in 2025. The Comprehensive Plan indicates the increasing population at the North Georgia College and State University as the primary source of future population growth in the city.

Table 2-10: Population Projections for City of Dahlonega and Lumpkin County, 2000-2035

	2000	2005	2010	2015	2020	2025	2035
Dahlonega	3,638	4,288	4,932	5,623	6,431	7,384	9,690
Lumpkin County	21,016	28,510	34,925	42,780	52,410	66,661	101,923

Source: City of Dahlonega Comprehensive Plan, 2005-2025; Note that 2035 forecast has been extrapolated using the same annual growth rate from 2005 to 2025.

According to the US Census, Dahlonega's population in 2009 was 4,959, which is consistent with estimates from the Comprehensive Plan. However, a significant variance exists when comparing Census data to Lumpkin County's population - Comprehensive Plan's 2010 (34,925) estimates are 24 percent higher than that of Census estimates (26,417). This variance may be explained by the crash in Georgia's housing market, and subsequent recession, which would have curtailed the steady relocation of retirees and others to the county.

Based on the data provided by the Comprehensive Plan, the population of Dahlonega is projected to grow by 125 percent from 2005 to 2035, whereas the Lumpkin County is projected to increase by over 250 percent. In order to ensure the reasonableness and validity of the projections provided in the Comprehensive Plan, a number of other sources were compared at the county level due to the availability of current data (**Table 2-11**).

Table 2-11: Comparison of Lumpkin County Population Forecasts

	Comprehensive Plan	GA Statewide Model	Governor's Office of Planning & Budget	Department of Community Affairs
2005	28,540	-	-	-
2006	-	25,460	25,935	-
2007	-	-	-	-
2009	-	-	27,528	23,580
2010	34,925	-	28,463	26,143
2012		-	-	-
2020	52,410	35,327	36,132	31,270
2025	66,660	-	40,618	33,834
2030	-	-	45,482	36,397
2035	101,876	43,940	51,129	39,886
2040	-	48,275	-	-
Annual Growth Rate	4.33%	1.90%	2.37%	1.85%

Source: Lumpkin County Comprehensive Plan (2005); GA Statewide Travel Demand Model (2010); Governor's Office of Planning and Budget – Georgia 2030 Population Projections (2010); Department of Community Affairs (DCA) Population Projections;

As presented in **2-11**, the Lumpkin County population projection from the Comprehensive Plan is significantly higher than the other projections which have relatively small variances. The Comprehensive Plan assumes the most aggressive growth with a compound annual growth rate (CAGR) of 4.33 percent between 2005 and 2025. When extrapolated out to 2035 using this growth rate, the county population is expected more than double the projections by other valid sources. The Comprehensive Plan being the oldest of the sources, coupled with how its 2010 projections compared with the recent Census, suggests that this Plan may not be the best indicator of future population conditions for Lumpkin County.

The projections published by the Department of Community Affairs (DCA) and the Governor's Office of Planning and Budget (OPB) are widely accepted as industry standards in variety of state planning initiatives including transportation planning. The Statewide travel demand model (TDM) was used as a basis to build the SR 52/MMP model to better understand the subarea travel patterns. This model and the associated socioeconomic forecasts were developed in 2010 for planning purposes by GDOT. Details on the model development will be available as a standalone document. The Statewide model projections were developed using historic Census trends coupled with the more recent published data by the Governor's OPB. Accordingly, the population projections from the Statewide model was considered reasonable, and therefore, will be used to establish the future growth in the subarea.

2.3 Key Findings

- By 2000, the population of the City of Dahlonega accounted for 17.3 percent of Lumpkin County's population of 21,016, down from 21.2 percent in 1990. During

the 1990s, Lumpkin County experienced 44.2 percent population growth, more than doubling the growth experienced in the city. The significant countywide growth indicates the need for the major study area roadways to be analyzed within the context of the regional transportation system, as well as their efficiency within the study area.

- Future population growth projections indicate that current trend will intensify over the years to come, with the county expected to grow at a much higher rate than the city.

- The City of Dahlonega Comprehensive Plan calls the increasing population at the North Georgia College and University the primary source of future population growth in the city. The needs of the university residents as well as the role of the university as a regional activity center should be taken into account in planning transportation improvements in the study area.

- North Georgia College and State University is the only Lumpkin County employer to rank among the top ten in the region. The other nine are found in neighboring Hall County. Commuting statistics from GDOL indicate that only half of employed county residents work in Lumpkin County. Therefore, the travel patterns within the study area and the SR 52/MMP Corridor must take into account cross-regional commuter trips as well as local trips.

- Negative impacts to neighborhoods with high Environmental Justice populations must be avoided in the planning and construction of transportation improvements.

- Based on income, the majority of the study area is considered Environmental Justice area, except for the southern area of the study area which includes the college campus and the areas south of SR52 and S. Chestatee Street.

- By 2035, Dahlonega is projected to grow to approximately 9,700 based on the growth rate provided in the City Comprehensive Plan (2005-2025). However, Lumpkin County's population projection in the Comprehensive Plan is significantly higher than other widely accepted sources. This study will use the most recent population projection developed by the Georgia Statewide travel demand model to establish the future growth in the subarea.

3.0 COMMUNITY RESOURCES AND NATURAL SYSTEMS

This section provides baseline data regarding the existing cultural and natural resources in the study area. Community resources are often popular destinations, and can shape travel patterns in the study area. Natural and other resources require respect during the planning process to ensure they are not unduly negatively impacted by transportation improvement recommendations.

3.1 Cultural and Community Resources

The study area is home to many activity centers and points of interest that serve local and regional needs. Among these are schools, parks and recreation facilities, hospitals, and retail and business centers. Cultural resources and culturally sensitive areas can be found in **Figure 3-1**.

3.1.1 North Georgia College and State University

The primary community resource in the study area is the North Georgia College and State University (NGCSU), which extends from south of SR52/MMP north to Vickery Drive/West Main Street/South Chestatee in the southern portion of the study area. NGCS is a public university with over 5,000 students, and is home to The Military College of Georgia, one of six senior military colleges in the US. Thus, the University is a major destination and activity center in the study area and region.

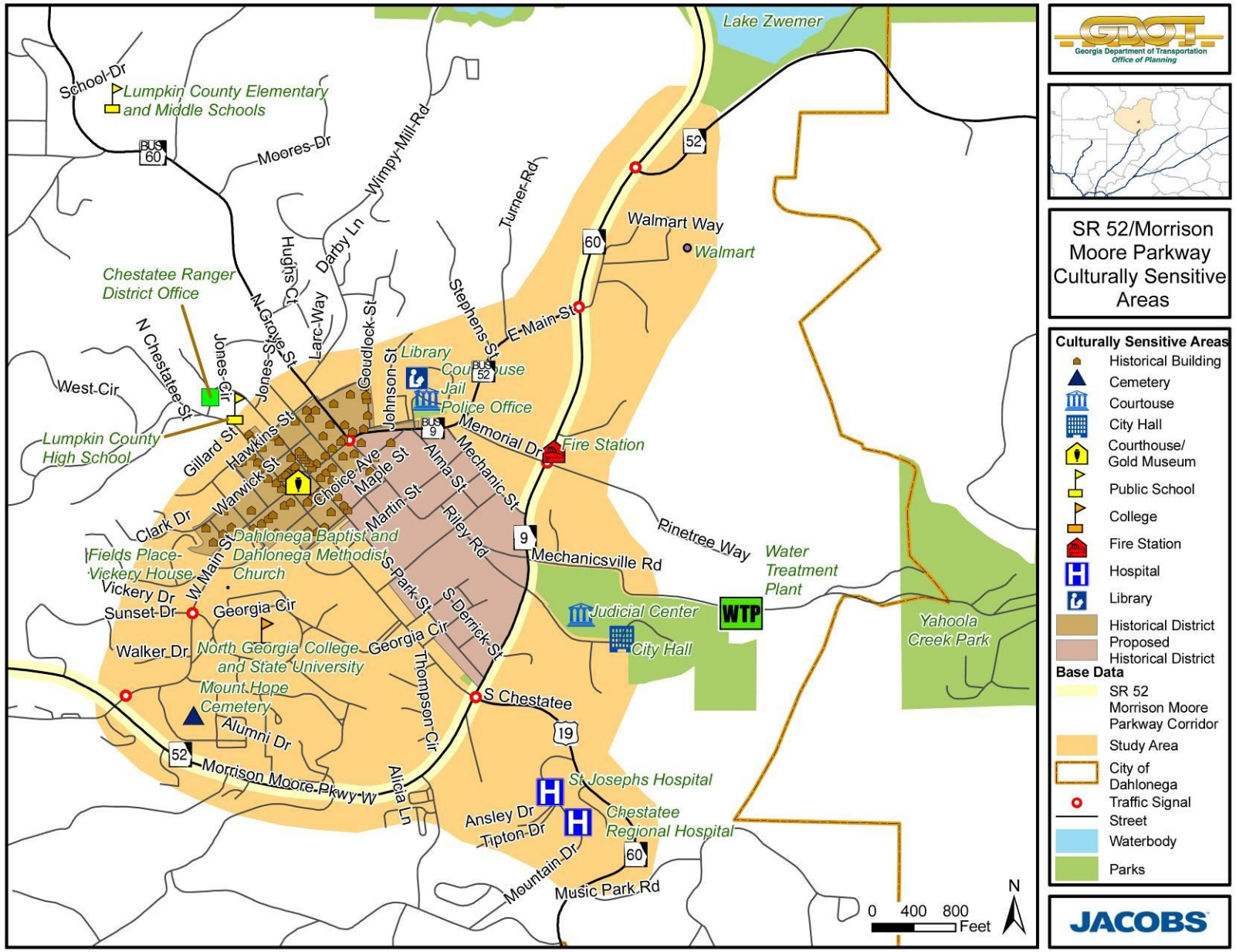
The Master Plan prepared for NGCSU in 2009 aimed to steer compact development on campus while enhancing walkability as the institution expands to its target enrollment of 7,500 full-time equivalent students. The plan recommends a number of new facilities that would "shift the University's center of gravity to the west."

The Plan recommends the realignment of the current gateway road from South Chestatee Street to create a more direct visual and physical connection with the Drill Field, the hallmark of the campus. In the long-term, the University is contemplating creating a new gateway road that ties into SR52/MMP.

The Plan also calls for the removal of all parking from along the Drill Field to allow an expansion of the sidewalks and the planting of street trees. Drill Field Road will remain a one-way access road moving in a counter-clockwise direction, and will serve as the major visual axis connecting the Main Campus to the West Campus. Vehicular access (with the exception of handicapped parking and emergency vehicle access) will be removed from the road behind Barnes Hall to create a major pedestrian promenade linking Hoag Student Center west to Rogers Hall and across West Main Street to the West Campus.

Campus roadways, on the whole, have been re-evaluated as gateways and connectors, and are expected to de-emphasize vehicular traffic in the future. To complement this, the Plan expands the campus network of pedestrian paths and sidewalks. On the Main Campus, the Plan would create a series of new pedestrian paths and improved sidewalks, including new pathways that would create better access for mobility-impaired students and staff.

Figure 3-1: Culturally Sensitive Areas in the Study Area



On West Campus, the Plan recommends improvements to sidewalks along Sunset Drive as well as new pathways adjacent to the HNS quadrangle to connect the civilian housing to the Main Campus. It would improve pedestrian circulation through the center of the new Dining Hall via a set of exterior stairs which lead from the Drill Field up to West Main Street and add a pathway between the civilian housing and the Athletics Campus.

The Master Plan accommodates additional parking for the expanding NGCSU through a combination of existing and proposed surface parking lots and three new parking decks. However, the Plan notes that these measures will provide just 5,300 of the 6,900 parking spaces that NGCSU will need by the time it reaches its goal enrollment of 7,500 full time equivalent students. The Plan recommends that the University consider remote parking and other policy solutions, such as limiting parking for freshman residents. Limited parking availability and an increasingly pedestrian-friendly campus will likely increase the foot traffic in and around NGCSU. To this end, the Plan recommends that the University work with the City to increase the visibility of pedestrian crosswalks across West Main Street as well as to improve sidewalks along the street from the Morrison Moore Connector to downtown.

3.1.2 Parks

Parklands can be a major determining factor in the formulation and selection of transit alignments. Section 4(f) of the Department of Transportation Act specifically prohibits acquiring or impacting parklands for transportation purposes unless there are no feasible and prudent alternatives after all possible planning has been done. Section 4(f) protection applies to all public parklands.

Therefore, of primary concern to this study are those parks and parklands which lie along the SR 52/MMP Corridor. As can be seen from **Figure 3-1**, at the study area's northern end, these include the parklands that surround Lake Zwemer. Along the study area's eastern edge, these include the parklands surrounding the Judicial Center and City Hall located at Mechanicsville Road Finally, as well as the small, city-owned, Madeline Anthony Park at South Chestatee Road. Transportation improvements proposed to SR 52/MMP or the surrounding roadway network in these areas will have to consider these parklands and avoid impacts to them.

There are also three small parks in the interior of the study area, within the historic district. One of these is the Dahlonega Gold Museum, which commemorates the Dahlonega Gold Rush, which began in 1828 and was the first gold rush in the United States. The museum, located in the repurposed 1836 Lumpkin County Courthouse on the public square in downtown Dahlonega, is considered a historic site and Georgia State Park. Another of these is Veteran's Park, owned by Lumpkin County and located north of East Main Street by the County Courthouse.

3.1.3 Schools

The Lumpkin County High School lies on the western edge of the study area on Chestatee Street. The Lumpkin County Elementary and Middle Schools are located to the northwest of the study area off of School Drive, which is accessed from the study area via N. Grove Street. Schools are a major destination and can cause congestion on

the surrounding transportation network, particularly in the mornings, when school openings coincide with the beginning of the work day.

3.1.4 Known Historic Sites

Like parks, historic resources are protected from impacts due to transportation projects. These resources are not limited to the districts and structures shown here, and a thorough analysis of the impacts of the alternatives on historic resources will be conducted in the later project planning phases.

Downtown Dahlonega in the study area is home to the Dahlonega Historic Commercial District, which extends from approximately Hawkins Street to Maple Street and from Sherman Green Terrace to Goudlock Street, as shown in **Figure 3-1**. There are a number of historical buildings in district, many of which house currently operating retail and commercial operations in the city center.

This historic district dates from 1833 and was entered on the National Register in 1983, and is therefore considered by the National Park service to be a "significant concentration, linkage, or continuity of sites, buildings, structures, or objects united historically or aesthetically by plan or physical development." Locally, the district is subject to Historic District design guidelines which seek to unify the aesthetics of the district's overall character.

The proposed historic district shown in **Figure 3-1** originated in the Downtown Dahlonega Master Plan (2009). According to the Master Plan, the proposed residential historic district would "preserve the architectural heritage of the area," and preserve buildings and large estate lots, as well as the overall rural character of the area. This would be accomplished through building and landscape guidelines for the rehabilitation of older buildings as well as for new infill development. The Plan notes that a "National Register listing would also qualify property owners to take advantage of available funding sources and tax credits offered by the State of Georgia and the Federal Government."

The creation of this district would require further study, during which its boundaries may be altered. However, as this district abuts the SR 52/MMP in the vicinity of South Chestatee Street, care should be taken in proposing improvements in this area so as to avoid impacts to existing historic resources, regardless of the status of the proposed district.

Mount Hope Cemetery is located north of the SR 52/MMP Corridor from Main Street to Haney Road in the southern portion of the corridor. Furthermore, the Dahlonega City Council is considering the placement of this site on the National Register of Historic Places to further conservation efforts that could make the location a more attractive draw for historical tourism and genealogists (Dahlonega Nugget, 03 November 2010). Impacts to this property would need to be avoided in improvements to SR 52/MMP and other roadways in this area proposed by this plan.

3.1.5 Other Activity Centers

Other major activity centers, resources, and destinations are also found in the study area. Transportation to and from these activity centers is an important aspect of the

regional network. As can be seen from **Figure 3-1**, Wal-Mart and its accompanying retail outlets, in the northern portion of the study area, draw shoppers from Dahlonega and the surrounding area.

The Chestatee Regional Hospital and St. Joseph's Hospital are located in the southeast portion of the study area along US 19/SR 60. These hospitals serve the regional population, and are surrounded by complementary medical offices and services.

3.2 Major Natural Systems Inventory

This chapter provides baseline data regarding the existing environmental conditions within the study area. Natural systems within the corridor are presented here so that possible future constraints on transportation improvements, including legally protected natural areas and topographical obstacles, can be foreseen.

3.2.1 Water Resources

There is one major reservoir, Lake Zwellner, at the northern tip of the study area, as can be seen in **Figure 3-2**. In addition, a network of small streams crosses the region and study area, providing drainage to this mountainous region.

3.2.2 Topography

As can be seen in **Figure 3-2**, the topography of the study area and surrounding area is very hilly, as fits is location in the Georgia Mountains. This topography can complicate the engineering and construction of transportation improvements.

3.3 Key Findings

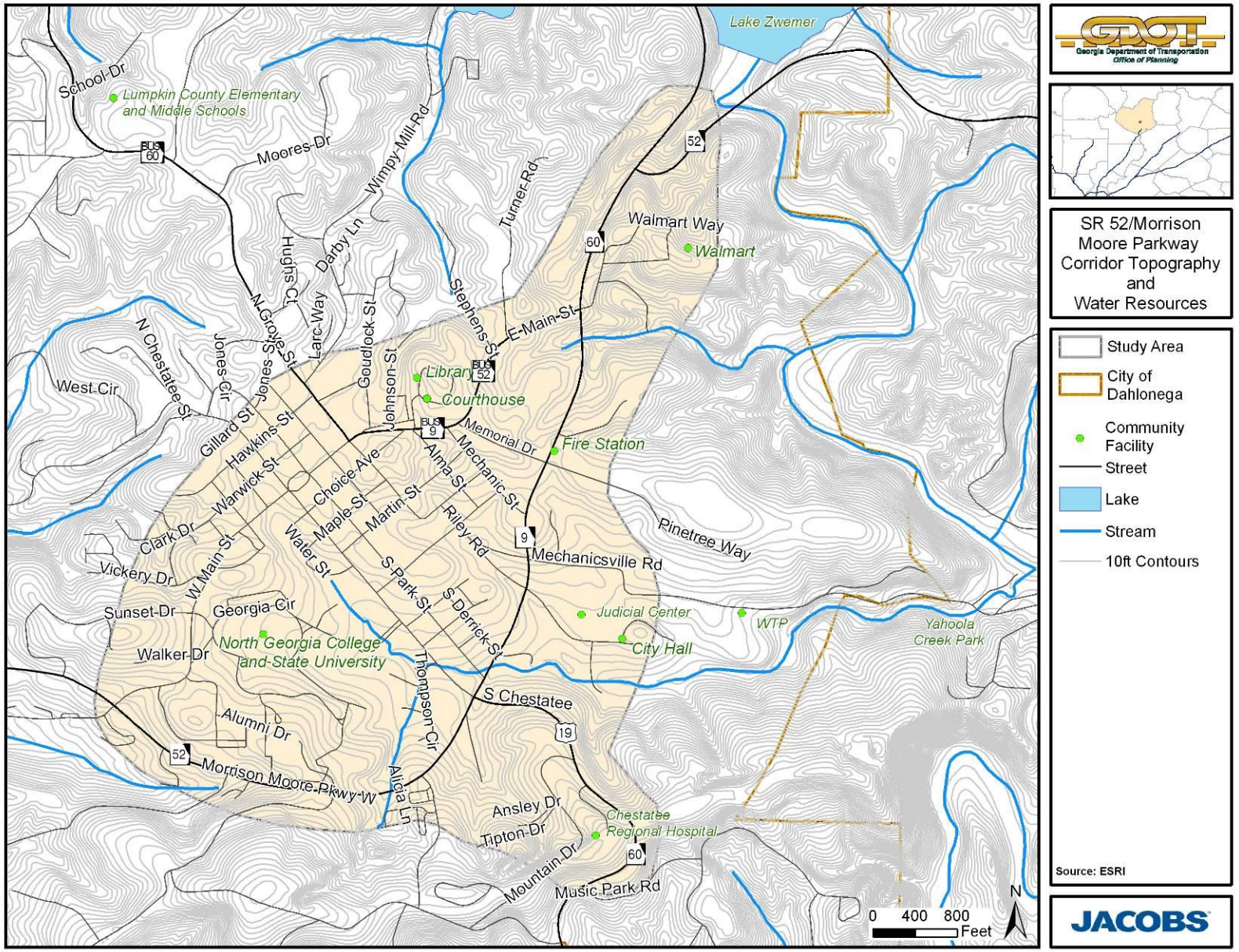
- Expansions plans of the NGCSU, as described in its Master Plan (2009), will likely have significant impacts to the study area. The Master Plan also envisions a more walkable campus. Pedestrian traffic is therefore expected to increase in the vicinity of campus, placing new emphasis on safe, visible crosswalks on West Main Street and on sidewalk connections from the SR 52/MMP Connector to downtown.

- Impacts to those parklands and historic sites immediately adjacent to the SR 52/MMP should be avoided in the development of transportation improvements.

- Many of the tourist destinations in Dahlonega, such as the Gold Museum, are historical resources, and must be preserved.

- There is one existing and one proposed historic district within the study area. These districts contain many known and unknown historic properties and care should be taken in the execution of transportation improvements in these areas.

Figure 3-2: Water Resources and Topography



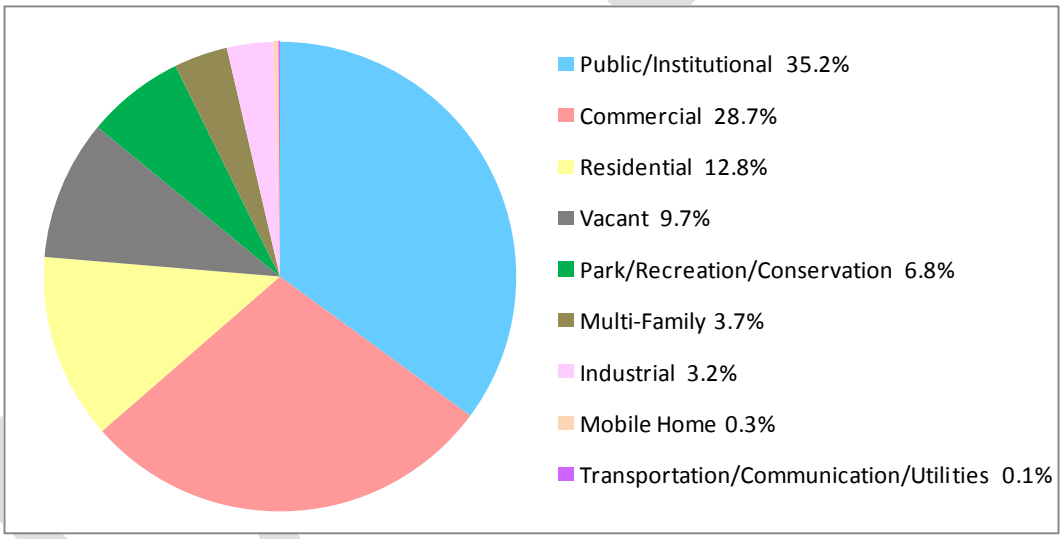
4.0 LAND USE AND DEVELOPMENT CHARACTERISTICS

The transportation improvements recommended from this study must support the land use and development characteristics of the SR 52/MMP subarea. The subsequent sections present an inventory of existing and planned land uses and identify areas for potential development or redevelopment.

4.1 EXISTING LAND USES

This section provides the composition and geographic distribution of existing land uses. An analysis of existing study area land uses reveals the most prominent land use to be public and institutional uses, which make up 35.2 percent of all study area land uses. Since the study area overlaps with downtown Dahlonega, commercial land uses are the second most prevalent in the study area, accounting for 28.7 percent. Residential uses account for 12.8 percent of land uses and vacant lands account for 9.7 percent, which indicates opportunities for new developments. The distribution of existing land uses is tallied in **Figure 4-1** below and shown geographically in **Figure 4-2**. Land uses have been described in their order of prevalence within the study area.

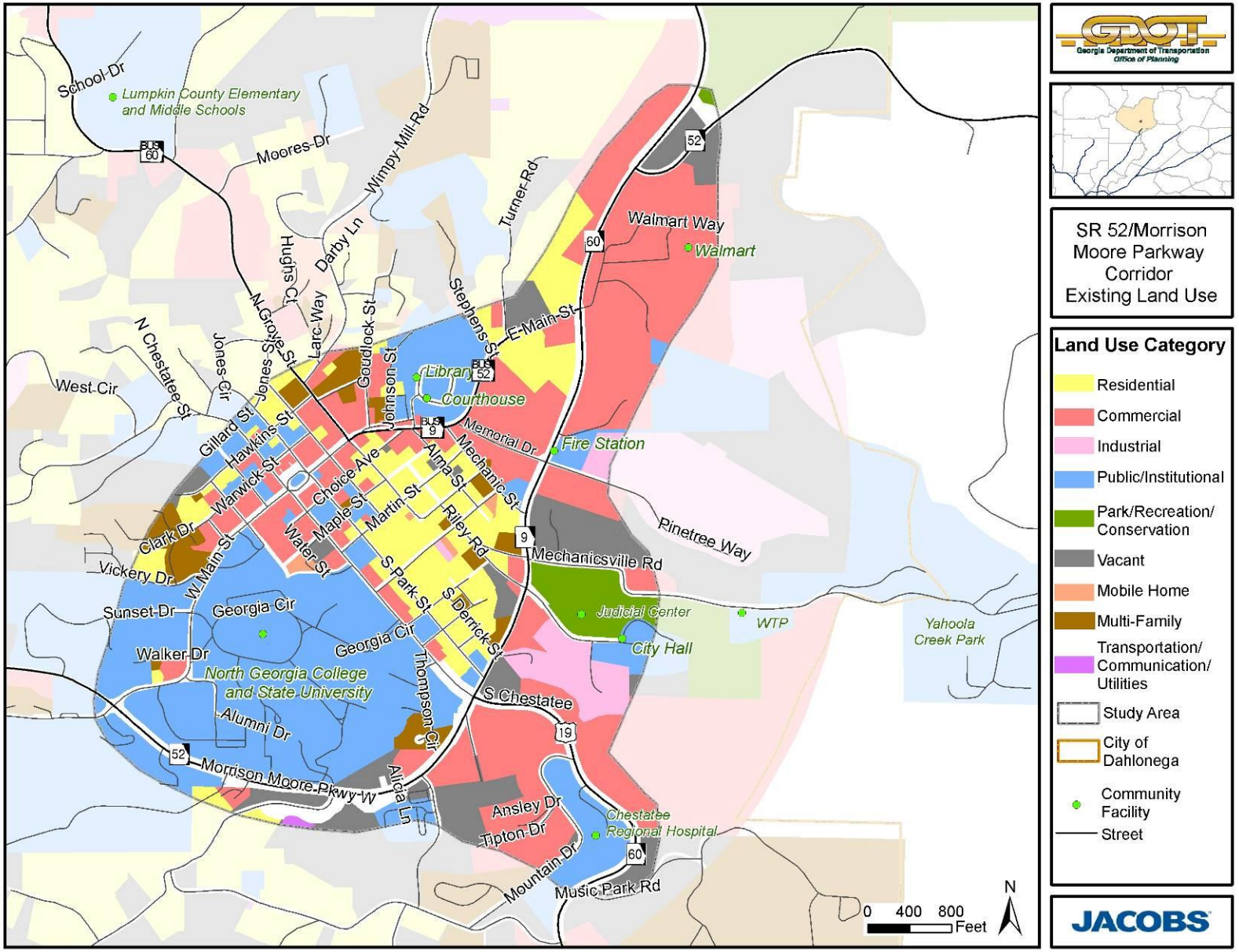
Figure 4-1: Existing Land Use Composition in the Study Area



Public-Institutional

Public-Institutional uses include federal, state and local government uses, and institutional land uses, in the form of city halls and government buildings, schools, universities, hospitals, research facilities, religious institutions, and cemeteries. With greater than a third of the total land area (172.4 acres), Public-Institutional uses are the most prevalent in the subarea. This is particularly relevant since many of the travel patterns of the subarea would be associated with these uses. In particular, access to the courthouse and other public facilities is an important goal for the local and regional transportation network.

Figure 4-2: Existing Land Use



The North Georgia State College and University (NGSCU) campus takes up the majority of the southern end of the study area, as illustrated in **Figure 4-2**. Current enrollment shows 5,260 students, of which about half commute to school. Furthermore, there are 635 faculty and staff members who commute to school on a daily basis. As such, particular attention should be given to commuter student and employee travel patterns in the subarea and consider improvements to better facilitate these trips.

Additional Public-Institutional land uses are found in the northern portion of the study area, where the Library and the County Administrative Complex are found. The new Lumpkin County Judicial Center and Dahlonega's City Hall, located along Riley Road, are also major components of this land use category. The Judicial Center opened for business on October 2010 and houses the County's Probate Court, Magistrate Court, Clerk of Court, District Attorney's Office, Superior Court, Juvenile Court, and the Lumpkin County Sheriff's Office Court Services Division. The County plans to develop this site into a County Government Services Complex with a new library, Department of Health, Park and Recreational Center and a daycare. Potential improvements to Riley Road and Mechanicsville Road will be considered to account for the additional traffic demand as a result of this future development plan. Finally, this study will also take into account the presence of Chestatee Regional Hospital and associated medical facilities in the southeastern portion of the study area.

Commercial

The commercial land category includes non-industrial businesses, including retail, office, service, and entertainment. Commercial land uses are the second most prevalent in the study area, with 140.3 acres. The northern end of the study area along SR 52/MMP Corridor is largely commercial, due to the presence of Wal-Mart and other smaller retail centers. The Public Square along Main Street is a major tourist destination and is home to unique retail shops and restaurants native to Dahlonega. Therefore, a safe pedestrian environment with contiguous sidewalks, pedestrian crossings and streetscape is particularly important to this area.

Residential

Single-family residences account for 62.6 acres and concentrated between E. Main Street and SR 52/MMP. Many of the homes in downtown Dahlonega are historic and would require further consideration when evaluating potential impacts of transportation improvements. As illustrated in **Figure 4-2**, many residential uses are also found outside of the study area, particularly to the northwest and south. As such, new local routes may be considered to enhance roadway connectivity and the grid network in the study area.

Multi-family residences comprise of 3.7 percent of the total land area. The multi-family category includes townhomes, duplexes, condominiums, and apartments. Multi-family residential development is found throughout the study area with one university-related concentration found in the vicinity of Clark Street in the western portion of the study area.

The mobile home residential category includes single- and double-wide mobile and manufacturer homes on individual lots, including mobile home parks, along with their accessory structures and uses. This category accounts for less than one percent of study area land uses. There is one small block of Mobile Home use at Water Street in the central study area; a larger concentration of this use can be found outside the study area in the vicinity of Hughs Court to the northwest of the study area.

Vacant

The Vacant land use category represents urban open space that is free of buildings with no identified use. This category represents 9.7 percent (47.2 acres) of the study area. Vacant lands can be found south of SR 52/MMP in the vicinity of Alicia Lane in the southern portion of the study area, east of SR 52/MMP at Mechanicsville Road in the eastern portion of the study area, and on either side of SR 52/MMP at SR 60 in the northern portion of the study area. Vacant areas can also interrupt the roadway network. For instance, Crown Mountain Place commercial condominium development would benefit from improved connectivity through surrounding vacant lands. These vacant lands represent opportunities for development within the study area and will be discussed in much greater detail in the discussion of future land uses.

Park-Recreation-Conservation

Park-Recreation-Conservation uses comprise of 6.8 percent of the total area. This land use type includes parks used for active recreation (ball fields, tennis courts, running tracks, swimming pools, golf courses), as well natural conservation areas. In the study area, this land use category is found in only two areas, principally in the large County park found in the eastern portion of the study area. Secondarily, the north of the study area touches the lands surrounding Lake Zwerner.

Industrial

Industrial land uses include manufacturing facilities, processing plants, factories, warehousing and wholesale trade facilities and similar uses. Industrial land uses comprise 3.2 percent of the study area. These are found primarily to the east of SR 52/MMP, where large lots are available. These areas are mostly surrounded by commercial and vacant lands.

Transportation/Communication/Utilities

The Transportation/Communication and Utilities category includes power generation plants, railroad facilities, radio towers, streets and highways, among others. This category accounts for less than one percent of study area land uses. There is one small segment of this land use in the very southernmost portion of the study area.

4.2 Future Land Uses

One of the goals in the City of Dahlonega's Comprehensive Plan (2005) maintains the importance of placing focus on the growth in economic development over the next twenty years. The City recognizes the significance of additional commercial development to benefit not only its jobs and tax base, but also to promote tourism. Although residential development has been strong throughout the county over the past decade, it has been strongest in the unincorporated portions of Lumpkin County, where large lots are available for new development. Given the relatively build out nature of the study area, the City would like to see some infill residential development.

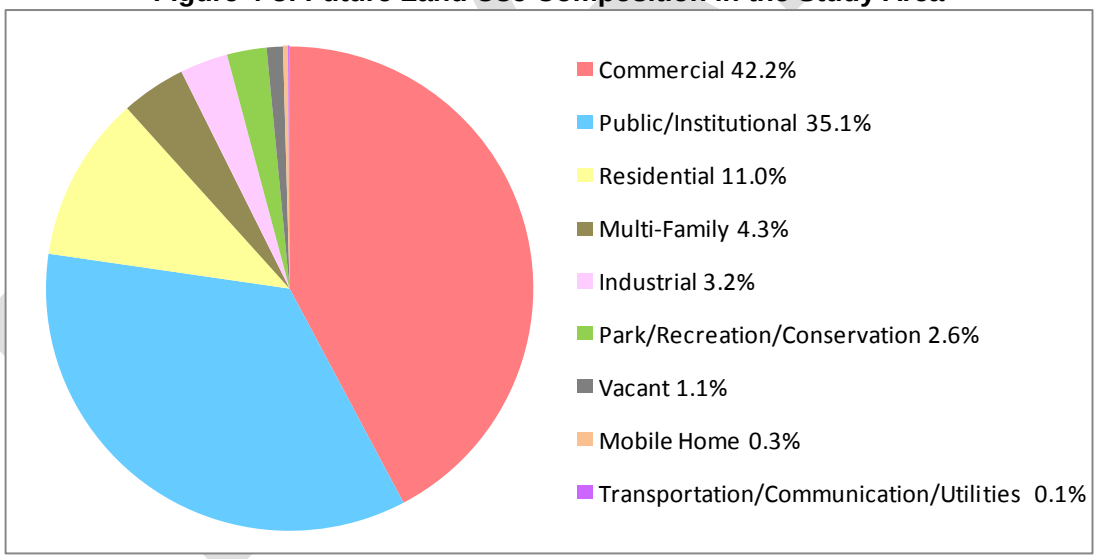
Shifts from existing to projected future land uses in the study area parallel these trends, with a 48 percent increase in acreage for commercial use and a 13.2 percent decrease in acreage for residential use. Multi-family residential uses, such as those frequently found in infill housing, are projected to increase slightly, by three acres. The bulk of available vacant land is projected to be developed by 2025, reducing vacant lands to approximately 5 acres by 2025. Changes in land uses can be found in **Table 4-1**.

Table 4-1: Changes in Study Area Land Use

Category	Future Land Use (Acres)	Existing Land Use (Acres)	Change in Total Acres	Percentage Change
Residential	54.29	62.57	-8.28	-13.2%
Commercial	207.61	140.29	67.33	48.0%
Industrial	15.70	15.70	0.00	0.0%
Public/Institutional	172.37	172.37	0.00	0.0%
Transportation/Communication/ Utilities	0.51	0.51	0.00	0.0%
Park/Recreation/ Conservation	12.98	33.13	-20.15	-60.8%
Vacant	5.32	47.25	-41.93	-88.7%
Mobile Home	1.64	1.64	0.00	0.0%
Multi-Family	21.18	18.15	3.03	16.7%

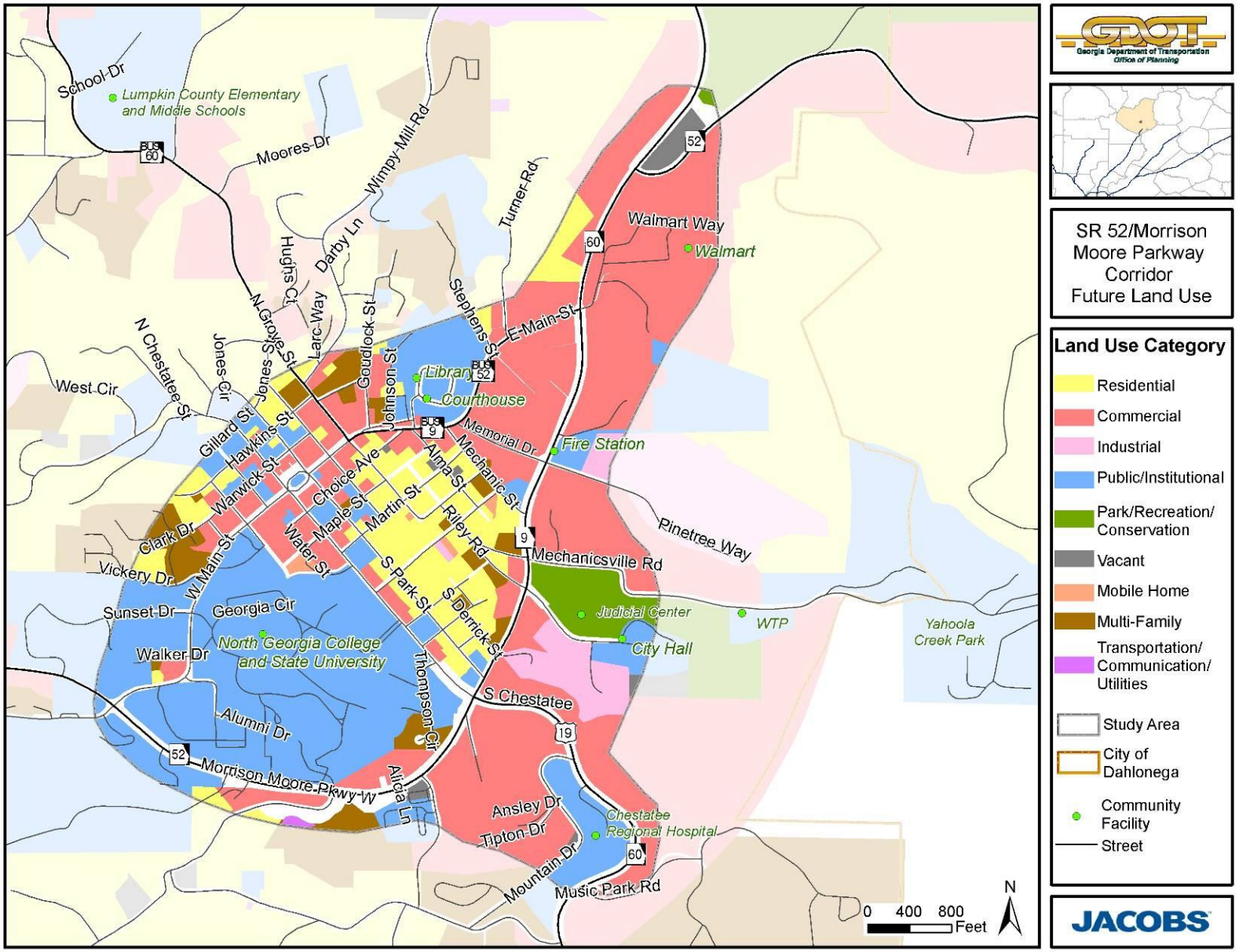
Due to these changes in land uses, future land use is projected to be dominated by commercial uses, rather than public and institutional uses as it is today. Due to development, vacant lands are projected to account for just over one percent of all future study area land uses, while today they account for nearly ten percent. The composition and a map of future land uses in the study area are illustrated in **Figure 4-3** and **4-4**, respectively.

Figure 4-3: Future Land Use Composition in the Study Area



The City's Comprehensive Plan notes that additional commercial development is projected to occur along SR 52/MMP in the vicinity of E. Main Street and Mechanicsville Road in the northern portion of the study area, and along SR 52/MMP in the vicinity of the university in the southern portion of the study area. In majority of these areas, land uses are projected to shift from residential to commercial, which would translate to higher number of trips to account for employees, customers, vendors and others associated with commercial uses.

Figure 4-4: Future Land Use



4.3 DEVELOPMENT TRENDS

Since 2005, seven applications for Developments of Regional Impact (DRI) in the City of Dahlonega have been approved or are pending. The status of these applications and developments are listed in **Table 4-2** below. DRIs are large-scale projects that are likely to have regional impacts beyond the boundaries of the local governments of their locations. Due to the magnitude of the land use changes that they institute, DRIs are typically a useful measurement of redevelopment in an area. Also, the size and nature of DRIs mean that they often have implications for their surrounding transportation networks.

DRI applications are reviewed by the Regional Commissions in a process overseen by the Georgia Department of Community Affairs, and issue a finding of whether or not the proposed project is in "the best interest of the Region and therefore the State." The local government uses this recommendation in deciding whether to allow the project to proceed.

Table 4-2: DRI Applications within the City of Dahlonega, 2001-2010

DRI ID	Project	Type	Initial Form Submittal	Application Status	Current Development Status
2033	Gold Creek Foods, LLC	Industrial	April 2009	Completed – Earned RC Approval	The property has been purchased, and structural redevelopment efforts are ongoing.
1890	Buckhorn Development	Mixed Use	June 2008	Completed - Earned RC Approval, with conditions	Plans for this development were approved, but the project was never started. This project is unlikely to be constructed.
1825	Student Residences	Housing	April 2008	Completed- Earned RC Approval, with conditions	Plans for this project were never submitted, and the property is still on the market. This project is unlikely to be constructed.
1744	Whispering Waters	Housing	Feb. 2008	Additional Form Submitted – Decision Pending	This property was never purchased. This project is unlikely to be constructed.
1472	Birch River	Mixed Use	June 2007	Completed- Earned RC Approval, with conditions	Project is ongoing. The project is expanding an existing mixed-use community.
1256	The Village at Buckhorn	Housing	Oct. 2006	Initial Form Submitted- Decision Pending	This development is part of the Buckhorn development, and is unlikely to be constructed.
397	Mountain Music Park	Housing	March 2003	Completed - Earned RC Approval	This project has gone into foreclosure, and is unlikely to be constructed.

Source: Georgia Department of Community Affairs

Of the seven DRI developments in Dahlonega, two remain underway. One is an ongoing expansion of Birch River, a large, existing development along US19/SR 60 south of the study area. The second is located at the former Mohawk Carpet plant on Pinetree Way in the northern portion of the study area. Gold Creek Foods, LLC, has received a DRI permit for converting the site to a food processing plant, and is currently working on repurposing the facility. The developers estimate that, when operational, the new plant will generate approximately 300 new trips per day with additional truck traffic. Operational improvements may be considered at the Pinetree Way intersection at SR 52/MMP to facilitate additional vehicular turning movement.

As described in its Master Plan (2009), NGCSU is undergoing redevelopment to expand its service to a targeted 7,500 full-time equivalent students. This redevelopment involves the construction of a number of new laboratory, classrooms and housing facilities, which would utilize much of the campus's undeveloped land. The recommendations from this Master Plan are described in Section 3.1.1 of this report.

Much remains to be seen regarding redevelopment in the study area and its surroundings. While many DRI permits were applied for prior to the recession in the housing market, there is little, if any, progress being made in these potential developments at this time. When the economy becomes such that development is once again attractive, some DRI initiatives may be taken up again by their developers as they were or in amended form, while some may be abandoned entirely.

4.4 Key Findings

- The most prominent existing category of land use is the Public and Institutional sector, which makes up over one-third of total land use. Primary among these land uses is the NGCSU campus, which takes up the majority of the study area's southern end. The new Judicial Center, Dahlonega's City Hall and Chestatee Regional Hospital are also major components of this land use category. These locations are particularly relevant since they have implications for the local and regional transportation network.

- Since the study area overlaps with downtown Dahlonega, commercial land uses are the second most prevalent in the study area. Downtown Dahlonega, in the central study area, has many smaller commercial lots, as suits its traditional downtown nature. As such, providing a safe pedestrian environment with contiguous sidewalks, pedestrian crossings and streetscape are particularly applicable to this area.

- Residential uses account for 12.8 percent of land uses. Historic neighborhoods from Park Street to Mechanic Street make up a large portion of the residential uses and may require further consideration when evaluating potential impacts of transportation improvements. Many other residential uses are also found outside of the study area, particularly to the northwest and south. As such, new local routes may be considered to enhance roadway connectivity and the grid network in the study area.

- Vacant lands account for nearly ten percent of land uses, which signals that there is some land available for infill and other development within the study area into the future. In fact, the City has an aggressive future land use plan in which almost all its land will be developed by 2025 with only one percent vacant land. The development of vacant land and potential redevelopment of other, underused properties, as

described in the City's Master Plan (2005), will have impacts to the transportation system in the study area.

- The City of Dahlonega states in its Comprehensive Plan (2005) that it intends to prioritize commercial development over residential development over the next twenty years. Accordingly, new commercial development is projected to replace residential land uses from SR 52/MMP to E. Main Street in the northern portion of the study area, and replace vacant land uses along SR 52/MMP in the vicinity of the university in the southern portion of the study area. These shifts in land uses are likely to translate to higher number of trips to account for employees, customers, vendors and others associated with commercial uses.

- There are two DRI developments underway in the City of Dahlonega. Gold Creek Foods, LLC, located on Pinetree Way has received a DRI permit for converting a former textile mill to a food processing plant, and is currently working on repurposing the facility. The new plant is expected to generate approximately 300 new trips per day with additional truck traffic, which may require operational improvements at the Pinetree Way intersection at SR 52/MMP.

5.0 TRANSPORTATION SYSTEM

This section provides a comprehensive overview of the transportation system in the subarea including the characteristics of roadway and multimodal facilities, planned improvements, safety analysis and parking. As part of the next steps, traffic modeling analysis will be conducted using a combination of the Travel Demand Model (TDM) and microsimulation model (using Vissim) in order to evaluate the travel conditions and identify the deficiencies in the major roadways and the intersections. The results of this analysis will be reported as part of the needs assessment.

The findings from the assessment of the transportation system are essential in creating a plan that reflects and addresses the needs of all travelers in the subarea, including the residents, commuters and tourists.

5.1 Roadway Characteristics

An inventory of roadway characteristics was collected to understand the needs and constraints of the subarea's transportation infrastructure and the types of trips served. These characteristics include design elements such as functional class, laneage, speed, and annual daily traffic (ADT) volumes.

The roadways in the subarea are characterized by narrow two-lane facilities and are part of a rural system. The following five major roadways carry the majority of the trips and are the focus of discussion in this section:

- SR 52/Morrison Moore Parkway (SR 52/MMP),
- US 19/SR 60/S. Chestatee Street
- SR 60/N. Grove Street,
- E. Main Street, and
- W. Main Street.

Furthermore, an analysis of current and future intersection operations will be conducted as part of the needs assessment for the key intersections in the subarea. Peak hour turning movement counts have been collected at the following locations:

- SR 52/MMP and S. Chestatee Street;
- SR 52/MMP and Riley Road;
- SR 52/MMP and Memorial Drive/Pinetree Way;
- SR 52/MMP and E. Main Street; and
- E. Main Street and N. Grove Street

Figure 5-1 illustrates some of the roadway characteristics of the transportation network in the subarea, which are also summarized in **Table 5-1**. In general, travel in the subarea is served by rural principal arterials, which are made up of segments of S. Chestatee Street, SR 52/MMP, E. Main Street and N. Grove Street. Rural principal arterials typically serve substantial statewide travel and emphasize regional mobility and connect larger urban areas. As such, it is important to keep in mind how well these principal arterials serve the travelers in the subarea.

Table 5-1: Summary of Major Roadway Characteristics

Roadway	From/To	Functional Classification	Speed Limit	Laneage	2009 ADT
SR 52/MMP	South of SR 60/S. Chestatee St	Rural Minor Arterial	35 MPH	2 Lanes	6,900-8,500
SR 52/MMP	SR 60/S. Chestatee St to E Main St	Rural Principal Arterial	35 MPH	2 Lanes	13,800-17,700
SR 60/MMP	North of E. Main St	Rural Minor Arterial/Major Collector	35 MPH	2 Lanes	5,200
SR 52	East of SR 60/MMP	Rural Minor Arterial	35 MPH	2 Lanes	6,400
E. Main Street	N. Chestatee St /N. Grove St	Rural Minor Collector	25 MPH	2 Lanes	10,700
W. Main Street	SR 52/MMP to N. Chestatee St	Rural Minor Collector	25 MPH	2 Lanes	6,800
E. Main Street	N Grove St to SR 52/MMP	Rural Principal Arterial	25 MPH	2 Lanes	7,700
SR 60/S. Chestatee Street	East of SR 52/MMP	Rural Principal Arterial	40 MPH	2 Lanes	12,800
SR 60/ S. Chestatee Street	SR 52/MMP to Main St	Rural Minor Collector	25 MPH	2 Lanes	6,700
N. Grove Street	North of E. Main St	Rural Principal Arterial	25 MPH	2 Lanes	7,200-12,300

Source: Georgia Department of Transportation

SR 52/MMP is a two-lane highway that serves as the bypass around Downtown Dahlonega. It begins in the southeastern portion of the city and extends west to connect with S. Chestatee Street, then travels north to the city limits. It is the main corridor serving both local and bypass trips and the travel demand is great with the current and expected growth along the corridor.

As shown in **Figure 5-1**, the segment of SR 52/MMP that traverses east-west in the southern portion of the subarea is classified as a minor arterial and carries between 6,900 – 8,500 vehicles per day. The north-south segment between S. Chestatee Street and E. Main Street is classified as a principal arterial with a daily volume of 13,800. This section of SR 52/MMP is generally characterized by strip retail centers and commercial uses with plans for additional growth. It is also the most traveled corridor in the subarea, and thus, safety and congestion are major issues to consider. The intersection of SR 52/MMP and S. Chestatee Street is heavily utilized, as it is the main junction for trips to and from GA 400, and this location experiences excessive queuing during the peak periods. This intersection serves 2,700 vehicles during the PM peak hour, according to turning movements collected as part of this study. Other critical intersections along SR 52/MMP have been identified based on recommendations from the Downtown Master Plan, field survey and stakeholder input. These intersections include the following:

- SR 52/MMP and Riley Road – This location is currently unsignalized and thus, severe delays occur on Riley Road during peak periods. Riley Road is heavily utilized by travelers associated with the new judicial center, city hall and the recreational center. As discussed in a greater detail in the Land Use section of this

report, the government complex has expansion plans which could have significant implications to traffic circulation in the surrounding streets.

- SR 52/MMP and Mechanicsville Road – Mechanicsville Road serves the water treatment plant and other public works activities. It also provides access to Yahoola Creek Park, which is extensive and is reported to generate significant event traffic. There are substantial areas of the park that are graded to accommodate additional playing fields, so travel demand can be expected to grow. This intersection is currently unsignalized and the configuration makes ingress and egress difficult.

  It is important to note that the SR 52/MMP intersections of Mechanicsville Road and Riley Road are located in close proximity. Neither road offers much opportunity for improved access to points west of SR 52/MMP. All areas between Mechanicsville Road and Riley Road along the SR 52/MMP frontage are publicly owned, and may offer the opportunity to consolidate these entry roads.

- SR 52/MMP and Crown Mountain Place – Safety is a major concern at this intersection as the traffic island installed to deter drivers from prematurely entering the right turn lane is ineffective. Refer to the subsequent section on safety for a more detailed discussion of this intersection.

S. Chestatee Street is a two-lane state and federal highway that caries most of the traffic from GA 400 to and through Downtown Dahlonega. S. Chestatee Street from south of SR 52/MMP carries 12,800 vehicles per day and is classified as a principal arterial. Most of this traffic turns onto the SR 52/MMP bypass, as indicated by the significant drop in the number of vehicles (6,700) on S. Chestatee Street north of the bypass. As such, facilitating this heavy turning movement will improve the operations at this intersection. The northern segment of S. Chestatee Street is classified as a minor arterial and provides connection to the NGCSU commuter parking lot and the historic Public Square. Development on the east frontage of S. Chestatee Street is a mix of commercial and office/institutional uses. There are plans to enhance the streetscape along S. Chestatee Street and W. Main Street as recommended from the Downtown Master Plan. This plan envisions a reduction in lane capacity to accommodate on-street parking, bike lanes and landscaped islands. Conflict may arise from increased development, growing traffic volumes, and impedance associated with parking and bike activity.

N. Grove Street is a two-lane principal arterial road that carries 7,200 vehicles per day. It extends to the northwestern section of the city and provides access to a concentration of county public schools. As such, N. Grove Street draws considerable school traffic through the downtown and Wimpy Mill Road. Providing safe access to school will be a key element considered in this study.

E. Main Street from SR 52/MMP to N. Grove Street is classified as a principal arterial and carries 7,700 vehicles per day. E. Main Street intersects with SR 52/MMP to the east and this has been improved to accommodate the Wal-Mart that lies northeast of the intersection. E. Main Street from North Grove Street to the Square is classified as a minor collector, and carries 10,700 vehicles per day, which is the heaviest traveled segment along Main Street. At the Public Square, Main Street splits into a one way pair circumscribing the Gold Museum. This is the most urban corridor in the subarea, creating a need for providing a safe pedestrian environment while facilitating the high number of vehicles that travel through the area as well as those accessing parking. Traffic is controlled using a combination of stop signs and yield signs, creating frequent back-ups.

Traffic volume decreases to 6,800 as W. Main Street traverses from the Square to SR 52/MMP. The main access to the NGCSU campus as well as much of the parking, including the new deck on Sunset Drive, is located on W. Main Street. The university, in partnership with the City, has been working towards providing a safe pedestrian environment for the students. NGCSU has made efforts to discourage jaywalking along this segment of W. Main Street by posting crossing guards during the first weeks of school, but the heavy volumes of conflicting vehicular and pedestrian traffic make this area a safety focus. Further campus development is anticipated in the Sunset Drive corridor, so this conflict is likely to grow.

5.2 Bicycle and Pedestrian Facilities

A robust pedestrian network allows people to access a variety and businesses and other destinations within an area without relying heavily on their vehicles. Similarly, bicycle paths, lanes, and multi-use trails allow for enhancing recreation and mobility without contributing to vehicular congestion. Currently, there are no bicycle lanes in the subarea, but recognizing the importance of a functional multimodal system, the City has proposed to develop a bicycle and pedestrian plan in the near future. An inventory of sidewalks has been conducted as part of this study.

As illustrated in **Figure 5-2**, sidewalks are mostly concentrated along the streets that provide access to the downtown core area. Sidewalks are located on both sides of Park Street and along at least one side of S. Chestatee Street through the study area. Within this area, sidewalks are available on one side of many streets; outside of this area, however, sidewalks are widely unavailable. Furthermore, the sidewalk network, even where present, is narrow, not contiguous and, in many places, in disrepair. SR 52/MMP within the study area has sidewalks on one side of the roadway between S. Chestatee Street and Legion Road.

Providing safe pedestrian connections to schools along N. Grove Street is a key element in this study and is an integral part of Georgia's Safe Routes to Schools initiative. N. Grove Street has continuous sidewalks on its east side from the Lumpkin County Elementary and Middle Schools to Main Street. However, some sections of the sidewalks are in need of maintenance and upgrade and the majority of the sidewalks do not provide buffers from vehicular traffic.

Pedestrian facilities can be found around the northern and western perimeter of NGSCU on W. Main Street and S. Chestatee Street. However, along SR 52/MMP on the southern side of the campus, sidewalks are not available. There is a great deal of pedestrian traffic crossing W. Main Street at its intersection with Sunset Drive and Vickery Drive. As noted previously, pedestrian activity is of great concern on W. Main Street, not only from the commuters using the parking lots, but also from additional private multifamily housing occupied by students. NGSCU's Master Plan recommends many improvements that would make campus more pedestrian-friendly. These recommendations include new sidewalks, restrictions on motor-vehicle access, and crosswalks at key access points to campus.

It was recently announced that Dahlonega is the recipient of $720,000 in Federal Tiger II Grant for the Downtown Dahlonega Complete Streets Corridor Improvements project, which is intended to encourage revitalization and pedestrian safety in the historic commercial core. Much of the funding will be used to promote the complete streets

principal by providing sidewalks, lighting, streetscapes, and pedestrian connections to greenspace, and cultural and educational assets.

Figure 5-1: Study Area Roadway Characteristics

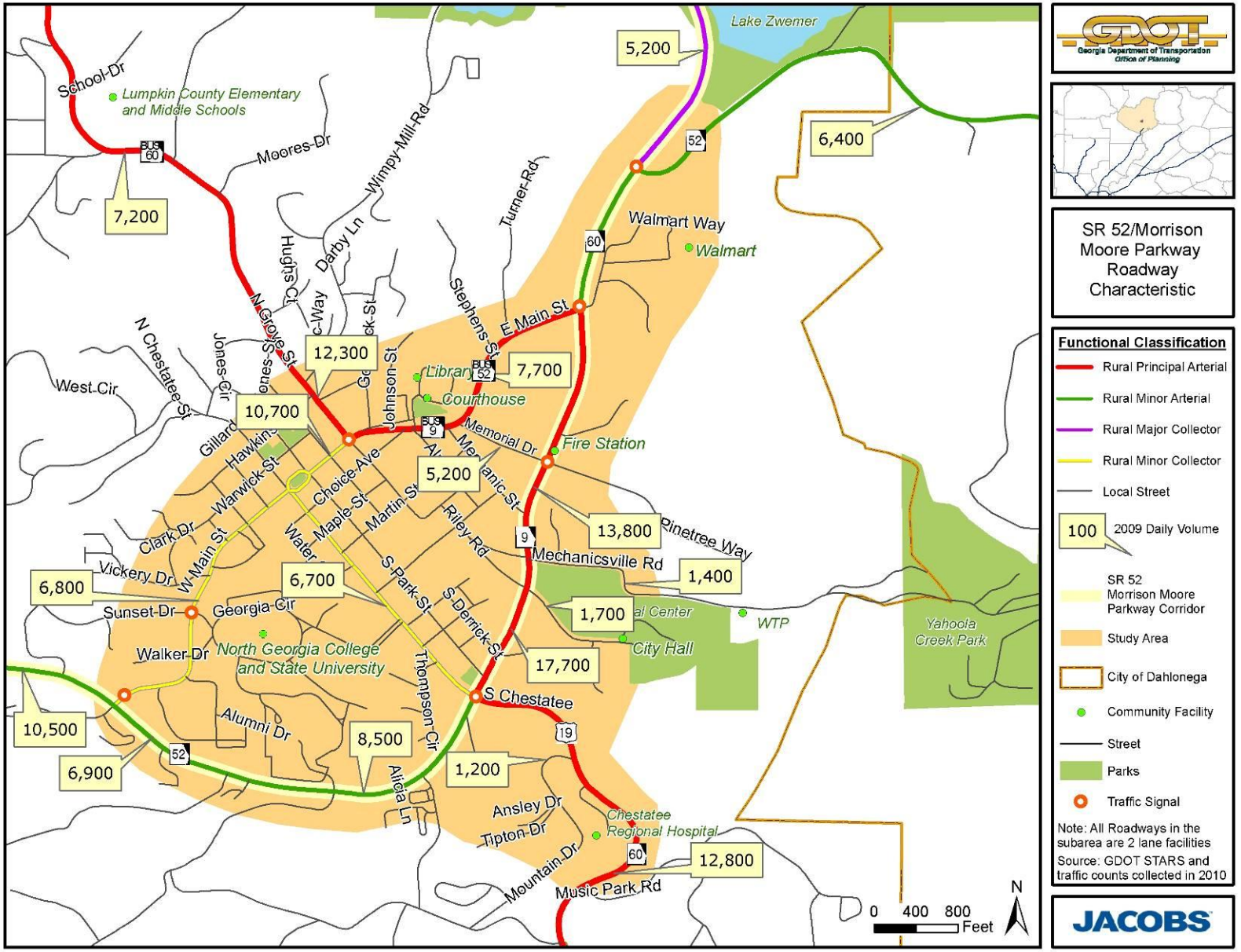
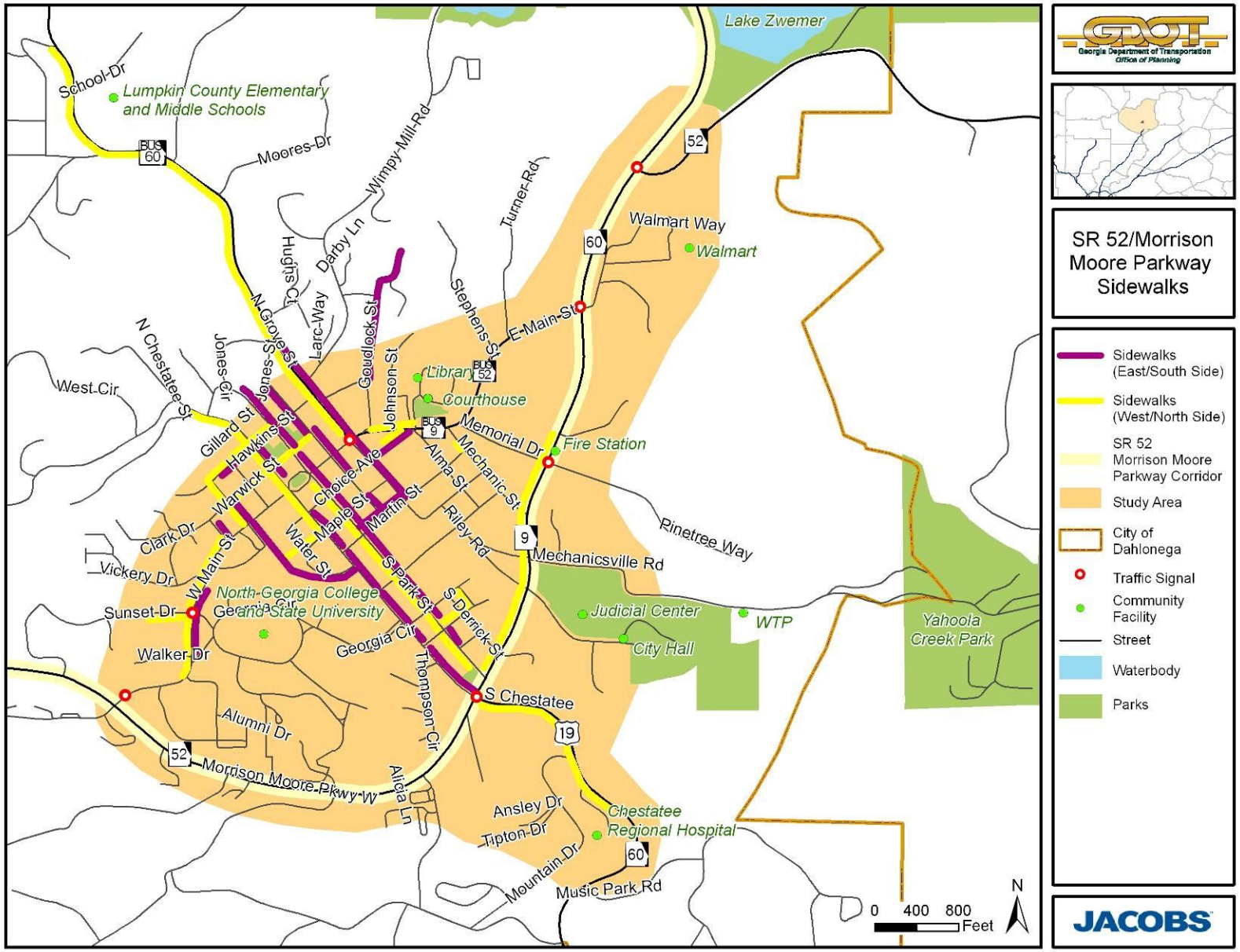


Figure 5-2: Existing Sidewalk Inventory



5.3 Planned and Programmed Improvements

This section presents the planned and programmed improvements to roadways and pedestrian/bicycle facilities within the study area. Programmed projects have had their funding secured from federal, state or local sources. There are no capacity improvements or operational upgrades programmed in the GDOT's State Transportation Improvement Program (STIP). The projects in the STIP are funded with federal and state funds. The only project within the subarea that is currently being undertaken by GDOT is the resurfacing and maintenance of Main Street (PI. M003439).

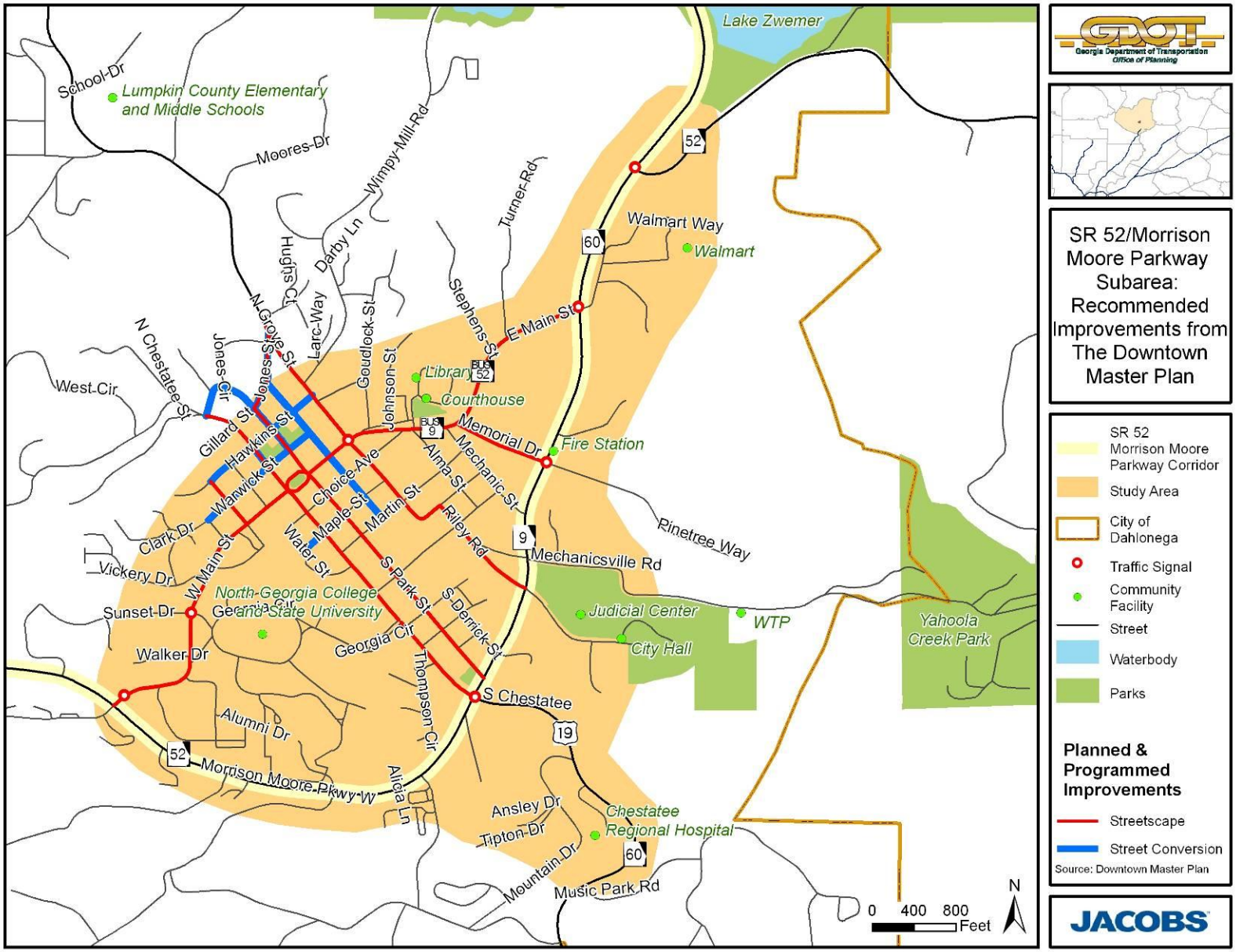
Planned improvements may be eligible for federal, state or local funding but do not have secure funding source. The projects in the Downtown Master Plan will likely be sponsored by the City of Dahlonega, the Downtown Development Authority (DDA), and/or NGCSU. **Table 5-2** below presents the projects recommended from this plan, which include streetscapes and one-way street conversions to promote revitalization and enhance pedestrian activity. These projects are also graphically represented in **Figure 5-3.**

Table 5-2: Recommended Improvements from Downtown Master Plan

Project Name	Project Type	Description	Projected Cost
Maple St	Street Conversion	One-way to two-way, parking, and new sidewalks	$77,000
Warwick St	Street Conversion	One-way to two-way, parking, sidewalk improvements	$425,000
Hawkins St	Street Conversion	One-way to two-way, parking, sidewalk improvements	$418,000
N Meaders St/ S Meaders St	Street Conversion	One-way to two-way, parking, sidewalk improvements	$550,000
Jones St	Street Conversion	One-way to two-way	
N Park St	Street Conversion	One-way to two-way	
N Chestatee St	Street Conversion	One-way to two-way	
Memorial Dr	Streetscape	Sidewalks, Parking, Planting with Trees	$672,750
Church St	Streetscape	Wide sidewalks, parking, textured crosswalks, themed landscape	$388,125
N Chestatee St	Streetscape	Sidewalks, Parking, Planting strip, curb and gutter	$741,750
S Chestatee St	Streetscape	Wide sidewalks, parking, textured crosswalks, themed landscape	$2,403,500
S Grove St/ Riley Rd	Streetscape	Sidewalk, parking, rustic fencing	$1,121,250
N Grove St	Streetscape	Sidewalks, planting strips, trees, curb and gutter	$667,000
S Park St/ N Park St/ Jones St	Streetscape	Sidewalk, parking, planting strip with trees	$2,783,000
E Main St/ W Main St	Streetscape	Sidewalks, Parking, Textured Crosswalks, Bulbouts	$1,536,975
W Main St	Streetscape	Sidewalk, bike lanes, planting strip with trees	$1,656,000
E Main St	Streetscape	Sidewalks, bike lanes, planting strip with trees	$1,932,000

Source: Dahlonega's Downtown Master Plan (2008)

Figure 5-3: Recommended Improvements from Downtown Master Plan



5.4 Safety Analysis

Assessing safety through the use of statistics is useful in identifying intersections and roadway segments that merit further study for safety improvements. To this end, crash data collected by GDOT from 2006 through 2008 were analyzed for all study area intersections. In addition, 2008 crash rates were calculated for major roadway segments and compared to statewide average crash rates for similar facility types.

The annual average numbers of crashes among study area intersections were compared to determine the relative safety of each intersection. The crash frequencies for the ten intersections with the highest number of average annual crashes are listed in **Table 5-3.** These intersections are mapped with 2008 crash frequencies in **Figure 5-4**.

Table 5-3: 2006-2008 Intersection Crashes

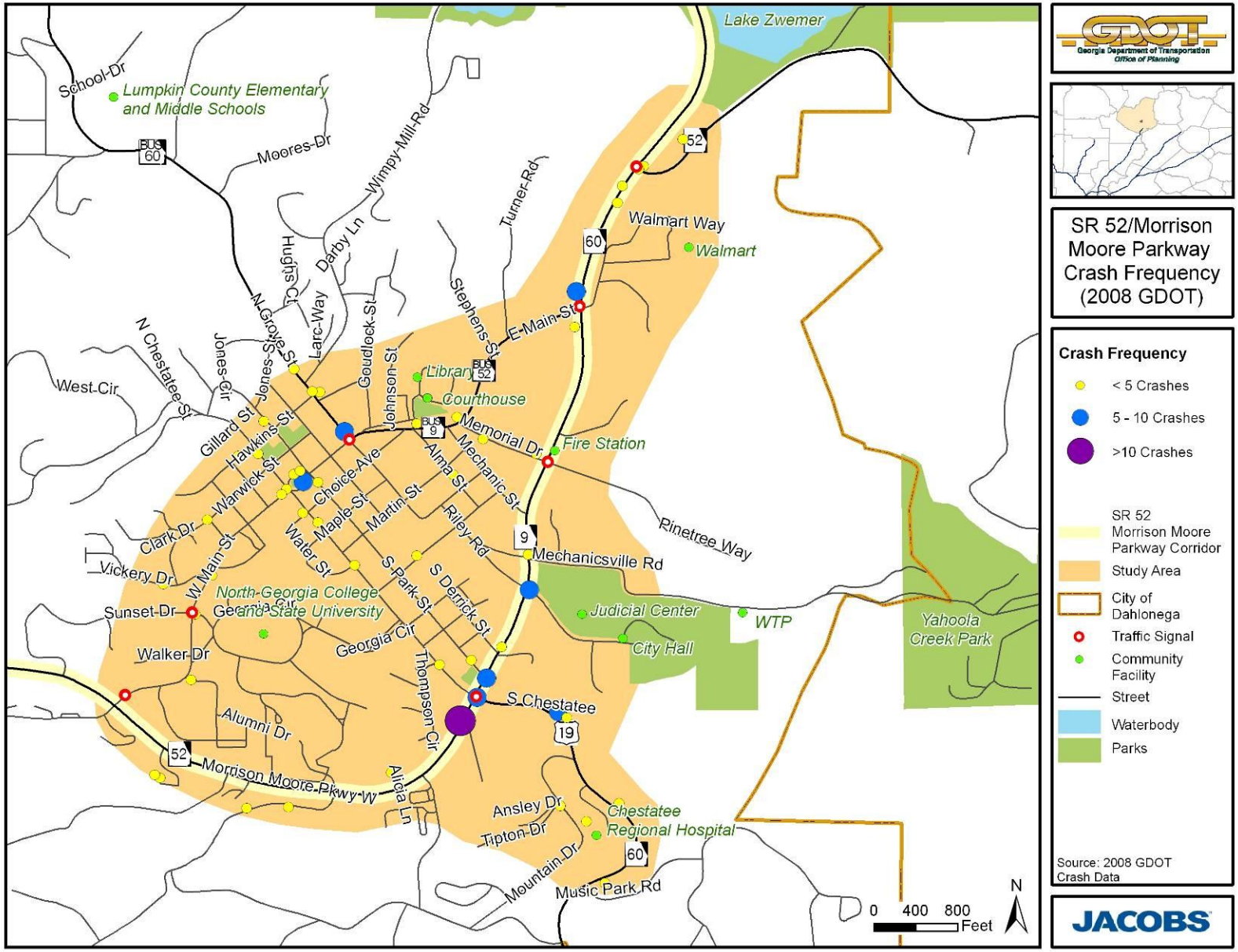
Intersection Location	Total (2006-2008)			Annual Average		
	Crash	Injury	Fatality	Crash	Injury	Fatality
SR 52/MMP and S Chestatee	43	7	0	14	2	0
SR 52/MMP and E. Main St	37	7	0	12	2	0
SR 52/MMP and Crown Mountain Place	32	4	0	11	1	0
Memorial Dr and E. Main Street	23	6	0	8	2	0
SR 52/MMP and S Park Street	17	3	0	6	1	0
SR 52/MMP and Riley Road	11	4	0	4	1	0
SR 52/MMP and Mechanicsville Road	11	0	0	4	0	0
N. Grove and E. Main Street	10	4	0	3	1	0
Public Square	10	1	0	3	0	0
SR 52/MMP and S Derrick Street	5	1	1	2	0	0

Source: GDOT 2006-2008 Crash Data

SR 52/MMP at S. Chestatee Street exhibited the highest average number of accidents during the study period. As previously noted, this intersection is the most-traveled intersection in the study area because S. Chestatee Street provides access between Dahlonega and GA 400, the major route to Atlanta. As such, the high rate of accidents at this location is likely due to the high traffic volumes it serves. Furthermore, it was observed that there may not be enough left-turn capacity for traffic southbound on SR 52/MMP. The intersection analysis as part of the needs assessment will determine the operational and capacity deficiencies inherently tied to safety. When left-turning traffic demand exceeds storage capacity at this intersection, it can create increased opportunities for crashes.

The second highest number of accidents during the three-year period occurred at SR 52/MMP at East Main Street, in the northern portion of the study area. Similar to the intersection of SR 52/MMP at S. Chestatee Street, this is a well-travelled intersection, and it provides access to the busy Wal-Mart shopping area on the eastern side of SR 52/MMP. Therefore, the high rate of accidents at this location is likely also a function of the high traffic volumes it serves.

Figure 5-4: Study Intersection Crash Frequency, 2008



Over the three-year study period, an average of 11 accidents occurred annually at the intersection of SR 52/MMP at Crown Mountain Place, which is located just over 200 feet south of the S. Chestatee Street intersection. As illustrated in **Figure 5-8**, this minor T-intersection exhibited the highest number of accidents occurred in 2008. This phenomenon is likely due to its current design as Crown Mountain Place intersects SR 52/MMP in the middle of the northbound right-turn storage lane, creating conflict between drivers entering the main roadway from the side street and those on the main road trying to get on the right-turning bay. Recently, an island has been installed here to discourage vehicles on SR 52/MMP from entering the right turn lane prematurely, but many drivers ignore it, making this situation worse. Intersection realignment is needed to better facilitate the movement of traffic and to ensure safety.

Table 5-4 provides crash rates for major roadway segments in the study area. These crash, injury and fatality rates have been normalized per 100 million vehicle miles traveled (100 MVM), and are compared against their respective statewide averages for similar facilities as indicated in the table.

Table 5-4: 2008 Roadway Segment Crash Analysis

Segment	Functional Class	Length (miles)	Crashes	Crash Rate (per 100 million vehicle-miles (MVM))		Injur-ies	Injury Rate (per 100 million vehicle-miles (MVM))		Fatal-ities	Fatality Rate (per 100 million vehicle-miles (MVM))	
				Road Seg-ment	State-wide Avg.		Road Seg-ment	State-wide Avg.		Road Seg-ment	State-wide Avg.
SR 52 from W. Main St. to S. Chestatee St.	R. Minor Arterial	0.85	35	147	152	2	8	75	0	0.00	1.85
SR 52 from S. Chestatee to E. Main St.	R. Principal Arterial	0.78	29	65	146	6	13	80	0	0.00	1.47
S. Chestatee St. from SR 52 to Music Parker Rd.	R. Principal Arterial	0.6	20	71	146	3	11	80	0	0.00	1.47
S. Chestatee St. from SR 52 to W. Main St.	R. Minor Collector	0.51	16	128	178	1	8	84	0	0.00	2.93
W. Main St. from SR 52 to N. Grove St.	R. Minor Collector	0.76	15	80	178	2	11	84	0	0.00	2.93
E. Main St. from N. Grove Street to SR 52	R. Principal Arterial	0.53	13	87	146	1	7	80	0	0.00	1.47
N. Grove St. from W. Main St. to School Dr.	R. Principal Arterial	0.87	27	87	146	8	26	80	1	3.23	1.47

Source: GDOT 2008 Crash Data

In general, the roadway segment crash rates are consistently lower than statewide average crash rates for similar facilities. The roadway segment with the highest crash rate in the study area, SR 52/MMP from W. Main Street to S. Chestatee Street, has a crash rate of 147 per 100 MVM, which is slightly lower than the statewide average for Rural Minor Arterials, 152 MVM. This roadway segment experienced two injuries and no fatalities during the study year.

The highest number of injuries in 2008 occurred in accidents on the segment of N. Grove St. to SR 52, which experienced eight injuries during the study year. Yet, the injury rate, 26 per 100 MVM, was lower than the statewide average for Rural Principal

Arterials, 80 per 100 MVM. Furthermore, this roadway segment experienced one fatality in 2008, which translated into a fatality rate of 3.23 per 100 MVM, which is higher than the statewide average for similar facilities of 1.47 per 100 MVM. There were no other fatalities on studied roadway segments in 2008.

It is important to note that although the roadway segments may have exhibited lower crash rates when compared to statewide averages, this is not necessarily an indicator of safe traffic conditions as almost all the accidents are associated with the intersections. To this end, enhancing intersection operations and design should be a major consideration in improving the overall travel environment in the subarea.

5.5 Parking

The Downtown Master Plan considered the lack of parking in Dahlonega as a "serious problem," which it addressed with a "multifaceted" parking strategy. Although there are several surface lots for their use, tourists consider parking in Dahlonega hard to locate or inconvenient to their destination. In addition, many of the surface lots, such as those on Waters Street and at the Warwick Lot, are well situated for redevelopment, perhaps into mixed use facilities which would include multi-level parking. The Master Plan recommended studying the feasibility of a new, shared parking facility near the historical Dahlonega Baptist Church, now the First Methodist Church.

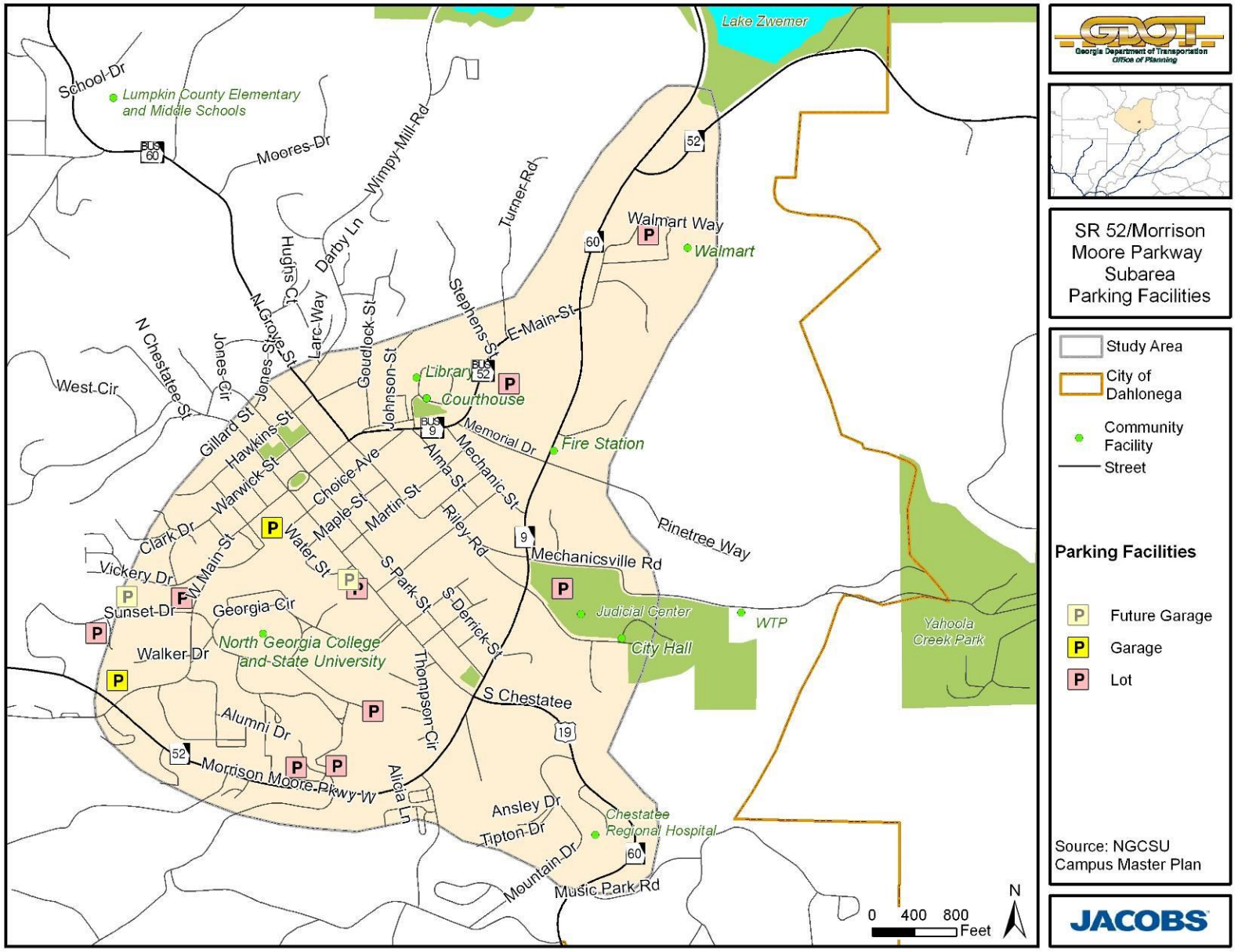
Two years after completion of the Master Plan, the City of Dahlonega commissioned its Downtown Dahlonega Parking Plan. This study estimated existing parking demand in the downtown is at 306 spaces, while the supply was 402 spaces. Thus the Plan reported that while "parking within the [study area] appears very challenging for visitors and employees alike," there was an actual surplus of 96 spaces. However, the Plan estimated that demand would rise to 456 spaces by 2020, creating a parking deficit of 54 spaces. To address the growing need for parking spaces and to create a better environment for locating and using the parking available, the Plan proposed two structural improvements. First, it recommended that the vacant, dirt lot adjacent to the elementary school be converted to surface parking for up to 100 spaces. This location is five minute walk to the Public Square. Second, it recommended that the City purchase the Choice Lot and surrounding property to retain its use as a parking facility. This location is easy to access by car and is within a short walking distance of the Square. These and other proposed parking facilities can be seen along with existing parking in **Figure 5-5**.

The Plan also recommended that the City implement several strategies to improve the parking environment in Dahlonega. These include the pooling of parking resources among owners, and the institution of paid, metered parking and time limits, enforced by a Parking Enforcement Officer and fines. The City was asked also to consider improved signage to aid in the location of parking by drivers and the promotion of the parking system via newspaper, website, downtown flyers, and parking ambassadors.

Finally, the NGCSU Campus Master Plan reported that there were 3,725 parking spaces on the main campus, including those in the newly opened parking deck. The plan assessed that the parking supply was "adequate but nearing capacity" at the present, but that NGSCU would need 6,900 parking spaces by the time it reached its target enrollment of 7,500 full time equivalent students. While the Plan calls for the restriction of vehicular traffic and parking from many campus roadways, it also proposes to

increase and consolidate parking with the addition of three new parking decks. The first deck would be located south of the Health and Natural Sciences building with 1,000 spaces, and was projected to open in 2010. The second deck would be adjacent to the Convocation Center and have 600 spaces, and a third deck would be north of the Health and Natural Sciences building with 900 spaces. The Master Plan provides 5,300 parking spaces out of the needed 6,900, and urges the University to consider “remote parking and other policy solutions over time” to meet the remaining demand.

Figure 5-5: Existing and Proposed Parking Facilities



5.6 Key Findings

- All the roadways in the subarea are narrow two-lane facilities and may not have the capacity to support the future growth planned by the City.

- Heavy through traffic, particularly for trucks, in Downtown Dahlonega is a major concern voiced by the stakeholders in the community. To this end, the designation of state highway has been removed for the segments of S. Chestatee Street north of SR 52/MMP and W. Main Street to discourage truck usage of these corridors.

- SR 52/MMP serves as a bypass around the city and is the most traveled corridor in the subarea. The northeastern segment of SR 52/MMP carries almost 14,000 vehicles per day. It is the main corridor serving both local and through trips and travel demand is projected to increase with the additional commercial developments planned along the corridor. Capacity and operational improvements may be needed to provide a functional bypass.

- As another measure to reduce congestion along SR 52/MMP, inter-parcel connectivity and promotion of the grid network on the eastern side of SR 52/MMP should be considered to enhance mobility and connectivity in the subarea.

- As the main entry point to GA 400, the intersection of SR 52/MMP and S. Chestatee Street is the heaviest utilized intersection in the subarea. The southbound left-turning movement frequently experiences excessive queuing during peak periods.

- With the completion of the Downtown Master Plan, a major emphasis has been placed on promoting Complete Streets principles in the redevelopment of downtown. To this end, the City has recently received $720,000 in Federal Tiger II Grant to provide sidewalks, bicycle lanes, on-street parking and streetscapes along S. Chestatee Street and W. Main Street. The implementation of this project may lead to a reduction in vehicular lane capacity. As such, there is a need to investigate S. Chestatee Street's capacity to operate efficiently into the future.

- Riley Road is home to the new Lumpkin County Judicial Center and Dahlonega's City Hall. There are plans in place to expand this site into a County Government Services Complex, which would have significant traffic impacts on the surrounding roadways. There is a need to examine various opportunities improve the intersection of SR 52/MMP and Riley Road. This could mean signalization and/or addition of turn lanes, or even the consolidation with the Mechanicsville Road intersection to accommodate the additional demand.

- Providing safe pedestrian connections to schools along N. Grove Street is a key element in this study and is an integral part of Georgia's Safe Routes to Schools initiative.

- SR 52/MMP is home to six out of top ten accident-prone intersections in the subarea, including the top three at S. Chestatee Street, E. Main Street and

Crown Mountain Place. High number of accidents associated with the intersections of SR 52/MMP at S. Chestatee Street and E. Main Street is likely a function of the high vehicular volume and capacity constraints. However, the intersection of SR 52/MMP and Crown Mountain Place may be in need of realignment and upgrades to the current design to ensure safety and alleviate the conflict between drivers from Crown Mountain Place and those on SR 52/MMP trying to get on the right-turning bay. Enhancing intersection operations and design should be a major consideration in improving the overall travel environment in the subarea.

- Adequate and convenient parking for visitors in the downtown area, as well as NGCSU students, is a great concern in light of the anticipated growth in the subarea. To this end, providing safe pedestrian connections to and from the proposed parking areas is a key element in this study.