Oglethorpe County Multi-Modal Transportation Plan

APRIL 2014

PREPARED FOR

GDOT Georgia Department of Transportation
Office of Planning

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PREPARED BY

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1 INTRODUCTION

1.1 PLAN BACKGROUND & OBJECTIVE

The Georgia Department of Transportation's (GDOT) Office of Planning, in conjunction with Oglethorpe County, initiated the development of a multi-modal transportation plan to guide transportation planning decisions in the county through the year 2040. The development of the *Oglethorpe County Multi-Modal Transportation Plan (*abbreviated as the *"Transportation Plan"* hereafter) includes an in-depth look at transportation and socio-economic conditions in order to identify potential projects that address existing and future transportation needs.

This study evaluated a variety of modes, including public transit, bicycle and pedestrian, rail, freight, and the roadway transportation infrastructure serving each mode. The *Transportation Plan* developed as part of this study was built upon existing work efforts to date and provides a mechanism for guiding transportation decision-making as development pressures increase throughout the county and the Northeast Georgia Region.

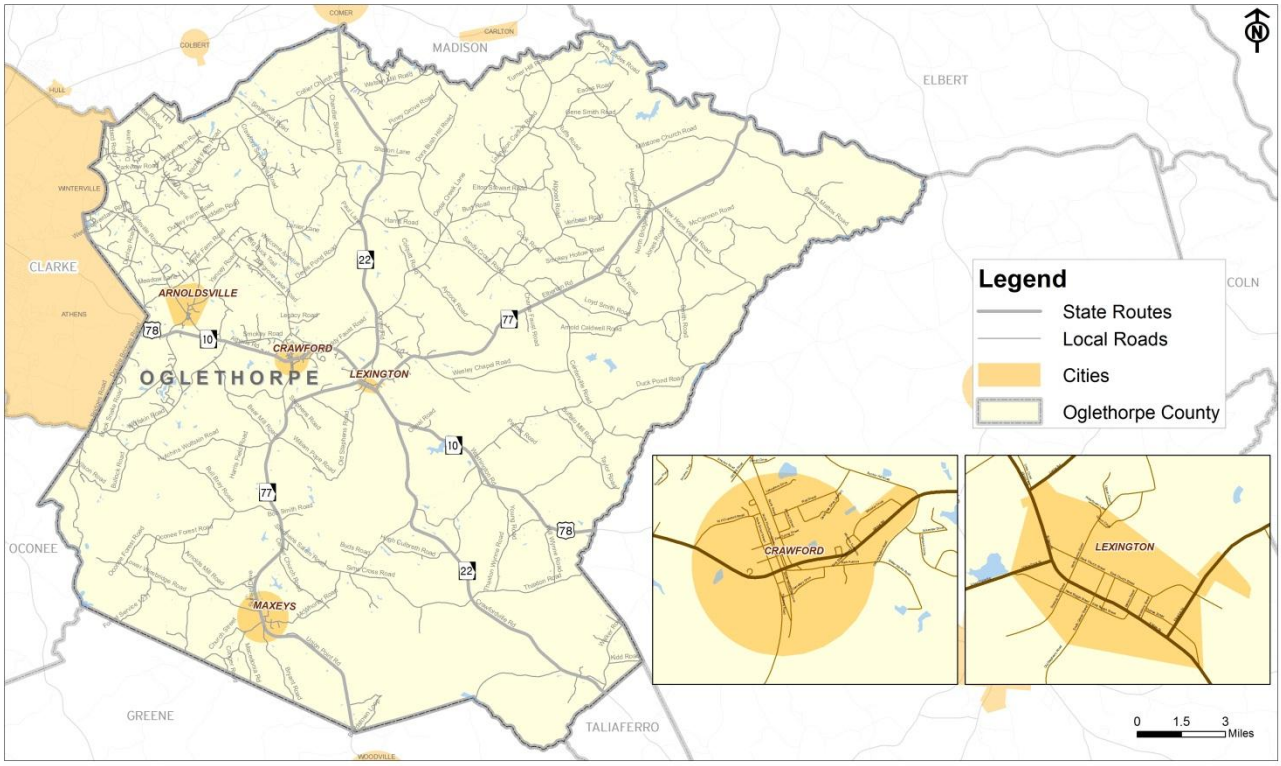
As part of this plan, existing and future conditions of the multi-modal transportation system (roadways, bicycle and pedestrian facilities, freight, and transit) were evaluated within Oglethorpe County. Ultimately, the plan will identify multi-modal transportation improvements and prioritize projects for implementation. As part of this effort, the travel demand model developed for the Athens-Clarke County Metropolitan Planning Organization (MPO) was expanded to include Oglethorpe County to represent the transportation network of the study area and to assist with analysis of future operating conditions. Additionally, a comprehensive and interactive stakeholder involvement program was implemented, and a public survey was conducted to establish plan goals and objectives, identify issues and opportunities, and to identify potential improvements to the Oglethorpe County transportation system. This process ensured that alternative transportation improvements were coordinated with various governments, and it afforded individual citizens the opportunity to provide their input.

The objective of this *Transportation Plan* is to identify transportation needs, determine the resources to meet those needs, and provide a framework of projects that address the transportation needs of the county. This *Transportation Plan* will also build upon previous plans that have identified long-range transportation needs. Ultimately, study efforts produced this *Transportation Plan* that provides for the efficient movement of people and goods within and through the county through the study horizon year (2040).

1.2 STUDY AREA

Located approximately 70 miles east of Atlanta in northeast Georgia, Oglethorpe County encompasses an area of approximately 442 square miles and is surrounded by Madison, Elbert, Wilkes, Taliaferro, Green, Oconee, and Clarke Counties. Oglethorpe County has strong economic ties to the Athens-Clarke metropolitan area, but the county generally maintains a rural feel with four small municipalities: Lexington (the county seat), Arnoldsville, Crawford, and Maxeys. A map of the study area is displayed in **Figure 1-1.**

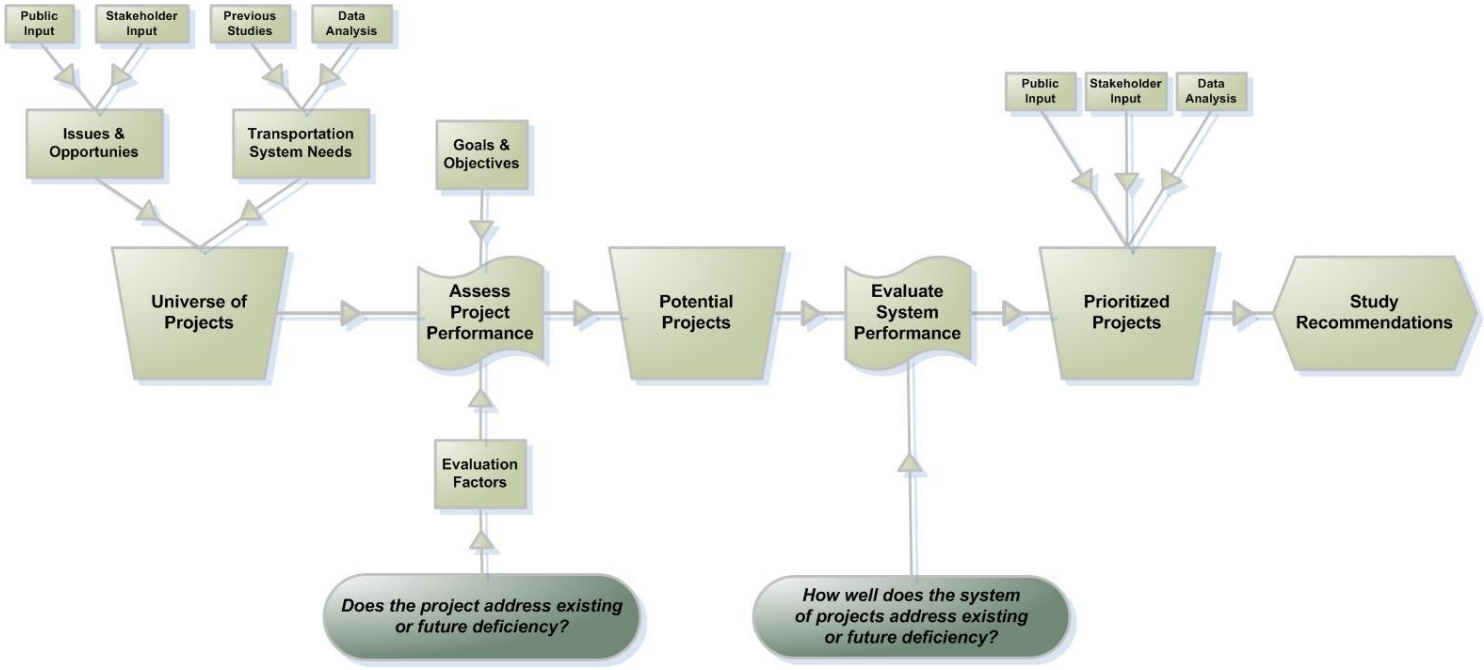
FIGURE 1-1: STUDY AREA



1.3 STUDY PROCESS

In order to identify needs and develop recommendations for Oglethorpe County, a process was employed that combined both quantitative and qualitative analyses, guided by input from key stakeholders and the public. **Figure 1-2** below outlines the process employed in the development of a long-range transportation plan for Oglethorpe County.

FIGURE 1-2: STUDY PROCESS



It is important to note that the development process for this *Transportation Plan* follows the same guidelines prescribed by federal legislation, known as *Moving Ahead for Progress in the 21st Century* (MAP-21), for MPO long-range transportation plans (LRTP). This more rigorous process establishes a performance-based framework for transportation planning and decision-making.

LRTPs are required to have a planning horizon of 20 or more years. The year 2040 was selected as a horizon year for this *Transportation Plan.* This time frame provides a basic structure and overall goal for meeting the long-term transportation needs for the community.

Detailed information for all analysis elements is provided in the following sections. It is within this framework that the existing conditions data was identified for collection, analyzed, and summarized as baseline conditions for the transportation system within the study area. Evaluation criteria were established to assess the existing and future transportation network. Deficiencies and operating conditions were then documented and ultimately used to develop the recommended improvements for the *Transportation Plan.*

2 Planning Context

2.1 Demographic Overview

The demographic overview of the County documents the historic population growth, future population projections, aging population, environmental justice population, existing employment base and future employment projections.

A review of U.S. Census data shows that Oglethorpe County has experienced low population growth during the past 30 years. According to the 2010 U.S. Census, the most recent data available, Oglethorpe County had a total population of 14,899 in 2010. **Table 2-1** presents select demographic data and illustrates the characteristics of the population, households and other socio-economic factors in Oglethorpe County.

Table 2-1: General Demographic Characteristics

Demographic	2010
Total Population	14,899
Median Age	40.1
Total Population in Occupied Housing Units	14,722
Average Household Size	3.03
Occupied Housing Units	5,647
Owner-Occupied Housing Units	4,511 (79.9% of total)
Renter-Occupied Housing Units	1,136 (20.1% of total)
In Labor force (age 16+)	11,788 (79.1% of total)
Percent High School Graduate or Higher	76.1% (of Person age 25 +)

Source: 2010 U.S. Census

Approximately 89 percent of Oglethorpe County residents (13,258) live outside of the incorporated cities within the County. **Table 2-2** shows the rural and urban population breakdown for the year 2010. Given the dispersed population distribution in the County, a regional approach to providing transportation services throughout the County is necessary.

Table 2-2: Area Population

Location	2010
Arnoldsville	357
Crawford	832
Lexington	228
Maxeys	224
Unincorporated	13,258
County Total	**14,899**

Source: 2010 U.S. Census

One of the statistics identified in the demographic data is the percent of disabled individuals in the County. Since the disabled population data is not yet available from the 2010 U.S. Census and American Community Survey for the County, the percentage of the population with disabilities from the 2000 U.S. Census was reviewed for the County and compared to the Georgia State Average for this study. **Table 2-3** highlights the percentage of population with disabilities by age group based on 2000 U.S. Census data. The U.S. Census Bureau defines disability as:

> "A long-lasting physical, mental, or emotional condition. This condition can make it difficult for a person to do activities such as walking, climbing stairs, dressing, bathing, learning, or remembering. This condition can also impede a person from being able to go outside the home alone or to work at a job or business."

Table 2-3: Percentage of Population with a Disability

Age Group	Percentage of Population With a Disability	
	Oglethorpe County	Georgia
Population 5 to 20 years old	11.2%	8.2%
Population 21 to 64 years old	25.5%	19.9%
Population 65 years old and over	51.4%	47.5%

Source: 2000 U.S. Census

As it can be seen from the table, the percentage of population with a disability in Oglethorpe County exceeds the statewide average for each age group, which presents the need for a transportation system that accommodates an aging and disabled population.

Historic Population Growth

According to the U.S. Census, Oglethorpe County has experienced a 67 percent increase in total population over the past 30 years, which is less than the statewide rate of 77 percent over the same time period. **Table 2-4** illustrates the growth trends from 1980 to 2010 for both Oglethorpe County and the State of Georgia. Information in **Table 2-4** shows that between 1980 and 2010, Oglethorpe County's population grew at an average annual rate of 1.7 percent, slightly lower than the annual average increase for Georgia (1.9 percent).

TABLE 2-4: HISTORICAL POPULATION GROWTH

Area	1980	1990	2000	2010	Total Growth (1980 -2010)	Average Annual Growth (1980 -2010)
Oglethorpe County	8,929	9,763	12,635	14,899	67%	1.7%
Georgia	5,462,989	6,478,149	8,186,453	9,687,663	77%	1.9%

Source: 2010 U.S. Census

Future Population Projections

Oglethorpe County population projections were collected and evaluated from various sources, including the Oglethorpe Joint City-County Comprehensive Plan 2005-2025, the Governor's Office of Planning and Budget (OPB) and the GDOT population forecasting data developed by Regional Economics Models, Inc. (REMI) for the Georgia Northeast Region.

The Oglethorpe Joint City-County Comprehensive Plan was completed in 2006 and projected population in the County from 2010 to 2025. The comprehensive plan projected that the County's population will grow by approximately 9,000 people from 2010 to 2025; significantly outpacing its historical growth rate for the ten year period from 2000 to 2010 and future projected growth rate from other sources.

The Governor's Office of Planning and Budget (OPB) is responsible (as denoted by state law – OCGA 45-12-171) for developing state and county population projections for the purpose of planning for statewide infrastructure including transportation, public buildings and water. The most recent projections (shown in **Table 2-5**), which use 2010 Census data as a baseline, provide annual population projections for the years 2012 through 2020, and in five year increments for 2020 through 2030, for Oglethorpe County.

TABLE 2-5: OPB'S POPULATION PROJECTIONS

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2025	2030
Population	14,899	15,460	15,647	15,833	16,008	16,183	16,358	16,533	16,708	17,530	18,295
Annual Growth Rate		1.2%	1.2%	1.2%	1.2%	1.2%	1.2%	1.2%	1.2%	1.1%	1.0%

Source: Governor's Office of Planning and Budget 2011

REMI produces long term population forecasts at the national, state, regional and county level and develops economic models for evaluating the total economic effects of various transportation improvements. The most recent projections developed by REMI forecasts annual growth rates of 0.7% for the Georgia Northeast Region (including Oglethorpe County), which is slightly lower than the County and OPB projections.

Considering the historical population data and population projections from various sources, a future growth rate of 1.0 percent per year was assumed. This growth rate was approved by the County and is consistent with the County's current Comprehensive Plan Update. **Table 2-6** shows the 2010 and 2040 population projections for Oglethorpe County.

TABLE 2-6: POPULATION PROJECTIONS

Area	2010	2040
Oglethorpe County	14,899	20,082

2.2 ENVIRONMENTAL JUSTICE

Environmental Justice (EJ) Executive Order 12898 defines EJ populations as persons belonging to any of the following groups:

- Black;
- Hispanic;
- Asian American;
- American Indian or Alaskan Native; or,
- Low-Income – a person whose household income (or in the case of a community or group, whose median household income) is at or below the U.S. Department of Health and Human Services poverty guidelines.

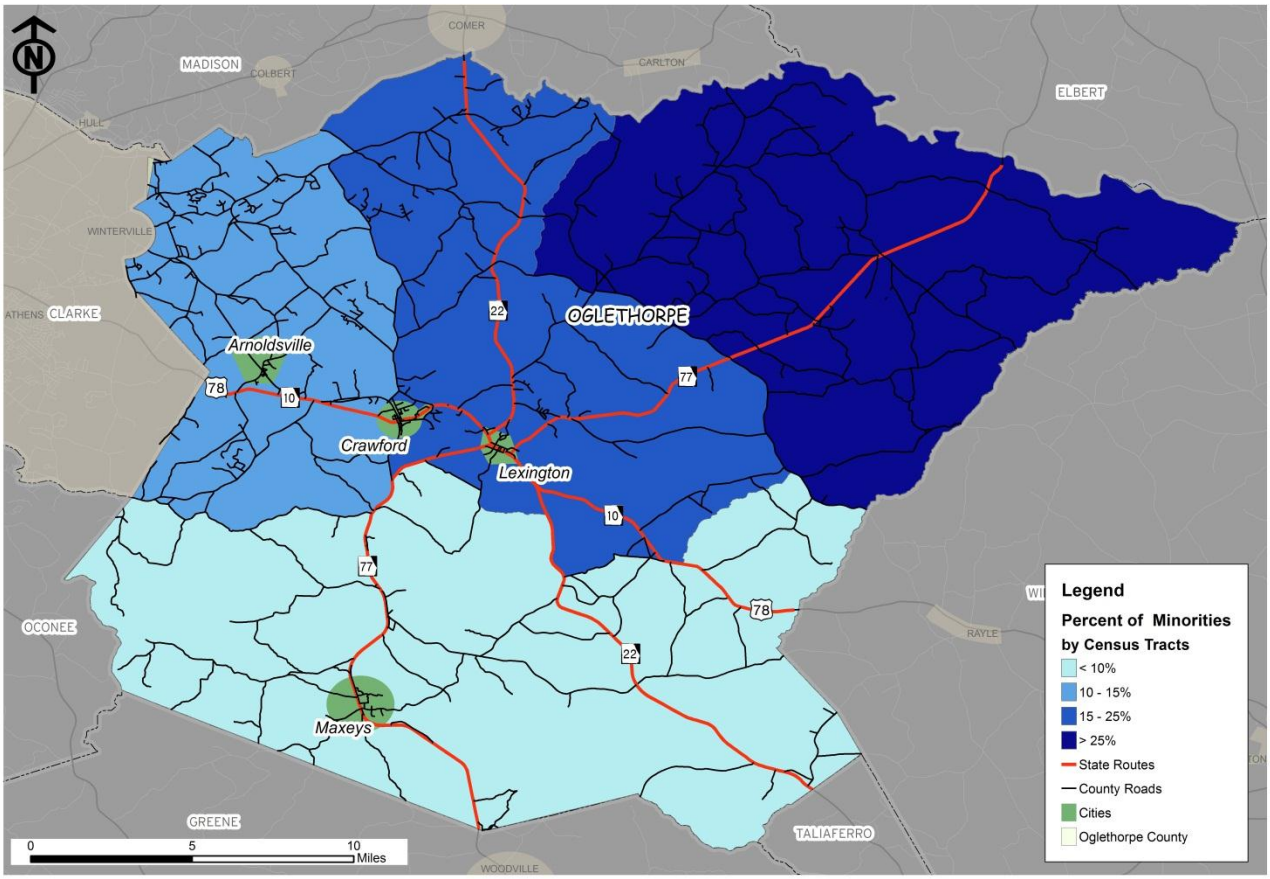
Environmental justice is intended to acknowledge minority and low-income populations that have been historically underrepresented in the transportation planning process and ensure that these groups are not disproportionately impacted as a result of transportation improvement recommendations.

The intent of an EJ analysis is to locate these populations and to involve them early and continuously through the decision-making process, as well as use data to analytically assess if there would be a disproportionate impact on traditionally underrepresented communities. The following sections document the location of minority and low-income populations.

Minority Populations

The minority populations in Oglethorpe County were identified and analyzed using 2010 U.S. Census data. This data was reviewed by census tract and illustrates the higher density concentrations (more than 25 percent) of minorities, which are located in the northeast portion of the County. The Census tract covering the southern half of the County exhibits the least diversified population, with less than 10 percent minorities. The average minority population by census tract in Oglethorpe County is 21.7 percent, which is significantly less than the statewide average of 39 percent. The minority population in Oglethorpe County is presented in **Figure 2-1** on the next page as a percentage of the County population.

FIGURE 2-1: PERCENT OF MINORITIES



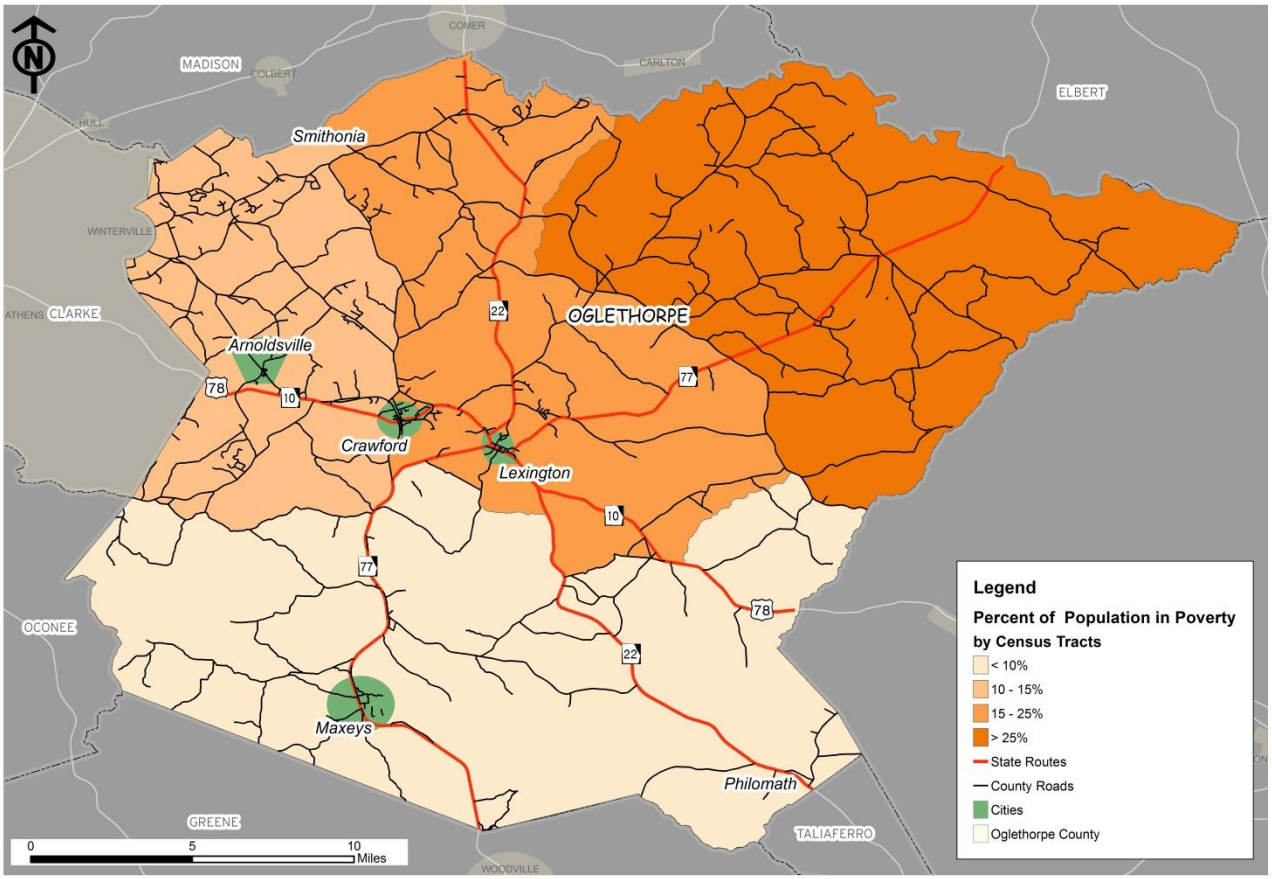
Low-Income Population

The second component of EJ, poverty level, was also analyzed using the 2010 Census data and was reviewed by census tract. Similar to the minority population, there are concentrations of low-income residents located in the northeast portion of the County. The average number of residents below the poverty line in Oglethorpe County is 16.1 percent, while the statewide average is 16.5 percent. The low-income census tracts are displayed in **Figure 2-2** on the next page.

Historically underrepresented populations were identified as part of this analysis and extra efforts were made to include these groups in the planning process. Representation from these groups was actively sought out for inclusion in the study advisory group. Outreach efforts are documented in Chapter 5, public involvement activities. These EJ areas were included in the analysis to ensure that transportation improvements would benefit and not disproportionately impact these areas in a negative manner. The following specific tasks were conducted in these areas:

- Coordinated with the Study Advisory Group to identify leaders within these communities;
    - Analyzed recommended projects to ensure that disproportionate impacts did not occur within these communities; and,
    - Analyzed recommended improvements to ensure that mobility benefits occurred within these communities – including bicycle and pedestrian and public transportation amenities.

FIGURE 2-2: PERCENT OF POPULATION IN POVERTY



2.3 EMPLOYMENT DATA

The review of Oglethorpe County employment data identified major employers, existing industry types, per capita income, and commute patterns.

The number, industry type, and location of jobs have a direct implication on the types of transportation facilities needed by business operators and employees in an area. **Table 2-7** shows the major categories of jobs and industries and their associated 2012 employment within Oglethorpe County.

TABLE 2-7: EXISTING INDUSTRY TYPE AND COUNTY EMPLOYMENT (2012)

Job/Industry Type	Oglethorpe County Employees	Percent of Total Employees
Agriculture, forestry, fishing and hunting	158	8.6%
Mining, quarrying, oil and gas extraction	100	5.4%
Construction	167	9.1%
Manufacturing	75	4.1%
Wholesale trade	11	0.6%
Retail trade	152	8.3%
Transportation and warehousing, and utilities	17	0.9%
Finance and insurance	38	2.1%
Real estate and rental and leasing	5	0.3%
Professional, scientific, and technical services	21	1.1%
Health care and social assistance	112	6.1%
Accommodation and food services	36	2.0%
Other services (utilities, information, administrative support, education service, arts, entrainment and recreation except public administration)	358	19.4%
Government	592	32.1%
Total	**1,842**	**100%**

Source: Georgia Department of Labor

In Oglethorpe County, government jobs (which include positions at the federal, state, and local level) make up the largest employment sector type, accounting for 32.1 percent of total employment. Other services including utilities, information, administrative support, education, etc. are the second largest employment sector type, accounting for 19.4 percent of total employment. The other three significant employment sectors are construction, agriculture/forestry/fishing/hunting, and retail trade.

Using the Georgia Department of Labor 2012 annual average employment data, the top ten largest employers for Oglethorpe County are provided below; they are listed alphabetically by area, not by the number of employees:

1. American Stadium Services Payroll
2. Anthony Refresh Group LLC
3. Bells Food Market
4. Greater Georgia Printers
5. James Greenhouses, Inc.
6. Keystone Granite Co., Inc.
7. Lakeview Farms LLC Cabaniss Dairy L
8. Piedmont Landscape Management
9. Quiet Oaks Nursing Homes
10. The Commercial Bank

According to the latest U.S. Census' *2007-2011 American Community Survey (ACS)* data, Oglethorpe County's per capita income is $19,052, which is lower than Georgia's statewide average of $25,383.

Also based on *2007-2011 ACS* data, 92.3 percent of workers rely on roadway-based transportation for commute trips, either by driving alone (75.1 percent) or carpooling (17.2 percent). Workers in Oglethorpe County who bike, walk, commute by other means, or work at home comprise about 4.7 percent of total workers. **Table 2-8** illustrates the breakdown in commuting patterns and characteristics by mode for Oglethorpe County and the State of Georgia.

TABLE 2-8: COMMUTE BEHAVIOR BY TRANSPORTATION MODE IN OGLETHORPE COUNTY

Work Commute	Oglethorpe County	Georgia
	Percentage	Percentage
Total Surveyed Workers (Age 16+)	100%	100%
Drove Alone	75.10%	78.80%
Carpooled	17.20%	11.10%
Public Transportation	0.10%	2.20%
Biked or Walked	1.30%	1.60%
Motorcycle or Other Means	0.40%	1.70%
Worked at Home	5.90%	4.60%
Mean Travel Time to Work (min.)	26.4	27

Source: U.S. Census Bureau, 2007-2011 American Community Survey

The Journey-to-Work data for Oglethorpe County from 2010 Census corresponds closely to the statewide averages for the various modes of travel. The percentage of carpooled travel in Oglethorpe County (17.2 percent) and percentage of working at home (5.9 percent) are higher than the statewide percentages (11.1 percent and 4.6 percent, respectively). However, the percentage of biking or walking commuters in Oglethorpe County (1.3 percent) and the percentage of public transportation commuters in Oglethorpe County (0.1 percent) are lower than the statewide numbers (1.6 percent and 2.2 percent), respectively, this is potentially due to the lack of bike trails and a publicly accessible transit system in Oglethorpe County. The mean travel time to work in Oglethorpe County (26.4 min.) is slightly lower than the statewide average (27 min.).

The commuting patterns of employed residents of Oglethorpe County are relevant to the *Transportation Plan* development. According to the U.S. Census, out of all employed residents of Oglethorpe County, 56.7 percent traveled to Athens-Clarke County for work. Only 21.8 percent of employed residents traveled to work within Oglethorpe County, 4.3 percent traveled to Madison County, 3.4 percent traveled to Oconee County, and 2.8 percent traveled to Elbert County, with the remaining 11 percent traveled to other counties in the region for work. The large imbalance of work trips originating in Oglethorpe County and destined for locations outside the County could imply a demand for commuter-oriented public transportation services to complete these trips. This could also potentially result in more frequent and longer trips on the transportation system.

Future Employment Projections

Oglethorpe County employment projections were also developed as inputs into the Oglethorpe travel demand model. The projections were estimated based on various sources, including historical employment data, the Oglethorpe Joint City-County Comprehensive Plan 2005-2025, and the GDOT employment forecasting data developed by REMI for the Georgia Northeast Region.

The Georgia Department of Labor collects and distributes detailed employment data by county for the entire state. **Table 2-9** presents the historical employment from 2000 to 2012 for Oglethorpe County. As shown, employment growth has not followed a consistent trend. Overall the employment data remained very similar over the past 12 years with an annual average growth rate of 0.1%.

TABLE 2-9: HISTORICAL EMPLOYMENT IN OGLETHORPE COUNTY

2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
1,724	1,669	1,698	1,737	1,684	1,741	1,782	1,769	1,755	1,744	1,842	1,815	1,738

REMI produces long term employment forecasts at the national, state, regional and county level and develops economic models for evaluating the total economic effects of various transportation improvements. The most recent projections developed by REMI forecasts annual employment growth of 1.2% for the Georgia Northeast Region (including Oglethorpe County). The Oglethorpe Joint City-County Comprehensive Plan, completed in 2006, projected employment in the County from 2010 to 2025. The comprehensive plan projected an annual growth rate of 2.6% for the period from 2000 to 2025, significantly outpacing its historical growth rate for the 12 year period from 2000 to 2012 and future projected other sources.

Considering the historical employment data and recent economic downturn, as well as REMI's projected annual growth rate for the Georgia Northeast Region, a future growth rate of 1.2 percent per year was assumed. This growth rate was approved by the County and is consistent with the County's current Comprehensive Plan Update.

2.4 LAND USE AND DEVELOPMENT

Existing Land Use

Agricultural and forest lands cover a majority of the landscape in Oglethorpe County, with intermingled low density residential, industrial, and public/institutional uses. Agriculture and forestry lands cover approximately 84 percent of the County, while residential uses cover approximately 12 percent. Industrial and transportation/communications/utilities land uses account for a majority of the remaining land use in the County. The majority of low-density residential uses are located in the northwestern corner of the County closest to Athens, with the dispersed concentrations spreading southeast towards Lexington and Maxeys. The existing land use patterns for Oglethorpe County are shown in **Figure 2-3** on the next page.

Figure 2-3: Existing Land Use

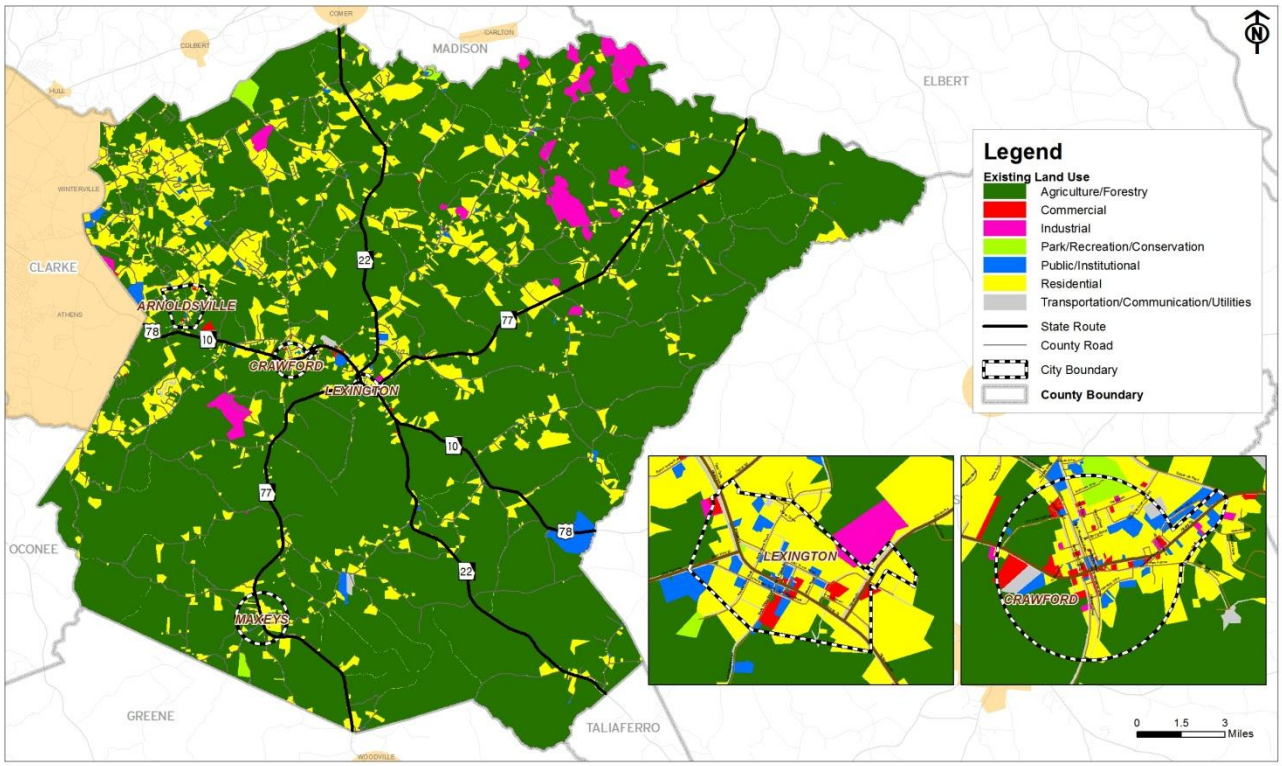


Table 2-10 shows the number of acres for each land use type in the County and the total percentage of the County's land use.

Table 2-10: Existing Land Use Breakdown

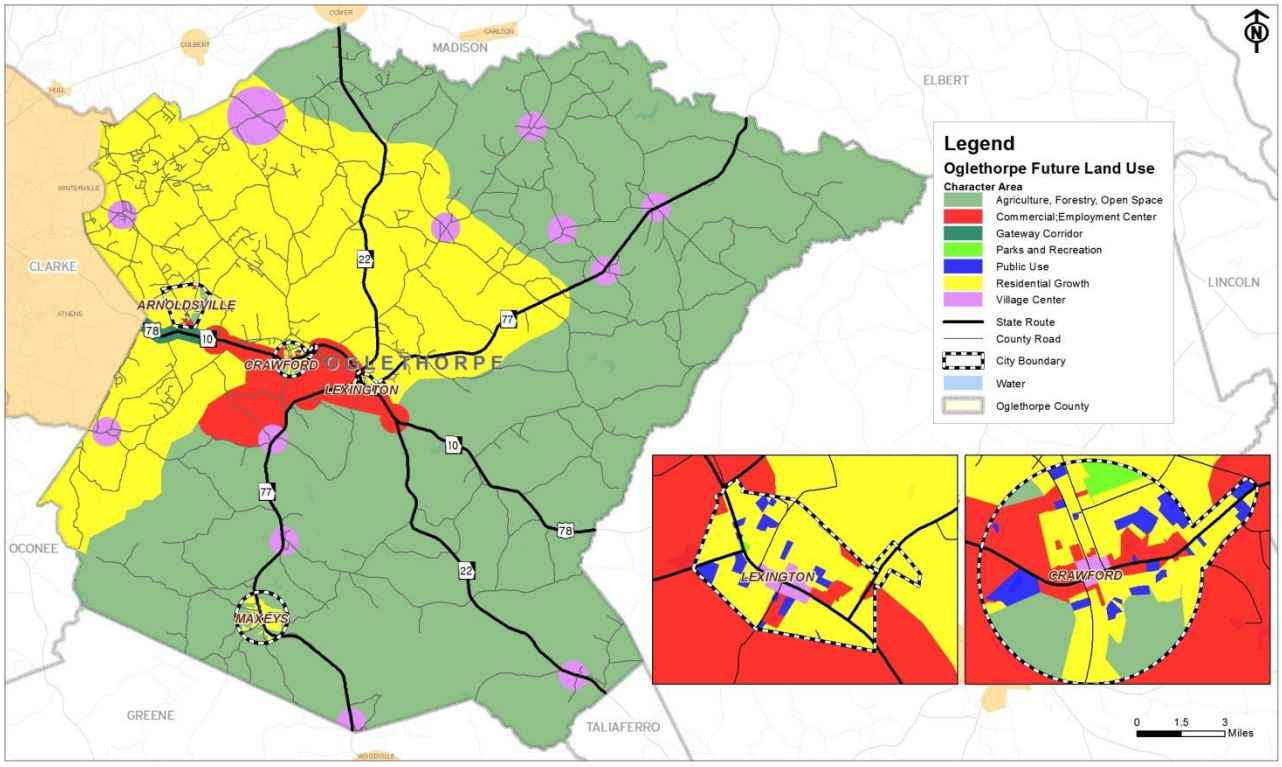
Land Use	Acres	Total %
Agriculture/Forestry	237,582	84%
Residential	33,504	12%
Commercial	418	0.15%
Public/Institutional	2,110	0.75%
Industrial	4,120	1.5%
Park/Recreation/Conservation	671	0.24%
Transportation/Communication/Utilities	4,547	1.6%
Total	**282,952**	**100%**

Future Land Use

The Oglethorpe County Comprehensive Plan identified development concepts in order to guide future land use development across the County. The land use goal of the County is to "promote the orderly development of land to accommodate growth through the coordination of available and planned public facilities and

services and the protection of key natural and cultural resources." The future land use map developed for the Comprehensive Plan is shown in **Figure 2-4** below.

FIGURE 2-4: FUTURE LAND USE



Future land use in Oglethorpe County will be heavily influenced by the expanding Athens metropolitan area. It is anticipated that the County will continue to experience growth in its northwestern portion, and it will be important for County planners to accommodate this anticipated growth by balancing the County's rural and residential development with a focus on expanding the local economy. It will also be important to mitigate any negative impacts to the County's natural and historical resources outlined in the following paragraphs.

2.5 NATURAL/HISTORICAL AND COMMUNITY RESOURCES

Environmentally sensitive areas, historic and natural resources, and community facilities should be examined to ensure that those areas are not adversely impacted by any future transportation improvements.

Historic Resources/Structures

Oglethorpe County has protected numerous historical resources within the County. There are three National Register Historic Districts, several individual National Historic properties, a significant number of historic buildings, two unique covered bridges, and sites in the County that represent architecture and history from the late 18th through 20th centuries.

Figure 2-5 illustrates Oglethorpe County's natural/historical resources. **Table 2-11** lists the resource and provides a location. The Watson Mill Covered Bridge (longest covered bridge in Georgia, ca. 1857) and the Howard's or Cloud's Creek Covered Bridge (longest single span, ca. 1904) are two of only a dozen such bridges in Georgia. The Lexington National Register Historic District encompasses virtually the entire city of Lexington. The Philomath National Register Historic District represents a small rural 19th century academic

community. The Smithonia National Register District includes a portion of the James Monroe Smith plantation, known as "Smithonia." The plantation was an empire that covered over 20,000 acres with more than 3,000 workers. It had two railroads, a hotel, mills, factories, streetlights and stores. These resources, as well as the granite Old Crawford Depot (ca. 1848) represent historic resources that are fast disappearing in this country.

FIGURE 2-5: NATURAL/HISTORICAL RESOURCES

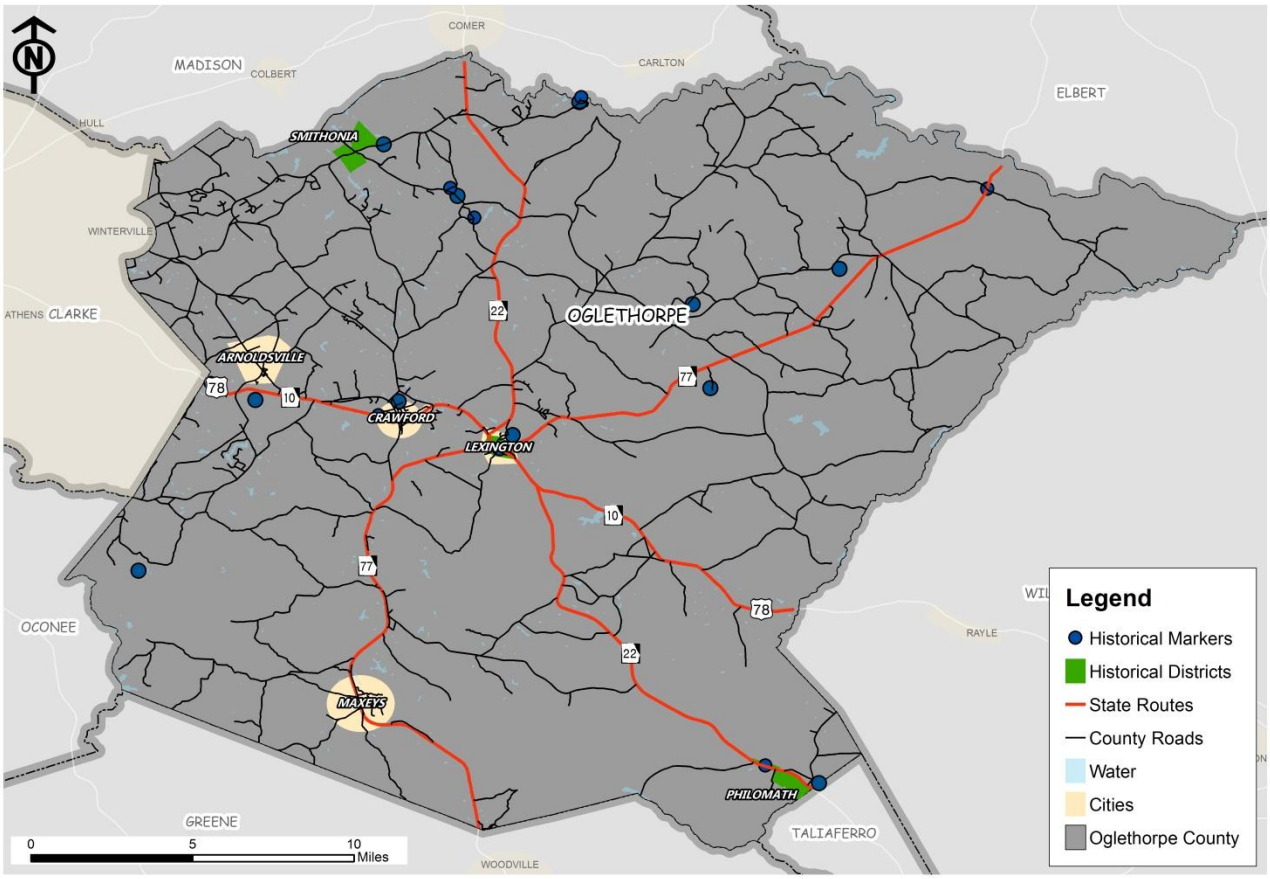


TABLE 2-11: SITES ON THE NATIONAL REGISTER OF HISTORIC PLACES

Historic Place	Location
Amis-Elder House	Crawford
J. L. Bridges Home	Lexington
Crawford Depot	Crawford
Faust Houses and Outbuildings	Lexington
Howard's Covered Bridge	Smithsonia
Langston-Daniel House	Crawford
Lexington Historic District	Lexington
Philomath Historic District	Philomath
Smith-Harris House	Vesta
Smithonia	Comer
Watson Mill Covered Bridge and Mill Historic District	Comer

Community Facilities

It is important to provide efficient connections between key community facilities. Therefore, one component of the Multi-Modal Transportation Plan is to understand where these resources are located and to evaluate community access to these vital facilities. Community facilities, schools, recreational areas, parks and community-identified special places are examined through the transportation needs assessment process of the Multi-Modal Transportation Plan. Those resources were documented and mapped in **Figure 2-6.**

FIGURE 2-6: COMMUNITY RESOURCES

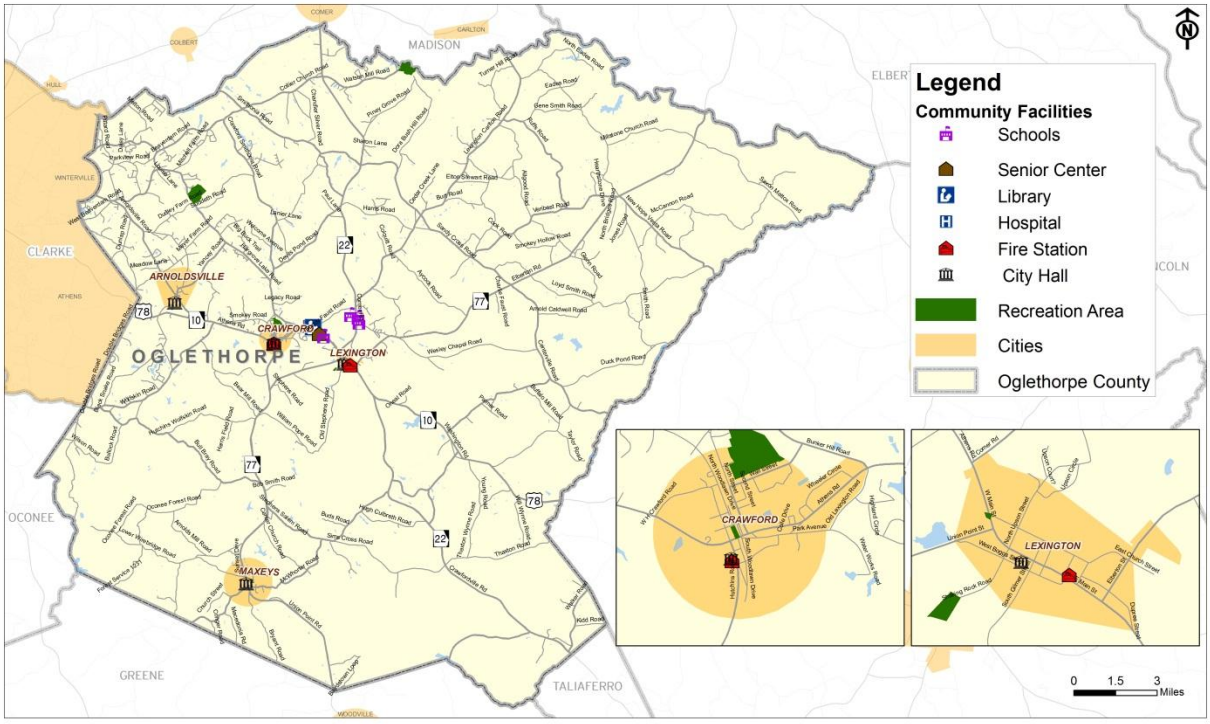


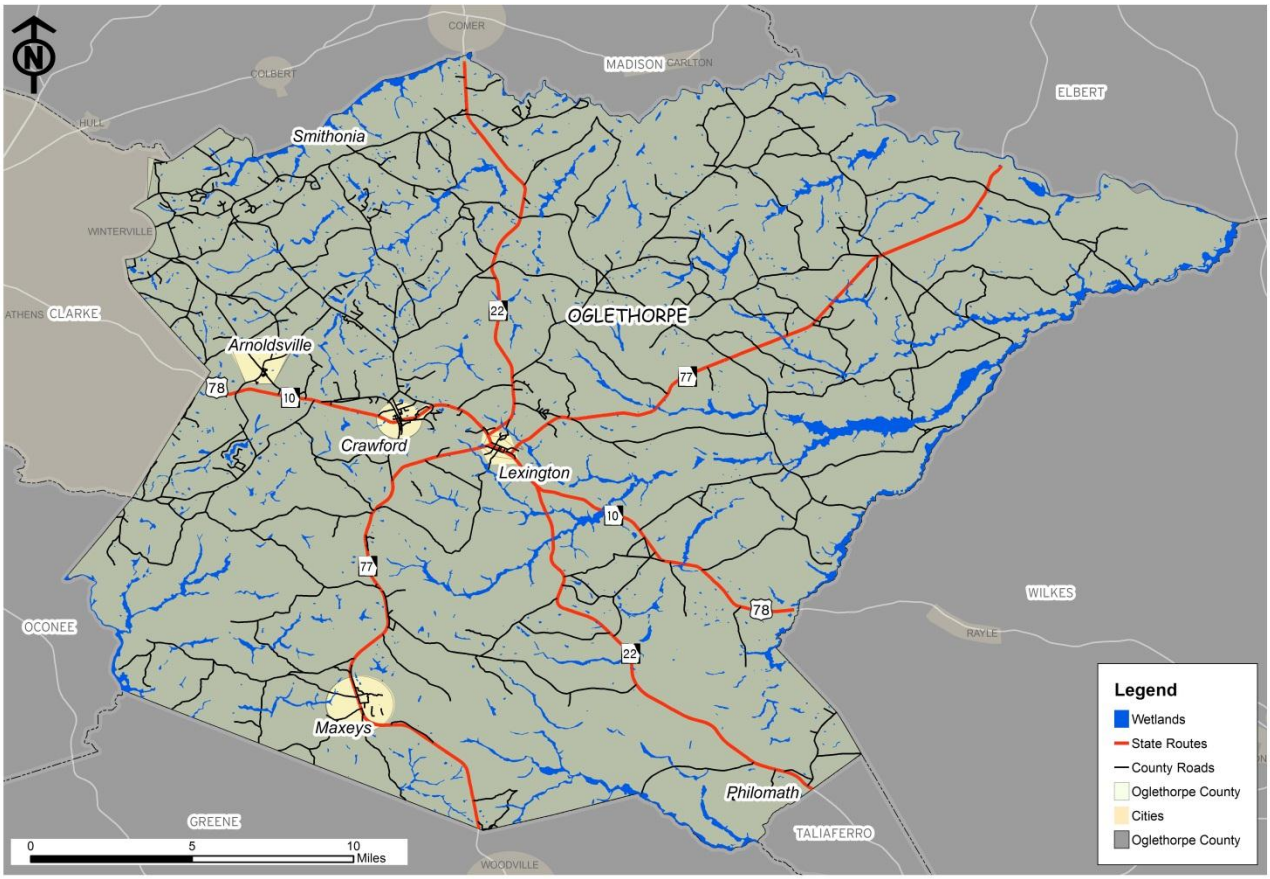
Table 2-12 lists the public schools in Oglethorpe County.

TABLE 2-12: OGLETHORPE COUNTY PUBLIC SCHOOLS

Public Schools	Location
Oglethorpe County Primary School	Lexington
Oglethorpe County Elementary School	Lexington
Oglethorpe County Middle School	Lexington
Oglethorpe County High School	Lexington

The Broad River creates the northern border of the County, while the Oconee River follows along the majority of the southern border. **Figure 2-7** illustrates the environmentally sensitive areas located throughout the County, including rivers, streams, wetlands, and floodplains.

FIGURE 2-7: WETLANDS AND STREAMS



3 Coordination with Previous Studies and Programs

An effective transportation plan accounts for previous planning efforts to ensure continuity between planning documents and that goals, objectives, and related projects recommended for the transportation system are consistent with the established community vision. Several previous studies and planning documents have contributed to the established community vision and existing work program for Oglethorpe County.

To that end, a review of the following planning studies and programs was conducted as part of the Multi-modal Transportation Planning development process:

- Georgia Statewide Transportation Plan (SWTP) and Statewide Strategic Transportation Plan (SSTP)
- Georgia Statewide Transportation Improvement Program (STIP)
- Joint City-County Comprehensive Plan 2005-2025 for Oglethorpe County
- GDOT Statewide Freight and Logistics Plan
- GDOT's Statewide Bicycle & Pedestrian Plan
- Northeast Georgia Regional Bicycle and Pedestrian Plan
- Transit Development Plan for Oglethorpe County
- Northeast Georgia Rural Human Service Transportation (RHST) Study
- Oglethorpe County Parks and Recreation Plan
- Madison Athens-Clarke Oconee Regional Transportation Study

3.1 Georgia SWTP and SSTP

The Georgia Statewide Transportation Plan (SWTP) presented a systematic analysis of existing and future transportation needs. It also assessed the funding available to the State over the 30-year planning horizon. The SSTP, first approved in 2010, includes projects, programs and other activities to support implementation of the state's strategic transportation goals and policies. The plan was updated in 2013 to reflect the two recent developments: the federal transportation funding bill "Moving Ahead for Progress in the 21st Century Act" (MAP-21) and the regional transportation referendum authorized by the Transportation Investment Act (TIA) of 2010 (three out of 12 regions statewide approved the referendum).

The goals developed under the SWTP and SSTP include:

- Support Georgia's economic growth and competiveness;
- Ensure safety and security;
- Maximize the value of Georgia's assets and get the most out of the existing network; and
- Minimize impact on the environment.

3.2 Statewide Transportation Improvement Program (STIP)

The Statewide Transportation Improvement Program (STIP) is Georgia's four-year transportation and capital improvements program which lists federally-funded transportation projects. Projects include highway, bridge, public transit, bike, pedestrian, railroad, and other improvements

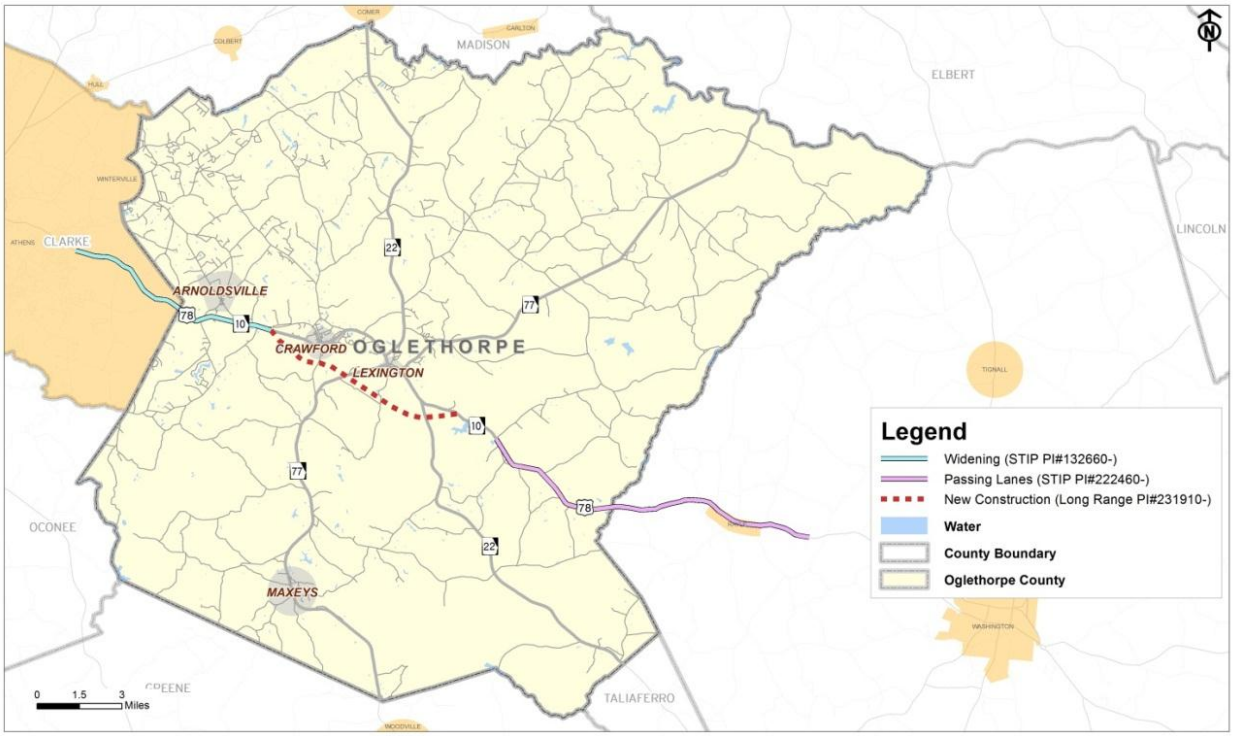
The SWTP and the FY 2014-2017 STIP were reviewed for planned and programmed projects within and/or impacting Oglethorpe County. Planned and programmed improvements for Oglethorpe County include roadway widening, passing lane improvements, and new construction of a bypass, as listed in **Table 3-1**. Additionally, these projects were given a project identification (PI) number by GDOT and are mapped in **Figure 3-1**.

Programmed improvements, for the purpose of this plan, refer to projects with a construction phase included in the STIP within the first four years of the planning horizon of 2014 - 2017. Planned projects refer to all other projects listed in the STIP and GDOT's Long Range Program.

Table 3-1: Planned and Programmed Projects

Project ID	Type	Location	Total Project Cost	Program
222460-	Passing Lanes	SR 10/U.S. 78 in eastern Oglethorpe County and western Wilkes County	$9,132,677	STIP
132660-	Widening	SR 10/U.S. 78 from Whit Davis Road to Smokey Road	$57,020,784	Long-Range
231910-	Roadway Project	Crawford/Lexington Bypass	$44,342,013	Long-Range

Figure 3-1: FY 2013-2016 STIP and Long Rang Projects



The SR 10/U.S. 78 widening project was included in the final transportation project list proposed to be funded through tax revenue from the Transportation Investment Act (TIA) of 2010 for the Northeast Georgia Region. The project could benefit the traveling public by alleviating congestion on SR 10/U.S. 78 and could potentially reduce the incidence of crashes along the corridor and its intersections.

3.3 Joint City-County Comprehensive Plan 2005-2025

In 2006, Oglethorpe County completed the Joint City-County Comprehensive Plan 2005-2025 to identify future capital investments based on the Community Agenda that was composed in 2005. This report is intended to meet the Standards and Procedures for Local Comprehensive Planning as established by the Georgia Department of Community Affairs (DCA) on May 1, 2005. The comprehensive plan developed a map to help guide the community vision of permitted land uses in Oglethorpe County and provided a comprehensive review of the issues and opportunities that will affect the future growth of the community over the next 20 years.

Table 3-2 below presents a summary of the Comprehensive Plan.

Table 3-2: Summary of the Joint City-County Comprehensive Plan

Key Data/Trends	Description
Land Use Issues	• New development is occurring within the unincorporated areas disconnected from existing municipalities. • Residential development is encroaching into active agricultural areas increasing the potential conflicts between farms and subdivisions.
Transportation Issues	• Increased truck traffic and congestion within downtown Lexington and Crawford along SR 10/U.S. 78. • Significant amount of local roads are unpaved. • Increase in Vehicle Miles Traveled (VMT) on local roads that are not designed to accommodate increased levels of traffic. • Lack of alternative modes of transportation, specifically bicycle and pedestrian facilities.
Transportation-Related Goal and Supportive Polices	Goal: Provide a safe, efficient, and effective transportation system that keeps pace with growth and integrates a variety of transportation modes increasing mobility options for all residents. Supportive Policies: • Coordinate transportation planning activities with local, regional, and state agencies. • Coordinate future development decisions with transportation capabilities. • Encourage intensive commercial uses at the intersections of major roads as indicated on the Future Development Map. • Control access points along major roads to decrease congestion and increase safety.

Key Data/Trends	Description
Land Use Issues	• New development is occurring within the unincorporated areas disconnected from existing municipalities. • Residential development is encroaching into active agricultural areas increasing the potential conflicts between farms and subdivisions.
Transportation Issues	• Increased truck traffic and congestion within downtown Lexington and Crawford along SR 10/U.S. 78. • Significant amount of local roads are unpaved. • Increase in Vehicle Miles Traveled (VMT) on local roads that are not designed to accommodate increased levels of traffic. • Lack of alternative modes of transportation, specifically bicycle and pedestrian facilities.
	• Encourage inter-parcel connectivity to minimize the number of access points along major roads. • Encourage the incorporation of sidewalks in new developments where appropriate.

3.4 GDOT Statewide Freight and Logistics Plan

The 2012 Georgia Statewide Freight and Logistics Plan evaluated the state's freight transportation network and the opportunity for Georgia to develop additional freight capacity to improve the movement of goods across the state. The study also considered the development of public-private partnerships in Georgia and neighboring states to ensure future freight growth not only in Georgia, but also across the entire Southeastern United States. Oglethorpe was not identified as one of the leading counties for freight flow in the state of Georgia.

3.5 GDOT Statewide Bicycle and Pedestrian Plan

The Statewide Bicycle and Pedestrian Plan, updated in 1998, includes fourteen bike/pedestrian routes covering approximately 2,943 miles throughout Georgia. Projects that are proposed along those routes must be designed to accommodate bicyclists and pedestrians. The goals developed as part of that study include:

- Promote non-motorized transportation as a means of congestion mitigation;
- Promote non-motorized transportation as an environmentally friendly means of mobility;
- Promote connectivity of non-motorized facilities with other modes of transportation;
- Promote bicycling and walking as mobility options in urban and rural areas of the state;
- Develop a transportation network of primary bicycle routes throughout the state to provide connectivity for intrastate and interstate bicycle travel; and
- Promote establishment of U.S. numbered bicycle routes in Georgia as part of a national network of bicycle routes.

Bicycle/Pedestrian-friendly design elements should be considered into other programmed improvement projects. Several factors were used in evaluating routes, including: accident history, total traffic volumes and

truck volumes, speeds, shoulder and travel lane width, pavement condition, network connectivity, access to cities and major points of interest, aesthetics, and the presence of potentially hazardous spot conditions.

GDOT's Statewide Bicycle and Pedestrian Plan was reviewed to identify proposed facilities in Oglethorpe County and revealed that State Bicycle Route 60 (Athens Link) falls within the bounds of the study area. **Section 4.8**, Bicycle and Pedestrian Facilities, provides further detail about the location and conditions of this State Bicycle Route and other bike and pedestrian facilities within the County.

3.6 Northeast Georgia Regional Bike and Pedestrian Plan

In August 2010, the Northeast Georgia Regional Commission (NEGRC) completed the Northeast Georgia Plan for Bicycling and Walking, which studied an area that includes Oglethorpe County, as well as Barrow, Clarke, Elbert, Greene, Jackson, Jasper, Madison, Newton, Oconee, and Walton Counties. The plan was designed to establish a foundation for developing an implementation plan proposing a network of bicycle and pedestrian facilities for the region. The major goals of the plan were to provide transportation and recreation options to encourage biking and walking, create safer communities, transform communities to support bicycling and walking trips, and enhance the quality of life for residents within the regional commission's boundaries.

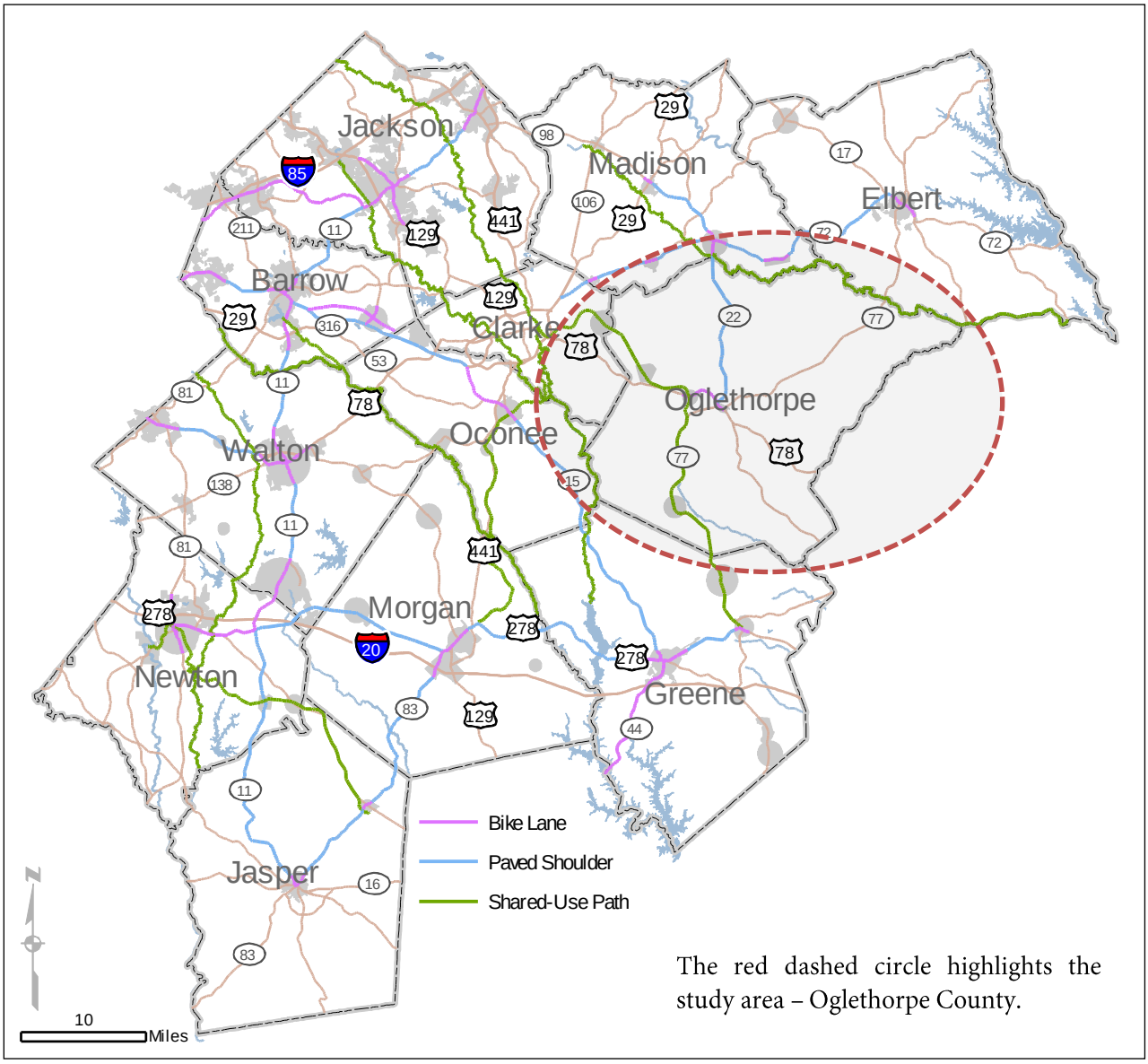
The Plan also identified existing bicycle and pedestrian facilities and activities in the region, and it noted that Oglethorpe County is not equipped with any shared-use paths, bike lanes, *sharrows*, or "share the road" facilities. The Plan identified Critical Focus Areas where demand for bicycle and pedestrian facilities may exist. This was based on examining destinations and activity centers and capturing population within a one-mile "walkshed" and a three-mile "bikeshed" of each destination. This analysis identified Lexington as a Critical Focus Area for bicycle and pedestrian amenity development.

The Plan formulated recommendations for bike lanes, paved shoulders, and shared-use paths for the Region. These recommendations seek to:

- Address connectivity within the Critical Focus Areas;
- Identify connectors between Critical Focus Areas to form a regional network; and
- Identify corridors which offer recreational opportunities based on their connectivity to various destinations or scenic or experience-based amenities.

Specific recommendations for Oglethorpe County are shown in **Figure 3-2**.

FIGURE 3-2: NEGRC REGIONAL BICYCLE AND PEDESTRIAN PLAN



Source: NEGRC – Northeast Georgia Plan for Bicycling and Walking, 2010.

3.7 Transit Development Plan for Oglethorpe County

In 2009, the NEGRC prepared the Transit Development Plan for Oglethorpe County, which provides general and specific options for initiating public transportation in Oglethorpe County. This Plan also conducted a survey to assess opinion and need for public transportation services, with the results of this survey effort summarized as follows:

- Thirty-nine percent (39%) of Oglethorpe County respondents indicated that they would take public transportation to work, while 61% said they would not;
- Sixty-six percent (66%) of respondents said that only some or few transportation needs were being met;
- Over half (>50%) of the respondents felt that there was at least somewhat of a need for public transportation services in Oglethorpe County;
- The most important locations that public transportation should serve included major employers, hospitals, and the Athens Multi-Modal Transportation Center. The least important locations were entertainment and cultural attractions;
- Fuel price was the most frequently cited reason for using public transportation, followed by accessibility and convenience; and
- Nearly half (48%) of respondents would walk less than one-half mile to access public transportation and 16% would walk more than one-half mile. Few respondents would bicycle if facilities were available.

The study drew a number of conclusions regarding the need for public transportation:

- The development of pedestrian and bicycle facilities near public transportation access points would likely increase the amount of walking and bicycling within Oglethorpe County, thus improving residents' health, enhancing livability, and creating tourism and economic development opportunities along these routes;
- Most residents employed outside of Oglethorpe County travel to Athens-Clarke County for work. The inclusion of public transportation could potentially reduce the number of automobiles from Oglethorpe County roads on work days, thus aiding the County in alleviating air pollution and traffic congestion issues, and possibly reducing the need for building a Crawford-Lexington Bypass; and
- Public transportation would enable the growing aging population to retain their independence for a longer period of time, as well as provide opportunities for travel to the grocery store and medical facilities, most of which are located in Athens.

The Plan thus sought to utilize existing resources in order to provide residents with a wider variety of transportation options to serve their needs. The following alternatives and recommendations were presented:

- Park-and-ride and carpool lots;
- Commuter shuttles;
- Rideshare; and
- On-demand transit.

Further detail on each is provided below.

Park-and-Ride and Carpool Lots

The Plan recommended that Oglethorpe County develop park-and-ride lots to facilitate carpooling and vanpooling. The Plan identified four potential park-and-ride locations:

- 1709 Athens Road in Crawford;
- 1185 Athens Road (Quick Pick) in Crawford;
- 1178 Athens Road (Family Dollar) in Crawford; and
- 103 W. Church Street (Lexington Baptist Church) in Lexington.

These lots would serve as a meeting and parking location for various carpooling and vanpooling services.

Commuter Shuttles

Commuter shuttles would operate at peak hours and make stops at the park-and-ride lots. The commuter shuttles could also use open bays at the Athens Multimodal Transportation Center and allow bus transfers onto the Athens Transit buses. Funding for circulator shuttle services could come from the Federal Transit Administration's Section 5311 program and would be administered by GDOT's Intermodal Office. Oglethorpe County would be responsible for a percentage match towards the cost of the program.

Rideshare

Rideshare programs include carpool or vanpool programs. Interested parties are matched up with others traveling to the same or a nearby destination. This type of program could be organized by the County, or accomplished via an existing online service. Riders could utilize the park-and-ride facilities to meet up with their carpool or vanpool.

On-Demand Transit

The study recommended that Oglethorpe County develop an on-demand transit service which would operate on an as-needed basis. With this service, passengers make an appointment for a ride and pay for that ride. Vans with a capacity of five to fifteen passengers are used for this type of program. The vehicles do not typically operate on a specific route or schedule. Fares charged for this service are based on mileage but need to be set so as to be affordable for residents. Funding for circulator shuttle services could come from the Federal Transit Administration's Section 5311 program and would be administered by GDOT's Intermodal Office. Oglethorpe County would be responsible for a percentage match towards the cost of the program.

3.8 Northeast Georgia RHST Study

In June 2012, GDOT completed the Rural Human Services Transportation Plan (RHST) for NEGRC. The Plan evaluated existing rural transit offerings, conducted stakeholder outreach, identified transit needs in the region, and developed a vision for future rural transit options in Northeast Georgia. The Plan findings for regional transit and human service transportation needs (outside of Athens) included:

- Additional transit service across all rural ridership groups, including seniors, low-income households, disabled persons, and people without vehicles;
- Additional transportation options for technical and higher education students;
- More transit options at key regional activity and employment centers;
- Coordination of rural and human service transportation offerings; and
- 24/7 service in some areas.

Oglethorpe County is currently served by T&T Transportation for general RHST trips and Medicaid trips are provided by Logisticare. The major recommendation from the Plan was to address the region's needs identified above by increasing service and coordination between transportation providers.

3.9 Oglethorpe County Parks and Recreation Plan

The Oglethorpe County Parks and Recreation Plan was completed in 2010. The Plan evaluated the need for recreational facility developments across the County, conducted interviews with key stakeholders in the recreation community, and developed park space and recreation program recommendations that would allow the County to improve the quality of life for residents and visitors.

The Plan identified several recreational opportunities for the County, including:

- Revenue generation for parks and recreation;
- Programs and services for older youth and adults;
- Ongoing maintenance and operation of existing facilities;
- Constructing new facilities; and
- Developing awareness for outdoor, conservation and recreational facilities in the County.

3.10 Madison Athens-Clarke Oconee Regional Transportation Study

In 2009, the Athens-Clarke County Planning Department conducted the Madison Athens/Clarke Oconee Regional Transportation Study (MACORTS) to update their 2035 Long Range Transportation Plan (LRTP). The MACORTS LRTP was developed directly from the considerations laid out by the federally mandated Safe, Accountable, Flexible, and Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU).

The study area covered Athens-Clarke County and northern half of Oconee County and the southernmost portion of Madison County and will likely have a large impact on the future transportation developments in western Oglethorpe County. The transportation projects identified in the MACORTS study that border Oglethorpe County are identified in **Table 3-3** below.

Table 3-3: MACORTS Projects Terminating at Oglethorpe County Line (Unfuned)

MACORTS Project ID	Project Name	Project Description
ACC-5	Lexington Highway Widening	Widen Lexington Rd (SR 10/U.S. 78) to 4-lane divided highway with turn lanes at major intersections from Whit Davis Rd to Oglethorpe county line.
OC-8	Bob Godfrey/Barnett Shoals Widening	Widen Bob Godfrey/Barnett Shoals Rd to a standard two-lane section from the Oconee River to the Oglethorpe County line.

4 Transportation Network and Operating Conditions

The multi-modal transportation network in Oglethorpe County is essential for the efficient movement of people, commodities, goods and services within and through the County. This chapter summarizes Oglethorpe County's existing transportation network and its existing and future operating conditions. Existing conditions data was analyzed to prepare and validate the associated travel demand model. By gathering this data, existing and future operating deficiencies in Oglethorpe County's transportation network can be identified.

4.1 Roadway Characteristics

This section presents the characteristics of the roadways in Oglethorpe County. The data is provided from GDOT's Roadway Characteristics (RC) Database. The following data was reviewed as part of the study process:

- Functional Classification;
- Roadway Lanes;
- Roadway Shoulders; and
- Roadway Surface Type.

Functional Classification

Roadways are grouped into functional classes according to the character of traffic they are intended to serve. GDOT determined the functional classifications by utilizing Federal Highway Administration (FHWA) Functional Classification Guidelines and the design standards developed by the American Association of State Highway and Transportation Officials (AASHTO). Additional information specific to GDOT policies related to functional classification of roadways is also available in the GDOT Plan Development Process (PDP) at: http://www.dot.ga.gov/doingbusiness/PoliciesManuals/roads/Pages/OtherResources.aspx

The FHWA defines the hierarchy of the highway functional classification system, including principal arterial roads, minor arterial roads, collector roads, and local roads for rural areas and urbanized areas. The functional classification system for rural areas, currently applicable to Oglethorpe County, is defined as:

- **Rural Principal Arterials** typically 1) serve corridor movements having trip length and travel density characteristics indicative of substantial statewide or interstate travel; 2) serve between urban areas with population of 25,000 and over; and 3) provide an integrated network without stub connections except where unusual geographic or traffic flow conditions dictate otherwise.
- **Rural Minor Arterials** typically 1) link cities and larger towns and form an integrated network providing interstate and inter-county service; 2) spaced at such intervals, consistent with population density, so that all developed areas of the State are within a reasonable distance of an arterial highway; and 3) provide service to corridors with trip lengths and travel density greater than those predominantly served by rural collector or local systems.
- **Rural Collector Roads** primarily serve intra-county travel rather than statewide travel and constitute those routes on which predominant travel distances are shorter than on arterial routes. Consequently,

more moderate speeds may be typical, on average. Collectors are typically classified as "major collector" and "minor collector."

- **Local Roads** – primarily 1) provide access to adjacent land; and 2) provide service to travel over relatively short distances as compared to collectors or other higher systems. Local roads constitute the rural mileage not classified as part of the principal arterial, minor arterials, or collector systems.

Table 4-1 shows the lane mileage for all the road classifications in Oglethorpe County. The Oglethorpe County study area has approximately 105 lane miles of arterial facilities, 323 lane miles of collectors and 687 lane miles of local streets.

TABLE 4-1: ROADWAY FUNCTIONAL CLASSIFICATIONS

Classification	Lane Mileage	% of Total Lane Miles
Principal Arterials	37	3%
Minor Arterials	68	6%
Major Collector	181	16%
Minor Collector	142	13%
Local	687	62%
Total	1,115	100%

Source: GDOT Office of Transportation Data-Mileage by Route Type and Road System

Table 4-2 below displays the mileage and vehicle miles traveled (VMT) for the different roadway classifications in Oglethorpe County and the State of Georgia. The Oglethorpe County study area is served by multiple state roads (approximately 14 percent of the lane miles), which handle close to 45 percent of the traffic. To ensure future mobility for Oglethorpe County, it is important to evaluate and identify needed improvements to the state road system through the development of this Plan.

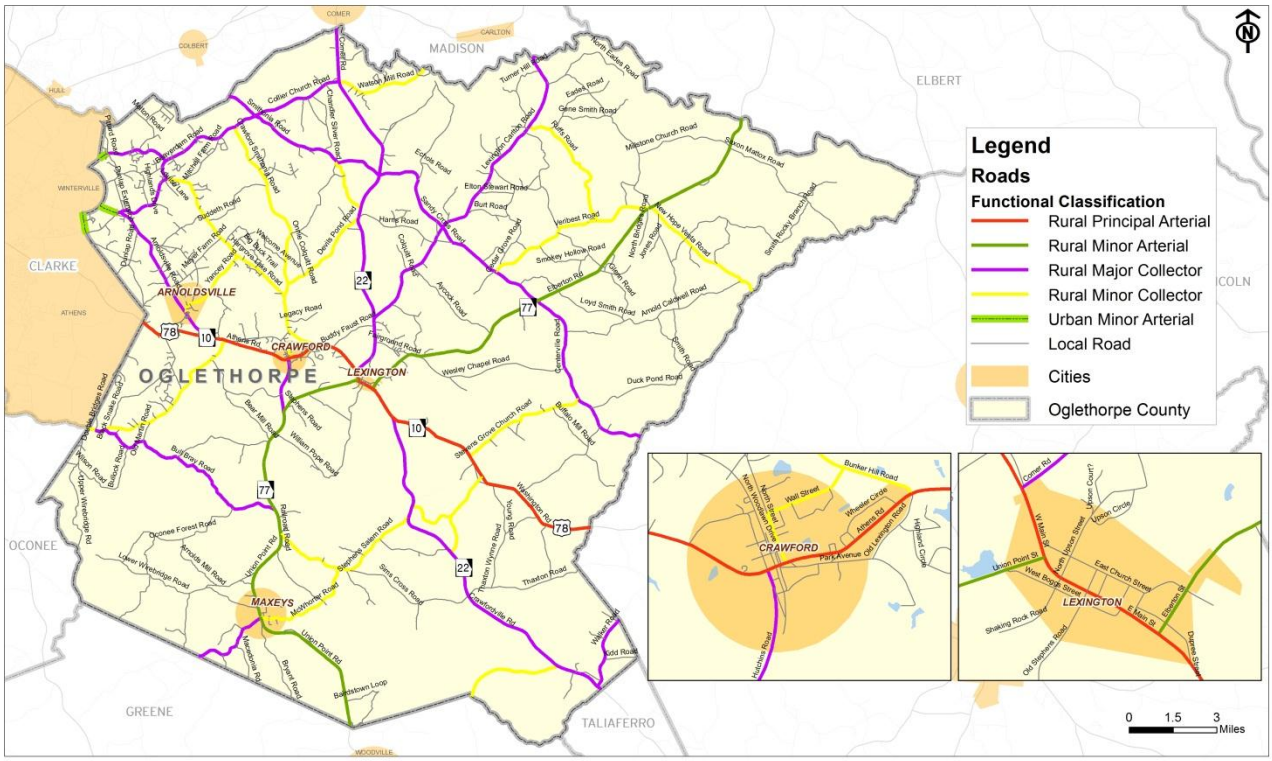
TABLE 4-2: MILEAGE AND VEHICLE MILES TRAVELED

Geographic Area	State Roads		County Roads		Local Roads		Total	
	Miles	VMT	Miles	VMT	Miles	VMT	Miles	VMT
Oglethorpe County	77	171	456	207	25	16	558	394
Georgia	17,985	180,752	97,296	77,035	21,492	48,269	118,773	306,056

Source: GDOT Office of Transportation Data-Mileage by Route Type and Road System

Figure 4-1 displays the functional classification of roadways in Oglethorpe County.

FIGURE 4-1: FUNCTIONAL CLASSIFICATION

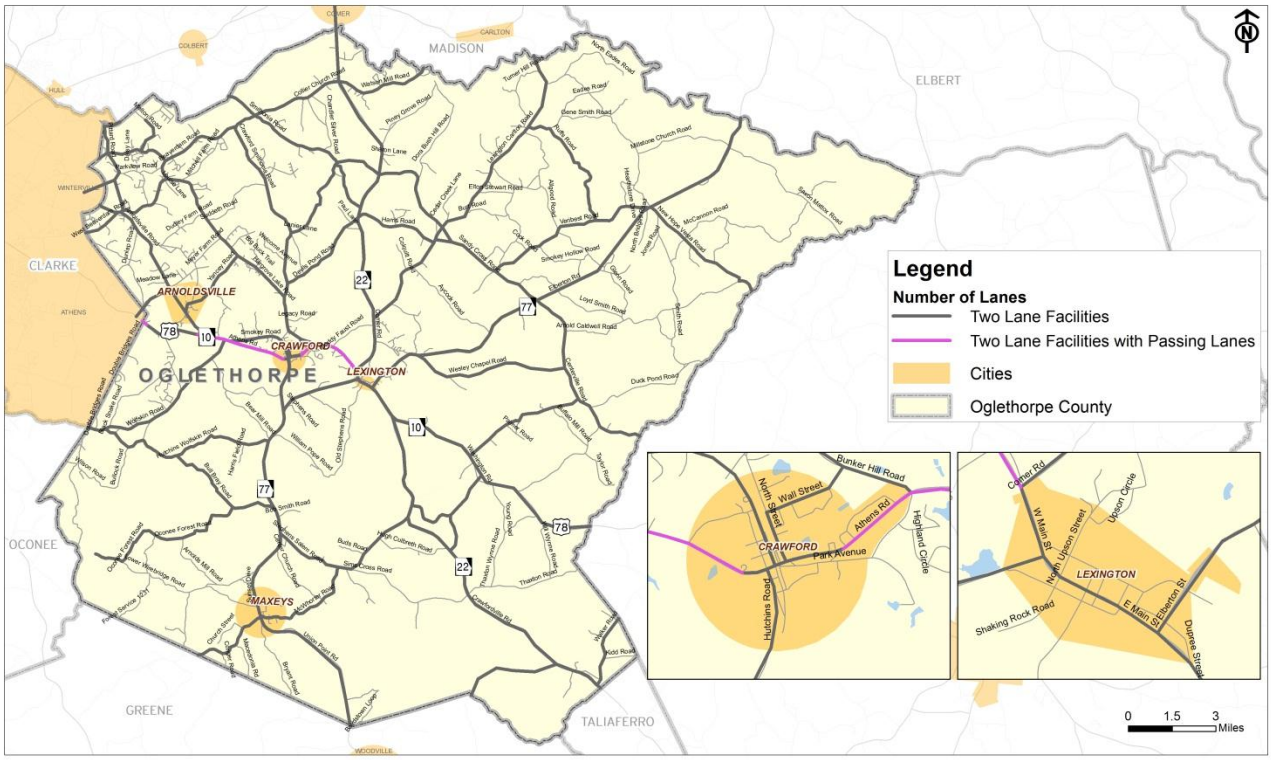


Roadway and Passing Lanes

Another important attribute reviewed from GDOT's RC Database is the number of lanes provided on each road. The roads in Oglethorpe County serve traffic in both directions. Additionally, all roads in the study area are 2-lane facilities with the exception of U.S. 78 from east of Dunlap Road to SR 22/Comer Road, which has periodic passing lanes for alternate directions. The passing lanes improve traffic flow and provide motorists opportunities to safely and easily pass slower vehicles.

Figure 4-2 displays the total number of lanes on the roads in Oglethorpe County.

FIGURE 4-2: TOTAL NUMBER OF LANES



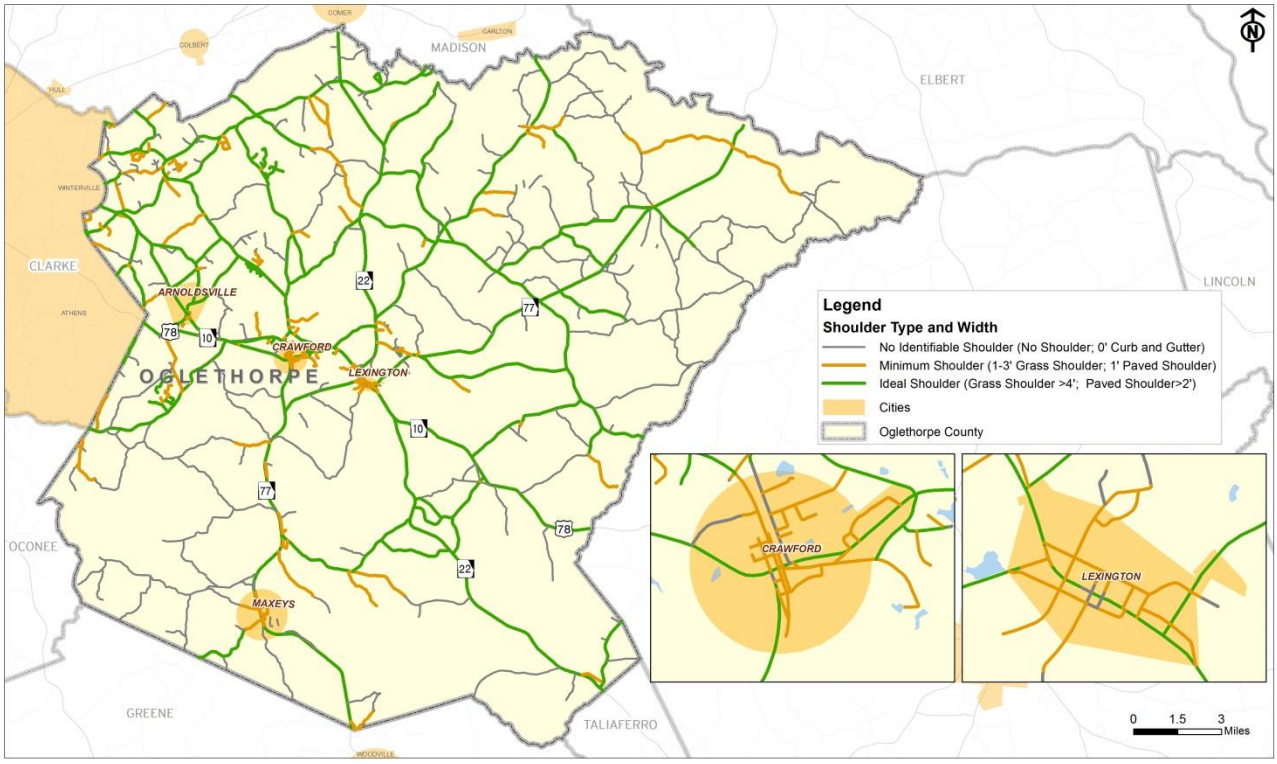
Roadway Shoulders

Another important attribute reviewed from GDOT's RC Database is roadway shoulders. For this analysis, both the shoulder type and width were reviewed to determine roadway segments in need of potential shoulder upgrades. A wide variety of shoulder widths and types are present throughout Oglethorpe County. Insufficient shoulder width can contribute to travel speed reductions, potentially impact safety, and may influence bicycle and pedestrian usage. The following guidelines are used to determine potential shoulder deficiencies:

- No shoulder or an unidentifiable shoulder;
- Grass shoulder less than 4 feet; and
- Paved shoulder less than 2 feet.

Figure 4-3 displays the roadway shoulder type and widths according to GDOT's RC Database for Oglethorpe County. Roadway segments with potentially deficient shoulders will become candidates for recommended upgrades.

FIGURE 4-3: ROADWAY SHOULDER TYPE AND WIDTH



Roadway Surface Type

The final attribute reviewed from GDOT's RC Database was roadway surface type. Roadway surface dramatically affects the capacity, useful life and safety of a particular facility. The list below details the surface types used in the study area.

Paved Roads

- **High Rigid** - Portland cement concrete pavement with or without bituminous surface if less than one inch.
- **High Flexible** - Mixed bituminous penetration road on a rigid or flexible base with a combined (surface and base) thickness of seven inches or more. Includes any bituminous concrete, sheet asphalt or rock asphalt.
- **Mixed Bituminous Penetration** - Low type (less than seven inches combined thickness surface and base). Surface is one inch or more.
- **Mixed Bituminous Pavement** - A road, the surface course of which is one inch or more in compacted thickness composed of gravel, stone, sand or similar material, mixed with bituminous material under partial control as to grading and proportions.
- **Bituminous Surfaced Treated** - An earth road, a soil-surfaced road, or a gravel or stone road to which has been added by any process a bituminous surface course with or without a seal coat, the total compacted thickness which is less than one inch. Seal coats include those known as chip seals, drag seals, plant mix seals, and rock asphalt seals.

Unpaved Roads

- **Gravel or Stone Road** - A road, the surface of which consists of gravel or stone. Surfaces may be stabilized.
- **Graded and Drained** - A road of natural earth aligned and graded to permit reasonable convenient use by motor vehicles and drained by longitudinal and transverse drainage systems (natural and artificial) sufficient to prevent serious impairment of the road by normal surface water, with or without dust palliative treatment or a continuous course of special borrow material to protect the new roadbed temporarily and to facilitate immediate traffic service.

Approximately 529 miles of roadways in Oglethorpe County are dirt or gravel. This constitutes approximately 47 percent of the total roadway mileage of Oglethorpe County. **Table 4-3** below shows the mileage and the paved road percentage for all the road classifications in Oglethorpe County.

TABLE 4-3: MILEAGE AND PAVED ROAD PERCENTAGE

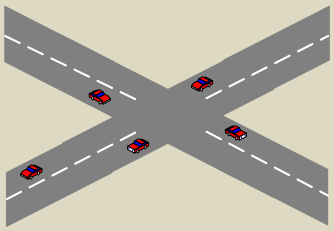
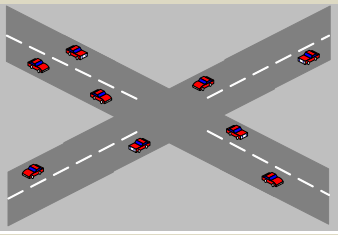
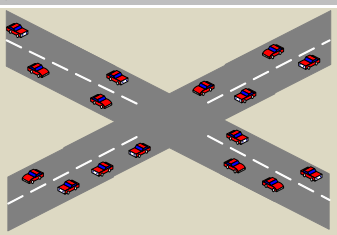
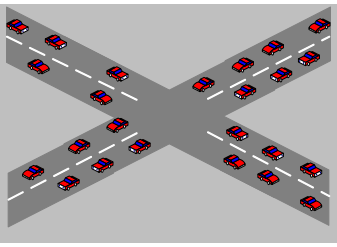
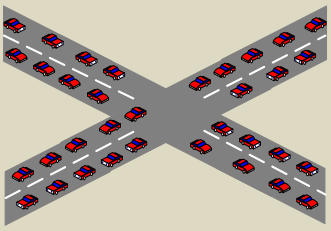
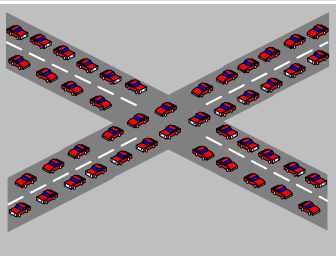
Classification	Total Lane Mileage	Paved Lane Mileage	% Paved
Principal Arterials	37	37	100%
Minor Arterials	68	68	100%
Major Collector	181	163	90%
Minor Collector	142	124	87%
Local	687	194	56%
Total	1,115	586	53%

4.2 EXISTING AND FUTURE ROADWAY OPERATING CONDITIONS

The travel demand model developed for the Athens-Clarke County MPO was expanded to represent Oglethorpe County's transportation network in order to assist with analysis of existing and future roadway operating conditions. More detailed information regarding the model and model development process is presented in **Appendix A**: Oglethorpe County Model Documentation Technical Memorandum. The key output from the travel demand model is the daily volume-to-capacity ratio for each roadway segment. Each volume-to-capacity ratio corresponds to a level of service based on accepted methodologies from the 2010 Highway Capacity Manual.

Prior to documenting the existing operating conditions, it is useful to summarize level of service. Level of service (LOS) is a qualitative measure of traffic flow describing operating conditions. Six levels of service are defined by the Federal Highway Administration (FHWA) in the Highway Capacity Manual for use in evaluating roadway operating conditions. They are given letter designations from A to F, with LOS A representing the best operating conditions and F representing the worst. A facility may operate at a range of levels of service depending upon time of day, day of the week, or period of the year. A qualitative description of the different levels of service is provided in the table below. **Table 4-4** on the next page shows the level of service description and depiction.

TABLE 4-4: LEVEL OF SERVICE DESCRIPTION AND DEPICTION

Level of Service Description	Level of Service Depiction
LOS A – Drivers perceive little or no delay and easily progress along a corridor.	
LOS B – Drivers experience some delay but generally driving conditions are favorable.	
LOS C – Travel speeds are slightly lower than the posted speed with noticeable delay in intersection areas.	
LOS D – Travel speeds are well below the posted speed with few opportunities to pass and considerable intersection delay.	
LOS E – The facility is operating at capacity and there are virtually no useable gaps in the traffic.	
LOS F – More traffic desires to use a particular facility than it is designed to handle resulting in extreme delays.	

The recommended approach used to identify deficient segments in Oglethorpe County was to analyze the volume of traffic on the roadway segments compared to the capacity of those segments, also known as the volume-to-capacity (V/C) ratio. For daily operating conditions, any segment identified as LOS D or worse was considered deficient.

The following thresholds were used to assign a level of service to the V/C ratios for rural facilities based on GDOT standards:

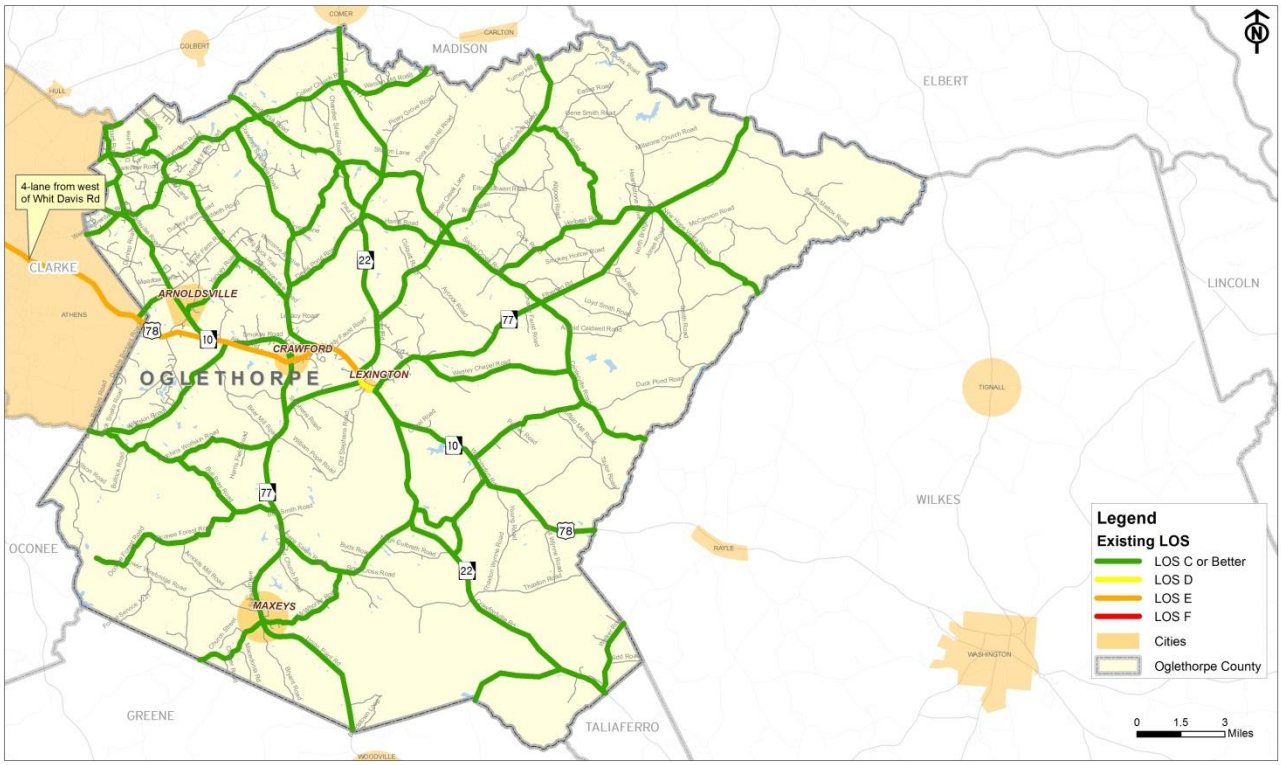
- V/C < 0.35 = LOS C or better;
- 0.35 < V/C < 0.55 = LOS D;
- 0.55 < V/C < 1.00 = LOS E; and,
- V/C > 1.00 = LOS F.

The existing conditions results derived from observed traffic count data where available, and the Oglethorpe County travel demand model, were used to determine deficient roadway segments. The existing analysis shows that the majority of roadways in Oglethorpe County currently operate at an acceptable LOS during daily conditions. Two segments currently operate daily at or below LOS D. **Table 4-5** displays the deficient roadway segments with the LOS for daily operating conditions. **Figure 4-4** displays the existing LOS for Oglethorpe County.

TABLE 4-5: EXISTING (2010) DEFICIENT SEGMENTS

Road	Location	Two-Way Daily Volume	V/C	LOS	Distance (miles)
SR 10/U.S. 78	between Whit Davis Road and Smokey Road	8,630 - 10,500	0.58 - 0.70	E	8.2
SR 10/U.S. 78	between SR 22 and SR 77	5,830	0.42 - 0.46	D	0.9

FIGURE 4-4: EXISTING (2010) LEVEL OF SERVICE (LOS)



Future operating conditions were evaluated for year 2040. In order to develop and evaluate future travel conditions, an existing plus committed (E+C) network was developed based on the existing network with the addition of committed projects identified in GDOT's STIP. Projects with funding of the construction phase authorized in the STIP year during 2013-2017 were considered "committed." Since no projects in Oglethorpe County have the construction phase authorized in the STIP year, the E+C network was the same as the existing roadway network and it was used to determine how well the roadway network would serve the future population and employment in Oglethorpe County, should no further improvements be funded.

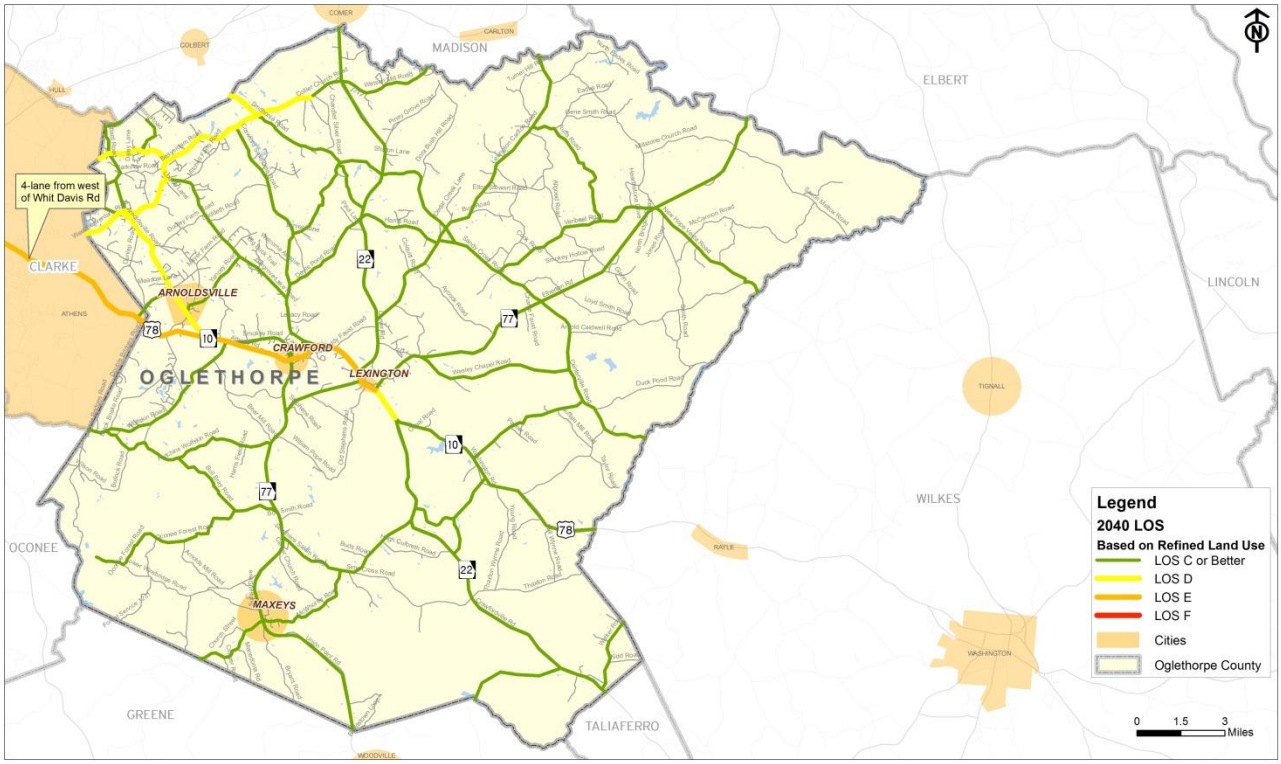
This long range transportation plan uses the adjusted population and employment projections based on various sources, which were discussed in detail in Chapter 2. Both projections were approved by the County and are consistent with the County's current Comprehensive Plan Update to ensure the plans are working in concert. It is useful to point out that the long-term projections for population and employment are the least reliable. This is not due to specific inaccuracies or projection techniques, but simply because it requires the judgment of stakeholders to assign population and employment throughout the study area, which in turn impacts estimates of travel demand. These long term results should be considered preliminary and when the transportation plan is updated every 3 to 5 years, the projects should be reexamined and amended as necessary.

The 2040 analysis shows that 10 segments can be expected to operate at or below LOS D under daily conditions. **Table 4-6** displays the deficient roadway segments with the LOS for daily operating conditions. **Figure 4-5** displays the future LOS for Oglethorpe County.

TABLE 4-6: FUTURE (2040) DEFICIENT SEGMENTS

Road	Location	Volume	V/C	LOS	Distance (miles)
SR 10/U.S. 78	Between Elberton Road and Double Bridges Road	4,070 - 6,450	0.37 - 0.86	E	13.2
SR 10/U.S. 78	Between Crawfordville Road and Elberton Road	2,690 - 2,740	0.37 - 0.38	D	2.3
Arnoldsville Road	Between SR 10/U.S. 78 and W Beaverdam Road	1,020 - 3,150	0.32 - 0.99	D	10.7
W Beaverdam Road	Between Robert Hardeman Road and Arnoldsville Road	1,110 - 1,120	0.33 - 0.37	D	2.7
Hargrove Lake Road	Between Arnoldsville Road and Beaverdam Road	1,400 - 1,700	0.44 - 0.53	D	4.6
Beaverdam Road	Between Hargrove Lake Road and Smithonia Road	1,070 - 1,480	0.36 - 0.49	D	7.1
Smithonia Road	Between Monticello Ct and Beaverdam Road	1,250 - 2,130	0.39 - 0.59	D	5.1
Crawford Smithonia Road	Between Beaverdam Road and Collier Church Road	1,290 - 1,350	0.43 - 0.45	D	1.5
Collier Church Road	Between Crawford Smithonia Road and Howard Bridge Road	1,140 - 1,170	0.36 - 0.39	D	3.9
Smithonia Road	Between Beaverdam Creek and Crawford Smithonia Road	1,520 - 1,550	0.51 - 0.52	D	2.3

FIGURE 4-5: FUTURE (2040) LEVEL OF SERVICE (LOS)



4.3 CRASH ANALYSIS

The most recent available vehicular crash data from GDOT (2007 - 2011) was collected and analyzed for state roads in the County. The crash data was also analyzed using the Critical Analysis Reporting Environment (CARE) software developed by the University of Alabama. Crash data was used to determine roadway locations with potential safety deficiencies throughout the study area. The study area experienced a total of 739 crashes, with 19 fatal crashes (approximate 3%) and 289 non-fatal injury crashes (approximate 40%).

Crash Intersections

Table 4-7 and **Figure 4-6** illustrate the 24 crash locations (which represent intersections having at least three crashes during the analysis period) in the County. The highest crash location in the study area is at the intersection of U.S. 78/Athens Road at Buddy Faust Road, with 14 crashes between 2007 and 2011. The next highest crash locations in the County are at the intersections of U.S. 78/Athens Road and SR 22/Comer Road, U.S. 78/Athens Road at North Street, and Yancey Road at Arnoldsville Road. Of the 24 crash locations, one fatal crash occurred at the intersection of SR 22/Comer Road at Sandy Cross Road and two fatal crashes occurred at the intersection of SR 22/Comer Road at Collier Church Road.

TABLE 4-7: CRASH INTERSECTION LOCATIONS, 2007-2011

Intersection	Number of Crashes	Fatal Crashes
U.S. 78/Athens Road at Buddy Faust Road	14	0
U.S. 78/Athens Road at SR 22/Comer Road	12	0

Intersection	Number of Crashes	Fatal Crashes
U.S. 78/Athens Road at North Street	12	0
Yancey Road at Arnoldsville Road	12	0
U.S. 78/Athens Road at N Woodlawn Road	11	0
U.S. 78/Athens Road at Broad Street	9	0
U.S. 78/Atlanta Street at SR 77	8	0
U.S. 78/Athens Road at Smokey Road	8	0
Main Street at Wolfskin Road	7	0
Sandy Cross Road at Lexington Carlton Road	6	0
U.S. 78/Athens Road at Bunker Hill Road	6	0
U.S. 78/Athens Road at Oglethorpe Drive	6	0
SR 22/Comer Road at Collier Church Road	6	2
SR 22/Comer Road at Lexington Carlton Road	5	0
SR 22/Comer Road at Sandy Cross Road	5	1
Hargrove Lake Road at Arnoldsville Road	5	0
Arnoldsville Road at W Beaverdam Road	4	0
U.S. 78/Atlanta Street at Church Street	4	0
U.S. 78/Athens Road at Yancey Road	4	0
SR 77/Elberton Road at Sandy Cross Road	3	0
U.S. 78/Athens Road at WH Crawford Road	3	0
Devils Pond Road at Crawford Smithonia Road	3	0
Watkins Farm Road at Sandy Cross Road	3	0
GW Bray Road at Arnoldsville Road	3	0

Crash Road Segment

In addition to crash intersection locations, segment-level crash analysis was another area of focus. One measure that is used to determine the potential safety deficiencies is the roadway segment crash rate. Crash rates (crashes per hundred million vehicle miles traveled) for a roadway segment were calculated based on the following equation:

$$Crash\ Rate = \frac{(number\ of\ crashes\ in\ X\ years) * 100{,}000{,}000}{(AADT) * (X\ years) * (365\ days/year) * (distance)}$$

Crash rates on state route segments were investigated based on the CARE crash data and AADT counts for the year 2010. Error! Not a valid bookmark self-reference. displays the comparison of Oglethorpe County state route segment crash rates and Georgia statewide average crash rates. From the table, it can be found that most of the state routes in the County experienced lower crash rates, with only three segments having a higher crash rate than the statewide average. The segments with higher crash rates are:

- SR 22 from Piney Grove Road to County Line (74% higher than the statewide average);
- U.S. 78 from Smokey Road to Bunker Hill Road (11% higher than the statewide average); and
- U.S. 78 from Bunker Hill Road to SR 77 (60% higher than the statewide average).

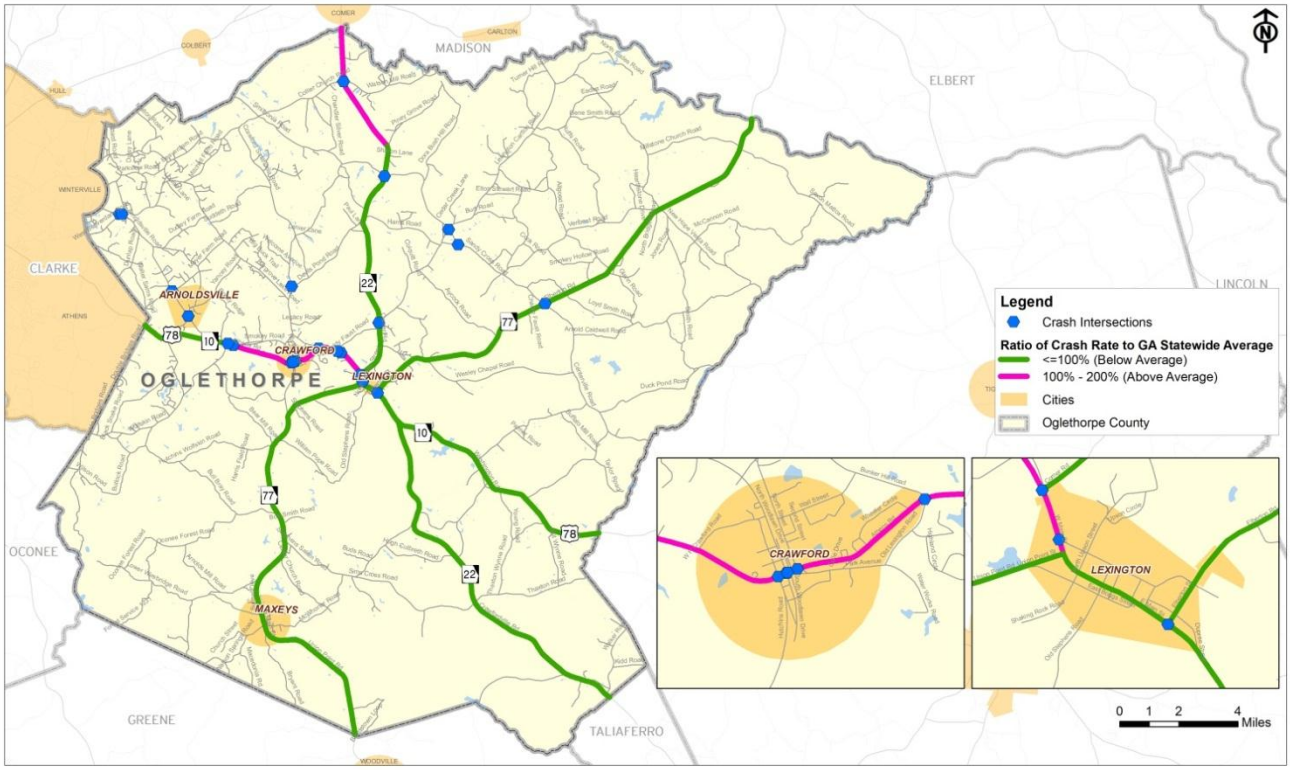
In addition to the crash intersection locations, fatal crash locations could also indicate the roadway safety deficiency to a certain degree. Potential roadway problems and future improvements should be examined at the fatal crash locations. Over the four years, there were a total of 16 fatal crashes that occurred in Oglethorpe County. Approximately 60 percent of the fatal crashes (11 out of 16) were located on state routes in the County. This suggests that targeted safety improvements, such as signage or shoulder widening, could be beneficial. **Figure 4-6** displays the crash locations and segments combined.

TABLE 4-8: STATE AND OGLETHORPE STATE ROUTE SEGMENT

Corridors	Segment	From	To	Distance (miles)	ADT	Total Crash (2010)	Crash Rate	Functional Classification	GA Average Crash Rate (2010)	% to GA Average Crash Rate
SR 22 North	1	US 78	Lexington Carlton Rd	2.1	2,580	1	51	Rural Major Collector	194	26%
	2	Lexington Carlton Rd	Harris Rd	3.6	880	0	0	Rural Major Collector	194	0%
	3	Harris Rd	Piney Grove Rd	2.7	1,500	0	0	Rural Major Collector	194	0%
	4	**Piney Grove Rd**	**County Line**	**4.5**	**1,800**	**10**	**338**	**Rural Major Collector**	**194**	**174%**
SR 77 North	1	US 78	County Line	16.6	878	8	150	Rural Minor Arterial	184	82%
SR 77 South	1	US 78	Hutching Rd	2.9	680	0	0	Rural Major Collector	194	0%
	2	Hutching Rd	Salem Rd	4.5	2,220	2	55	Rural Minor Arterial	184	30%
	3	Salem Rd	County Line	8.7	1,540	1	20	Rural Minor Arterial	184	11%
SR 22 South	1	US 78	Sims Cross Rd	7.3	1,150	1	33	Rural Major Collector	194	17%
	2	Sims Cross Rd	County Line	5.5	710	0	0	Rural Major Collector	194	0%
US 78	1	County Line - West	Smokey Rd	3.2	8,630	7	69	Rural Principal Arterial	131	53%
	2	**Smokey Rd**	**Bunker Hill Rd**	**3.11**	**9,080**	**15**	**146**	**Rural Principal Arterial**	**131**	**111%**
	3	**Bunker Hill Rd**	**SR 77 / Union Point Rd**	**2.1**	**9,320**	**15**	**210**	**Rural Principal Arterial**	**131**	**160%**
	4	SR 77 / Union Point Rd	SR 77 / Elberton Rd	0.59	5,830	1	80	Rural Principal Arterial	131	61%
	5	SR 77 / Elberton Rd	Salem Church Rd	4.49	4,963	0	0	Rural Principal Arterial	131	0%
	6	Salem Church Rd	County Line - East	5.02	2,600	3	63	Rural Principal Arterial	131	48%

Source: ADT - GDOT 2010 STARS DATA; GA Average Crash Rate - GDOT

FIGURE 4-6: CRASH INTERSECTION LOCATIONS AND ROAD SEGMENT



4.4 BRIDGES

Another critical transportation area of emphasis in Oglethorpe County is bridge conditions. Existing bridges were evaluated to determine the need for potential improvement. In addition to bridges, existing fords located within the County were also evaluated. A ford is a type of river-crossing that while less costly to construct than a bridge, has a higher likelihood of becoming impassable after heavy rain or during flood conditions. Deficient bridges and impassable fords can pose an obstacle to a fully functional road network. The study area was reviewed to identify all bridges and fords to assess the need for potential improvements.

Existing Bridges

Sufficiency rating is the general measure of the condition of each bridge. The sufficiency rating is used to determine the structural and geometric condition of the bridge, and represents the structural safety, adequacy, serviceability, and necessity of public use. This measure is used to identify need for maintenance, rehabilitation or reconstruction of a bridge structure. Bridges are rated on a point system from 1 to 100 (the maximum rating). The sufficiency rating can be used to establish a priority based bridge rehabilitation and reconstruction. It is important to note that bridges with ratings below 50 could be still able to safely accommodate traffic; however, upgrading these bridges to modern design and load standards will improve the operation and safety of the bridge, as well as the capacity of the roadway. All bridges with a sufficiency rating of 50 or lower were identified as deficient for purposes of the Plan. **Table 4-9** below provides a bridge inventory with a sufficiency rating for each in Oglethorpe County.

Table 4-9: Bridge Inventory

Road	Water Feature	Sufficiency Rating
Vesta Palmetto Road	Macks Creek	100
Young Road	Buffalo Creek	100
Vesta Palmetto Road	Little Macks Creek	100
Double Bridges Road	Moss Creek	100
Philomath-Woodville Road	Syls Fork Creek	100
Hutchins-Wolfskin Road	Barrow Creek	100
Melton Road	Sulfur Spring Branch	100
Old Stephens Road	Brooks Creek	100
Penny Harris Road	Grove Creek	100
SR 77	Indian Creek	99.7
SR 77	Little Indian Creek	99.7
Hargrove Lake Road	Mill Creek	99.5
SR 77	Goosepond Creek	99.5
SR 22	Brooks Creek	98.6
SR 22	Long Creek Overflow	98.6
SR 22	Long Creek	98.3
Gene Smith Road	Millstone Creek	96.5
SR 22	South Fork Broad River	95.2
McWhorter Road	Raiden Creek	92.5
Bull Bray Road	Barrow Creek Tributary	92.5
McWhorter Road	North Fork Little River	92.5
Hargrove Lake Road	Hawks Creek	92
SR 22	Buffalo Creek	91.6
Smithsonia Road	Sulphur Spring Br Tributary	91.6
Sandy Cross Road	Grove Creek	88.9
U.S. 78/ SR 10	Long Creek	86.6
Centerville Road	Buffalo Creek	85.6
SR 22	Big Clouds Creek	83.6
U.S. 78/ SR 10	Buffalo Creek	83.5
Centerville Road	Long Creek	82.7
U.S. 78/ SR 10	Dry Fork Creek	82.6
SR 22	Grove Creek	82.6
Pennfield Wirebridge Road	Sandy Creek	81.5

Centerville Road	Indian Creek	81.5
Lem Edwards Road	Sulfur Spring Branch	81.4
Hargrove Lake Road	Big Cloud Creek Tributary	80.9
U.S. 78/ SR 10	Moss Creek	79.4
Centerville Smithonia	Big Clouds Creek	77.2
Saxton-Mattox Road	Goosepond Creek	76
Wilson Road	Big Creek	74.3
SR 77	Broad River	73.6
Crawford-Smithonia	Hawks Creek	65.4
Arnold Caldwell Road	Long Creek	63.5
Godfrey Road	Big Creek	62.4
Crawford-Smithonia Road	Big Clouds Creek	54.8
Levington-Garlston Road	South Fork Broad River	50.6
Smithonia Road	Beaverdam Creek	49.8
Duck Pond Road	Dry Fork Creek	25.6
Saxton-Mattox Road	Long Creek	13
Watson Mill Road	South Fork Broad River	4

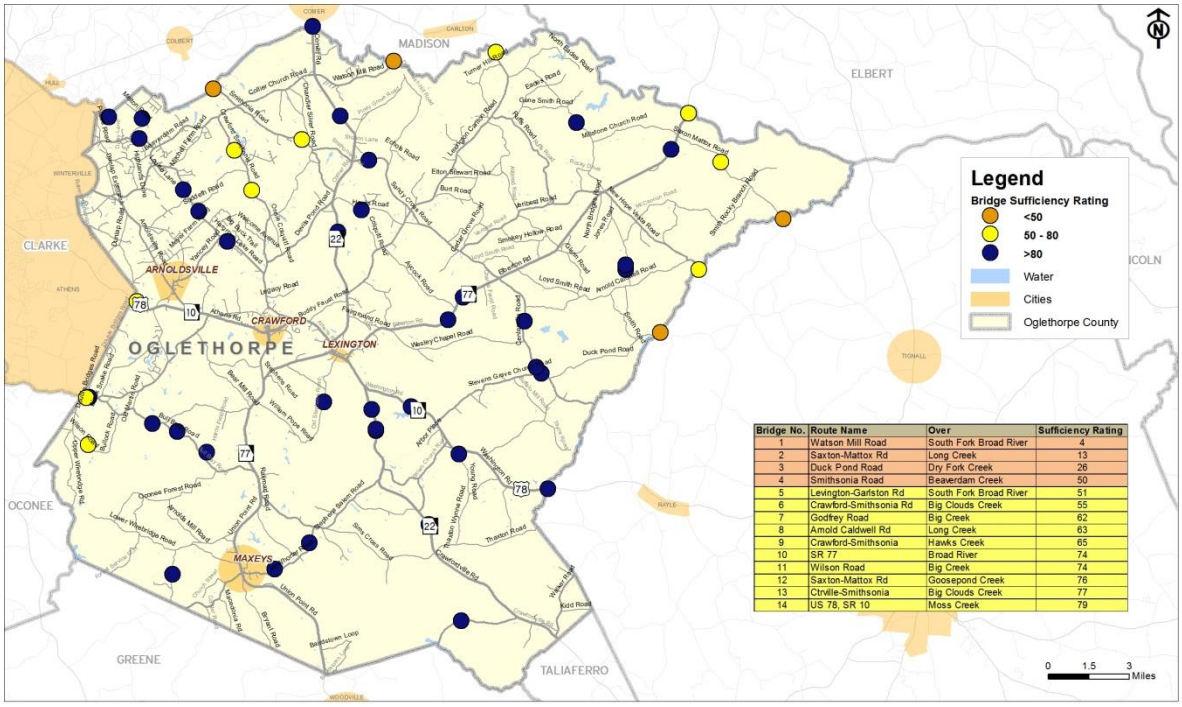
Based on the sufficiency rating, the majority of the 50 bridges in Oglethorpe County are in good condition and not in need of any major maintenance or upgrade activities. There are four bridges that have a sufficiency rating below 50 and are potentially eligible for maintenance and rehabilitation in the next 10-15 years, as follows:

- Watson Mill Road over South Fork Broad River (4.0 sufficiency rating);
- Saxton-Mattox Road over Long Creek (13.0 sufficiency rating);
- Duck Pond Road over Dry Fork Creek (25.6 sufficiency rating); and
- Smithonia Road over Beaverdam Creek (49.8 sufficiency rating).

In addition, there are 10 bridges that have a sufficiency rating between 50 and 80 and should be considered candidates for maintenance and rehabilitation within the horizon year of the Plan (2040). The candidate bridges in Oglethorpe County for maintenance and rehabilitation are mapped in **Figure 4-7.**

While this Plan reviewed bridge condition reports and identified bridges potentially eligible for maintenance and rehabilitation in the next 10-15 years, GDOT's Bridge Office continuously monitors all bridges throughout the state for maintenance, rehabilitation, and replacement needs.

FIGURE 4-7: BRIDGE SUFFICIENCY RATING



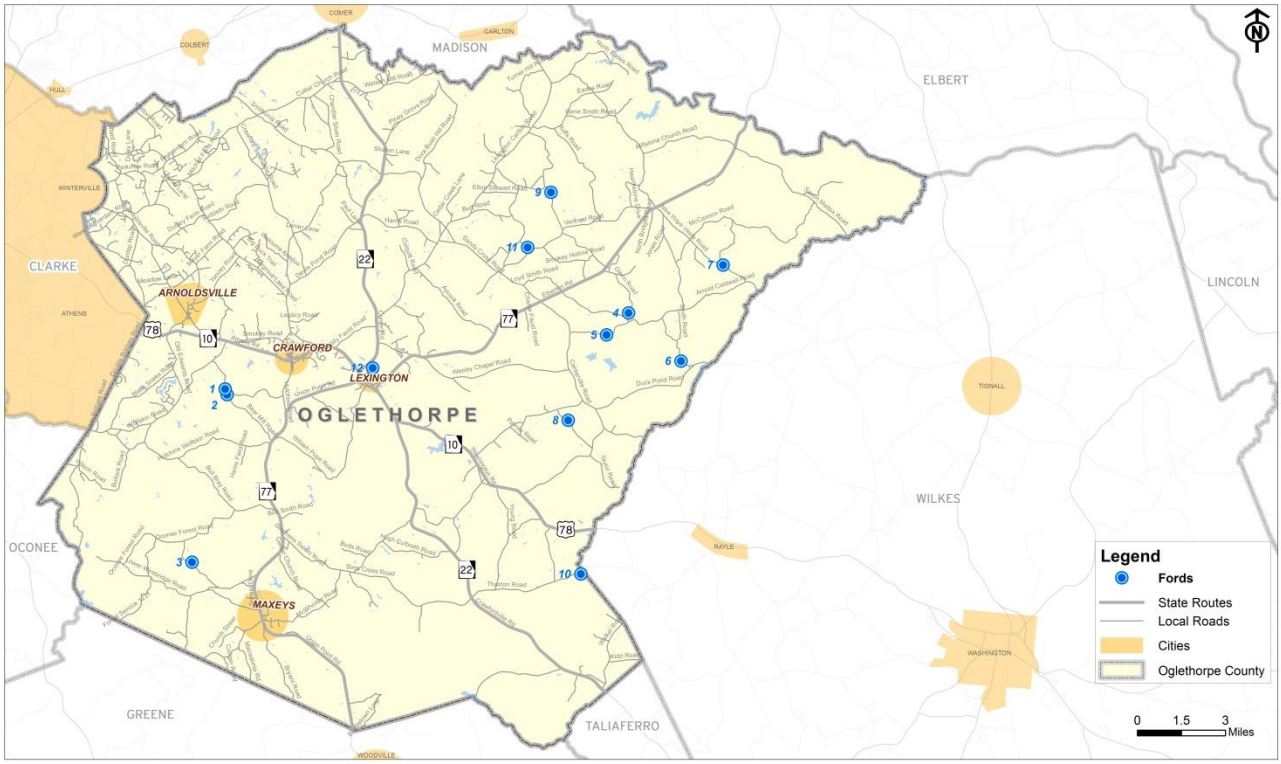
Bridge No.	Route Name	Over	Sufficiency Rating
1	Watson Mill Road	South Fork Broad River	4
2	Saxton-Mattox Rd	Long Creek	13
3	Duck Pond Road	Dry Fork Creek	26
4	Smithsonia Road	Beaverdam Creek	50
5	Lexington-Garlston Rd	South Fork Broad River	51
6	Crawford-Smithsonia Rd	Big Clouds Creek	55
7	Godfrey Road	Big Creek	62
8	Arnold Caldwell Rd	Long Creek	63
9	Crawford-Smithsonia	Hawks Creek	65
10	SR 77	Broad River	74
11	Wilson Road	Big Creek	74
12	Saxton-Mattox Rd	Goosepond Creek	76
13	Ctrville-Smithsonia	Big Clouds Creek	77
14	US 78, SR 10	Moss Creek	79

Existing Fords

There are 12 fords (**Figure 4-8**) in Oglethorpe County where either the dilapidated bridges have been abandoned or bridges have never been built. All the fords are shallow enough to be crossed by cars and other wheeled or tracked vehicles. The problem with fords is that they overflow in wet weather.

The fords in Oglethorpe County are mostly located on local roads, except the ford located on New Hope Vesta Road, which is classified as a rural minor collector. While the traffic volumes on the fords are relevant lower than the traffic volumes on most existing bridges, as the population and economy in the Oglethorpe County continues to grow, some fords may pose constraints on the load limits and/or safety concerns.

FIGURE 4-8: FORD LOCATIONS



4.5 PUBLIC TRANSPORTATION

Existing County Services

Oglethorpe County does not currently operate any on-demand rural transit services. An on-demand rural transit system typically utilizes vans and provides a fare-based, pick-up and delivery service for any residents who request it via a 24-hour advance trip appointment. On-demand rural transit is largely funded by Federal Transit Administration (FTA) Section 5311 Rural Public Transportation Funding and is administered by GDOT's Intermodal Office.

Oglethorpe County does provide transportation services for its low-income and disabled population via the Human Services Transit program, which provides transportation for Medicaid recipients, Temporary Assistance for Needy Families (TANF) recipients, and eligible residents receiving assistance from the Department of Behavioral Health and Developmental Disabilities. This program, funded at the federal and state level, is administered by the Georgia Department of Community Health (Georgia DCH) and the Georgia Department of Human Services (Georgia DHS).

The Senior Center in Crawford

Additionally, Oglethorpe County operates a Senior Citizens Center, located in Crawford. The Senior Center provides daily transportation and other services for its 65+ members. County residents age 60 and over are eligible for membership to the

center. The center is equipped with two large vans and two minivans which can transport up to 35 passengers. These vehicles provide services for two-hours in the morning and two-hours in the afternoon for routes throughout the County each day to transport members to and from their homes to the Center. Depending on the daily activities planned, the vans may take members to the Wal-Mart in Athens for their groceries, prescriptions and household goods; to scheduled medical appointments; and/or to other shopping and recreational destinations. The Senior Center transportation services are funded by the County and by the Georgia Division on Aging Services (Georgia DAS).

Regional Services

The Northeast Georgia region's only fixed route public transit system is operated by Athens Transit for Athens-Clark County. This system, funded by FTA Section 5307 Urban Public Transit Funding, offers a multi-modal bus, van and vehicle terminal located in downtown Athens; 19 fixed bus routes; various special shuttle services; and four park-and-ride facilities. The park-and-ride facility located in the parking lot at the Wal-Mart Supercenter at 4375 Lexington Road is approximately 10 to 12 miles from Crawford and Lexington along the U.S. 78 corridor.

Four of the twelve counties, as well as one city in NEGRC, currently offer rural public transportation services. Elbert, Greene, Jackson and Morgan Counties, as well as the city of Social Circle in Walton County, each operate individual on-demand transit systems. There is currently no connectivity between these county systems, nor is there connectivity to the Athens Transit system.

4.6 Freight Transport

Truck freight activity in Oglethorpe County is centered on the timber, granite and agricultural industries. According to the Georgia Statewide Freight and Logistics Plan (2011), truck traffic is concentrated on U.S. 78, SR 77, and SR 22. The truck percentage ranges from 13% to 17% for U.S. 78; 14% to 23% for SR 22; and 10% to 22% for SR 77, based on the GDOT 2010 State Traffic and Report Statistics (STARS) data. The Average Annual Daily Traffic (AADT) count on any thoroughfare in the County is generally below 1,000 trucks per day. However, along U.S. 78 between Athens and Lexington, truck traffic increases with an AADT greater than 1,000 trucks per day.

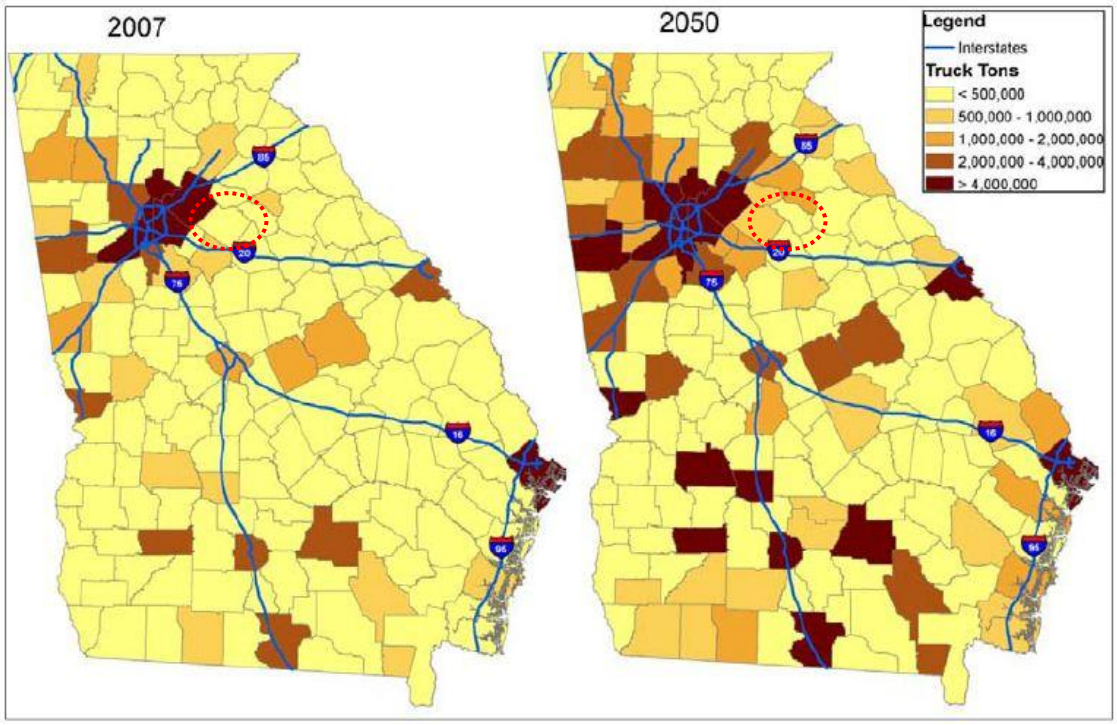
Inbound and outbound trucks each carry up to 500,000 tons of goods per year through Oglethorpe County. As seen in the Figures below, the Georgia Statewide Freight and Logistics Plan forecasts that while inbound truck tonnage will experience minor growth, outbound truck tonnage is projected to grow between 500,000 and 1,000,000 tons per year by the year 2050.

Natural resources in Oglethorpe County, such as timber and granite, account for the projected increased growth in outbound freight. Oglethorpe County has one of the highest acreages of timber in northeastern Georgia. Timber forested throughout the County is transported to a number of plant locations, including paper mills along the Georgia coast. The northeastern part of Oglethorpe County overlays rich deposits of monument-quality granite, supporting a number of quarries and granite-related industries. Much of the granite quarried in the County is trucked primarily to its point of sale in Elbert County. This trend may change somewhat as the industry expands in the County, resulting in increased truck traffic transporting granite material into Lexington for point of sale.

In addition to timber and granite, the movement of agricultural projects accounts for much of the freight traffic in the County. Oglethorpe County produced 54.1 million broilers in 2007, ranking the fifth in Georgia counties (U.S. Department of Agriculture, Census of Agriculture). Poultry and poultry products, in particular,

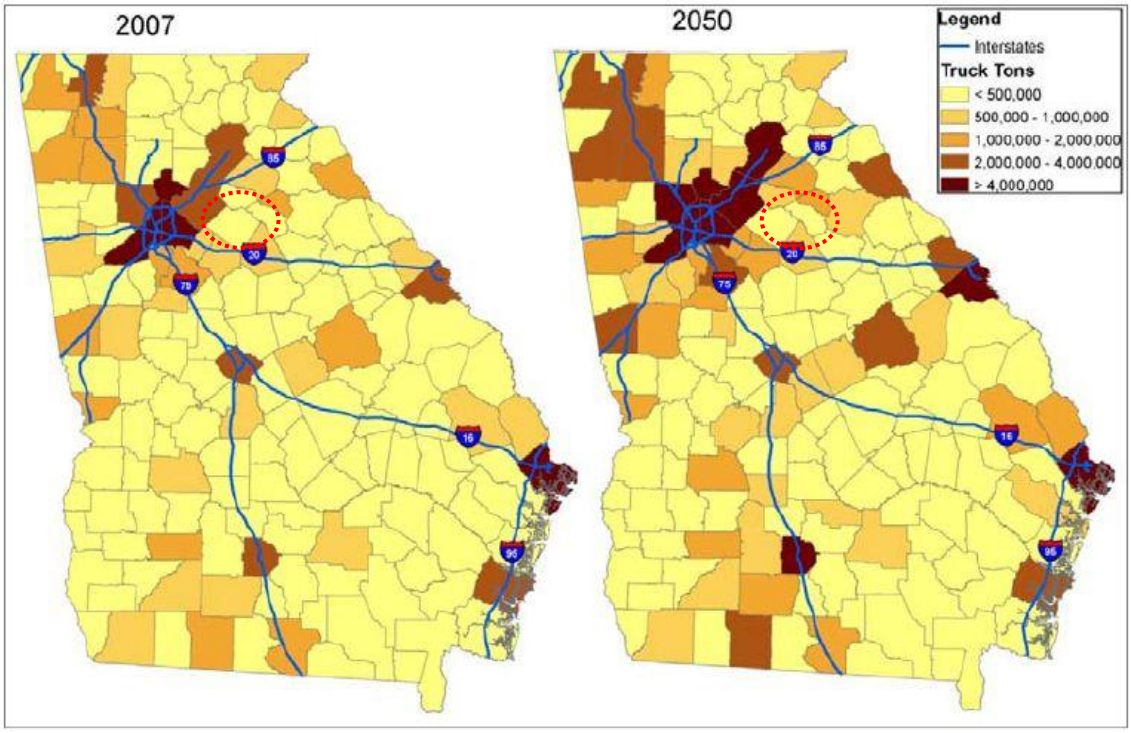
are transported to major processing plants (Pilgrim's Pride and Harrison, Inc.) in the Athens, Elberton, and Bethlehem areas.

Figure 4-9: Inbound Truck Tons in Georgia, 2007 and 2050



Source: Georgia Statewide Freight and Logistics Plan, 2011

Figure 4-10: Outbound Truck in Tons, 2007 and 2050



Source: Georgia Statewide Freight and Logistics Plan, 2011

U.S. 78 is a popular thoroughfare for both local and thru-truck traffic in the County with trucks traveling to/from Athens and Augusta favoring this route. Safety can be an issue with truck traffic, particularly along U.S. 78, as many trucks travel at excessive speeds through downtown Crawford and Lexington. With the exception of a traffic signal in Crawford, there currently are no traffic control devices to slow traffic in these areas. Specific locations on U.S. 78 where truck speed is an issue include Buddy Faust Road, Bunker Hill Road, Old Edwards Road, and Yancey Road.

U.S. 78 west of Crawford, has site distance and horizontal visibility limitations. Trucks traveling at excessive speeds along this thoroughfare can decrease safety along this route. Trucks taking short-cut routes on non-GDOT maintained roads, such as Wolfskin Road between U.S. 78 and Watkinsville, also create safety concerns.

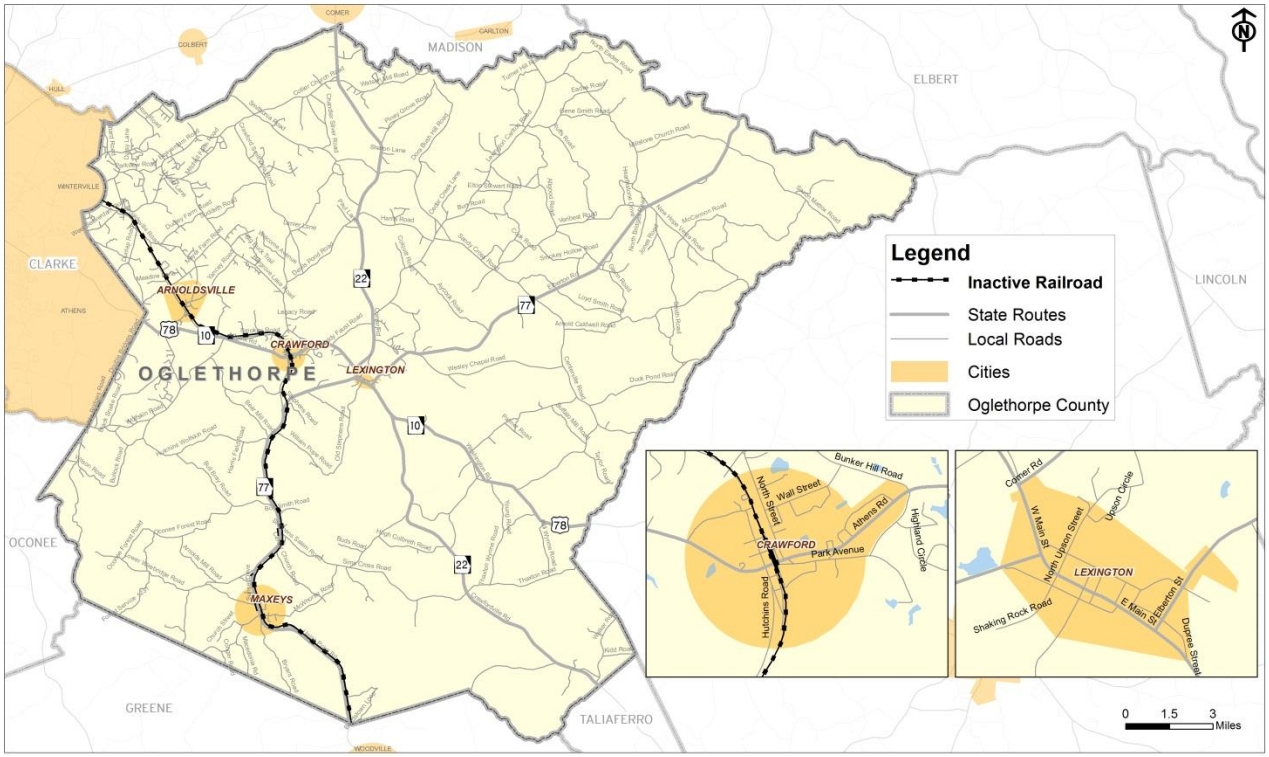
Unpaved roads which house logging, granite, poultry and other industrial facilities also experience the high impact of frequent truck traffic. Trucks must sometimes travel four to five miles on these unpaved roads to reach their destinations. In some areas, 20 to 30 trucks may traverse these roads each day. Industries reliant on such truck travel would be better served with road improvements to better facilitate transporting their goods and products.

4.7 Rail

Oglethorpe County does not currently have any active rail lines; however, CSX Transportation operates a rail line that traverses east to west bordering the northern edge of the County. This line connects Atlanta, Winder, Athens, and Elberton into South Carolina, and carries20 to 40 million gross tons of cargo per year. Commodities transported include coal, non-metallic minerals, automotive products, agricultural products, and wood and timber products. According to the Georgia Statewide Freight and Logistics Plan (2012), this single-track line is currently categorized as a bottleneck corridor due to a combination of yard, main line, and interchange issues, and it is expected to experience increased capacity demand in future years.

There are approximately 27 miles of inactive CSX rail line right-of-way (ROW) in Oglethorpe County, located in the western half of the County between Arnoldsville, Crawford, and Maxeys, as shown in **Figure 4-11** on the next page. Discussions have ensued, with both pros and cons, to utilize the abandoned rail line for the Firefly Trail, a 39-mile rail-trail initiative that would connect Athens-Clarke, Oglethorpe, and Greene Counties. There are, however, no specific development plans for the trail through Oglethorpe County at this point in time.

FIGURE 4-11: INACTIVE RAIL IN OGLETHORPE COUNTY



4.8 BICYCLE AND PEDESTRIAN FACILITIES

Bicycle and pedestrian facilities are an important component of the roadway network. They provide active transportation and recreation options for all residents and visitors, connecting residential neighborhoods to each other and to commercial, medical and business destinations, as well as to recreational facilities and to other transportation hubs. Walkable and bikeable communities not only provide additional transportation options, but they also enhance the way people experience the area by fostering active lifestyles, promoting community-based commerce and reducing the environmental impacts of motorized transportation.

This section provides a description of the existing bicycle and pedestrian conditions in Oglethorpe County. It includes an inventory of existing and planned facilities, recent crash data, and public and stakeholder input garnered as part of this Plan. This section also provides a summary of existing plans and policies, as well as their recommendations that relate to bicycle and pedestrian facilities in Oglethorpe County.

Existing Facilities

Sidewalks in Oglethorpe County are limited primarily to the downtown areas of Crawford (U.S. 78 and North Street) and Lexington (Main Street and Boggs Street). All of the schools, the library, and local parks are rurally located and thus do not have sidewalk networks that connect them to surrounding residential areas. Major shopping and medical destinations are located primarily in nearby Athens and require vehicle transportation to reach.

There are currently no multi-use paths or bicycle lanes in Oglethorpe County. There is, however, a definite presence of recreational bicycling along the County's rural roads and landscape. Common routes for recreational riders are along Wolfskin Road, Hargrove Lake Road, Winterville Road and Sandy Cross Road.

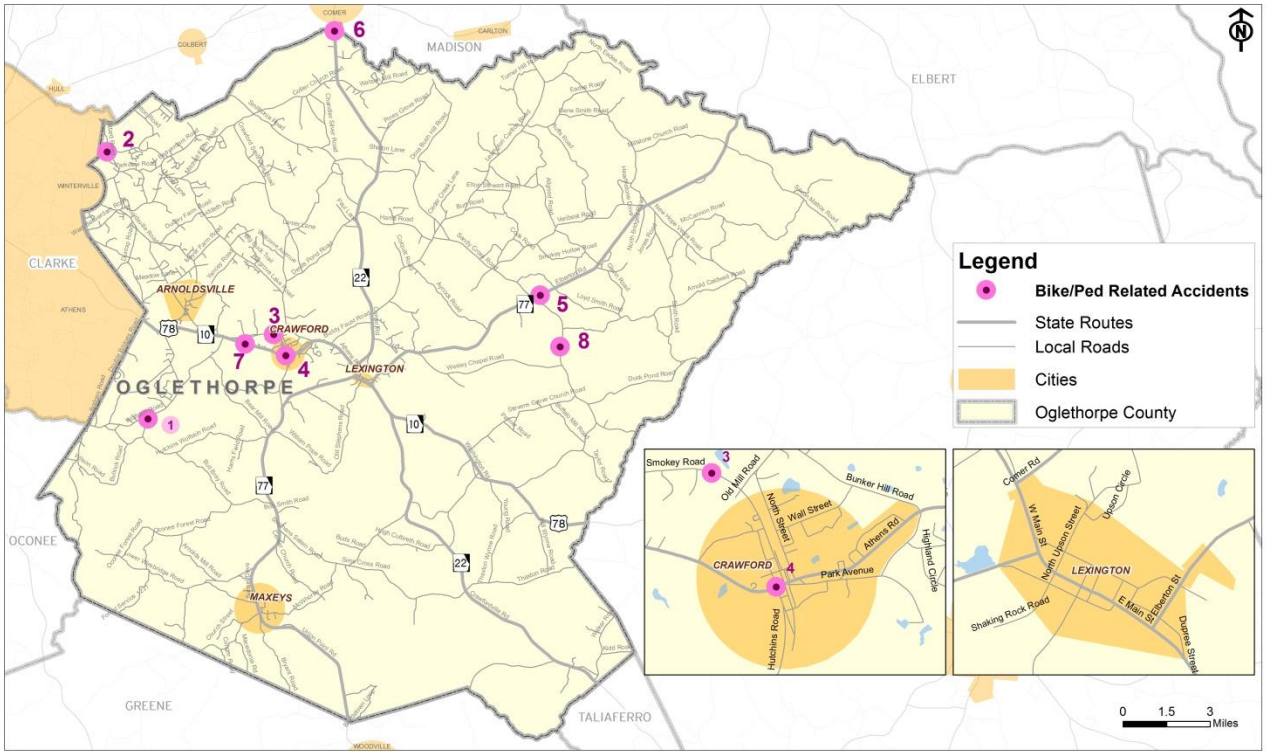
Nature and hiking trails are located in various parks throughout the County. These can be found at:

- Bryan Park, located in the city of Crawford;
- Watson Mill State Park, located on the northern border to Madison County, on the east fork of the Broad River;
- Shaking Rock Park, located off U.S. 78 in Lexington; and
- Redlands Wildlife Management Area, located at the northern tip of Oconee National Forest.

Bicycle and Pedestrian-Related Crash Data

Nine crashes involving bicycles and/or pedestrians have been reported for Oglethorpe County between 2007 and 2011. The locations are shown on **Figure 4-12** and described in **Table 4-10** on the next page.

FIGURE 4-12: BICYCLE AND PEDESTRIAN RELATED CRASHES



Source: GDOT Crash Database

TABLE 4-10: BICYCLE AND PEDESTRIAN RELATED CRASHES, 2007 - 2011

Map ID	Year	Crash Location	Crash Severity	Type
1	2007	Old Martin Road at Wolfskin Road	Non-Fatal Injury Crash	Pedestrian
2	2007	Smithonia Road between Pittard Road and Howington Road	Non-Fatal Injury Crash	Bicycle
3	2009	Smokey Road between Smokey Trail and Old Mill Road	Non-Fatal Injury Crash	Bicycle
4	2009	North Board Street at U.S. 78/Athens Road	Non-Fatal Injury Crash	Pedestrian
5	2010	Elberton Road between Loyd Smith Road and Tiller Bridges Road	Non-Fatal Injury Crash	Bicycle
6	2010	Comer Road close to Gholston Church Road	Non-Fatal Injury Crash	Bicycle
7	2010	U.S. 78/Athens Road between Amber Lane and Heather Lane	**Fatal Crash**	Pedestrian
8	2011	Centerville Road between Wesley Chapel Road and Arnold Caldwell Road	Non-Fatal Injury Crash	Bicycle

Source: GDOT Crash Database

The data above shows that a fatal crash occurred in 2010 on U.S. 78/Athens Road between Amber Lane and Heather Lane. The fatal crash was a head-on collision involving a pedestrian. Four of the nine crashes since 2007 involved pedestrians, and the other five crashes involved bicycles.

Existing Recommendations

There are no proposed bicycle-pedestrian or trail improvement projects planned for Oglethorpe County for the 2013 to 2016 STIP planning period. However, a number of planning documents have been compiled and prepared over the past several years, which identify measures and action items for bicycle and pedestrian facilities in Oglethorpe County.

In 2007, at the request of the County, the Georgia Department of Community Affairs, Quality Growth Resource Team (QGRT), developed growth management solutions for Oglethorpe County. These solutions aimed to:

- Maintain and enhance the rural quality of life;
- Encourage high-quality development, both master planned and commercial;
- Guide future expansion of community facilities and infrastructure;
- Preserve the integrity of the community's historic resources;
- Expand commercial and retail opportunities to increase sales tax revenues; and
- Create more jobs within the County for local citizens.

The Resource Team Report recommends physical infrastructure improvements to guide growth to the cities of Crawford and Lexington, while maintaining the rural character of the remainder of the County. Bicycle and pedestrian initiatives that support this recommendation include:

- Expanding the transportation network/historic grid patterns within Crawford and Lexington to allow for a traditional development pattern and encourage walkability; and

- Expanding the existing sidewalk network to continue along existing streets in Crawford and Lexington and include sidewalks on all new streets either through zoning requirements, a community sidewalk program or other methods.

Furthermore, the report encourages downtown revitalization for Crawford and Lexington that would create appeal, promote their historic resources and enhance these rural activity centers. This includes streetscape enhancements to add street trees, benches, planters, and crosswalks, as well as improvements to sidewalks and lighting for the Crawford and Lexington downtown area.

The *Northeast Georgia Plan for Bicycling and Walking* conducted by the Northeast Georgia Regional Commission in 2010 identified Critical Focus Areas where demand for bicycle and pedestrian facilities may exist, and bike and pedestrian facilities to serve the demand. Specific recommendations for Oglethorpe County are listed in **Table 4-11** below.

TABLE 4-11: NEGRC REGIONAL BICYCLE AND PEDESTRIAN PLAN RECOMMENDATIONS

Location	Corridor Name	Recommended Facility Type	Length (miles)
Oglethorpe County	SR 22	Paved Shoulder	12.80
Crawford-Lexington	U.S. 78	Bike Lane	4.31
Madison-Elbert-Oglethorpe	Broad River	Greenway	27.23
Clarke-Oglethorpe-Greene	Firefly Trail	Rail-Trail	39.31
Clarke-Oconee-Oglethorpe-Greene	Oconee River	Greenway	22.46

Source: NEGRC – Northeast Georgia Plan for Bicycling and Walking, 2010.

5 Public and Stakeholder Involvement

It is important to understand transportation issues, opportunities and needs as perceived by citizens and key stakeholders, in addition to those identified through technical analyses. As part of the Multi-Modal Transportation Plan process, GDOT participated in ongoing coordination with staff representatives and elected officials from Oglethorpe County, the Northeast Georgia Regional Commission, the Cities of Arnoldsville, Crawford, Maxeys, and Lexington, as well as the Athens-Clarke County MPO. The outreach approach outlined in the plan included the formation of a Study Advisory Committee that convened at key milestones during the planning process. Outreach also incorporated a public survey that was conducted to solicit feedback from residents living and working in the County.

5.1 Study Advisory Committee

A Study Advisory Committee has been established with participants invited based on guidance from local County and City staff. The Committee includes representation from the following: Oglethorpe County; the City of Arnoldsville; the City of Crawford; the City of Maxeys; the City of Lexington; the Northeast Georgia Regional Commission; GDOT District 2; the Oglethorpe County Chamber of Commerce; major employers; and others suggested by County and City staff. Participants in the Study Advisory Group are listed in **Table 5-1**.

Table 5-1: Study Advisory Committee Members

Name	Title	Organization/Agency
Billy Pittard	Commissioner	Oglethorpe County
Josh Hawkins	Director of Planning and Zoning	Oglethorpe County
Renee Gardner	Director of Senior Citizens Center	Oglethorpe County
Jim Dove	Executive Director	Northeast Georgia Regional Commission
Jimmy Coile	Mayor	City of Crawford
Bill Winkle	Mayor	City of Maxeys
David Montgomery	Mayor	City of Lexington
Larry McFalls	Mayor	City of Arnoldsville
Randy Yeargin	Chairman	Board of Education
Phillip Todd	Director	School Transportation
Cary Fordyce	President	Chamber of Commerce
Doy Johnson	General Manager	Elberton Granite Association (Major Employer)

Name	Title	Organization/Agency
Bobby Miller	General Manager	Greater Georgia Printers (Major Employer)
Todd Boyd	General Manager	J&J Chemical (Major Employer)
Melanee McGee	Director	Oglethorpe Children's Academy
Tracy Graham	General Manager	Georgia Forestry Commission
Danny Sanders	General Manager	Oglethorpe Feed and Farm Supply
Wendy Ryan	Director	Emergency Medical Services
Douglas Spencer	President	Fire Association
Stephen Hooper	Director	Emergency Management Agency
Sherry McDuffie	Transportation Planner	Athens-Clarke County
Vonda Everett	Planning & Programming Engineer	GDOT, District 2 Office
Mike Smith	Sheriff	Oglethorpe County
Chris Wright	Patrol Officer	Georgia State Patrol

The Study Advisory Committee met at three key milestones during the plan development effort. The first meeting took place early in the study process to discuss issues and opportunities, provide an overview of the study process, and develop study goals and objectives. The second meeting provided an opportunity to gather feedback on the needs assessment of both existing and future conditions and the preliminary project recommendations. The third meeting focused discussion on the study's recommendations and policy guidance to assist with maintaining the existing infrastructure. Study Advisory Committee dates and locations are documented in **Table 5-2.**

TABLE 5-2: STUDY ADVISORY COMMITTEE MEETINGS

Purpose	Location	Date / Time
Meeting #1	Historic Crawford Depot	April 16, 2013 / 2:00 PM
Meeting #2	Historic Crawford Depot	October 15, 2013 / 10:30 AM
Meeting #3	Historic Crawford Depot	February 18, 2014 / 10:30 AM

Documentation of each Study Advisory Committee meeting can be found in **Appendix B.**

5.2 Public Surveys

The Oglethorpe County Multi-Modal Transportation Plan's Public Survey was designed to gain input from those who are most familiar with the County's potential transportation-related issues and opportunities. The survey queried the public about various transportation topics. Twenty-one questions covering commute patterns, transportation improvement priorities and issues on traffic operations, safety, trucks, road conditions, bridges, sidewalks and bicycle routes, and public transportation were included in the survey and provided the public with the opportunity to express their thoughts and concerns.

The survey was made available to the general public online on the GDOT Study website (www.dot.ga.gov/oglethorpestudy) and Oglethorpe County's website from March 2013 through June 2013. In addition, the Oglethorpe County school system was asked to participate in the process by distributing hard copies of the survey to students to take home to their families. Approximately 200 public surveys were completed. The survey collected valuable insight and information from county citizens that were then incorporated into the study assessment and recommendations.

A number of common themes and issues emerged from the responses, including the following:

- Respondents overwhelmingly viewed U.S. 78 as needing traffic operational improvements in the downtown areas of Crawford and Lexington, with particular opportunities cited at its intersection with Buddy Faust Road, Bunker Hill Road, and SR 22.
- Respondents felt that traffic operations, sidewalks, and other safety improvements are greatly needed in the vicinity of the high, middle, elementary and primary schools.
- Respondents expressed urgency and frustration with road conditions in the County. Pavement conditions, potholes, inadequate shoulders, visibility problems and gravel roads were frequently cited as areas needing attention in order to make roads safer and more passable by vehicles, bicycles, trucks, and school buses.
- Respondents were somewhat divided on their feelings about bicycle routes in the County with most supporting bike routes and some strongly opposing them. However, there was a general consensus that bicycling is prevalent in the County and that existing conditions are unsafe for both bicycles and vehicles.
- Respondents did express some support for public transportation in the County. A number of comments indicated that bus service, possibly within the County and outside the County to Athens, may be desirable.

Documentation of the detailed public survey instrument and results can be found in **Appendix C.**

5.3 Public and Stakeholder Input

Table 5-3 summarizes general themes expressed by citizens and stakeholders relative to transportation issues, opportunities and needs in Oglethorpe County.

Table 5-3: Public and Stakeholder Input

Transportation and Growth
• Need recommendations on the best way to preserve the existing transportation network; need to focus on growth areas and preservation of rural areas. • Desire for concentrating growth in dense areas and maintaining rural areas. • Project priorities should be prepared and evaluated, so the project with highest priorities can be ready for implementation as funding becomes available. • Consider schools and emergency service areas as growth hubs.
Transportation Improvement Priorities
The following lists the transportation improvement priorities identified and their associated percent of respondents who agreed: • Improve roadway safety (51%). • Add or coordinate traffic signals, turn lanes, and other features to improve traffic flow (44%). • Provide transportation services for the elderly, disabled, and/or the general public (39%). • Enhance the operations and maintenance of the current transportation system (27%). • Relieve traffic congestion (24%). • Enhance bicycle and pedestrian amenities (20%). • Address truck travel (14%). • Improve connectivity (14%).
Roadway Operations and Safety
• Widening of U.S. 78 was the #1 project in the Transportation Investment Act of 2010 (TIA) list for the County connecting Lexington/Crawford west to Athens. • Need for widening/passing lanes near Crawford coming to and from Athens. • Need to review speed limits in town; the speed limit drops dramatically in small intervals and it will be beneficial to have better signage and advance warning; consider extending reduced speed limit signs further out. • Congestion due to slow moving traffic and large trucks is a constant commute problem.
Intersection Operations and Safety
• Need operational improvements at the SR 22 (Comer Road) / U.S. 78 intersection; there is a safety concern and it is difficult to enter highway. • Need operational improvements at other U.S. 78 intersections: Buddy Faust Road; Bunker Hill Road; Hutchins Road; Wolfskin Road; and Cherokee Corner. • Need operational improvements at SR 22 and Buddy Faust Road. • The intersection at Arnoldsville Road and Yancey Road should be squared off.

Bicycle and Pedestrian
• Support was expressed for bicycle and pedestrian options in growth areas, such as in the Crawford civic areas and around schools and parks (Bryan Park, specifically). • Preserve accessibility to schools and businesses in Lexington and Crawford. • Sidewalks, crosswalks, and pedestrian lights are needed in concentrated population areas. • Concern was expressed that the Firefly Trail is inconsistent with the community's desires and local culture; the Trail's proximity to private property was also expressed as a concern. • Recreational bicyclers create dangerous travel conditions, particularly when they occupy a full travel lane; need to improve the safety for the common areas for recreational riders along Wolfskin Road, Hargrove Lake Road, Winterville Road and Sandy Cross Road.
Public Transportation
• There is an increase in the senior population; consider public transportation options for seniors and students; seniors may require relocation closer to Athens if there are no mobility options as they age and cannot drive (consider centrally located hub). • A park and ride facility in Oglethorpe County would be nice to provide service from Crawford to Athens.

These themes and suggestions were considered alongside the technical analyses as part of the identification of potential transportation solutions to address future transportation needs in the County.

6 Goals and Objectives

Goals and objectives are the foundation of the long-range planning process. They guide the development of the Multi-Modal Transportation Plan by providing a basis for evaluating transportation plan improvements and reflecting the intentions that the Plan is meant to achieve. It is necessary to establish long-range goals and objectives to guide the transportation plan development process for Oglethorpe County. The goals represent the general themes and overall direction that Oglethorpe County and its residents envision for the future of the County. The objectives provide additional specificity and focus for each associated goal. Combined, they provide the policy framework for development and implementation of the transportation plan.

The *Transportation Plan* goals and objectives were developed to be consistent with relevant federal, state, and local plans and legislation. Furthermore, they reflect the community's long-term vision based on input from local leadership and the Study Advisory Committee.

6.1 National Goals

The Moving Ahead for Progress in the 21st Century (MAP-21) includes seven performance goals that must be considered when a MPO develops a LRTP. It is understood that Oglethorpe County is not currently an MPO; however, the guidelines for MPOs were followed to provide a strong framework for transportation decisions. Specifically, the LRTP must be designed around the following performance goals:

- **Safety** - To achieve a significant reduction in traffic fatalities and serious injuries on all public roads.
- **Infrastructure condition** - To maintain the highway infrastructure asset system in a state of good repair.
- **Congestion reduction** - To achieve a significant reduction in congestion on the National Highway System.
- **System reliability** - To improve the efficiency of the surface transportation system.
- **Freight movement and economic vitality** - To improve the national freight network, strengthen the ability of rural communities to access national and international trade markets, and support regional economic development.
- **Environmental sustainability** - To enhance the performance of the transportation system while protecting and enhancing the natural environment.
- **Reduced project delivery delays** - To reduce project costs, promote jobs and the economy, and expedite the movement of people and goods by accelerating project completion through eliminating delays in the project development and delivery process, including reducing regulatory burdens and improving agencies' work practices.

6.2 State Goals

In April 2012, Governor Nathan Deal released the Governor's Strategic Goals for Georgia, which included a vision of "a lean and responsive state government that allows communities, individuals and businesses to prosper." Specifically, it envisioned a Georgia that is educated, mobile, growing, healthy, safe, and fiscally responsible. The following goals established for the state of Georgia are very relevant to transportation:

- **Mobile**: Transporting people and products by improving the movement of people and goods across and within the state, expanding Georgia's role as a major logistics hub for global commerce and

leveraging public-private partnerships, and improving intergovernmental cooperation for successful infrastructure development.

- **Growing**: Creating jobs and growing businesses.
- **Healthy**: Providing for accessible care and active lifestyles.
- **Safe**: Protecting the public's safety and security by reducing injury and loss of life on Georgia's roads.

6.3 Local Goals

The Joint City-County Comprehensive Plan 2005-2025 provided a comprehensive review of the issues and opportunities that will affect the future growth of Oglethorpe County over the next 20 years. The transportation goal established in this comprehensive plan is to provide a safe, efficient, and effective transportation system that keeps pace with growth and integrates a variety of transportation modes, thereby increasing mobility options for all residents.

6.4 Goals and Objectives of This Plan

Based on the review of transportation goals at the national, state, and local levels, as well as the input from County and City officials and local stakeholders, the following goals and objectives were established for the Oglethorpe County Multi-Modal Transportation Plan to guide the transportation decision-making process:

Goal 1: Preserve the County's rural, natural, agricultural and environmentally sensitive areas and enhance the character of the historic and existing communities in the County.

Objective 1.1: Improve the environmental quality of transportation decision making by incorporating context-sensitive solutions and principles in all aspects of the planning and project development process.

Objective 1.2: Consider the overall rural, natural, agricultural, and environmental effects when making transportation decisions.

Objective 1.3: Identify potential environmental impacts early in the transportation decision-making process to protect significant natural, agricultural, historical, and cultural resources.

Goal 2: Optimize utilization of existing infrastructure and maintain a safe, reliable and efficient transportation network that will sustain economic activity and promote economic development.

Objective 2.1: Explore transportation solutions that accommodate growth in travel demand while sustaining economic activity and promoting economic development.

Objective 2.2: Improve the safety of the roadway network by identifying high-crash locations and identifying safety-related funding sources to implement improvements at these locations.

Objective 2.3: Identify projects that improve and enhance access to activity centers and projects that address high-crash locations and other safety-related issues.

Objective 2.4: Focus on system preservation by maintaining and optimizing the utilization of the existing transportation network.

Goal 3: Promote environmental sustainability through the coordination of land use and transportation plans.

Objective 3.1: Review the plan in conjunction with the future land use element of the Oglethorpe County Comprehensive Plan to assess potential impacts to the transportation system.

Objective 3.2: Encourage transportation improvements that are compatible with area development types.

Objective 3.3: As development is permitted, review the impact to the transportation system to ensure mobility is protected as parcel-level development occurs.

Goal 4: Provide a range of mobility options and enhance health and quality of life for all residents.

Objective 4.1: Coordinate transportation and land-use decision making to ensure viability of alternative modes.

Objective 4.2: Enhance and expand mobility options for all Oglethorpe County citizens, especially for the senior and disabled populations.

Objective 4.3: Identify programmatic funding sources for potential public transit, bicycle, and pedestrian improvements.

These goals and objectives are utilized later in the planning process to identify the appropriate performance measures and guide the project evaluation and prioritization.

7 Improvement Needs

Based on the activities summarized in Chapters 1 – 6 of this document, an assessment of future conditions was conducted which identified a series of potential improvements to address Oglethorpe County's transportation needs. Potential improvements were identified in various modes of transportation, including roadway, operations, bridges, bicycle, and pedestrian. Freight and transit were also considered in the evaluation and several recommendations to enhance these modes are also included in the document. These potential improvements were developed in consultation with the Stakeholder Advisory Group and Oglethorpe County citizens as outlined in Chapter 5.

7.1 Roadway Needs

The transportation network in Oglethorpe County was analyzed for three different types of potential roadway improvements: capacity improvements (including new roadways), operational improvements, and intersection improvements. Needs were evaluated through the capacity analysis based on the existing and 2040 travel demand model and safety analysis, discussed in Chapter 4. Stakeholder Advisory input was also considered in the identification of improvements consistent with the goals of the study, discussed in Chapter 5.

Logical Termini

For roadway capacity improvements, logical termini were determined to help link the long range planning process with National Environmental Policy Act 2003 and 2007 (NEPA) regulations. The Federal Highway Administration (FHWA) Code of Federal Regulations (CFR) includes three general principles at 23 CFR 771.111(f) that should be used to frame a highway project:

> In order to ensure meaningful evaluation of alternatives and to avoid commitments to transportation improvements before they are fully evaluated, the action evaluated in each environmental impact statement (EIS) or finding of no significant impact (FONSI) shall:
>
> - Connect logical termini and be of sufficient length to address environmental matters on a broad scope;
> - Have independent utility or independent significance, i.e., be usable and be a reasonable expenditure even if no additional transportation improvements in the area are made; and
> - Not restrict consideration of alternatives for other reasonably foreseeable transportation improvements.

Logical termini for each corridor improvement were examined and revised based on the analysis conducted to date.

Capacity Improvements

Based on the existing and future deficiencies identified in Chapter 4, the following capacity improvements are recommended:

- U.S. 78 Widening
  - PI # 132660-: from CR26/Smokey Road to CR166/Whit Davis Road
- Bypass

- PI # 231910-: Crawford/Lexington Bypass

During the 2nd Study Advisory Committee meeting, the potential realignments for both the U.S. 78 widening and bypass were discussed.

For the U.S. 78 widening, a southern alignment was requested to be evaluated further by the Study Advisory Committee. It was found that this alignment was considered during the GDOT Alternative Analysis Process and was screened out due to considerable environmental impacts. The approved northern alignment (PI # 132660-) has the Practical Alternatives Report (PAR) completed. The PAR is a report prepared for those projects that require an individual U. S. Army Corps of Engineers permit, providing an analysis of alternatives to avoid and to minimize harm to the jurisdictional waters of the United States. In addition, FHWA has approved the logical termini at each end of the existing project limits. With these approvals, any alignment shifts will significantly impact and delay the project's existing schedule. Therefore, it is recommended to follow the proposed northern alignment in the PAR for the U.S. 78 widening project.

For the bypass, a 4.2 mile northern alignment as an alternative to the 7.4 mile southern alignment (PI # 231910-) was also requested to be evaluated further by the Study Advisory Committee. The preliminary alignment for the Northern Bypass alternative would begin from roughly the CR 26/Smokey Road and SR 10/U.S. 78 intersection and closely follow the abandoned railroad to the vicinity of Smokey Trail where the bypass would continue in an easterly direction and intersecting with Old Mill Road and Bunker Hill Road, at which point the bypass would continue in a southeastern direction and would intersect with Buddy Faust Road before it rejoined SR 10/U.S. 78 northwest of Lexington. A preliminary technical desktop review and environmental screening was conducted to understand whether there is any fatal flaw for the Northern Bypass alignment. The environmental screening covers the following resources needed for NEPA consideration:

- Protected plant and animal species habitat;
- Jurisdictional wetlands and streams;
- Potential underground storage tank sites;
- Potentially historic resources/structures; and
- Areas of high potential for archaeological sites.

According to the Environmental Screening results, the overall potential for environmental impact of the Northern Bypass alternative is moderate to high, but not critical. Detailed environmental screening process and results can be found in **Appendix D**.

In addition, a capacity analysis of Northern Bypass was conducted for 2040. The operational analysis result shows that the Northern Bypass is expected to operate at LOS D while U.S. 78 east of the bypass is expected to operate at LOS E in 2040. Based on both analyses, the Northern Bypass seems to be feasible; it is recommended that more in-depth evaluation be carried out to further study through the Alternative Analysis process.

Operational Improvements

Operational improvements address geometric concerns and other issues that impact the flow of traffic on an existing roadway facility, and may include the addition of turn lanes or passing lanes, signage improvements, signal timing improvements, shoulder widening or upgrades, introduction of traffic calming elements, improved curve or turning radii, and/or paving projects. Operational upgrades of facilities can provide relief to adjacent facilities experiencing capacity problems by providing for viable movement of increased traffic flows without the major investment associated with a capacity enhancement or new roadway facility.

Recommendations for operational improvements are developed based on safety data, roadway characteristics, and Stakeholder Advisory input received during the *Transportation Plan* development process and should be regarded as planning-level. Detailed location-specific traffic analysis will be necessary in order to make specific improvement recommendations.

Passing Lanes

The following roadway is recommended for adding passing lanes:

- Passing lane pair on U.S. 78 from east of Stevens Grove Church Road to east of Beaver Dam Road (Wilkes County) - PI # 222460-

Shoulder Upgrade

The following roadways are recommended for upgraded shoulders:

- SR 77/S. Main Street from south of Hill Street to south of Church Street in Maxeys
- SR 77/Union Point Street from west of Boggs Street to U.S. 78/Atlanta Street in Lexington

Access Management

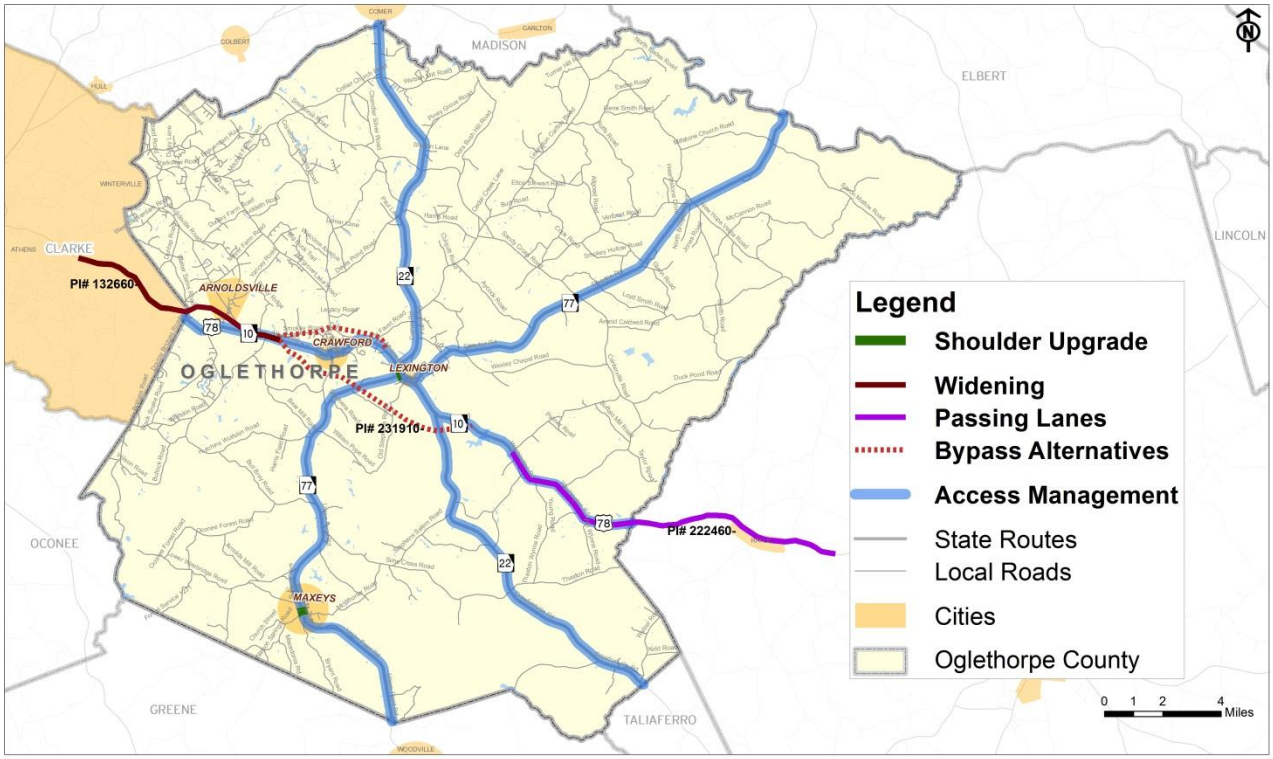
Access management is intended to balance the roadways' role of serving through traffic with the role of providing access to properties. Access management involves the proper planning and design of points of access to the public roadway system. These points of access include interchanges, public road intersections, and driveways. Sound access management can have a positive impact on roadway safety and the ability of roadways to carry traffic efficiently and safely. Ideally, the management policies should be applied when right-of-way is still available, access along the corridor is consolidated, vested interests are not yet well established, and there is the potential to adopt techniques early on that will have a powerful influence on future travel behavior.

It is recommended that further evaluation be carried out based on performance measures. The following roadways are ideal candidates for access management polices to ensure they maintain their appropriate operational levels:

- U.S. 78 (especially the segment from east of Double Bridges Road to SR 22/Crawfordville Road, where the future growth is anticipated and is expected to operate at LOS D or E by 2040)
- SR 22 (especially the segment from Salem Church Road to Harris Road where the future growth is anticipated)
- SR 77 (especially the segment from Hutchins Wolfskin Road to Sandy Cross Road where the future growth is anticipated)

See **Figure 7-1** for a map displaying the recommended roadway improvements including capacity and operational improvements.

FIGURE 7-1: RECOMMENDED ROADWAY IMPROVEMENTS



7.2 INTERSECTION IMPROVEMENTS

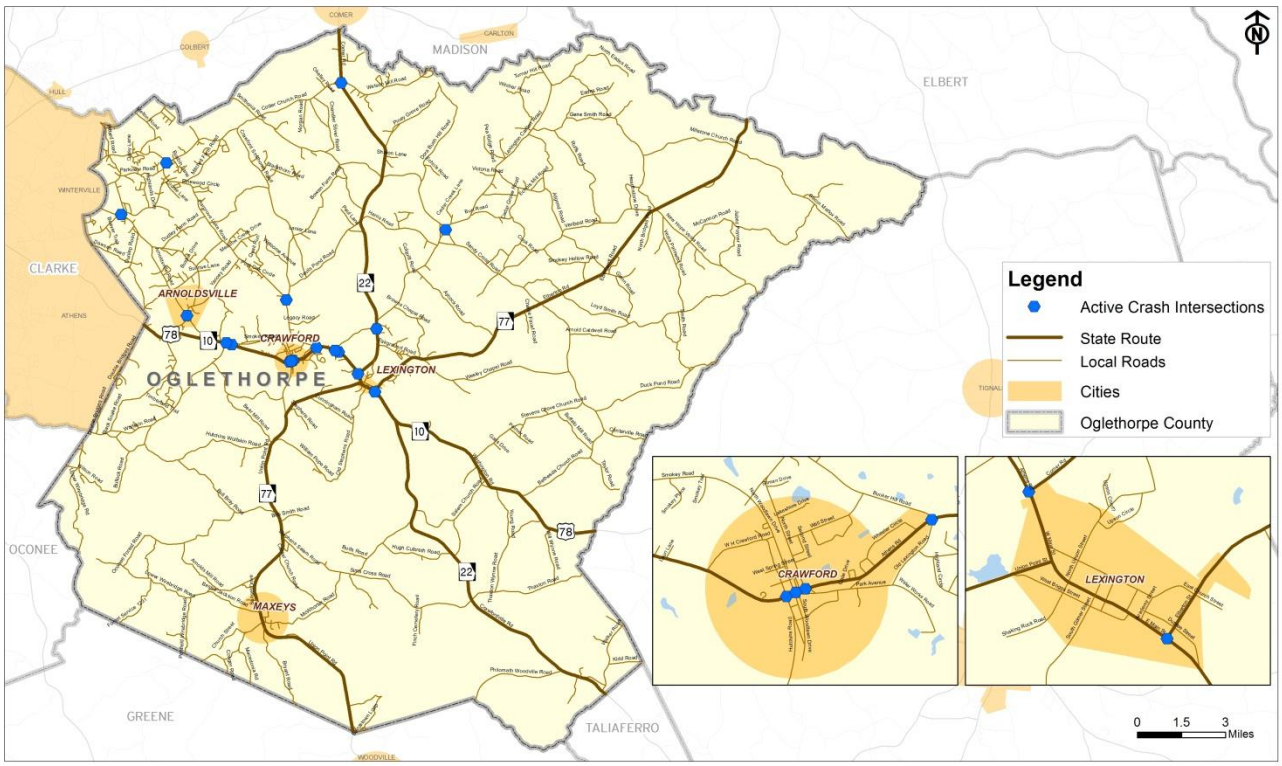
Intersection improvements are proposed to address needs identified based on safety analysis, existing and future traffic volumes, as well as safety concerns raised by the Study Advisory Committee. Improvements may include signage enhancements, upgrades to intersection control, and/or geometric realignment of an intersection. Recommendations for intersection improvements are typically based on planning-level data, and require detailed location-specific analysis by a professional engineer, and/or further review by GDOT District 2 to refine specific project improvement recommendations. Considerations include available right-of-way, traffic volumes, safety, driver expectancy, and the context of the area.

Incorporating technical analysis as well as the public and stakeholder input, the following intersections are recommended for future improvements:

- U.S. 78/Athens Road at SR 22/Comer Road
- U.S. 78/Athens Road at Buddy Faust Road
- U.S. 78/Athens Road at Broad Street
- U.S. 78/Athens Road at Bunker Hill Road
- U.S. 78/Athens Road at Oglethorpe Drive
- U.S. 78/Athens Road at Smokey Road
- U.S. 78/Athens Road at North Street
- U.S. 78/Athens Road at N Woodlawn Drive
- U.S. 78/Atlanta Street at SR 77
- SR 22/ Comer Road at Collier Church Road
- SR 22/ Comer Road at Buddy Faust Road

- Yancey Road at Arnoldsville Road
- Hargrove Lake Road at Arnoldsville Road
- Hargrove Lake Road at Crawford Smithonia Road
- Beaverdam Road at Smithonia Road
- Main Street at Wolfskin Road
- Sandy Cross Road at Lexington Carlton Road

FIGURE 7-2: RECOMMENDED INTERSECTION IMPROVEMENTS



7.3 BRIDGE NEEDS

Based on the sufficiency ratings identified in Section 4.4, bridges were identified as eligible for mid-term and long-term improvement recommendations. Bridges with a sufficiency rating of 50 or below are currently eligible for improvements. Bridges with a sufficiency rating between 50 and 80 are likely eligible for improvement by 2040.

The four bridges with sufficiency ratings below 50 that are eligible for improvement include:

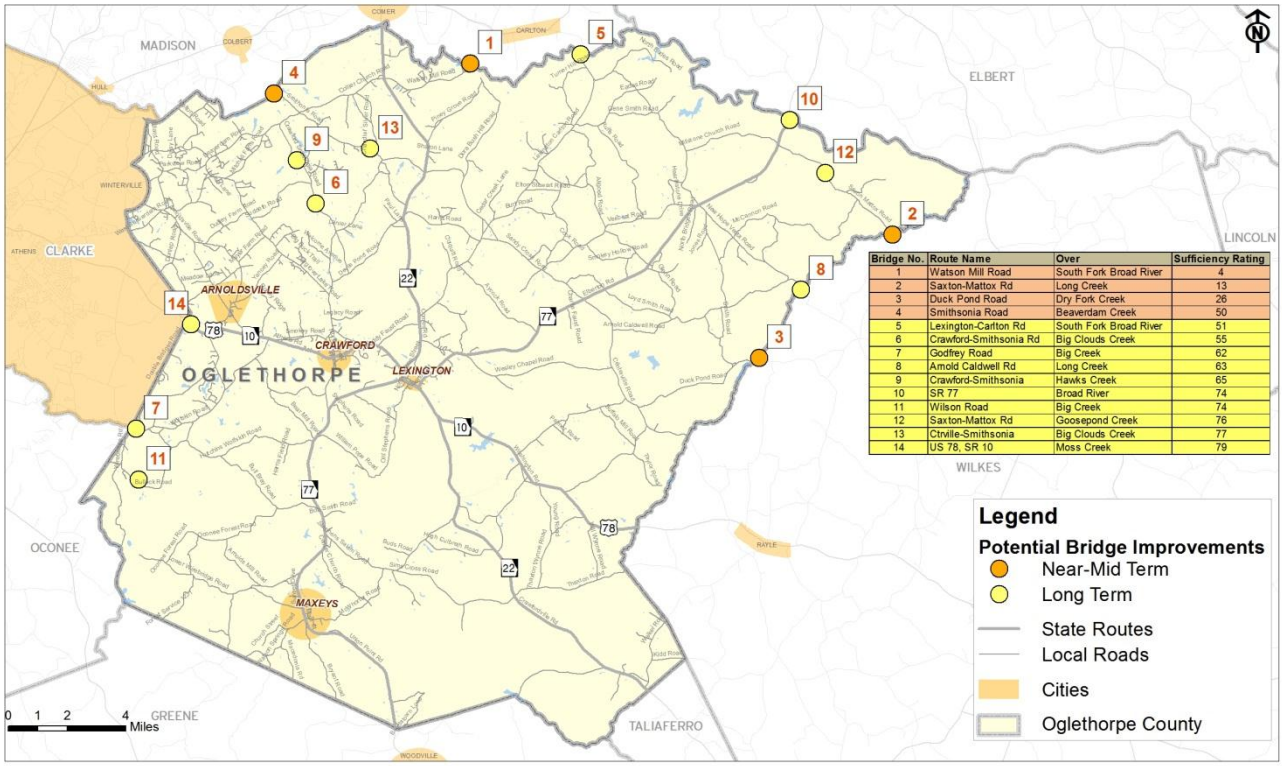
- Watson Mill Road over South Fork Broad River
- Saxton-Mattox Road over Long Creek
- Duck Pond Road over Dry Fork Creek
- Smithonia Road over Beaverdam Creek

Ten bridges were identified with sufficiency ratings between 50 and 80 and are likely eligible for improvement by 2040 which include:

- Lexington-Carlton Road over South Fork Broad River
- Crawford-Smithonia Road over Big Clouds Creek
- Godfrey Road over Big Creek
- Arnold Caldwell Road over Long Creek
- Crawford-Smithonia Road over Hawks Creek
- SR 77 over Broad River
- Wilson Road over Big Creek
- Saxton-Mattox Road over Goosepond Creek
- Carterville-Smithonia Road over Big Clouds Creek
- U.S. 78/SR 10 over Moss Creek

See **Figure 7-3** for a map displaying the recommended bridges for improvement.

FIGURE 7-3: RECOMMENDED BRIDGES FOR IMPROVEMENTS



Bridge No.	Route Name	Over	Sufficiency Rating
1	Watson Mill Road	South Fork Broad River	4
2	Saxton-Mattox Rd	Long Creek	13
3	Duck Pond Road	Dry Fork Creek	26
4	Smithsonia Road	Beaverdam Creek	50
5	Lexington-Carlton Rd	South Fork Broad River	51
6	Crawford-Smithsonia Rd	Big Clouds Creek	55
7	Godfrey Road	Big Creek	62
8	Arnold Caldwell Rd	Long Creek	63
9	Crawford-Smithsonia	Hawks Creek	65
10	SR 77	Broad River	74
11	Wilson Road	Big Creek	74
12	Saxton-Mattox Rd	Goosepond Creek	76
13	Ctrville-Smithsonia	Big Clouds Creek	77
14	US 78, SR 10	Moss Creek	79

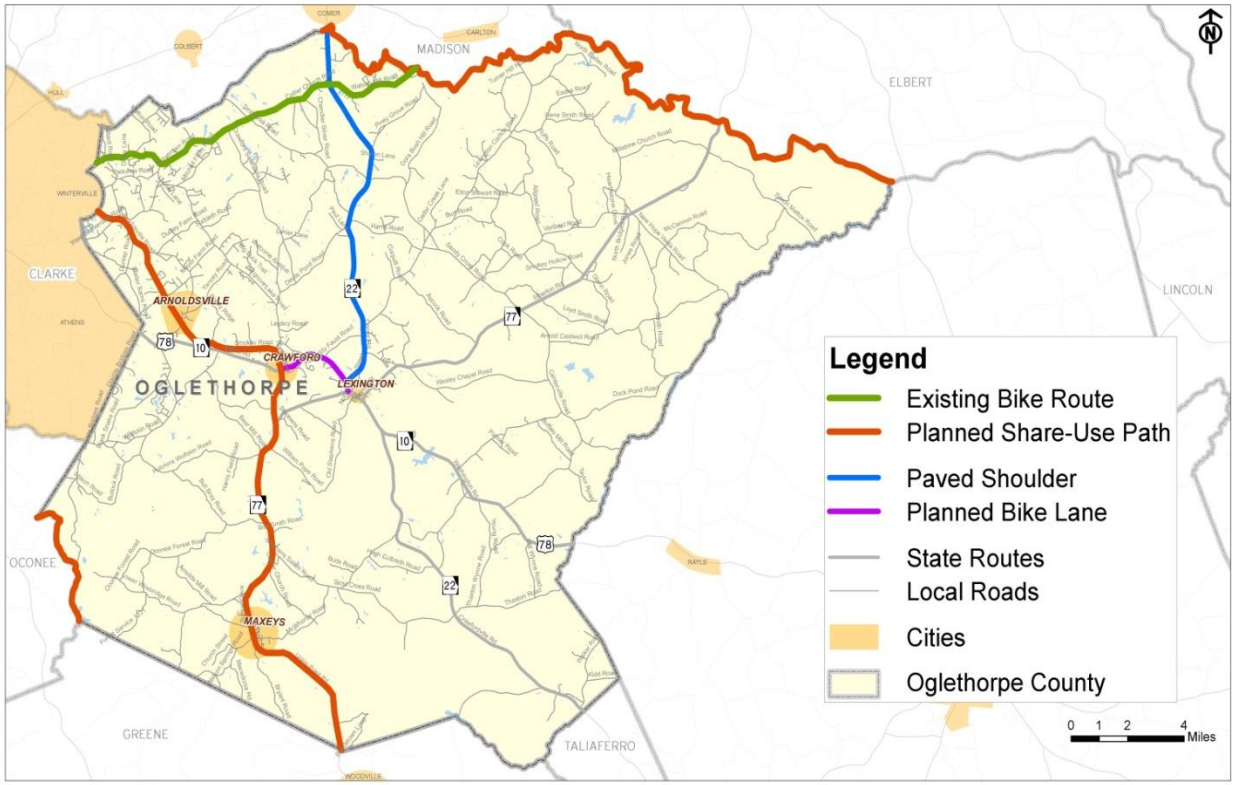
7.4 Bicycle and Pedestrian Needs and Recommendations

Coordination with Northeast Georgia Bike/Pedestrian Plan

In August of 2010, the Northeast Georgia Regional Commission completed the *Northeast Georgia Plan for Bicycling and Walking* that includes Oglethorpe as well as Barrow, Clarke, Elbert, Greene, Jackson, Jasper, Madison, Newton, Oconee, and Walton Counties. The Plan identified existing bicycle and pedestrian facilities and activities in the region and noted that Oglethorpe County is not equipped with any shared-use paths, bike lanes, sharrows, or "share the road" facilities. The Plan identified Critical Focus Areas where demand for bicycle and pedestrian facilities may exist. This was based on examining destinations and activity centers and capturing population within a one-mile "walkshed" and a three-mile "bikeshed" of each destination. This analysis identified Lexington as a Critical Focus Area for bicycle and pedestrian amenity development.

Specific recommendations for Oglethorpe County are depicted below in **Figure 7-4**.

Figure 7-4: NEGRC Regional Bicycle and Pedestrian Plan



Source: NEGRC - Northeast Georgia Plan for Bicycling and Walking, 2010.

Bicycle and Pedestrian Recommendations

During the development of the *Transportation Plan*, additional improvements are developed to improve mobility in Oglethorpe County based on the following:

- Review of existing land use, transportation, and recreation plans;
- Analysis of bicycle and pedestrian crash data;
- Examination of existing facilities;
- Review of current and proposed projects;
- Input from Stakeholder Advisory Group and the Public; and

- Site visits.

In addition to the on-going initiatives mentioned above, the following improvements to the bicycle and pedestrian system should be considered:

- Add Sidewalk(s)
  - U.S. 78 (on both sides) from Oglethorpe Builders Supply to East Elbert in Crawford (0.5 mi.)
  - East side of North Street from U.S. 78 to Bryan Park in Crawford (0.5 mile)
  - North side of U.S. 78 connecting library, senior center, medical center, high school, Bell's Grocery, and Fred's in Lexington (0.6 mi.)
- Pedestrian Signal
  - U.S. 78/North Street Intersection in Crawford
- Restripe
  - Pedestrian crosswalk at Depot in Crawford

The scope of this plan does not include an examination of every local street in the county for bicycle or pedestrian facilities. This plan is intended to evaluate safety problems and identify major bicycle and pedestrian needs and network deficiencies, and to propose potential projects to address those needs. Once the top priorities have been implemented, the plan should be updated to assess the current conditions, new challenges and opportunities, possible solutions and available funding. The development of a more detailed bicycle and pedestrian plan for the County is necessary in order to identify an appropriate community-wide network.

It is important to note that all recommendations, including the specific recommendations identified in the NEGRC Regional Bicycle and Pedestrian Plan, are subject to the available funding. Additional local funding might be required should the County decides to expedite the implementation of these projects.

System-wide Infrastructure and Policy Recommendations

The following recommendations should be considered throughout the County:

- Appropriate bicycle and pedestrian facilities should be included in all roadway improvement projects. The type of facility and level of accommodation will vary depending on need, land use, and other factors.
- Where bike lanes are recommended or planned, and it is later determined during the project development process that bike lanes cannot be accommodated for any reason, then shared lane markings (sharrows) should be used in its place rather than just signage or no facility at all.
- For roads with a rural-typical section (i.e. open drainage, no curb and gutter), construct minimum 6.5' paved shoulders as part of GDOT widening, reconstruction or resurfacing projects, and minimum 4' shoulders on county roads (increase to 6.5' if rumble strips are used).
- Construct and maintain sidewalks on both sides of the road within a ½-mile radius of all schools, as recommended by GDOT's Pedestrian and Streetscape Guide and supported by GDOT's Safe Routes to School Program. These could be implemented as part of roadway construction projects, developments or subdivisions, in order to help with implementation.
- Install fluorescent green-yellow pedestrian crossing warning signs at all trail crossings to warn motorists of bicycle and pedestrian crossings. In addition, install advance warning signage where sight distance is poor.

- Upgrade intersections for pedestrian and bicycle safety anytime a roadway is improved. Intersection treatments may include, but are not limited to: traffic signals, raised medians or crossing islands, crosswalks, advance crosswalk bars, curb ramps (as required by ADA in all roadway alteration projects), pedestrian countdown signal heads, pedestrian or trail crossing signage, "no turn on red" or other restrictive signage, and signal time adjustments. FHWA's PEDSAFE tool and FHWA's "How to Develop a Pedestrian Safety Action Plan" are helpful aides in choosing the right facility:
  - FHWA PEDSAFE tool: http://www.walkinginfo.org/pedsafe/
  - FHWA's "How to Develop a Pedestrian Safety Action Plan": http://www.walkinginfo.org/library/details.cfm?id=229.
- Subdivision and Zoning Codes: Update subdivision and zoning regulations to require that developers do the following:
  - Construct sidewalks on both sides of the road within subdivisions and along the main street frontage of a subdivision, commercial, office or retail development.
  - Provide bicycle parking at large commercial, office, and retail developments
  - Construct a path, bike lanes or suitable bicycle facility as part of any new development.
  - Provide inter-development or inter-parcel walkways and pedestrian connections not otherwise located parallel to street rights-of-way, and where warranted to improve non-motorized access to major facilities or other activity centers.

7.5 Transit Needs and Potential Recommendations

The online Survey conducted as part of this Study conveyed a sentiment of unmet public transportation needs in Oglethorpe County. Thirty-eight percent (38%) of Survey respondents identified transportation services for the elderly, disabled, and/or the general public as one of the three highest transportation improvement priorities for the County. The Study Advisory Committee also acknowledged that this need will likely increase as the population of seniors, students, and other transit-dependent populations grow in the County in future years. Thus the County is faced with the challenge to address mobility of these transit-dependent populations in a manner that is efficient and beneficial to it citizens in coming years.

Needs Assessment

Seniors

The growing senior population in Oglethorpe County represents perhaps the largest group of residents potentially seeking public transportation options in future years. The U.S. Census Bureau and the Governor's Office of Planning and Budget show a staggering increase in the percentage and number of seniors in the County by the year 2020 (age-specific projections beyond 2020 are not currently available). This data is shown in **Table 7-1**.

TABLE 7-1: OGLETHORPE COUNTY POPULATION 2010 AND PROJECTIONS FOR 2020

Demographics	2010		2020		Percentage Change (2010 to 2020)
	Count	%	Count	%	
Total Population	14,899	100%	16,708	100%	12%
Persons age 0 to 4 years	877	6%	790	5%	-9%
Persons age 5 to 17 years	2,678	18%	3,062	18%	14%
Persons age 18 to 64 years	9,230	62%	9,767	58.5%	6%
Persons age 65 and Over	2,114	14%	3,089	18.5%	46%

Source: U.S. Census and Governor's Office of Planning and Budget, 2012 Series

For 2010 to 2020, the County's total population growth is projected to slow to 12% but the population of seniors is expected to increase by 46%. The number of seniors age 65 and over is projected to increase to 3,089 persons by the year 2020, up from 2,114 in 2010 and 1,566 in 2000. The growing population of elderly citizens will also mean that the population of disabled citizens (currently 18% of the population in the region) will likewise increase in coming years. While the current senior population is somewhat scattered throughout the County, according to 2010 Census data, the majority of seniors currently live in the northwest (34%) and north central (34%) parts of the County. The City of Crawford also has a number of seniors living in several apartment complexes (Azalea Village, Forrest Hills, and Huntington Villas). Thus the geographical spread of the senior population presents logistical challenges for providing access to public transit.

The County does not currently have any type of retirement village or community that provides independent, assisted living, or nursing home amenities. Such a community would help to somewhat concentrate the population of seniors into one location that could be more efficiently served by the senior center transportation or any kind of future public transportation.

Low Income Population

Nearly 30% of citizens of all ages in the northeast part of the county and 20% of those in the north central portion of the county are currently living below the poverty level, exceeding the national average of 14%. 21% of all seniors residing in the north central part also have incomes below the poverty status. These households are often faced with limited transportation options for traveling to jobs and other activity centers for shopping, medical care, and the like. Without sufficient transportation to jobs, many in this sector will be unable to overcome poverty.

Students

According to the University of Georgia's Office of Institutional Research, for the 2012 fall semester, 89 undergraduate and graduate students reported Oglethorpe County as their primary address of residence. Moreover, the University requires that students live on campus during their first year of undergraduate

attendance; however, they offer exemptions from this requirement if the students live with a parent or legal guardian in Oglethorpe County (as well as other counties adjacent to Clarke County). Thus, students represent another potential user of public transportation both now and in future years.

The General Public

The online Survey results expressed support for public transportation, particularly for elderly, low-income, and disabled citizens. 38% of respondents identified it as one of the three top priorities for the County while only 29% said that they had personally experienced a lack of on-demand transit services. Several survey respondents indicated that they did not necessarily need transit services for themselves but that it would be nice for others. Likewise, the NEGRC Transit Development Plan for Oglethorpe County, completed in 2009, garnered similar sentiment about public transportation in its public survey. 39% of respondents said they would take public transportation to work while 61% would not and over half felt that there was at least somewhat of a need for public transportation services in Oglethorpe County. Thus, both surveys suggest that, aside from some commuters, the general public may not be primary users of a public transit system.

Transit Recommendations

The data presented above, coupled with Survey responses, indicates that the elderly, low-income individuals, students, and some commuters would be the most likely users of public transportation. Below are alternatives and recommendations for addressing these transit needs.

Park-and-Ride/Carpool Lots

Designated park-and-ride/carpool lots can be effective in establishing ride-sharing in the County and can serve as a launch-pad for additional transit services, such as commuter shuttles. Park-and-ride and carpool lots are designated parking lots at which commuters are able to park their personal vehicles to join a carpool/carpool or public transit. The County can develop user agreements or easements with existing lot property owners or can convert publicly owned land into park-and-ride lots.

A park-and-ride lot could initially be located in Crawford and/or Lexington along U.S. 78. This would provide a logical meeting place for workers or students wishing to carpool to Athens. A lot could also potentially be used to enhance current transportation services provided by the Senior Center or could provide independent seniors with a meeting place to coordinate trips to Athens for groceries, medical appointments, and recreation.

A lot located in downtown Crawford would be in close proximity to higher density residential areas and nearby apartment complexes that currently house many seniors (Azalea Village, Forrest Hills, and Huntington Villas). A lot located in the Lexington area would be somewhat closer to the low-income and senior populations residing in the north central and northeast parts of the county. The largest existing parking lot in

Bells Foods on U.S. 78 in Lexington

Lexington is located at Bells Foods on U.S. 78.

Rideshare Programs

With a park-and-ride facility in place, the County can promote rideshare programs on its website. Rideshare programs formally match commuters interested in carpooling or vanpooling to a particular work location or to other destinations. There are a number of online rideshare programs available. GDOT and the Georgia Commute Options (GCO) offer matching assistance and financial incentives for commuters who carpool and vanpool (www.gacommuteoptions.com).

Carpools are often informally organized between commuters working at the same employer. Employers sometimes also offer matching services for workers living in close proximity to each other or to park-and-ride lots. The County can use its website to promote these and other rideshare opportunities.

Commuter Shuttle

Transportation to Athens was the most frequently mentioned transit request by Study Survey respondents. A commuter shuttle that utilizes a County park-and-ride facility, mentioned above, could provide this service. The shuttle could initially be set up to travel to and from the Wal-Mart on U.S. 78, east of Athens. This Wal-Mart also houses an Athens-Transit park-and-ride lot. Three Athens Transit bus routes, Routes 25, 26, and 27, service this lot on weekdays and at limited times on weekends. Shuttle riders could use the service to shop at Wal-Mart or they could continue their trip to Athens on one of the buses. Route 26 makes a direct trip to downtown Athens and the Athens Transit Multi-Modal Station. Routes 25 and Route 27 traverse through the University of Georgia campus before reaching downtown Athens and the Multi-Modal Station. While a separate study would be needed to determine specific time-of-day demand, service levels, and fare structure, such a shuttle between a park and ride facility in Oglethorpe County and the Wal-Mart park-and-ride facility in Athens could provide an effective transit option for students, seniors, workers, as well as the general public.

Human Services Transportation

Given the demand relative to the County's overall population, an on-demand rural transit system, which utilizes vans to provide fare-based pick-up and delivery transportation services for all residents, may not be a viable option for Oglethorpe County at this point. To adequately plan for the changing population and explosive growth in the senior population in future years, the County can take steps to work towards this type of service to meet its future demand. This includes the following:

- The NEGRC organizes and facilitates meetings for the Rural and Human Services Transportation Committee (RHST), a group of county representatives who address rural transit objectives and initiatives for the 12-county region. Oglethorpe County should actively participate in this committee, with its future needs in mind.
- Along with participation in the RHST Committee, the County can look to its neighbors for possibly accomplishing greater efficiencies in providing transit solutions. Currently, Elbert and Jackson Counties have individual on-demand rural transit systems while neighboring Oglethorpe and Madison Counties do not. Oglethorpe County could partner with Madison County to initiate various types of shuttle or transit programs. Oglethorpe County could work with Elbert County to coordinate new services with Elbert's existing rural transit system. Or, the four counties could possibly partner together to provide coordinated on-demand rural transportation services, thereby achieving economies of scale and reducing administrative, service provider, and capital

and vehicle costs. The NEGRC could be used as a resource to facilitate coordination on any initiatives between Oglethorpe and its neighboring counties.

As part of its County and City Comprehensive Land Use Plan Update scheduled for completion in 2015, Oglethorpe County will have the opportunity to re-examine its demographic, economic, and land use data and re-assess its public transit demand and need. If the County seeks to promote development and a lifestyle that would attract retirees to the area, not only it will need to provide living communities conducive to this population but it will need to address the public transportation needs of this sector as well. Well-planned retirement villages or communities that mix various income levels with independent, assisted living, and nursing home care coupled with conveniently located access points to shuttles or vans could be very attractive to retirees desiring a comfortable, rural lifestyle in Oglethorpe County.

7.6 Freight and Rail

Freight Needs

Truck traffic is concentrated on U.S. 78, SR 77, and SR 22. Trucks also take short-cuts on non-GDOT maintained roads such as Wolfskin Road between U.S. 78 and Watkinsville. The Joint City-County Comprehensive Plan, 2005 – 2025, directs future commercial growth and new industry to the U.S. 78 corridor east and west of Crawford. Specifically, the north quadrant of U.S. 78 between Arnoldsville Road and Broad Street and the area west of downtown Crawford to Wheeler Circle are identified for future commercial land use. As new industry locates into these areas, freight truck traffic will also increase. Freight routes, however, are expected to remain somewhat constant, with trucks transporting goods between source industries located in the County to their markets. Freight transport between points of origin in the County and rail just north of the County line is expected to remain minimal.

The online Survey, conducted as part of this Study, queried respondents about problems with heavy truck traffic. While 74% of respondents indicated that they did not experience problems with heavy truck traffic, many responses were provided indicating where heavy truck traffic exists. The U.S. 78 corridor was the overwhelming location mentioned. According to respondents, truck traffic and speed near Oglethorpe County High School on U.S. 78 is problematic. Truck traffic at the intersection of U.S. 78 and SR 22 in the vicinity of the primary, elementary, and middle schools also causes concern. A complete summary of the Survey can be found in **Appendix C**.

Freight Recommendations

Recommendations for future freight movement in Oglethorpe County are below.

- Industrial and commercial development along U.S. 78 through Crawford and Lexington will bear greatly on future truck freight traffic volume. It is recommended that the County guide new industry into appropriate locations, according to the Future Development Map in the County-City Comprehensive Plan. It is also recommended that the County review the impact of anticipated freight traffic generated by new industry so that appropriate traffic and safety measures can be identified and implemented.
- Roadway improvements along the U.S. 78 corridor, particularly west and east of Crawford, will help to mitigate the impact of truck speed and volume. This includes intersection control improvements, turn lanes, and thru-traffic diversion routes around the downtown areas. Specific intersections targeted for improvements include:
  - U.S. 78 at Buddy Faust Road
  - U.S. 78 at Bunker Hill Road

  - U.S. 78 at Old Edwards and Yancey Roads
  - U.S. 78 and SR 22
  - U.S. 78 and SR 77

- Consider paving roads bearing heavy truck traffic to improve the operating condition.

Air Freight

The concept of an air freight terminal was introduced to the County in a consulting report dating several years ago. The terminal was presented as a freight handling operation, similar to the original FedEx freight operation in Memphis, Tennessee. This facility would not handle any air passengers but would serve to move freight traffic out of the Atlanta area. The facility was proposed for the southeast quadrant of the County along the SR 22 corridor. This location would allow direct delivery of freight to the terminal via SR 22 and I-20. The air freight terminal concept is not incorporated into the Oglethorpe County Joint City-County Comprehensive Plan - 2005 – 2025 nor is it included in the Oglethorpe County Short Term Work Program Update 2011.

Rail

Oglethorpe County does not have active rail lines. Thus there are no recommendations for rail improvements.

8 Project Prioritization

In order to aid GDOT and County staff, potential improvement projects identified to address future transportation needs in Oglethorpe County were vetted with the Study Advisory Committee and prioritized based on established criteria consistent with the study goals identified in Chapter 5. This section presents the recommended improvements, the estimated costs associated with these improvements, project prioritization criteria, and the final list of prioritized projects for each improvement category including roadway capacity, intersection, bridge, bicycle and pedestrian.

8.1 Estimated Costs

The GDOT Office of Planning's Right of Way and Utilities Cost Estimation Tool (RUCEST) and a Construction Cost Estimation Tool (CES) were used in the development of planning-level cost estimates for the Oglethorpe County *Transportation Plan*. These tools include area-specific values and the most up-to-date data available for construction lettings in the State of Georgia. Please note that all planning-level costs are current-year dollars, based on the best assumptions and information available at the time this study was completed. All planning-level project costs will be further refined as specific improvements and engineering concepts evolve. Actual project costs may vary depending on a number of factors which include, but are not limited to, the results of more detailed environmental and engineering studies, fluctuations in the cost of land and materials, and the year of expenditure. It is important to note that all planning-level cost estimates should be considered preliminary in nature. More detailed engineering studies are required to identify highly accurate cost estimates based on specific project characteristics and concepts.

Roadway Cost Estimates

Roadway assumptions include the planning-level cost averages of pavement based on GDOT's recommended typical section for the facility type. All capacity related needs were identified within the Department's Program; therefore, the current project costs provided by TPro were used. Shoulder upgrades assumed a cost of $180,000 per mile to upgrade the shoulder in both directions.

Intersection and Operational Improvement Cost Estimates

In the case of intersection and operational improvement recommendations, a micro-level analysis and review by a professional engineer is required to make specific project recommendations. Specific recommendations may include improvements such as adding left turn lanes or right turn lanes off a major arterial, or modifying the geometric design of the road.

For purposes of the Oglethorpe County *Transportation Plan*, the planning-level cost estimate used for operational improvements is a placeholder of $270,000. This estimate represents a reasonable average for intersection improvements, but it is important to note that actual costs could be higher or lower depending on the specifics of the improvement identified. In cases where a specific improvement item is identified, such as a traffic signal or a roundabout, a unit cost for the item is used if available. Planning level construction cost estimates for these types of improvements should be revisited when a more detailed analysis is conducted.

Bridge Cost Estimates

Bridge improvements were calculated based on the appropriate typical section and square footage of the improved bridge structure with the assumption of a cost of $110 per square foot of bridge deck. Additionally

for State Routes, $1,400,000 was added per bridge approach. This assumes 1/3 mile new roadway construction to access the new bridge being built alongside the old bridge.

Bicycle and Pedestrian Cost Estimates

Pedestrian improvement costs assume 5 feet sidewalks. According to FHWA, sidewalks require a minimum width of 5.0 feet to meet the minimum requirements for people with disabilities. Right-of-way (ROW) costs were factored into sidewalk improvements. Signage and crossing treatments were assumed to occur within existing ROW. Construction costs for 5 feet sidewalks were assumed to be $520,000 per mile. Construction costs for bike lanes were assumed to be $1 million per mile. Minor improvement also included restriping crosswalks which assumed a cost of $1,500.

8.2 Project Prioritization Overview

Qualitative and quantitative evaluation factors were established and applied to potential improvements. The evaluation methodology produces a score for each of the potential projects, resulting in a prioritization of improvement options to meet the County's transportation needs. Prioritization criteria were developed for the following types of projects: roadway capacity and operation, intersections, bridges, and bicycle and pedestrian improvements. The project prioritization criteria established as part of the development of the *Transportation Plan* also provides a framework for Oglethorpe County so that the future potential improvements could be evaluated objectively by County staff.

8.3 Roadway Capacity and Operation Project Prioritization

Qualitative Criteria

Qualitative criteria were established to evaluate the deficient corridors based on various conditions or standards established through the study process. The following list documents the qualitative criteria established for the roadway capacity and operation improvement evaluation. These correspond to the vision established in the Goals and Objectives documented in Chapter 6.

- System Preservation
- Corridor Type
- Connectivity
- Protection of Downtowns
- Project Readiness
- Support of Comprehensive Planning Efforts
- Transportation and Land Use Linkage

Potential projects were considered alongside the established criteria and associated scoring presented in **Table 8-1** below. Based on the resulting scores, an initial prioritization list was established. The highest score based on qualitative criteria is 50 points. The qualitative score is combined with the quantitative score documented on the following pages for the ultimate prioritization score.

TABLE 8-1: ROADWAY PROJECT QUALITATIVE PRIORITIZATION CRITERIA

Roadway Project Qualitative Prioritization Criteria	Possible Points	
System Preservation Does the project build on or maximize the use of existing transportation infrastructure?	No Yes	0 10
Corridor Type What is the corridor type and in what level it provides regional connectivity and system reliability?	Local State Route U.S. Route	0 5 10
Connectivity Does the proposed project improve access between activity centers or link existing or proposed projects or provide regional connectivity?	No Yes	0 5
Protection of Downtown Does the proposed project enhance the roadway safety and operations in downtown areas?	No Yes	0 5
Project Readiness Level Which proposed phase or mile stone is the project in? Does the project acquire additional right-of-way (ROW)? Is the project relatively low cost and easy to implement?	Low Moderate High	0 5 10
Support of Comprehensive Planning Efforts Does the proposed project preserve/ enhance the character of existing communities and stimulate economic growth in the County?	No Yes	0 5
Transportation Land Use Linkage Has the proposed project coordinated with, or support, land use decisions in the area?	No Yes	0 5
TOTAL POSSIBLE POINTS	50	

Quantitative Criteria

Quantitative criteria were identified to evaluate deficient corridors based on various measurable conditions. The same criteria were used for corridors being recommended for capacity improvements as with corridors being recommended with operational improvements. The list below documents the quantitative criteria established for the roadway network improvement evaluation.

- Volume to Capacity (V/C) Ratio
  - What is the existing V/C ratio for the roadway segment?
- Ratio of Corridor Crash Rate (Number of Crashes per 100 Million Vehicle Miles Traveled) to Statewide Crash Rate Average
  - How does the crash rate of the roadway segment compared to the average statewide crash rate?
- Number of Fatalities
  - Did a fatality occur along the roadway segment?

Table 8-2 displays the quantitative criteria and the associated scoring. The total points established by the Quantitative Criteria range from 0 to 50 points.

TABLE 8-2: ROADWAY PROJECT QUANTITATIVE PRIORITIZATION CRITERIA

Roadway Prioritization Criteria	Possible Points
Volume to Capacity Ratio	
0.00 - 0.249	4
0.250 - 0.399	8
0.400 - 0.499	12
0.500 - 0.599	16
0.600 - 0.699	20
0.700 - 0.799	24
0.800 - 0.899	28
0.900 - 0.999	32
>1	36
Ratio of Corridor Crash Rate to Statewide Crash Rate	
0.01 - 0.49	1
0.50 - 0.99	2
1.00 - 1.49	4
1.5 - 1.99	6
> 2	8
Number of Fatalities	
1	2
2 or more	6
TOTAL POSSIBLE POINTS	50

The total points that a facility can receive for both the qualitative and quantitative criteria is 100 points. Based upon the identified improvements and the evaluations made during the quantitative and qualitative evaluation, a prioritized list of recommendations was established. The scoring for the corridor capacity related improvements is displayed in **Table 8-3** and the scoring for the corridor operational improvements is displayed in **Table 8-4**.

TABLE 8-3: ROADWAY CAPACITY IMPROVEMENT PRIORITIZATION SCORES

ID	Facility	Qualitative Criteria								Quantitative Criteria				Total Score
		Continuation of Existing Road Widening Project	Governor's Road Improvement Program/National Highway System	Connectivity	Protection of Downtowns	Project Readiness	Supports Comprehensive Planning Efforts	Maintains Transportation and Land Use Linkage	Sub-Total Qualitative Criteria	Volume/Capacity Ratio	Ratio of 100 Million VMT to Statewide Average	Number of Fatalities	Sub-Total Quantitative Criteria	
		0-10	0-10	0-5	0-5	0-10	0-5	0-5		0-36	0-8	0-6		
C-1	U.S. 78 Widening	10	10	5	0	10	5	5	45	24	2	0	26	71
C-2	U.S. 78 Bypass	0	0	5	5	0	0	0	10	20	4	2	26	36

TABLE 8-4: ROADWAY OPERATIONAL IMPROVEMENT PRIORITIZATION SCORES

ID	Facility	Qualitative Criteria								Quantitative Criteria				Total Score
		Continuation of Existing Road Widening Project	Governor's Road Improvement Program/National Highway System	Connectivity	Protection of Downtowns	Project Readiness	Supports Comprehensive Planning Efforts	Maintains Transportation and Land Use Linkage	Sub-Total Qualitative Criteria	Volume/Capacity Ratio	Ratio of 100 Million VMT to Statewide Average	Number of Fatalities	Sub-Total Quantitative Criteria	
		0-10	0-10	0-5	0-5	0-10	0-5	0-5		0-36	0-8	0-6		
O-1	U.S. 78 - Passing Lane	10	10	5	0	10	5	5	40	4	1	0	5	50
O-2	SR 77/S Main Street - Shoulder upgrade	10	5	5	5	10	0	5	40	4	1	0	5	45
O-3	SR 77/Union Point Street - Shoulder upgrade	10	10	5	5	10	0	5	45	4	1	0	5	50
O-4	U.S. 78 – Access Management	10	10	5	5	5	5	5	45	24	6	2	32	77
O-5	SR 22 – Access Management	10	5	5	5	5	5	5	40	8	6	6	20	60
O-6	SR 77 – Access Management	10	5	5	5	5	5	5	40	4	2	2	8	48

The project points are not meant to be the final decision on whether a project should be implemented or not. Instead, these rankings should be employed in conjunction with input from key technical staff from GDOT and the County; input from political decision-makers; and public comment.

Based on the existing condition analysis, 47 percent of the total roadways in Oglethorpe County are dirt or gravel. So in addition to prioritizing roadway capacity and operation projects, criteria has been established to evaluate and prioritize dirt and gravel roads to be paved if funding becomes available. The detailed evaluation criteria and analysis results can be found in **Appendix E**.

8.4 Intersection Prioritization

Criteria were established to evaluate the potential intersection improvements based on various standards established through the study process. The following list documents the criteria established for the intersection evaluation.

- How many crashes occurred at the intersection between 2007 and 2011?
- Did a fatality occur at the intersection?
- What is the Average Annual Daily Traffic (AADT) at the intersection?
- Is the intersection currently identified by GDOT or the County?

By comparing potential projects to these established criteria, it was possible to determine which projects scored highest against these critical measures. This information was used to prioritize projects. **Table 8-5** below documents the scoring used for the intersection prioritization and **Table 8-6** displays the scoring applied to the proposed intersection improvements.

Table 8-5: Intersection Prioritization Criteria

Intersection Prioritization Criteria	Possible Points
Crashes How many crashes occurred at the intersection between 2007 and 2011?	> 8 = 20 5 - 8 = 12 <5 = 6
Fatality Did a fatality occur at the intersection?	Yes = 20 No = 0
AADT What is the Average AADT at the intersection?	> 5,000 = 30 5,000 - 3,000 = 24 3,000 - 1,000 = 15 < 1,000 = 0
Currently Identified Improvement Is the intersection currently identified by GDOT/County?	Yes = 30 No = 0
Total Possible Points	**100**

TABLE 8-6: INTERSECTION PRIORITIZATION

ID	Location	Rank	Total Crashes (07-11)	Fatality Crashes	2010 AADT	GDOT/County Identified	Total Score
I-1	U.S. 78/Athens Rd at SR 22/Comer Rd	1	12	0	8,790	Yes	80
I-13	U.S. 78/Athens Rd at Buddy Faust Rd	1	14	0	8790	Yes	80
I-14	U.S. 78/Athens Rd at Broad St	1	9	0	8,740	Yes	80
I-10	U.S. 78/Athens Rd at Bunker Hill Rd	4	6	0	8,740	Yes	72
I-9	Yancey Rd at Arnoldsville Rd	5	12	0	1,910	Yes	65
I-25	Hargrove Lake Rd at Arnoldsville Rd	6	5	0	3,590	Yes	60
I-23	SR 22 at Buddy Faust Rd	7	2	0	1,360	Yes	51
I-24	Hargrove Lake Rd at Crawford Smithonia Rd	7	2	0	1,530	Yes	51
I-26	Beaverdam Rd at Smithonia Rd	7	2	0	2,210	Yes	51
I-3	U.S. 78/Athens Rd at Smokey Rd	10	8	0	9,080	No	50
I-5	U.S. 78/Athens Rd at North St	10	12	0	8,740	No	50
I-6	U.S. 78/Athens Rd at N Woodlawn Dr	10	11	0	8,740	No	50
I-28	SR 22/ Comer Rd at Collier Church Rd	13	6	2	1,800	No	47
I-2	U.S. 78/Atlanta St at SR 77	14	8	0	4,580	No	44
I-4	Main St at Wolfskin Rd	15	7	0	9,080	No	42
I-8	Sandy Cross Rd at Lexington Carlton Rd	15	6	0	890	Yes	42
I-12	U.S. 78/Athens Rd at Oglethorpe Dr	15	6	0	8,790	No	42

The prioritization scoring resulted in the following top tier intersection improvements:

- U.S. 78/Athens Road at SR 22/Comer Road
- U.S. 78/Athens Road at Buddy Faust Road
- U.S. 78/Athens Road at Broad Street
- U.S. 78/Athens Road at Bunker Hill Road
- U.S. 78/Athens Road at North Street
- SR 22 at Buddy Faust Road
- SR 22/ Comer Road at Collier Church Road
- Yancey Road at Arnoldsville Road
- Hargrove Lake Road at Crawford Smithonia Road

For those top nine (9) intersections, a through operational and crash analysis was conducted including:

- Physical Condition - summarized the intersection type and lane configuration
- Traffic Characteristics – highlighted turning movement counts (TMC) for both AM and PM peak hours which were collected at all intersections on April 24, 2013.

- Safety Analysis – summarized the safety analysis results which were based on the crash data from the last five years (2007-2011). Safety analysis was used to assist in identifying safety issues and selecting countermeasures to improve the intersection.
- Peak Hour Level of Service Analysis – summarized the operational analysis results for both AM and PM peak hours using Highway Capacity Software (HCS).
- Stakeholder and Public Input – recapped the input from stakeholders and summarized the public survey results.

Based on the results of the operational and crash analysis, a variety of potential small-scale intersection improvements are recommended for each of the top nine (9) intersections to enhance safety and operations. The improvements include advanced warning signs, adjustment in intersection controls, and/or geometric realignment of an intersection.

Improvement recommendations are based on available right-of-way, traffic volumes, safety analysis, driver expectancy, and the context of the area. Specifically, safety analysis was used to assist in identifying safety issues and selecting countermeasures to improve them; driver expectancy, available right-of-way, traffic volumes, and levels of service were used to evaluate the adjustment in intersection controls including uncontrolled intersections, stop controlled intersections, signalized intersections, and roundabouts.

For each improvement, the following information is included:

- Crash Type Addressed – highlighted the crash type to which the proposed improvement is intended to address.
- Benefits – discussed the expected benefits associated with the proposed improvement.
- Timeline for Implementation – referred to the relative approximate time it can take to implement the proposed intersection improvements. Three categories include:
    - Short (< 1 year)
    - Short to Moderate (1 to 3 years)
    - Moderate (> 3 years)
- Estimated Cost – provided categories of planning-level estimated costs of the intersection improvements related to one another. All improvements are considered low cost, low to moderate or moderate cost. Costs could vary considerably due to right-of-way costs.
    - Low (< $100,000)
    - Low to Moderate ($100,000 to $500,000)
    - Moderate (>$500,000)
- Crash Reduction Factor (CRF) – CRFs are the quantitative results from research and/or evaluation studies, indicating the percentage reductions in crashes that can be expected after implementing treatments. Crash Reduction Factors (CRFs) are from FHWA's "Issue Brief 8: Toolbox of Countermeasures and Their Potential Effectiveness for Intersection Crashes" and "Desktop Reference for Crash Reduction Factors".

The detailed Intersection Assessment and Potential Improvements can be found in **Appendix F**.

During the intersection assessment process, a thorough review of the potential improvements was conducted by GDOT District 2 staff and some of the potential improvements have been through the GDOT district and maintenance including the following:

- Bunker Hill Road at U.S. 78, replace (2) 30", R1-1 (stop) signs with (2) 36" signs.

- Install a W2-1 (intersection) sign on U.S. 78 along the eastbound approach, prior to Broad Street.
- Remove and reset the existing sign series associated with the westbound merge on U.S. 78, just prior to Buddy Faust Road.

8.5 Bridge and Ford Prioritization

Bridges with a sufficiency rating of 50 or lower are eligible for improvements, and those with a rating of 80 to 50 are eligible for improvements by 2040. The four bridges with sufficiency ratings below 50 that are eligible for improvement include:

- Waston Mill Road over South Fork Broad River
- Saxton-Mattox Road over Long Creek
- Duck Pond Road over Dry Fork Creek
- Smithonia Road over Beaverdam Creek

In addition to bridge, evaluation criteria are established for prioritizing future improvements for existing fords. The criteria include the following:

- Functional classification of the roadway at which the ford locates;
- Connectivity of the roadway at which the ford locates;
- Within a projected residential growth area;
- Within a commercial/projected employment growth area; and
- County input and priority.

Table 8-7 below documents the scoring used and **Table 8-8** displays the scoring applied for the prioritizing of future improvements for existing fords.

TABLE 8-7: FORD IMPROVEMENT PRIORITIZATION CRITERIA

Ford Improvement Prioritization Criteria	Possible Points	
Roadway Functional Classification What is functional classification of the roadway at which the ford locates?	Local Road Rural Minor Collector	5 10
Connectivity Does the roadway at which the ford locates connect state routes or minor connectors?	Local Road Rural Minor Collector State Route	0 10 20
Projected Residential Growth Area Is the roadway which the ford locates within the projected residential growth area?	No Yes	0 10
Projected Commercial/Employment Growth Area Is the roadway which the ford locates within the projected commercial/employment growth area?	No Yes	0 10
County input and priority Is the ford currently identified by County as a priority?	Low Moderate High	0 15 50
Total Possible Points	**100**	

TABLE 8-8: FORD IMPROVEMENT PRIORITIZATION

ID	Location	Rank	Roadway Functional Classification	Connect To	Within Projected Residential Growth Area	Within Commercial/ Projected Employment Growth Area	County Priority	Total Score
F-1	Faust Farm Road	2	Local Road	SR 77/Union Point Road	Y	N	High	85
F-2	Bear Mill Road	6	Local Road	SR 77/Union Point Road	N	Y	Moderate	50
F-3	Arnolds Mill Road	12	Local Road	Local Roads	N	N	Low	5
F-4	Glenn Road	9	Local Road	Local Roads	N	N	Moderate	20
F-5	Arnold Caldwell Road	10	Local Road	Centerville Road (Rural Minor Collector)	N	N	Low	15
F-6	Smith Road	5	Local Road	Local Roads	N	N	High	55
F-7	New Hope Vesta Road	7	Rural Minor Collector	SR 77/Elberton Road	N	N	Moderate	45
F-8	Buffalo Mill Road	4	Local Road	Stevens Grove Church Road	N	N	High	59
F-9	Allgood Road	10	Local Road	Veribest Road	N	N	Low	9
F-10	Thaxton Road	3	Local Road	SR 22/Crawfordville Road	N	N	High	75
F-11	Cook Road	8	Local Road	Veribest Road	N	N	Moderate	24
F-12	N Upson Street	1	Local Road	SR 22/Comer Road and U.S. 78/Athens Road	Y	N	High	85

Based on the prioritization rating and further County input, the following fords have top priority for future improvements:

- Godfrey Road over Big Creek
- Faust Farm Road over Barrow Creek
- Buffalo Mill Road over Buffalo Creek
- Thaxton Road over Dry Fork Creek
- Smith Road over Long Creek
- N Upson Street over Troublesome Creek

In addition to constructing a bridge structure or culvert at the ford location, fords can sometimes be improved by the provision of a submerged concrete floor. In such cases a curb is often placed on the downstream side to prevent vehicles slipping off, as growth of algae will often make the slab very slippery. Fords may be also equipped with a post indicating the water depth, so drivers may know if the water is too deep to attempt to cross.

8.6 Bicycle and Pedestrian Project Prioritization

The prioritization criteria used to evaluate potential bicycle and pedestrian improvements were based on GDOT's Guidebook for Pedestrian Planning project prioritization framework, as well as on the goals established in this study. In addition to project recommendations, policy recommendations were also made which will have the effect of improving the bicycle and pedestrian network system-wide over the long term.

The recommended improvements to the bicycle and pedestrian transportation network were evaluated using the prioritization scoring criteria shown in **Table 8-9**. The prioritization criteria include scoring elements for both existing deficiencies in the network and potential for infrastructure improvements to have a positive impact.

Table 8-9: Bike and Pedestrian Improvement Prioritization Criteria

Project Prioritization Criteria	Possible Points	
Bicycle and Pedestrian Deficiency Factors		
Bicycle/Pedestrian Crashes Have there been bicycle or pedestrian crashes at this location along this corridor, how many, and what severity?	3	No more than one crash along this corridor (but not the project location) in past 3 years
	6	No more than one crash at the project location within last 3 years
	9	2 or more crashes on the corridor, but not at the project location in the past 3 years
	13	2 or more crashes at the project location in the past 3 years
	15	1 or more injuries or fatalities at the project location or along the corridor in the past 3 years
Existing Facilities Is this project replacing an existing facility or do none currently exist?	3	If purely a cosmetic upgrade of existing facility
	6	Existing bike/ped facilities but in poor condition
	9	Existing bike/ped facilities but many gaps or discontinuous
	12	No facilities currently on one side of road
	15	No facilities currently exist on either side of the road, or no street crossing facilities
Traffic Factors Does the project location have high motor vehicle speeds, high traffic volumes, multiple lanes to cross, or complicated intersections? Some roads due to their traffic and design characteristics are more difficult to cross and less attractive, and sometimes less safe, to walk or bike along. These roads often warrant improvements more so than quiet residential streets that are already bike and pedestrian friendly.	3	Project location is on a quiet, 2-lane residential street with low speeds and low traffic volumes
	9	Project location is on a street with moderate traffic volumes and speeds, no more than 3 lanes of traffic (not including on-street parking)
	15	Project location is on a major street with high speeds, high traffic volumes, multiple traffic lanes, wide intersections, and few crossing locations
Bicycle and Pedestrian Potential Factors		
Need Is there evidence of existing demand (bike/pedestrian counts, worn paths along roadside), current or	3-15	On a scale of 1-to-5, with 1 being the least demand and 5 being the highest demand for bicycle and pedestrian facilities

forecasted population densities that rely more heavily on walking and biking (i.e. young, elderly, low-income populations), or existing or future land uses that support biking and walking.		
Bike/Ped Priority Area Is the project within a bicycle or pedestrian priority area, i.e. for bicycles, within 1 mile radius of schools, parks, libraries or community facilities (such as senior center, YMCA, community health clinic, etc.); for pedestrians, within 1/2 mile radius of schools, parks, libraries or community facilities (such as senior center, YMCA, community health clinic, etc.).	0, 9, or 15	0 = No 9 = Partially 15 = Yes
Connectivity Does the proposed project provide a direct connection to: • Major employment or activity centers • Downtown Commercial Business Districts • Existing or proposed transportation projects or major real estate developments • Other modes of transportation (such as public transit or a shared path access point) • Does the project close a gap in a sidewalk or bike facility?	0 - 15	0 = No connectivity On a scale of 1-to-15, with 1 providing very little connectivity and 15 providing the greatest connectivity to multiple destinations
Previously Identified Improvement Was the proposed project previously identified in a community plan (STIP, CRC Bike/Ped Plan, Comprehensive Plan, Land Use Plan, Recreation Plan, etc.)?	0 or 10	0 = No 10 = Yes
TOTAL POSSIBLE POINTS	**100**	

Regarding deficiencies, each recommendation was first examined to assess its ability to address a safety need. This evaluation included a review of bicycle or pedestrian crash history in the vicinity of each recommended improvement. If a recommendation creates a new bicycle or pedestrian transportation system element, it was given a higher score than an improvement to upgrade an existing facility. Improvements in locations with higher traffic volumes and speeds received a higher score than improvements in areas with low traffic volume and speed.

To evaluate the potential for a recommendation to have a positive impact to the bicycle or pedestrian system, the need for connection of people to desirable land uses was examined. Those recommendations providing connection to schools, parks, libraries, employment centers, and other community facilities received a higher score. Projects identified in a previously completed community or transportation plan also received a higher score. Finally, all of the scores in each individual category were combined resulting in an overall project prioritization score. The results of the prioritization process are shown in **Table 8-10.**

TABLE 8-10: BIKE AND PEDESTRIAN IMPROVEMENT PRIORITIZATION

ID	Location	Type of Improvement	Project Length (in miles)	Crashes (3-15)	Existing Facilities (3, 9 or 15)	Traffic Factors (3, 9 or 15)	Need (3-15)	Priority Area (0, 9, or 15)	Connectivity (0 – 15)	Previously Identified (0 or 10)	Score (Possible pts = 100)
P-1	U.S. 78 in Crawford From Oglethorpe Builders Supply to East Elbert	Sidewalks on both sides	0.5	6	15	15	12	15	15	0	78
P-2	North Street in Crawford from US 78 to Bryan Park	Sidewalks on east side	0.5	6	15	9	12	15	15	0	72
P-3	US 78/North Street Intersection in Crawford	Pedestrian Signals	N/A	6	15	15	15	15	15	0	81
P-4	Pedestrian Crosswalk at Depot in Crawford	Restripe	N/A	3	6	15	15	15	15	3	79
P-5	U.S. 78 in Lexington from Library to Fred's	Sidewalk on north side	0.6	3	15	15	15	15	15	0	78
B-1	SR 22 in Oglethorpe Co.	Paved Shoulder	12.8	6	15	9	9	9	3	3	61
B-2	US 78 from Crawford to Lexington	Bike Lane	4.3	6	15	15	12	15	15	3	88
B-3	Broad River Madison-Elbert-Oglethorpe from Clarke County Line to Elbert County Line	Greenway	27.2	3	15	3	3	0	3	3	37
B-4	Clarke-Oglethorpe-Greene Firefly Trail from Clarke County Line to Greene County Line	Rail-Trail	39.3	3	15	3	3	9	6	3	49
B-5	Oconee River Clarke-Oconee-Oglethorpe-Greene from Clarke County Line to Greene County Line	Greenway	22.5	3	15	3	3	0	3	3	37

Besides the on-going initiatives mentioned above, the top five bicycle and pedestrian improvements in Oglethorpe County are:

- Bicycle Lanes on U.S. 78 from Crawford to Lexington
- Pedestrian signals at the intersection of U.S. 78 and North Street in Crawford
- Sidewalks on both sides of U.S. 78 from Oglethorpe Builders Supply to East Elbert
- Crosswalk restriping at the Depot in Crawford
- Sidewalks on the north side of U.S. 78 from the library to Fred's in Lexington

8.7 Summary of Recommended Improvements

Based on the analysis completed as part of this study, a listing of recommended projects was created for Oglethorpe County. This information is presented in Table 8-11 on the next page. For each recommendation, several informational elements were produced including: facility; limits; existing and improved configuration; comments; source; improvement type; need; and cost. For successful implementation of these projects, additional detailed engineering studies and environmental analysis are required to determine the most appropriate alignment, design, and cost of each project. Additionally, successful project implementation will require identified funding mechanisms, political support, and public recognition of the project need and benefit. This *Transportation Plan* provides a basis for each of these achievements, but more work is necessary in order to advance and ultimately build each project.

Table 8-11: Prioritized Recommended Improvements

Project Ref. No.	Facility	Segment Limits From	Segment Limits To	Existing Configuration	Improved Configuration	Notes/Comments	Source	Improvement Type	Need	Estimated Cost	Prioritization Score
CAPACITY IMPROVEMENTS AND NEW ROADWAYS with Anticipated Benefits of Increased Capacity and Improved Safety											
C-1 (PI # 132660-)	U.S. 78	CR26 / Smokey Road	CR166 / Whit Davis Road	2-lane highway with one passing lane in some segments	4-lane highway	3.47 miles	GDOT/Analysis	Roadway Widening	Capacity Deficiency	$ 34,203,100	71
C-2 (PI # 231910-)	U.S. 78	Smokey Road	East of Oneal Rd	None	Bypass	7.4 miles Southern Bypass aligment. Northern alignment (4.2 mile) warrants further study.	GDOT/Analysis	New Bypass	Capacity Deficiency & Protection of Downtown	$ 44,342,000	50
									Sub-Total	**$ 78,545,100**	
OPERATIONAL IMPORVEMENTS with Anticipated Benefits of Improved Capacity and Safety											
O-4	U.S. 78	County Boundary	County Boundary	2-lane undived rural principal arterial	Maintain access management standards	18.5 miles	Analysis	Operational Improvements	Operational & Safety Issues	$ 370,000	77
O-5	SR 22	County Boundary	County Boundary	2-lane rural major collector	Maintain access management standards	25.7 miles	Analysis	Improvements	Operational & Safety Issues	$ 514,000	60
O-1 (PI # 222460-)*	U.S. 78	East of Stevens Grove Church Road	East of Beaver Dam Road (Wilkes County)	2-lane undivided rural principal arterial	Passing lane pair	12.6 miles	GDOT/Analysis	Operational Improvements	Operational & Safety Issues	$ 9,189,400	50
O-3	SR 77/Union Point Street	West of Boggs Street	U.S. 78/Atlanta Street in Lexington	2-lane rural minor arterial with 1' paved shoulder	Upgrade shoulders	0.2 miles	Analysis	Operational Improvements	Operational & Safety Issues	$ 27,000	50
O-6	SR 77	County Boundary	County Boundary	2-lane rural minor arterial	Maintain access management standards	32.7 miles	Analysis	Improvements	Operational & Safety Issues	$ 654,000	48
O-2	SR 77/S Main Street	South of Hill Street	South of Church Street in Maxeys	2-lane rural minor arterial without identifiable shoulder	Upgrade shoulders	0.3 miles	Analysis	Operational Improvements	Operational & Safety Issues	$ 45,000	45
									Sub-Total	**$ 10,799,400**	
INTERSECTION IMPROVEMENTS with Anticipated Benefits of Improved Capacity and Safety											
I-1	U.S. 78 / Athens Road	At SR 22 / Comer Road		One-way stop controlled	Further study (Potential improvements identified)	12 crashes (07-11)	Comments/Analysis	Improvements	Operational & Safety Issues	$ 270,000	80
I-13	U.S. 78 / Athens Road	At Buddy Faust Road		One-way stop controlled	Further study (Potential improvements identified)	14 crashes (07-11)	Comments/Analysis	Improvements	Operational & Safety Issues	$ 270,000	80
I-14	U.S. 78 / Athens Road	At Broad Street		Two-way stop controlled	Further study (Potential improvements identified)	9 crashes (07-11)	Comments/Analysis	Improvements	Operational & Safety Issues	$ 270,000	80
I-10	U.S. 78 / Athens Road	At Bunker Hill Road		Two-way stop controlled	Further study (Potential improvements identified)	6 crashes (07-11)	Comments/Analysis	Improvements	Operational & Safety Issues	$ 270,000	72
I-9	Yancey Road	At Arnoldsville Road		Two-way stop controlled	Further study (Potential improvements identified)	12 crashes (07-11)	Comments/Analysis	Improvements	Operational & Safety Issues	$ 270,000	65
I-23	SR 22 / Comer Road	At Buddy Faust Road		One-way stop controlled	Further study (Potential improvements identified)	2 crashes (07-11)	Comments/Analysis	Improvements	Operational & Safety Issues	$ 270,000	51
I-24	Hargrove Lake Road	At Crawford Smithonia Road		One-way stop controlled	Further study (Potential improvements identified)	2 crashes (07-11)	Comments/Analysis	Improvements	Operational & Safety Issues	$ 270,000	51
I-5	U.S. 78 / Athens Road	At North Street		Signalized	Further study (Potential improvements identified)	11 crashes (07-11)	Comments/Analysis	Improvements	Operational & Safety Issues	$ 270,000	50
I-28	SR 22 / Comer Road	At Collier Church Road		Two-way stop controlled	Further study (Potential improvements identified)	11)	Comments/Analysis	Improvements	Operational & Safety Issues	$ 270,000	47
									Sub-Total	**$ 2,430,000.00**	
BRIDGE IMPORVEMENTS with Anticipated Benefits of Improved Safety and Operations											
B-1	Waston Mill Road	Over South Fork Broad River		4,480 sq ft of deck		4 sufficiency rating	Analysis	Upgrade Bridge	Maintenance	$ 493,000	96
B-2	Saxton-Mattox Road	Over Long Creek		645 sq ft of deck		13 sufficiency rating	Analysis	Upgrade Bridge	Maintenance	$ 71,100	87
B-3	Duck Pond Road	Over Dry Fork Creek		365 sq ft of deck		26 sufficiency rating	Analysis	Upgrade Bridge	Maintenance	$ 40,300	74
B-4	Smithonia Road	Over Beaverdam Creek		3,365 sq ft of deck		50 sufficiency rating	Analysis	Upgrade Bridge	Maintenance	$ 370,300	50
B-5	Levington-Garlston Road	Over South Fork Broad River		10,560 sq ft of deck		51 sufficiency rating	Analysis	Upgrade Bridge	Maintenance	$ 1,161,700	49
B-6	Crawford-Smithonia Road	Over Big Clouds Creek		3,000 sq ft of deck		55 sufficiency rating	Analysis	Upgrade Bridge	Maintenance	$ 330,100	45
B-7	Godfrey Road	Over Big Creek		4,095 sq ft of deck		62 sufficiency rating	Analysis	Upgrade Bridge	Maintenance	$ 450,500	38
B-8	Arnold Caldwell Road	Over Long Creek		5,360 sq ft of deck		63 sufficiency rating	Analysis	Upgrade Bridge	Maintenance	$ 589,700	37
B-9	Crawford-Smithonia	Over Hawks Creek		970 sq ft of deck		65 sufficiency rating	Analysis	Upgrade Bridge	Maintenance	$ 106,800	35
B-10	SR 77	Over Broad River		12,606 sq ft of deck		74 sufficiency rating	Analysis	Upgrade Bridge	Maintenance	$ 1,386,700	26
B-11	Wilson Road	Over Big Creek		2,006 sq ft of deck		74 sufficiency rating	Analysis	Upgrade Bridge	Maintenance	$ 220,700	26
B-12	Saxton-Mattox Road	Over Goosepond Creek		480 sq ft of deck		76 sufficiency rating	Analysis	Upgrade Bridge	Maintenance	$ 52,800	24
B-13	Road	Over Big Clouds Creek		4,352 sq ft of deck		77 sufficiency rating	Analysis	Upgrade Bridge	Maintenance	$ 478,800	23
B-14	U.S. 78 / SR 10	Over Moss Creek		694 sq ft of deck		79 sufficiency rating	Analysis	Upgrade Bridge	Maintenance	$ 76,400	21
									Sub-Total	**$ 5,828,900**	
BIKE/PED IMPORVMENETS with Anticipated Benefits of Enhanced Multi-Modal System											
B-2	U.S. 78	Crawford	Lexington	No bike lanes	Add bike lanes	3.2 miles	Analysis	Expand Bike Lanes	Bike/Ped Facilities	$ 3,200,000	88
P-3	U.S. 78 @ North Street	In Crawford		No pedestrian signals	Install pedestrian signals	0.0 miles	Analysis	Install Signals	Bike/Ped Facilities	$ 7,000	81
P-4	Depot	In Crawford		No crosswalk strip	Crosswalk restriping	0.0 miles	Analysis	Upgrade Crossing	Bike/Ped Facilities	$ 1,500	79
P-1	U.S. 78	Oglethorpe Builders Supply	East Elbert	No sidewalk	Add sidewalks on both sides	0.5 miles	Analysis	Expand Sidewalks	Bike/Ped Facilities	$ 520,000	78
P-5	U.S. 78	Library	Fred's in Lexington	No sidewalk on the north side	Add sidewalks on the north side	0.6 miles	Analysis	Expand Sidewalks	Bike/Ped Facilities	$ 312,000	78
									Sub-Total	**$ 4,040,500**	
									Total	***$ 101,643,900***	

1. Operational and intersection improvements recommendations are planning level and require further study for specific solutions and refined costs.
2. Intersection costs assume a placeholder cost of $270,000 where further study is required.
3. Cost estimates are in current year dollars (uninflated dollars).
4. Cost estimates are planning-level, based on best available data and assumptions.

* Estimated cost is for the full length of the passing lane project, which includes 7.37 miles in Wilkes County.

HNTB

9 Funding and Implementation

9.1 Funding Sources

Several funding sources have the potential to be utilized to implement the recommended projects. Eligibility for funds is typically dictated by the agencies responsible for maintaining and operating the transportation facility in question and is subject to funding availability. Most major facilities in Oglethorpe County are either operated by GDOT or the County. Should the County desire to accelerate projects on state owned and maintained facilities, it is highly likely that overmatching of local funds could accelerate the process.

Funding for most transportation projects in the County has historically come in part through GDOT. To understand the ability of the Department to continue to provide funds to Oglethorpe County, it is useful to understand the components of GDOT funding. Key components include:

- Federal Title I Apportionments;
- State Motor Fuel Taxes; and
- Local Funds.

While detailed analysis of these funding sources is beyond the scope of this study, it is useful to point out that all of the revenue streams identified as key components of GDOT funding have traditionally positive growth rates. However, it should be noted that past trends are not a guarantee of future expectations moving forward.

While GDOT funding components have positive growth rates, the Department is experiencing some funding challenges. There are currently more transportation needs in the state than there are dollars to fund projects. In addition, construction costs have fluctuated considerably over the past three years, forcing the Department to continually assess which projects it can reasonably fund. GDOT's Project Prioritization Study, completed in 2008, formulated a prioritization methodology for all projects in the state based upon GDOT's statewide goals and objectives for the performance of the transportation system. Every project eligible for Federal or State funding may be subject to this process, which helps to identify the projects that bring the state the most benefit for the investment. Local funding sources are becoming more significant and will continue to be significant in the future for the successful implementation of projects. A review of project implementation shows that locations with a Special Purpose Local Option Sales Tax (SPLOST) have been in the best position to leverage funds and ultimately construct projects.

Federal Funding Sources for Transportation

A substantial portion of GDOT funding comes from the Federal Government through Federal Title I Apportionments. The primary funding source for Title I is the Federal gasoline tax collected at the state level. The U.S. Congress authorizes federal transportation funding to the states and other public entities generally every six years. The previous authorization was known as the "Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users" or SAFETEA-LU. The reauthorization of SAFETEA-LU passed by Congress in July 2012 is known as the "Moving Ahead for Progress in the 21st Century Act" (MAP-21) which authorizes the Federal surface transportation programs for highways, highway safety, and transit for the 2-year period of 2012 through 2014. According to the U.S. DOT, funding levels for major highway transportation programs and apportionments allocated to Georgia over the two-year time frame total approximately $3.7 billion out of a total of $113 billion. These lump sum funds are apportioned throughout the state.

Federal funding for the majority of highway system improvements (excluding interstate highways) planned in Oglethorpe County is expected to come from the Surface Transportation Program (STP) and Minimum Guarantee Program. Locally-sponsored projects within the County will generally require a 20 percent local funding commitment to match federal funds. The local government is also generally responsible for completing the planning and design of the projects as well. Federal and state funds are programmed by GDOT for right of way and construction costs.

As part of the federal apportionment and allocation, there are opportunities for local governments to collaborate with GDOT on special transportation projects. One opportunity is with the transportation Enhancement Program (TE Funds). Currently, the TE Grant Program provides federal transportation funds through GDOT to local governments through a competitive process for non-highway projects. Eligible projects include bicycle and pedestrian facilities, multi-use trails, the preservation of historic sites related to transportation, etc.

Federal Funds for Public Transportation

As the population of Oglethorpe County grows and demographic trends change with a larger percentage of the population being elderly, the needs for special public transit to serve seniors and disabled people will likely increase. Commuter-oriented public transportation services such as vanpooling programs and transit facilities, such as park and ride lots can begin to be considered in the area. Park and ride facilities can be developed with local use agreements or easements in partnerships with property owners. Park and ride facilities can also possibly be funded with federal grants from the Federal Transit Administration's Section 5309–Bus and Bus Facilities Program which provides funding for transit capital investments, such as park and ride lots. Funding in this program is generally earmarked for specific projects; however, unallocated or discretionary funds are sometimes available.

The County should continue to monitor its needs for local and regional public transportation services and identify potential opportunities to tap into available federal sources for these programs. On-demand rural transit and commuter shuttle services can both be implemented utilizing funding from the Federal Transit Administration's Section 5311-Formula Grants for Other Than Urbanized Areas Program. The Section 5311 program, administered by GDOT, provides funding to rural localities with populations of less than 50,000. Funds may be used for capital expenses (vehicles, fare boxes, communications equipment, wheelchair lifts, and computer and office equipment) as well as operating assistance, including administrative costs. The local government must provide a 20 percent match against eligible capital and administrative costs and a 50 percent match for operating costs. Coordination of rural transit across county lines is essential for counties wanting to undertake on-demand rural transit programs in the NEGRC Region. Such coordination would create significant cost savings for counties, such as Oglethorpe County, and would enable a more extensive area of coverage and service within the NEGRC Region.

Other federal funding sources are available to assist rural local communities with transit needs. The FTA Section 5316-Job Access and Reverse Commute (JARC) Program was established to address the unique transportation challenges faced by welfare recipients and low-income persons seeking to obtain and maintain employment. The funding can be used for planning and operating expenses for projects that transport low income individuals to and from jobs and activities related to employment. To be eligible for funding, localities must meet needs-formula requirements as well have their projects identified in a locally developed, coordinated public transit-human services transportation plan. The FTA Section 5310–Enhanced Mobility of Seniors and Individuals with Disabilities Program provides funds for programs to serve the special needs of transit-dependent populations beyond traditional public transportation services and Americans with Disabilities Act (ADA) complementary paratransit services. Funds are apportioned for rural areas based on

the number of seniors and individuals with disabilities. For both 5316 and 5310, the local government must provide a match of 20 percent of eligible capital and administrative costs and 50 percent of operating costs.

State Funding Sources for Transportation

State funding for transportation projects in Georgia is derived mostly from state tax on motor fuels (7.5 cents per gallon). The state tax on motor fuels accounts for approximately 98% of the State's transportation funding allotted for projects;

It is also useful to note that Georgia currently has one of the nation's lowest state motor fuel taxes, excluding sales taxes. Even when including the additional 4 percent sales tax, Georgia's motor fuel taxes are the third lowest in the U.S.

Local Funding Sources for Transportation

Local governments (cities and counties) receive revenues from a number of sources to support the public facilities and services they provide to citizens. These sources include federal and state funds, "own source" funds, such as property tax revenues and other monies, and discretionary grant funds from federal and/or state agencies.

9.2 Historical Funding Level

Oglethorpe County's Historical Local Maintenance & Improvement Grant (LMIG) Funding

The Local Maintenance and Improvement Grant (LMIG) is a GDOT Local Assistance Program that is funded by the State Motor Fuel Tax. In FY 2013, GDOT revised the LMIG program to expand the list of eligible projects to include a broader range of roadway and bridge improvement activities. This list includes:

- Preliminary engineering;
- Construction supervision and inspection;
- Utility adjustments/replacements;
- Patching and resurfacing;
- Grading and drainage;
- Replacing storm drain pipe or culverts;
- Intersection improvements;
- Turn lanes;
- Bridge repair and replacement;
- Sidewalks adjacent to public roadways;
- Roadway signs;
- Striping and guardrail installation;
- Signal installation or improvement; and
- Aggregate surface course for dirt road maintenance.

LMIG funds cannot be used for right-of-way acquisition, street lighting, beautification and streetscapes, walking trails and tracks, landscaping, or administrative services.

The match component of LMIG is based on and in accordance with the new TIA legislation. Local jurisdictions in a TIA-approved region are required to contribute a 10% match for LMIG projects. Local jurisdictions in a region that did not pass TIA legislation must provide a 30% match for LMIG projects.

LMIG is a formula-based grant program. Between 10% and 20% of the State's previous year motor fuel collections are set aside for LMIG funding. Each jurisdiction's share of available LMIG funds is based on their population (weighted one-third) and their centerline miles (weighted two-thirds). Thus, a local government formula amount is calculated for each jurisdiction providing their allotted LMIG funds each year.

A local government must submit an application and list of eligible projects to GDOT at the beginning of the year that is equal to or exceeds its LMIG formula allotment plus its required local match amount. GDOT reviews the application and list and then forwards the allotted funds to the local government. At the end of the year, each local government must submit a certification of work to ensure that projects are completed within a three-year timeframe.

The Northeast Region voters did not pass the TIA referendum and thus Oglethorpe County and its cities must provide a 30% match for its LMIG projects. **Table 9-1** below shows the historical unmatched LMIG Funds Allocations for Oglethorpe County and the Cities of Arnoldsville, Crawford, Lexington, and Maxeys from 2011 to 2013 as well as the allotted formula amounts for 2014.

TABLE 9-1: UNMATCHED LMIG FUNDS ALLOCATIONS (2011 - 2014)

Jurisdiction	2011	2012	2013	2014
Unincorporated Oglethorpe County	$309,104	$321,186	$388,635	$425,282
Arnoldsville	$1,994	$5,619	$5,942	$6,116
Crawford	$5,040	$7,199	$8,307	$8,933
Lexington	$2,366	$2,916	$3,399	$3,586
Maxeys	$2,180	$4,798	$5,630	$6,647
Total	**$320,684**	**$341,718**	**$411,913**	**$450,564**

Source: Georgia Department of Transportation

9.3 FUTURE TRANSPORTATION FUNDING NEEDS

A combination of federal, state, local, and private funding sources should be pursued for individual projects to improve transportation facilities in the study area. These sources should be pursued based on GDOT (state), regional and local investment priorities that weigh the best investments for anticipated benefits of the projects through the planning horizon year of 2040. A combination of sources will increase the likelihood for project implementation.

9.4 EFFECTIVE USE OF THE PLAN

This LRTP document identifies potential projects for implementation based on local transportation needs and verified by technical analysis. This is an important step towards implementation but additional steps are necessary in order to advance projects into GDOT's Project Development Process and/or to identify and solidify funding commitments from the state, if desired. The project implementation process for Georgia outside of an MPO area begins with support from local elected officials. Each county should begin with a thorough review of their LRTP priority projects. If funding is desired beyond what is available locally, the following steps are recommended:

Step 1: Gather letters of support from local elected officials highlighting the need for the project(s) and the merits of the project(s).

Step 2: Assess the level of funding support that may be provided by the County as a local match and / or for specific project phases (i.e. PE, ROW, etc.).

Step 3: Contact your GDOT District Office (District 2 for Oglethorpe County) and coordinate with the GDOT District Engineer regarding the project. Depending on project type, the GDOT District may know of state aid resources that could be used for feasibility studies and potentially for additional match funding sources.

Step 4: The GDOT District Office typically serves as the project sponsor and submits a project information package to GDOT's Division of Planning for consideration. The information included in the long-range plan and the project sheet, in addition to any supporting information resulting from additional study, is included in this package.

Step 5: Projects approved by GDOT's Division of Planning are programmed into GDOT's Work Program. As funding is identified, the project will move into GDOT's STIP.

10 Conclusion and Next Steps

The Georgia Department of Transportation's (GDOT) Office of Planning initiated the Oglethorpe County Multi-Modal Transportation Plan to assess needs and identify multi-modal transportation improvement opportunities that will help Oglethorpe County address transportation issues through the plan's horizon year of 2040. Recommended projects for Oglethorpe County were identified through analysis of existing and future transportation deficiencies, and selected and prioritized based on local goals and objectives with the intent of enhancing the quality of life for County residents and visitors. Efforts were taken to ensure that proposed projects negatively impacted the community as little as possible while providing maximum benefits. As part of this effort, existing and future operating conditions were documented for the following modes: highways and bridges, bicycle and pedestrian and transit. Ultimately, the study identified a prioritized list of projects for implementation.

GDOT coordinated with Oglethorpe County and the Cities of Arnoldsville, Crawford, Lexington, and Maxeys, the Northeast Georgia Regional Commission, MACORTS, area residents and business leaders, and other local partners in the planning, development, and review of potential improvements. Additionally, a public survey was developed and distributed which ensured that alternative transportation improvements were not only coordinated with various governments, but afforded individual citizens and interested groups the opportunity to provide their input in developing and evaluating potential improvements to the County's transportation network.

The end product for this study is this Long Range Transportation Plan document. If implemented, its solutions address future needs and provide for the efficient movement of people and goods within and through Oglethorpe County through the horizon year of this study, 2040. This document should be reviewed and updated periodically to ensure that the planning factors and other assumptions are still relevant and effectively address transportation needs. In addition, this document should serve as the foundation for Oglethorpe County's transportation planning efforts and a starting point for addressing future transportation needs.

APPENDIX

APPENDIX A

TRAVEL DEMAND MODEL DEVELOPMENT

1. INTRODUCTIONS

The Georgia Department of Transportation (GDOT), in conjunction with Oglethorpe County, is developing a Multi-modal Transportation Plan to serve the County through the planning horizon year of 2040. Since there is no travel demand model at the county level for Oglethorpe County, a travel demand model was developed as part of this planning process to represent the transportation network of the study area and to assist with analysis of future operation conditions.

The primary objectives of the Oglethorpe County Travel Demand Model (TDM) are to replicate current travel demands and predict the travel demands in the 2040 horizon year. The development process was performed following the *GDOT General Summary of Travel Demand Model Development Procedures for Consultants, MPOs and Modelers ("GDOT Procedures")* that was prepared in December 2012. The Oglethorpe County TDM was developed by expanding the current Athens MPO TDM based on the observations that Athens MPO area is the major trip destination for the County residents. The process of the development of the Oglethorpe TDM Traffic Analysis Zone (TAZ) and network were documented in the "Travel Demand Model TAZ and Network Development Technical Memo", prepared in March 2013. The TAZ and network were reviewed and approved by GDOT and Oglethorpe County. Assumptions in Athens MPO TDM scripts were applied to the Oglethorpe County initially and then calibration efforts were conducted to ensure the model replicates the current transportation conditions in Oglethorpe County.

The following technical memorandum summarizes the base year (2010) model assignment calibration using the approved TAZ, network and revised Athens TDM scripts. The calibration efforts were measured by a variety of statistics, including system-wide vehicle miles of travel (VMT), VMT by functional class, system-wide percent root mean square error (%RMSE), %RMSE by volume groups, system-wide percent deviation of traffic, percent deviation of traffic by functional class, percent deviation of traffic by screenline, and system-wide coefficient of determination.

2. LINK VOLUME PERCENT DEVIATION

The Percent Deviation method is based on the guidelines provided in *Calibration and Adjustment of System Planning Models, FHWA-ED-90-015*. This method is used to calibrate a model for system-wide studies. It is based on the expectation that the travel demand model should accurately predict the number of through-lanes required to provide a specified level of service for a given facility. Traffic assignment deviation should not result in a design deviation of more than one highway travel lane. Therefore, the expected accuracy of the model increases as the average annual daily traffic (AADT) on a facility increases. The percent deviation is calculated as follows:

$$\text{Percent Deviation} = [(\text{Base Year Assignment} - \text{Base Year Count})/\text{Base Year Count}]*100$$

Figure 1 shows the deviation between the 2010 base year volumes assigned by the model and 2010 observed traffic counts for the study area. Maximum desired deviation range is represented by the

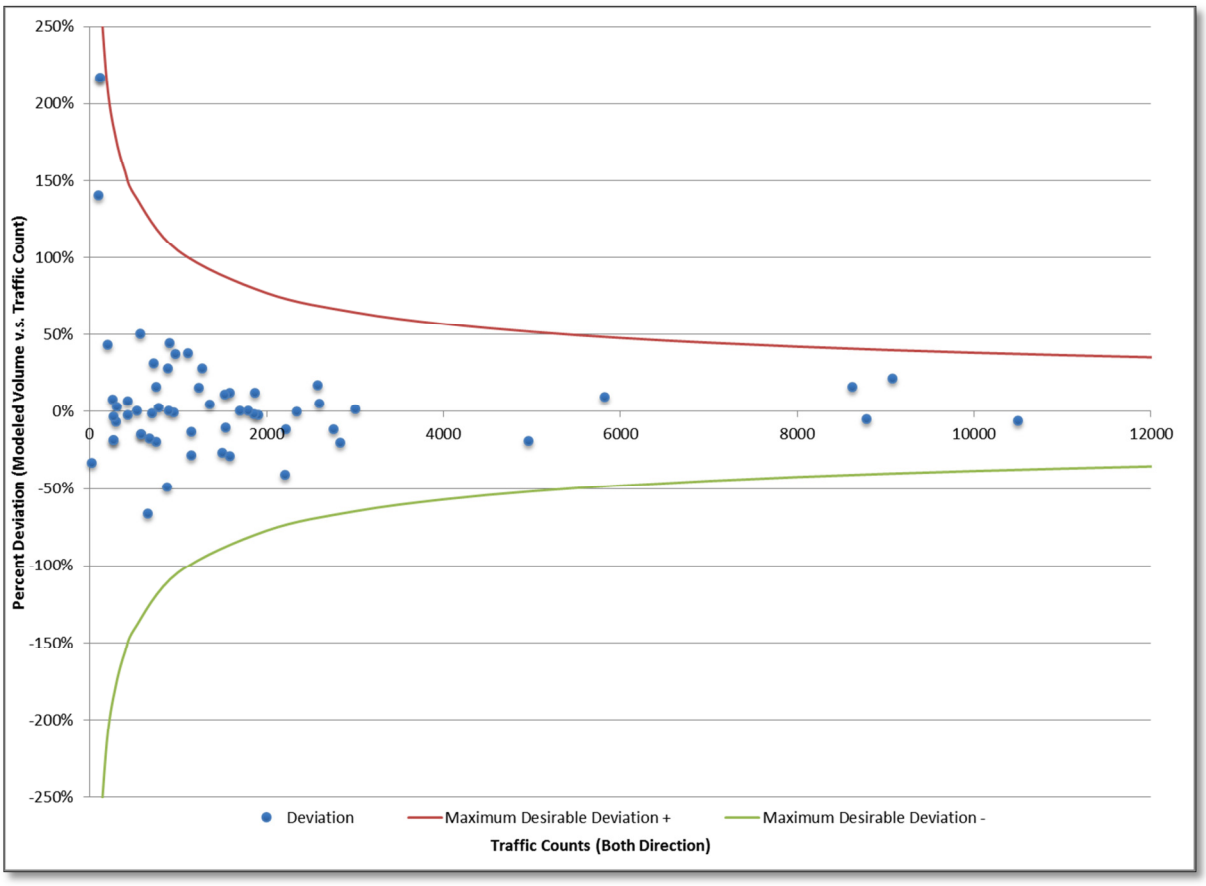
red and green sloping curves in Figure 1. In the Oglethorpe County model, the following equation provided by GDOT was used to estimate the Maximum Desirable Deviation for individual links:

$$\text{Maximum Desirable \% Deviation}_{links} = 38.262 * \left(\frac{AADT_{Two-Way}}{10000} \right)^{-0.4361}$$

Figure 1 indicates that most of the link-level model deviation points are concentrated between maximum desirable deviation positive line (in red) and maximum desirable deviation negative line (in green). The following conclusions can be drawn from the graph:

- All of the model highway links were assigned volumes which were in reasonable agreement with traffic counts; and,
- Observed traffic counts for most of the highway links were under 12,000 per day.

FIGURE 1 TRAFFIC ASSIGNMENT DEVIATION VS. MAXIMUM DESIRABLE DEVIATION

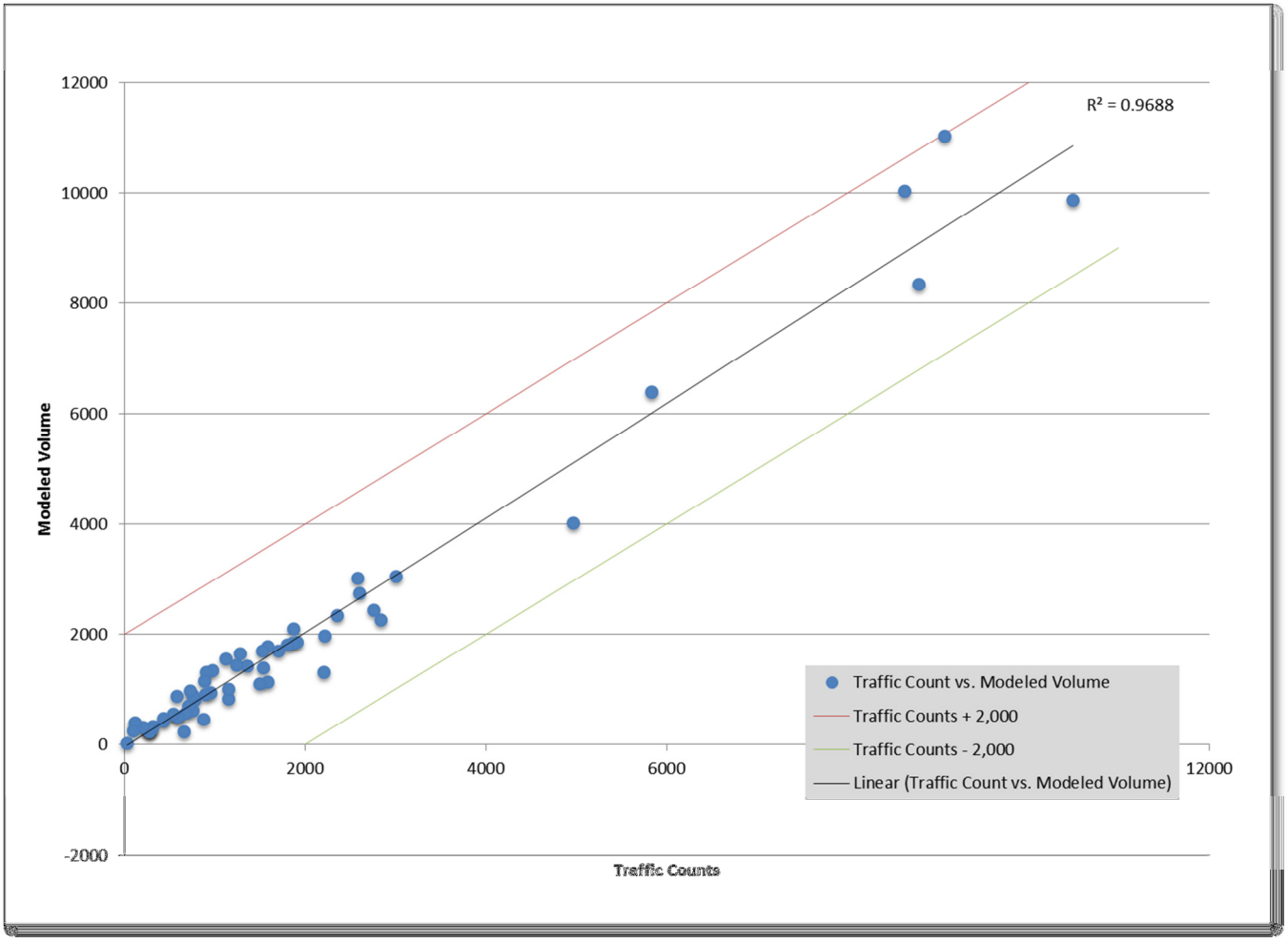


3. Coefficient of Determination and Scatter Plot

The coefficient of determination (R^2) represents the proportion of variability in values of the dependent variable (traffic volume) that is explained by the model. It helps in understanding the model's predictive power. The Oglethorpe County model achieves a system-wide R^2 equal to 0.9688, which is greater than the model validation target ($R^2 = 0.88$) required by the Federal model validation guideline (*Model Validation and Reasonableness Checking Manual, FHWA, Sept, 2010*).

A scatter plot of modeled volumes versus traffic counts, as shown in Figure 2, helps identify outliers. As indicated in the figure, all modeled volumes are within +/- 2,000 of the corresponding traffic counts.

Figure 2 Scatter Plot of Modeled Volume vs. Traffic Counts



4. Percent Root Mean Square Error

Percent Root Mean Square Error (%RMSE) is a measure of the average deviation between the actual traffic counts and the base year assigned model volumes. It is another indicator to illustrate how closely the model volumes match the traffic counts.

The %RMSE is calculated as follows:

$$\%\text{RMSE} = \frac{\sqrt{\sum_i \frac{(V_i - C_i)^2}{(N-1)}}}{\frac{\sum_i C_i}{N}} \times 100$$

where,

Vi = model volume at link i;
Ci = traffic count at link i; and
N = number of count stations.

The Oglethorpe County model achieved an overall RMSE of 22%, which is lower than the GDOT target of 30%. Low RMSEs were also observed for links by volume groups, as shown in Table 1.

TABLE1 Percent Root Mean Square Error (RMSE %) Statistics

AADT Volume Group	Oglethorpe County Model	GDOT Target Range
0 – 5000	24%	< 100%
5,001 – 10,000	18%	< 75%
10,001 – 15,000	6%	< 50%
Total	**24%**	**< 30%**

5. Vehicle Miles of Travel (VMT)

Comparing the assigned VMT to the observed VMT provides another method of the reasonableness check for the assignment. Assigned VMT is simply the product of the link volume and the link distance, summed over the desired facility type. The observed VMT is a product of a comprehensive traffic count program.

Table 2 shows VMT statistics aggregated by functional classification for both modeled VMT and actual VMT for Oglethorpe County in 2010. The 2010 observed VMT values were obtained from GDOT's Report 445 for 2010. As shown in the Table 2, the modeled VMT values as well as the modeled VMT distribution values are very close to the observed values in Oglethorpe County.

TABLE2 MODELED VMT BY ROAD FUNCTIONAL CLASSIFICATION

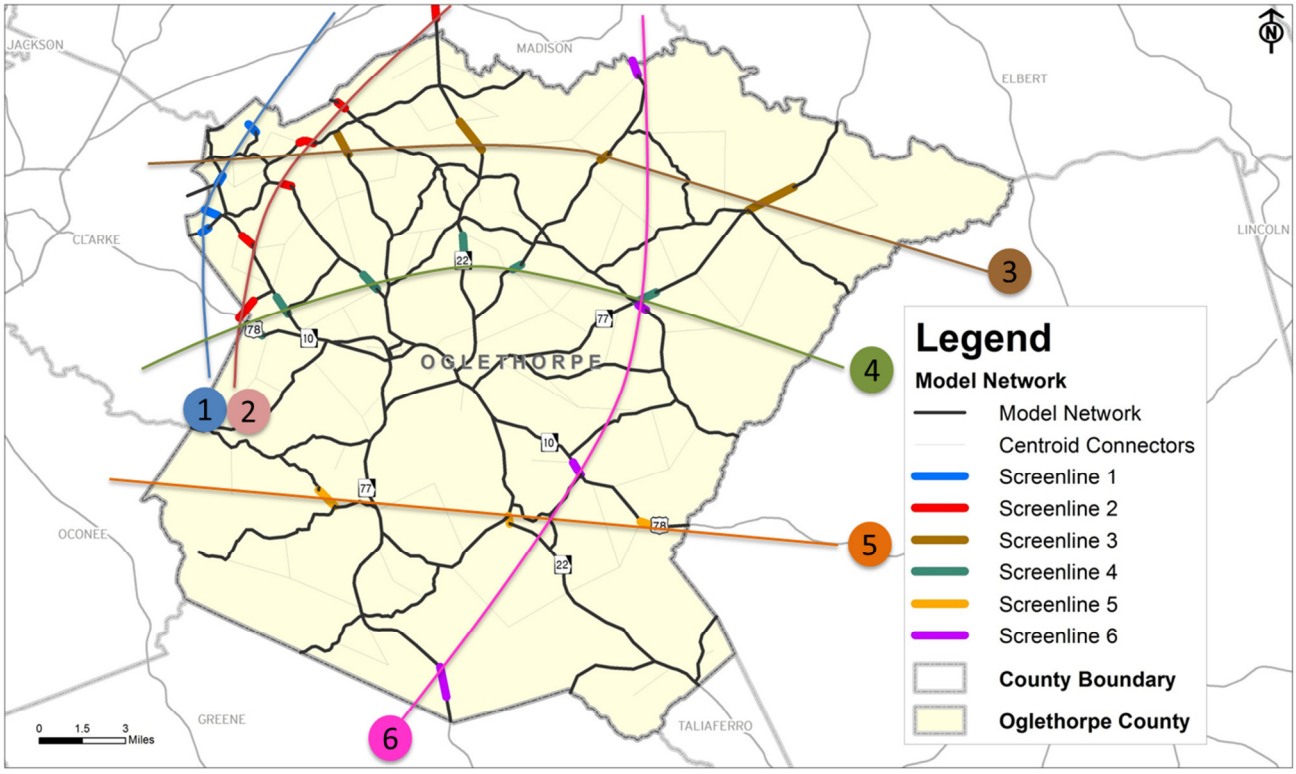
Function Classification	VMT (in thousands)		VMT Distribution (% of Total)	
	Observed	Model	Observed	Modeled
Principal Arterial	103	114	36%	40%
Minor Arterial	43	45	15%	16%
Collectors	138	127	49%	44%
Total	**284**	**286**	**100%**	**100%**

**Observed values were obtained from GDOT report 445.*

6. SCREENLINE ANALYSIS

Screenline analysis was performed as another indicator to assess model reasonableness. Six screenlines were established to intercept major traffic flows in the Oglethorpe County area. Assigned volumes in the 2010 base year model were compared with the 2010 traffic counts at each screenline crossing. The maximum desirable deviation for screenlines used for model calibration was from *NCHRP Report 255*. Figure 3 illustrates screenlines used in the calibration of base year model.

FIGURE 3 SCATTER PLOT OF MODELED VOLUME VS. TRAFFIC COUNTS



The screenline analysis results are shown in Table 3. It is clear that the observed percent deviations agree with the maximum desired values for all screenlines.

TABLE 3 SCREENLINE ANALYSIS STATISTICS

Screenlines	Total Counts	Total Model Volume	% Deviation	Max. Desirable % Deviation
1	5,730	5,600	-2%	74%
2	9,421	9,790	4%	61%
3	3,800	3,390	-11%	86%
4	15,340	16,220	6%	51%
5	3,600	3,580	-1%	88%
6	4,520	4,680	4%	81%
Grand Total	**42,411**	**42,411**	**2%**	**34%**

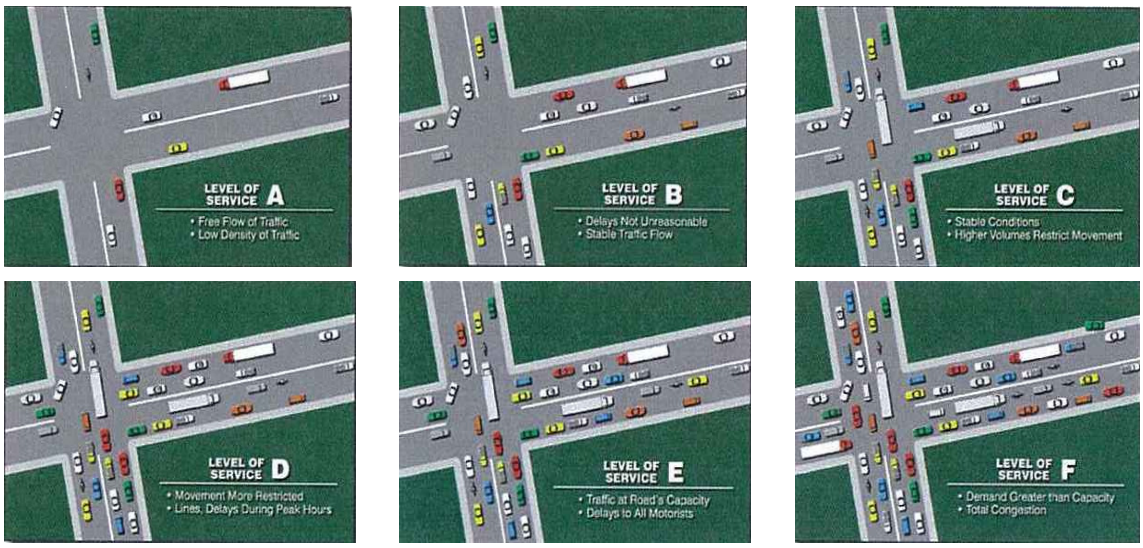
7. RESULTS

A model run was performed to determine operational characteristics after the model calibration was completed. One of the operational characteristics, Level of Service (LOS) was post-processed from model output data. Level of service (LOS) is a qualitative measure of traffic flow describing operating conditions. Six levels of service are defined by the Federal Highway Administration (FHWA) in the Highway Capacity Manual for use in evaluating roadway operating conditions. They are given letter designations from A to F, with LOS "A" representing the best operating conditions and LOS "F" the worst. A facility may operate at a range of levels of service depending upon time of day, day of week or period of the year. A qualitative description of the different levels of service is provided below. Figure 4 provides visual representation of the various levels of service.

- LOS A – Drivers perceive little or no delay and easily progress along a corridor.
- LOS B – Drivers experience some delay but generally driving conditions are favorable.
- LOS C – Travel speeds are slightly lower than the posted speed with noticeable delay in intersection areas.
- LOS D – Travel speeds are well below the posted speed with few opportunities to pass and considerable intersection delay.
- LOS E – The facility is operating at capacity and there are virtually no useable gaps in the traffic.
- LOS F – More traffic desires to use a particular facility than it is designed to handle resulting in extreme delays.

The recommended approach used to identify deficient segments was to analyze the volume of traffic on the roadway segments compared to the capacity of those segments, also known as the volume-to-capacity (V/C) ratio. For daily operating conditions, any segment identified as LOS "E" or "F" was considered deficient.

FIGURE 4 LEVEL OF SERVICE

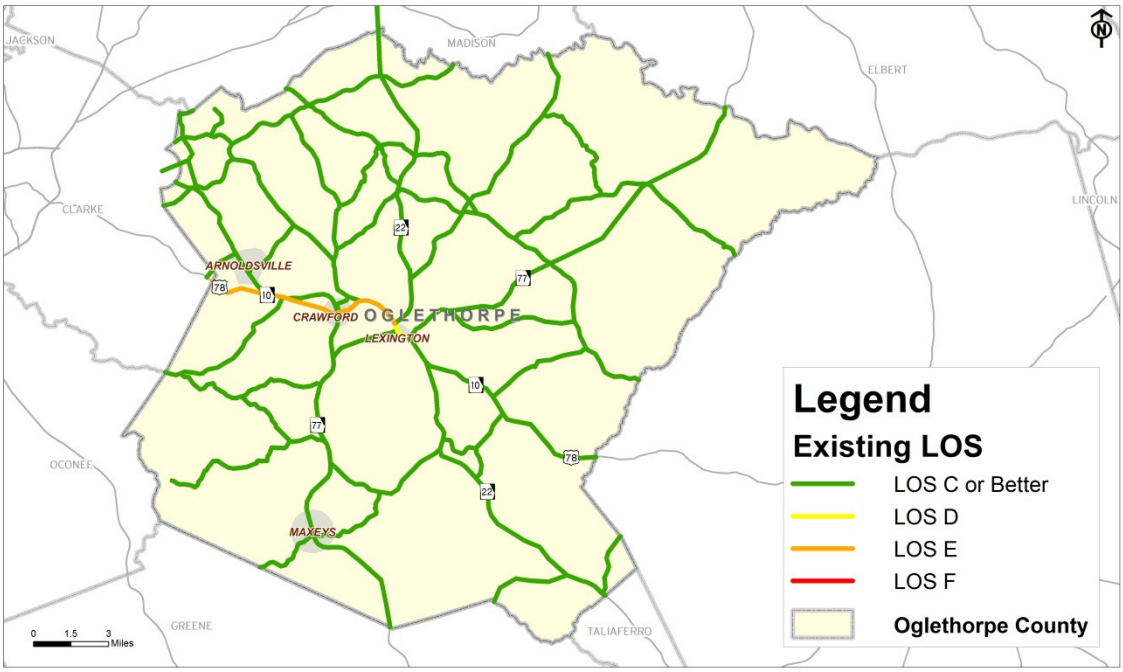


The following thresholds were used to assign a level of service to the V/C ratios, based on the general resulting operations described in Figure 4. Please note that the thresholds were established considering the rural characteristics of the Oglethorpe County as well. Generally in rural counties, the v/c ratio thresholds for congestion levels were different compared to urban areas due to differences in driver expectancy.

- V/C < 0.35: LOS C or better;
- V/C = 0.35 - 0.55: LOS D;
- V/C = 0.55 - 1.00: LOS E; and,
- V/C > 1.00: LOS F.

Figure 5 displays the existing 2010 LOS for roadways within the Oglethorpe County. As shown almost all segments operate at LOS C or better, which is an acceptable level. US 78 is the only corridor with congestion at daily operating conditions. These results are consistent with local knowledge of current operating condition within the County.

FIGURE 5 OGLETHORPE EXISTING (2010) LEVEL OF SERVICE



The 2010 analysis shows that the following segments can be expected to operate at or below LOS D under daily conditions. Table 4 displays the existing roadway segments operating at LOS D or worse.

TABLE4 EXISTING SEGMENTS OPERATING AT LOS D OR WORSE

Roadway	From	To	LOS
US 78	City of Lexington	City of Crawford	D
US 78	North Street in Crawford	County Line	E

APPENDIX B

STAKEHOLDER MEETINGS

Oglethorpe County
Long Range Transportation Study

Kickoff and Stakeholder Advisory Committee Meeting

April 16, 2013

Georgia Department of Transportation

AGENDA

- Purpose of the Plan
- Study Overview
- Study Schedule
- Stakeholder and Public Outreach
- Data Collection
- Study Goals and Objectives
- Stakeholder Input
- Next Steps

Georgia Department of Transportation

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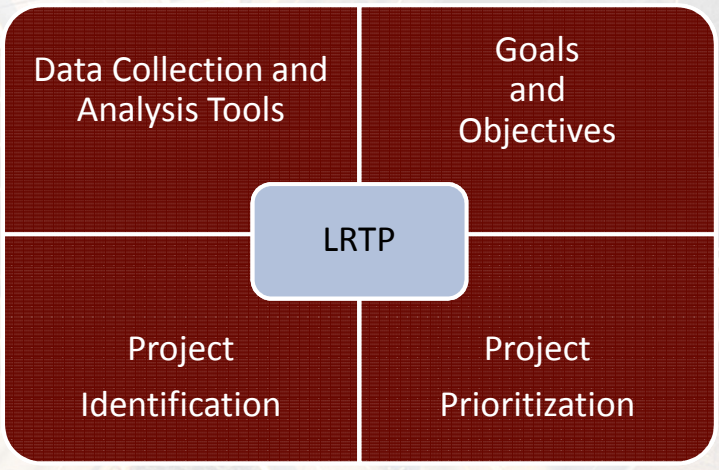
WHY DEVELOP A TRANSPORTATION PLAN?

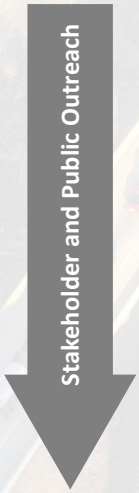
- Ensure that Oglethorpe County and its municipalities are able to meet the current and future mobility needs of residents and businesses
- Ensure transportation priorities match community priorities
- Coordinate with other planning efforts
- Develop a listing of tiered transportation projects
- Early identification of funding issues and opportunities

STUDY OVERVIEW – PLAN COMPONENTS



STUDY OVERVIEW - PLAN TASKS

- Collect Multi-Modal Data
- Review Existing Plans, Studies, and Projects
- Formulate Goals and Objectives
- Establish Evaluation Factors
- Analyze Existing Conditions
- Develop Travel Demand Model
- Analyze Future Conditions



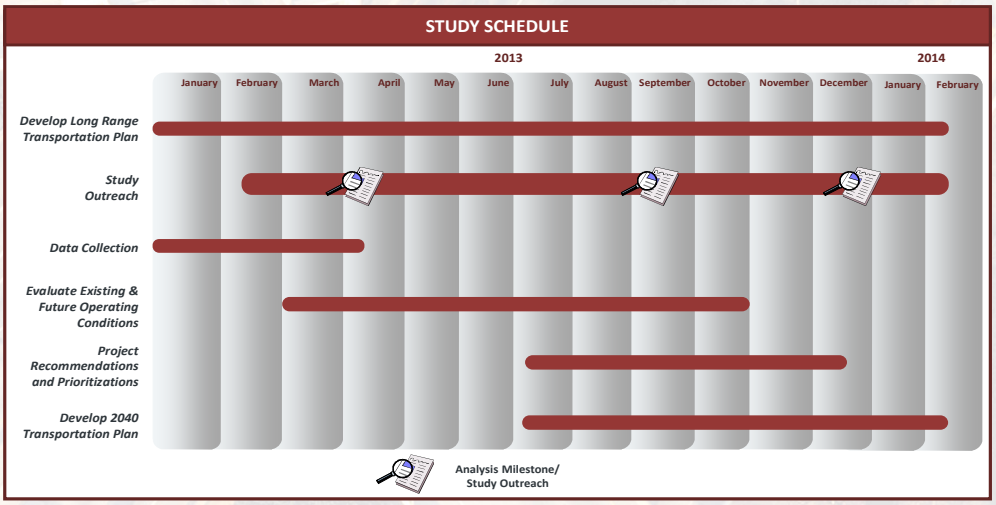
STUDY OVERVIEW - PLAN TASKS

- Identify, Screen, and Prioritize Potential Improvements
- Provide Recommendations
- Develop Cost Estimates
- Discuss Financial Resources and Funding Options

2040 Long Range Transportation Plan

STUDY SCHEDULE

Study Development: January 2013 – December 2013
Final Documentation: December 2013 – February 2014



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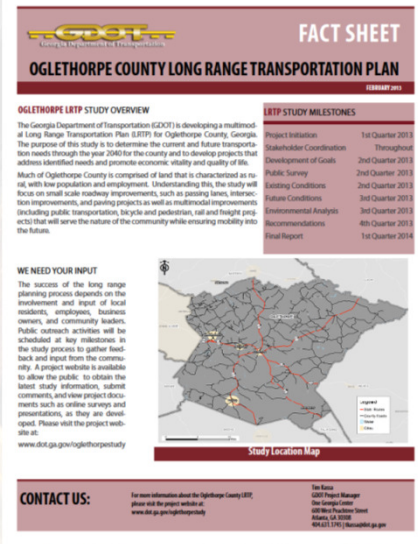
STAKEHOLDER AND PUBLIC OUTREACH

- Stakeholder Advisory Group
- Fact Sheet
- Website
  www.dot.ga.gov/oglethorpestudy
- Public Survey
  https://www.surveymonkey.com/s/Oglethorpe_County_LRTP


FACT SHEET

OGLETHORPE COUNTY LONG RANGE TRANSPORTATION PLAN

FEBRUARY 2013

OGLETHORPE LRTP STUDY OVERVIEW

The Georgia Department of Transportation (GDOT) is developing a multimodal Long Range Transportation Plan (LRTP) for Oglethorpe County, Georgia. The purpose of this study is to determine the current and future transportation needs through the year 2040 for the county and to develop projects that address identified needs and promote economic vitality and quality of life.

Much of Oglethorpe County is comprised of land that is characterized as rural, with low population and employment. Understanding this, the study will focus on small scale roadway improvements, such as passing lanes, intersection improvements, and paving projects as well as multimodal improvements (including public transportation, bicycle and pedestrian, rail and freight projects) that will serve the nature of the community while ensuring mobility into the future.

LRTP STUDY MILESTONES

Project Initiation	1st Quarter 2013
Stakeholder Coordination	Throughout
Development of Goals	2nd Quarter 2013
Public Survey	2nd Quarter 2013
Existing Conditions	2nd Quarter 2013
Future Conditions	3rd Quarter 2013
Environmental Analysis	3rd Quarter 2013
Recommendations	4th Quarter 2013
Final Report	1st Quarter 2014

WE NEED YOUR INPUT

The success of the long range planning process depends on the involvement and input of local residents, employees, business owners, and community leaders. Public outreach activities will be scheduled at key milestones in the study process to gather feedback and input from the community. A project website is available to allow the public to obtain the latest study information, submit comments, and view project documents such as online surveys and presentations, as they are developed. Please visit the project website at:

www.dot.ga.gov/oglethorpestudy

Study Location Map

CONTACT US:

Georgia Department of Transportation

www.dot.ga.gov/oglethorpestudy

Stakeholder Advisory Group

- Members Include
  - Municipalities
  - Chamber of Commerce
  - Planning Agencies
  - Schools and Emergency Services
  - Business and Community Leaders
- Purpose
  - Refine study goals and objectives
  - Provide input at key study milestones

Data Collection

- Background Information and Previous/Ongoing Studies
- All Modes: Roads, Transit, Bicycle and Pedestrian Facilities and Freight
- Crash History and Bridge Inventory
- Freight Movement
- Data to Support Travel Demand Model
  - Transportation Network
  - Population/Employment Data
  - Land Use Data

Social-Economic Profile
2000 to 2010 Comparison

Demographics	2000		2010		Percentage Change (2000-2010)
	Counts	Percentage	Counts	Percentage	
Total Population	**12,635**	**100%**	**14,899**	**100%**	**18%**
• Persons 0 to 4 years	870	7%	877	6%	1%
• Persons 5 to 17 years	2,388	19%	2,678	18%	12%
• Persons 18 to 64 years	7,811	62%	9,230	62%	18%
• Senior, 65 years and over	1,566	12%	2,114	14%	35%
Households	**4,849**	**100%**	**5,647**	**100%**	**17%**

Data Sources: 2000 Census and 2010 Census

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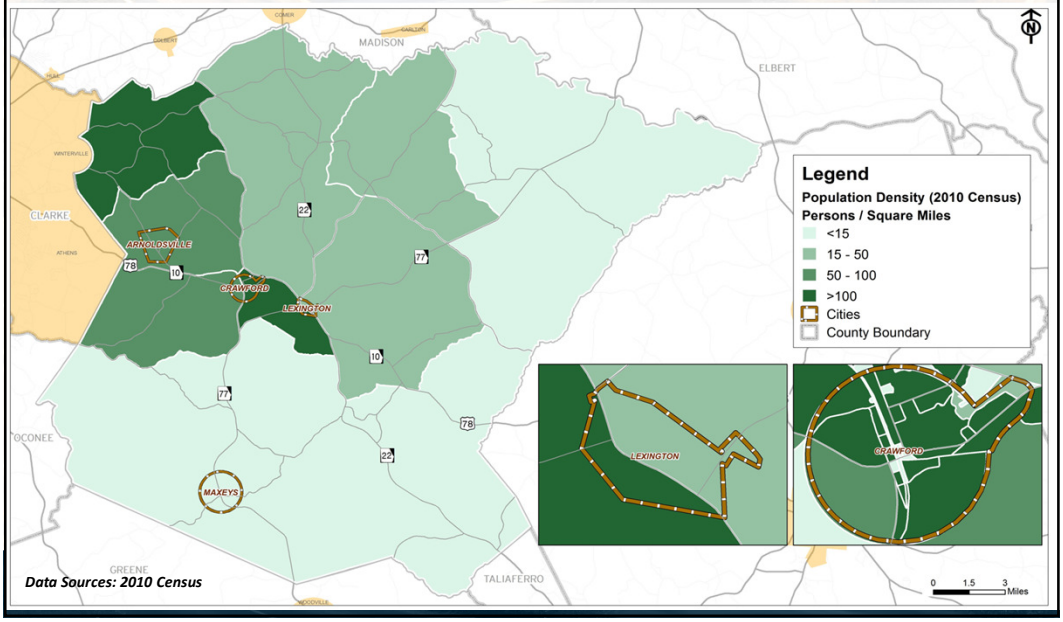
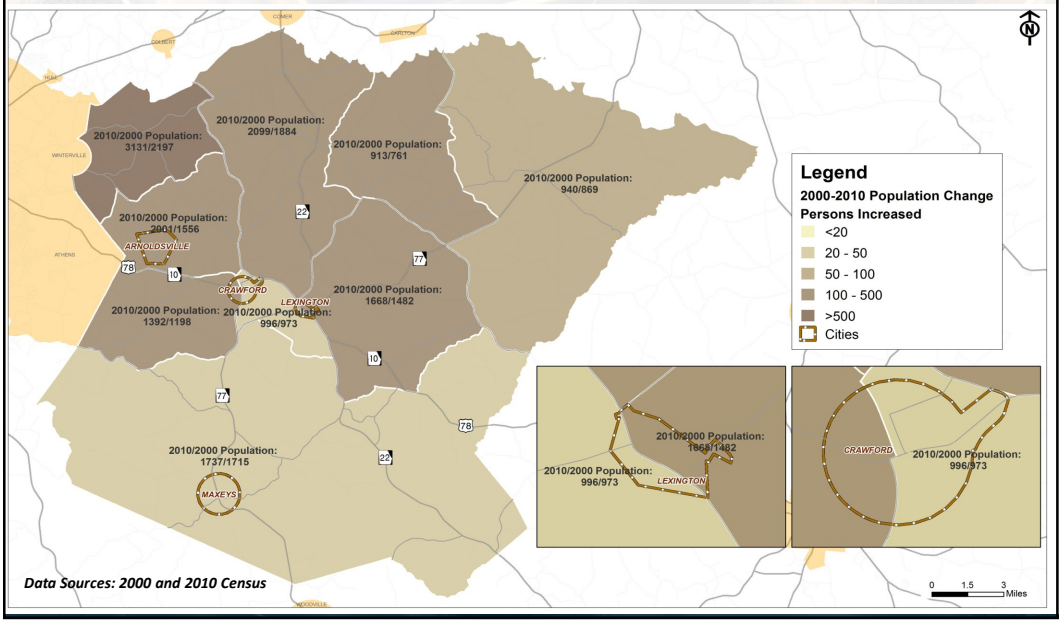
2010 Population Density



Data Sources: 2010 Census

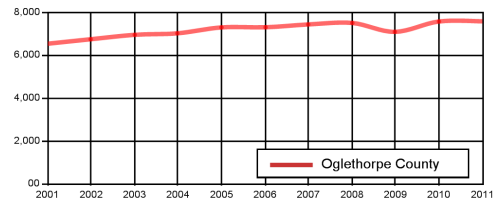
2000 - 2010 Population Change



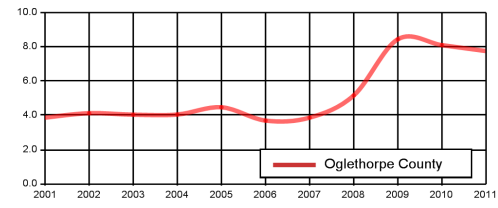
Data Sources: 2000 and 2010 Census

Social-Economic Profile (Cont'd)

Employment Trends



Unemployment Rate Trends



- Employment has remained constant over the past decade
- 2011 unemployment rate is slightly lower than statewide average of 9.8%
- Median Household Income has steadily Increased
  - $32,499 in 1990 (*$29,943 in GA)*
  - $35,578 in 2000 *($41,990 in GA*)
  - $39,319 in 2010 *($47,659 in GA)*

Data Sources:
Georgia Department of Labor, US Bureau of Labor Statistics

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Goals and Objectives

Georgia Department of Transportation

BACKGROUND – EXISTING GOALS

- Federal Surface Transportation Bill (2012)
  Moving Ahead for Progress in the 21st Century (MAP-21)
  - Safety;
  - Infrastructure Condition;
  - Congestion Reduction;
  - System Reliability;
  - Freight Movement and Economic Vitality;
  - Environmental Sustainability; and
  - Reduced Project Delivery Delays.

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BACKGROUND – EXISTING GOALS (CONT'D)

- Governor's Strategic Goals for Georgia (2012)
  - ***Mobile***: Improving the movement of people and goods across and within the state, expanding GA's role as a major logistics hub, and leveraging public-private partnerships
  - ***Growing***: Creating jobs and growing businesses
  - ***Healthy***: Accessible care and active lifestyles
  - ***Safe***: Protecting the public's safety and security by reducing injury and loss of life on Georgia's roads

BACKGROUND – EXISTING GOALS (CONT'D)

- Joint City-County Comprehensive Plan 2005-2025
  - Provide a ***safe***, ***efficient***, and ***effective*** transportation system that keeps pace with ***growth*** and integrates ***a variety of transportation modes*** to increase ***mobility*** options for all residents.

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STUDY DRAFT GOALS

- Goal 1:
  - Preserve the County's ***rural, natural, and environmental-sensitive*** areas and enhance the character of the ***historic and existing communities*** in the County.
- Goal 2:
  - Optimize utilization of existing infrastructure and maintain a ***safe, reliable and efficient*** transportation network which will ***sustain economic activity and promote economic development***.
- Goal 3:
  - Promote ***environmental sustainability*** through the coordination of ***land use and transportation plans***.
- Goal 4:
  - Provide a range of ***mobility options*** and enhance ***health and quality of life*** for all residents.

Stakeholder Input

We Need Your Input

- Transportation issues
  - Traffic Issues
  - Safety Issues
  - Alignment Issues
  - Transit
  - Bicycles and Pedestrian
  - Operations/Maintenance

We Need Your Input (Cont'd)

- Desired Projects or Improvements
  - Maintain and Manage Current Facilities
  - Operational Improvements
  - Safety Improvements
  - Diversify Modes
  - Expand Existing Facilities
  - New Facilities
- High Growth and Development Areas
- Main Outcome of the Plan

Next Steps

Georgia Department of Transportation

NEXT STEPS

- Public Survey Distribution
- Development of the Travel Demand Model
  - Existing (2010)
  - Future (2040)
- Finalization of Goals and Objectives
- Existing Conditions Analysis
- Future Conditions Analysis

Georgia Department of Transportation

www.dot.ga.gov/oglethorpestudy

CONTACT INFORMATION

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Phone: (404) 631-1745
tkassa@dot.ga.gov

HNTB
Attention: Ms. Jennifer Zhan
Phone: (404) 946-5705
yzhan@hntb.com

Oglethorpe County Long Range Transportation Study
Stakeholder Advisory Group Meeting Minutes

Date: April 16, 2013

Location: Historical Crawford Depot

Time: 2:00 PM

Meeting Attendees:

Billy Pittard	Oglethorpe County Commission
Josh Hawkins	Oglethorpe County
Cary Fordyce	Chamber of Commerce
Jim Dove	North Georgia Regional Commission
Mott Beck	North Georgia Regional Commission
Melanee McGee	Oglethorpe Children's Academy
Douglas Spencer	Oglethorpe County Fire
Nicole Spencer	Oglethorpe County
Joseph Fiore	Oglethorpe J&J Chemical Co.
Bobby Miller	Oglethorpe Greater Georgia Printers, Inc.
Neil Franker	GA State Patrol
Jimmie Cole	City of Crawford
Sherry McDuffie	Athens-Clarke County - MACORTS
Brad Griffin	Athens-Clarke County - MACORTS
Tracy Graham	Forestry Commission
Vonda Everett	GDOT District 2
Tim Kassa	GDOT Office of Planning
Garth Lynch	HNTB
Jennifer Zhan	HNTB

Meeting Summary:
Josh Hawkins, the planning director of Oglethorpe County commenced the meeting and introduced Tim Kassa, Georgia Department of Transportation (GDOT) Project Manager, to the group. Mr. Tim introduced the study and its purpose, and had meeting attendees introduce themselves. He then turned the floor over to Jennifer Zhan, HNTB Project Manager. Ms. Zhan thanked the group for attending, and provided a PowerPoint presentation that described the purpose of the plan, provided an overview of the study, outlined the schedule and stakeholder and public outreach process. She then provided a summary of the data collection efforts to date and discussed the study goals and objectives.

Following the presentation, Ms. Zhan opened up the meeting for input from the committee on goals and objectives for this Long Range Transportation Plan, transportation deficiencies and opportunities, growth patterns, and general insight. The following summarizes the input received:

- Not interested in current Crawford Lexington bypass concept. County doesn't think it is absolutely necessary to avoid what seems like illogical environmental areas with the bypass around Crawford-Lexington or the widening into Clarke County. Consider north Crawford bypass.
- Bike/pedestrian options favorable in growth areas, such as providing access to Crawford civic areas, schools, parks. There is also need for crosswalks and pedestrian lights.
- There is need for operational improvements on US 78 and Buddy Faust Road. Sun blinds eastbound drivers turning left. Consider flashing signal to help morning traffic during school time and/or add a left turn lane. Another option is to limit turns onto Buddy Faust Road and move the turns to SR 22.
- Need to review speed limits in town, the speed limit drops dramatically in small intervals and it will be beneficial to have better signage and warning. Possibly extend reduced speed limit signs farther out.
- Need operational improvements on SR 22 (Comer Road) / US 78 intersection - there is safety concern and it is difficult to enter highway
- Need for widening/passing lanes near Crawford coming to and from Athens.
- J&J Chemical is located along US 78, a mile and half west of Crawford with 20-30 trucks per day (near city limit sign). There are sight distance issues and trucks are slowing going in/out.
- Need to identify priorities whether funded or not to be prepared as funding becomes available.
- Need recommendations on best way to preserve existing transportation network – need to focus on growth areas and to preserve rural areas.
- Consider schools and emergency services as growth hubs.
- Need amenities such as sidewalks in concentrated population areas. Around Bryan Park.
- There is higher increase in senior population, consider public transportation options for senior and students. Seniors may require relocation closer to Athens if there are not mobility options as they age and cannot drive (consider centrally located hub).
- Widening of US 78 is the #1 project in the TIA list for the county connecting Lexington /Crawford west to Athens.
- Desire for concentrating dense areas and want rural areas to remain rural. The plan will need to focus on objectives of the desired future.
- Be sure LRTP and comprehensive plan work hand in hand (goal 1 and 2 are very much in line with comp plan). Add agricultural to goal 1.
- Preserve accessibility to school and businesses in Lexington and Crawford.
- Large agricultural plot placement needs to be considered as it relates to transportation system.
- SR 22 E to Crawfordville Road – the traffic is not an issue east of here
- The Firefly Trail (Athens – Crawford – Union Point) is inconsistent with community's desire. Cons include: 1. Proximity to private property; 2. Not consistent with local culture.

- Recreational riders sometimes take up full lane and it is very dangerous. There are 2 recent cycling deaths in the County. The common areas for recreational riders are along:
    - Wolfskin Road
    - Hargrove Lake Road
    - Winterville Road
    - Sandy Cross Road
- Crawford to Wolfskin Road – very hilly, sunlight, sight distance, need to look at safety options

Ms. Zhan concluded with a discussion of the next steps of the study, which include distributing Public Survey, developing a travel demand model for 2010 and 2040, finalizing the goals and objectives, and conducting existing and future conditions analysis. The next meeting will occur in September 2013.

Oglethorpe County Long Range Transportation Study
Kickoff and Stakeholder Advisory Committee Meeting – April 16th, 2013
SIGN-IN SHEET
Please Print

Name	Company and/or Address	Phone	E-Mail
Douglas Spencer	Oglethorpe Fire 2703 Elberton Rd Lexington 30627		vestafiredept@yahoo.com
Nicole Spencer			
Vonda Everett	GDOT	478 552 4631	veverett@dot.ga.gov
JOSEPH FIORE	J&J CHEMICAL CO.	706.453-6899	JOE@JJCHEM.COM
Bobby Miller	Greater Georgia Printers, Inc	706-743-8155	bobby@georgiaprinters.com
NEIL FRANKEL	GA STATE PATROL	706-202-3185	NFRANKEL@GSP.NET
Melanee McGee	Oglethorpe Children's Academy	706-743-7400	melaneemcgee@windstream.net
Jim Dove	Northeast Ga RegComm.	706/369-5650	jdove@negrc.org
Matt Beck	Northeast Ga. Reg. Comm.	706/369-5650	mbeck@negrc.org
Jimmie Cole	City of Crawford	706-743-5260	jcoile@windstream.net
Josh Hawkins	County Planner	706-743-8159	
Cary Fordyce	Economic Development/Chamber of Commerce	706-743-3113	
BRAD GRIFFIN	MACORTS	706 613-3515	Brad.Griffin@AthensClarkeCounty.com
Sherry McDuffie	"	"	
Tracy M. Graham	302 Buddy Faust Rd. GA Forestry Comm.	706 743 5703	tgraham@gfc.state.ga.us
Randy Yeargin	Oglethorpe Co Schools	706-202-9873	RLyeargin@Aol.com

Oglethorpe County
Long Range Transportation Study

Stakeholder Advisory Committee
Meeting #2

October 15, 2013

Georgia Department of Transportation

AGENDA

- Project Purpose and Overview
- Existing & Future Conditions
- Needs Assessment and Potential Improvements
- Stakeholder Input
- Next Steps

Georgia Department of Transportation

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Project Purpose and Overview

Georgia Department of Transportation

WHY DEVELOP A TRANSPORTATION PLAN?

- Ensure that Oglethorpe County and its municipalities are able to meet the current and future mobility needs of residents and businesses
- Ensure transportation priorities match community priorities
- Coordinate with other planning efforts
- Develop a listing of tiered transportation projects
- Early identification of funding issues and opportunities

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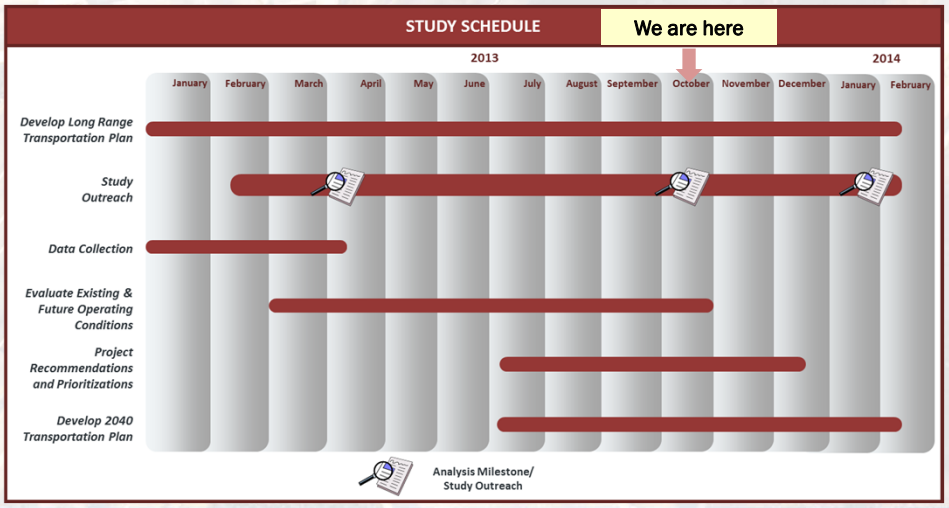
SCHEDULE

Study Development: January 2013 – December 2013
Final Documentation: December 2013 – February 2014

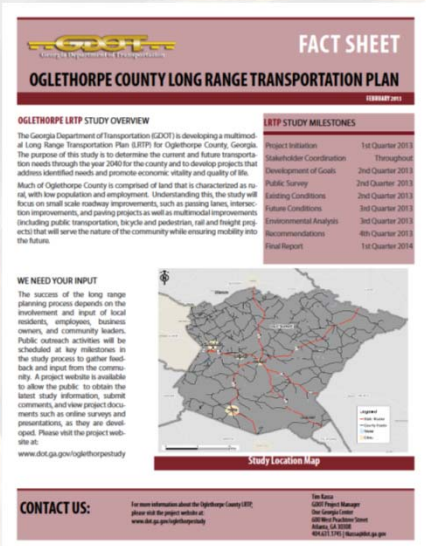


STUDY GOALS

- Goal 1:
  - Preserve the County's ***rural, agricultural, natural, and environmental-sensitive*** areas and enhance the character of the ***historic and existing communities*** in the County.
- Goal 2:
  - Optimize utilization of existing infrastructure and maintain a ***safe, reliable and efficient*** transportation network which will ***sustain economic activity and promote economic development***.
- Goal 3:
  - Promote ***environmental sustainability*** through the coordination of ***land use and transportation plans***.
- Goal 4:
  - Provide a range of ***mobility options*** and enhance ***health and quality of life*** for all residents.

Stakeholder and Public Outreach

- Stakeholder Advisory Group
- Fact Sheet
- Website
  www.dot.ga.gov/oglethorpestudy
- Public Survey


FACT SHEET

OGLETHORPE COUNTY LONG RANGE TRANSPORTATION PLAN

OGLETHORPE LRTP STUDY OVERVIEW

LRTP STUDY MILESTONES

WE NEED YOUR INPUT

Study Location Map

CONTACT US:

Georgia Department of Transportation

www.dot.ga.gov/oglethorpestudy

Stakeholder and Public Outreach - Public Survey

- 21 question survey developed covering
  - Commute patterns
  - Transportation improvement priorities
  - Issues on traffic operations, safety, trucks, road conditions, bridges, sidewalks and bicycle routes, and public transportation
- Distribution
  - Online Survey
  - County school system
- 188 surveys completed


Traveling in Georgia Local Government Doing Business Projects Information Center

SUGGEST A QUICK FIX

Oglethorpe County - Long Range Study

Public Survey

Give Us Your FEEDBACK!

Complete Survey

Quick Links

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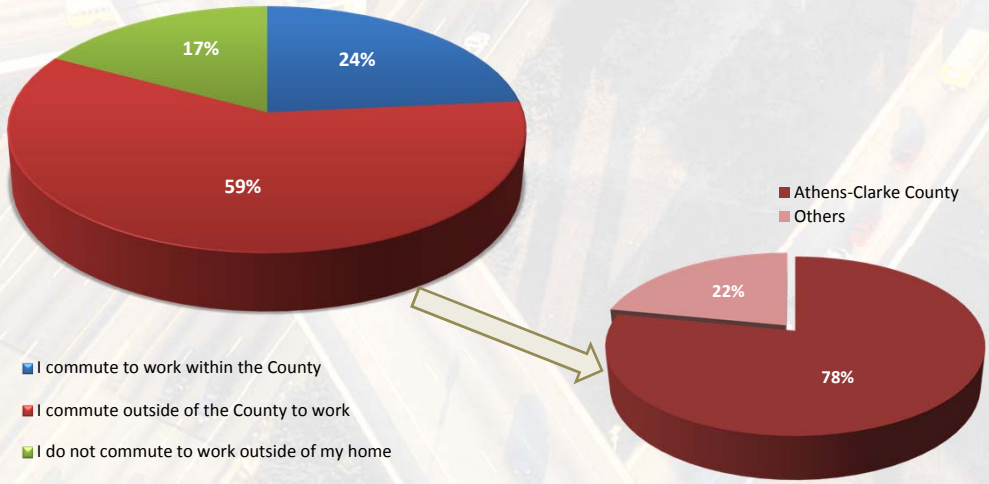
Stakeholder and Public Outreach - Public Survey

Commuter Patterns



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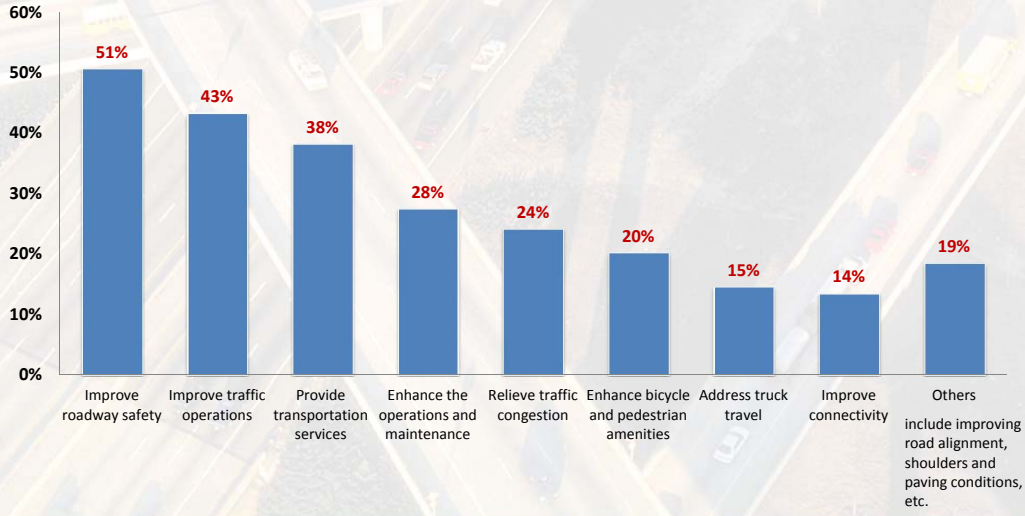
Stakeholder and Public Outreach - Public Survey

Transportation Improvement Priorities



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Public Survey Key Observations on Transportation Needs

- Improve traffic operations along US 78
  - US 78 @ Buddy Faust Road
  - US 78 @ Bunker Hill Road
  - US 78 @ SR 22
- Improve traffic operations and safety in the vicinity of the schools
- Improve roadway condition
- Some support for public transportation needs

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Existing & Future Conditions

Georgia Department of Transportation

DATA COLLECTION OVERVIEW

- Background Information and Studies
  - Transportation Documents
  - Land Use Planning Documents
- Multi-Modal
  - Roadway
  - Transit
  - Bicycle and Pedestrian
- Crash History
- Bridge Inventory
- Data to Support Travel Demand Model

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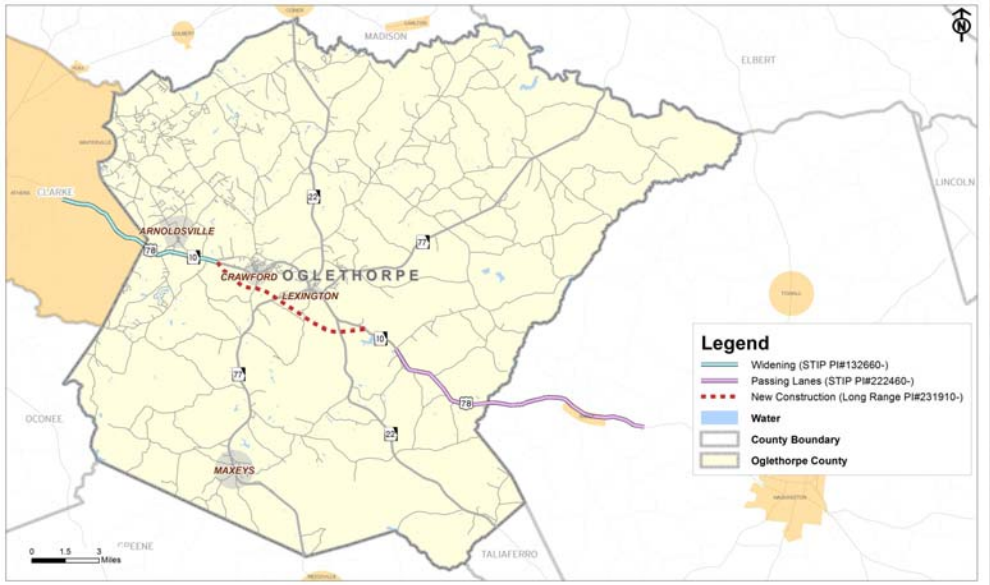
PLANNED IMPROVEMENTS



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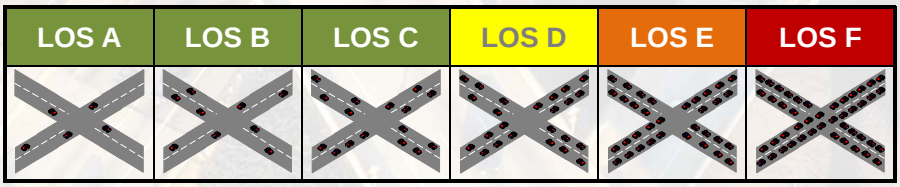
Roadway Operating Conditions

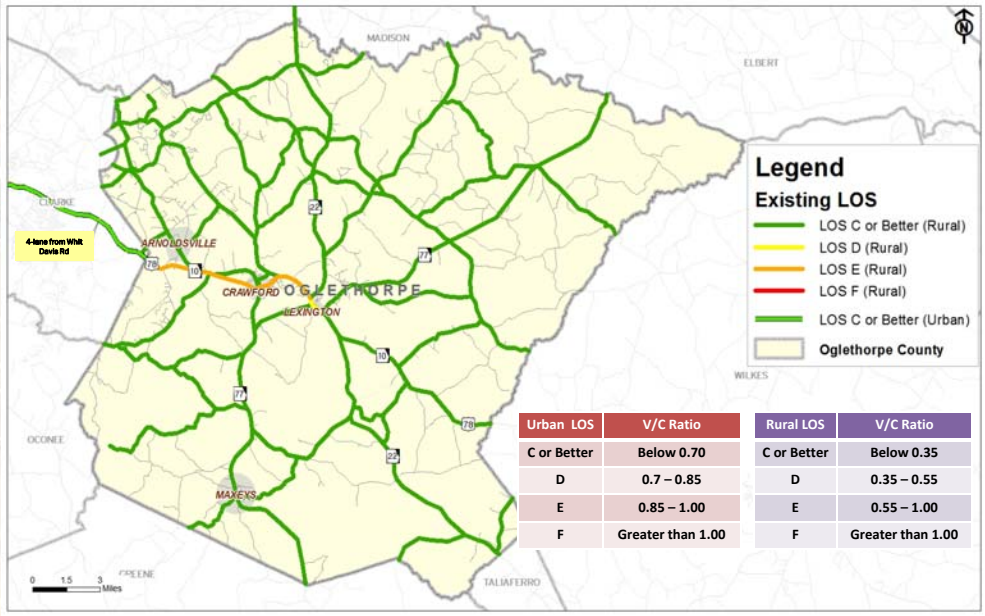
- Roadway operating conditions were evaluated using Level of Service (LOS)
- LOS compares volumes along the roadway to the capacity of that roadway
- LOS was derived using the Travel Demand Model
- Existing (2010) and Future (2040) Operating Conditions were Evaluated



Travel Demand Model

- Expanded Athens MPO model to cover Oglethorpe County
- Model development is based on:
  - 2010 traffic counts
  - Census data
  - Employment information
  - School enrollment
  - Land use data
  - Socioeconomic forecasts
- Utilized results to identify potential improvements based on future needs

2010 Level of Service



Urban LOS	V/C Ratio
C or Better	Below 0.70
D	0.7 – 0.85
E	0.85 – 1.00
F	Greater than 1.00

Rural LOS	V/C Ratio
C or Better	Below 0.35
D	0.35 – 0.55
E	0.55 – 1.00
F	Greater than 1.00

Georgia Department of Transportation

Future Socio-economic Forecasts - Highlights

- 35% population increase between 2010 and 2040
- 43% employment increase between 2010 and 2040

Year	Population	Household	Employment
2010	14,899	6,484	1,537
2040	20,082	8,739	2,198
Change	5,183	2,255	661

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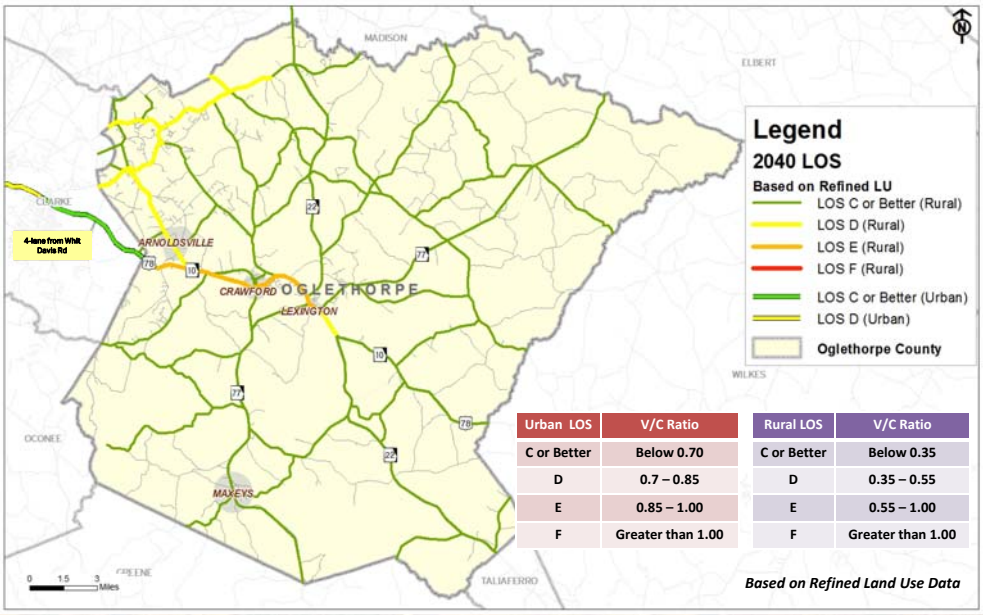
2040 Level of Service (Existing Network)



Urban LOS	V/C Ratio
C or Better	Below 0.70
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F	Greater than 1.00

Rural LOS	V/C Ratio
C or Better	Below 0.35
D	0.35 – 0.55
E	0.55 – 1.00
F	Greater than 1.00

Based on Refined Land Use Data

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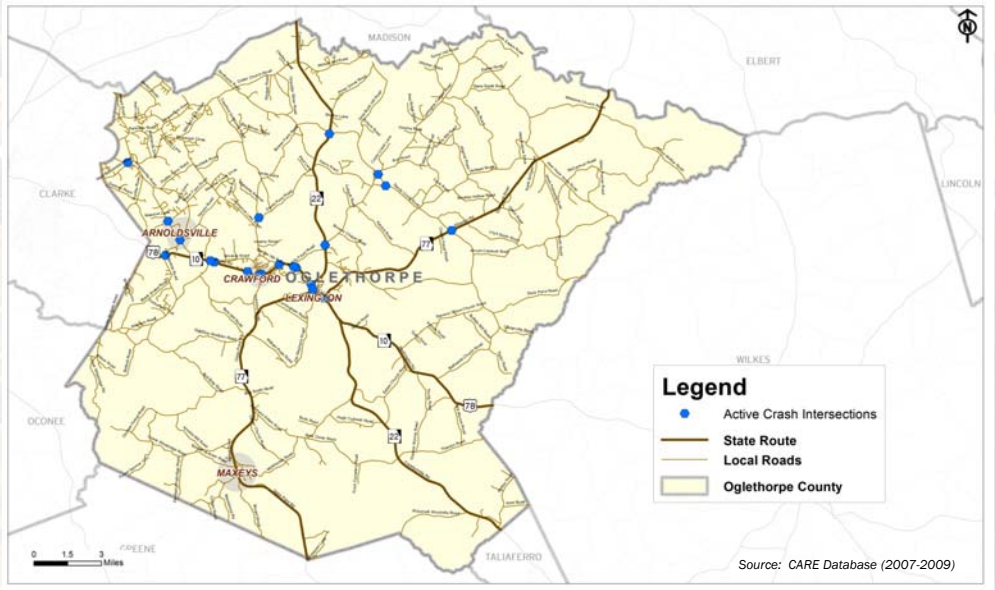
Crash Analysis



Source: CARE Database (2007-2009)

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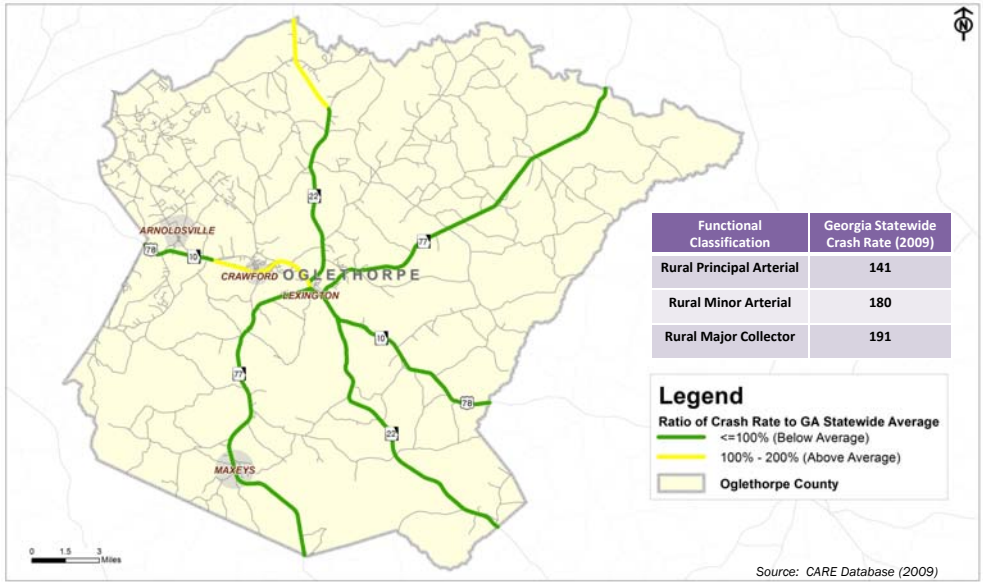
CRASH ANALYSIS



Functional Classification	Georgia Statewide Crash Rate (2009)
Rural Principal Arterial	141
Rural Minor Arterial	180
Rural Major Collector	191

Source: CARE Database (2009)

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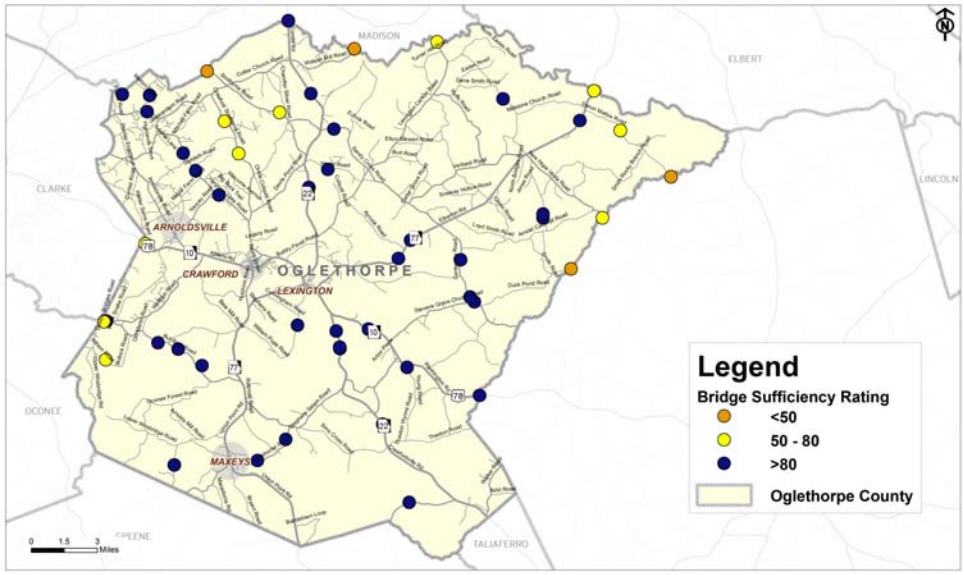
BRIDGE ANALYSIS



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Needs Assessment and Potential Improvements

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NEEDS ASSESSMENT AND POTENTIAL IMPROVEMENTS

- Roadway Needs and Improvements
- Intersection Needs and Improvements
- Bridge Upgrades Needs
- Bicycle and Pedestrian Facilities Assessment
- Public Transit Assessment

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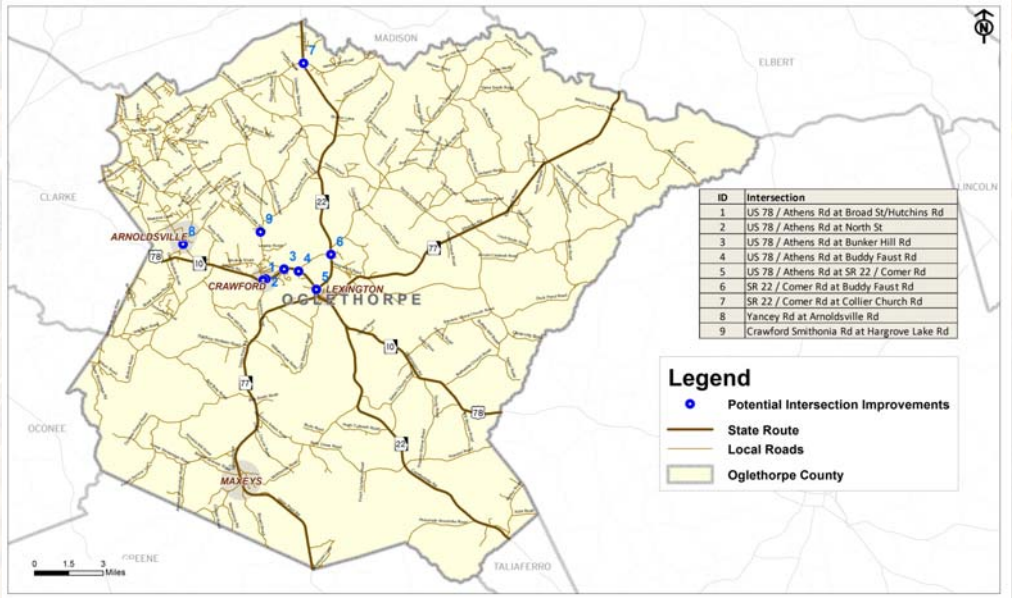
Roadway Needs and Potential Improvements

- Analyzed roadway characteristics and used the travel demand model to forecast future travel patterns
- Stakeholder input, future development, and future land use were also considered
- Potential improvements could include widening, passing lanes, and paving upgrades

Intersection and Safety Needs and Potential Improvements

- Identified top nine (9) intersections based on safety analysis and stakeholder input
- Collected Turning Movement Counts and performed operational analysis
- Analyzed crash data in the last five years (2007-2011)
- Potential improvements include advanced warning signs, operational improvements and access management strategies

Intersection and Potential Safety Improvements



ID	Intersection
1	US 78 / Athens Rd at Broad St/Hutchins Rd
2	US 78 / Athens Rd at North St
3	US 78 / Athens Rd at Bunker Hill Rd
4	US 78 / Athens Rd at Buddy Faust Rd
5	US 78 / Athens Rd at SR 22 / Comer Rd
6	SR 22 / Comer Rd at Buddy Faust Rd
7	SR 22 / Comer Rd at Collier Church Rd
8	Yancey Rd at Arnoldsville Rd
9	Crawford Smithonia Rd at Hargrove Lake Rd

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Intersection and Potential Safety Improvements

Intersection of US 78 / Athens Road at Bunker Hill Road

Existing Condition Analysis

Physical Condition

- Two-way stop-controlled intersection
- Two lanes on US 78 / Athens Road eastbound; one lane on all other approaches
- No exclusive turn lanes

Safety Analysis

- 6 crashes in total during 2007 to 2011 with majority of them being rear end collisions
- Drivers' unawareness of the intersection and/or road curvature could be the main causes for crashes

Percentage of Crashes by Severity and Cause

Crash Severity

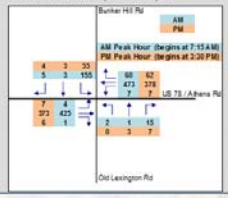
Manner of Collision

Vehicle Maneuver

Traffic Characteristics

2013 Existing Peak Hour Turning Movement Counts

- AM Peak Hour: 7:15 am – 8:15 am
- PM Peak Hour: 3:30 pm – 4:30 pm



Peak Hour Level of Service Analysis

- AM Peak Hour: 7:15 am – 8:15 am
- PM Peak Hour: 3:30 pm – 4:30 pm

Stakeholder and Public Input

- There is a flow issue on the mainline on US 78 / Athens Road.
- During the AM and PM peak periods, drivers experienced long queues on Bunker Hill Road southbound.
- It is difficult to make left-turn movement on Bunker Hill Road due to limited sight distance and high speed on US 78.
- Public expressed safety concern over this intersection.
- Public suggested signalizing this intersection or implementing four-way stop control and adding left turn lanes on US 78 and Bunker Hill Road southbound approach.

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Intersection and Potential Safety Improvements

 # 3 - Intersection of US 78 / Athens Road at Bunker Hill Road — **Existing Condition Analysis**

Potential Improvements for Further Evaluation

	Next Steps and Potential Improvements	Crash Type Addressed	Benefits	Timeline for Implementation	Estimated Cost	Crash Reduction Factors (CRF)*
No. 1	Replace 30-inch with 36-inch stop signs on Bunker Hill Road southbound. 	Right angle and rear end crashes attributed to drivers unaware of the intersection or failing to stop at the stop sign	Could provide approaching motorists with additional information and help them make safer decisions as they approach the intersection			67%
No. 2	Consider providing "Chevron" signs for southbound Bunker Hill Road. 	Sideswipe crashes or crashes attributed to negotiating a curve	Could provide approaching motorists with additional information and help them make safer decisions as they approach the intersection			20%-64%
No. 3	Consider offsetting the intersection and cul-de-sacing the driveway to the church to improve operations and safety.	Crashes attributed to insufficient sight distance and awkward sight lines at a skewed intersection	Could address problems like vehicle alignment, long exposure in the intersection, and potential driver confusion			Varies * The CRF varies by the degree of skew
No. 4	Consider adding right turn lane from US 78 to Bunker Hill Road and converting the current passing lanes to two-way left-turn lane (TWLTL).	Crashes between (1) vehicles turning left and following vehicles and (2) vehicles turning left and opposing through vehicles	TWLTL can allow through vehicles to continue without stopping while turning vehicles can use left turn lanes.			23%-48%

Note: Roundabout was initially considered as a potential improvement. It was determined that geometry limits the feasibility for roundabout improvement at this intersection.

Bridge Potential Improvements

- Analysis based on GDOT Bridge sufficiency ratings
- Bridges will be recommended for near-term or mid-term improvements
- Bridges that have the highest traffic volumes or provide key connections will have highest priority
- Potential improvements can include maintenance, upgrades or replacement

Bicycle & Pedestrian Assessment

- Northeast Georgia RC Bicycle & Pedestrian Plan
- Public / Stakeholder Input and Field Observation
- Opportunity Areas for Consideration
  - Crawford / Lexington
  - Schools
  - Parks
  - Library
  - Public Facilities

Bicycle & Pedestrian improvements

- SR 22 Paved Shoulder
- US 78 Bike Lane
- Firefly Trail
- Broad River Greenway
- Oconee River Greenway

Source: NEGRC – Northeast Georgia Plan for Bicycling and Walking, 2010.

BICYCLE & PEDESTRIAN POTENTIAL IMPROVEMENTS

Crawford:

- Add a sidewalk on the both sides of US 78 from Oglethorpe Builders Supply to East Elbert (.5 mi)
- Add a sidewalk on the east side of North Street from US 78 to Bryan Park including a pedestrian signal at US 78/North Street intersection (.5 mi.)
- Restripe the pedestrian crosswalk at the Depot

Lexington:

- Add sidewalk on north side of US 78 connecting library, senior center, medical center, high school, Bell's Grocery, and Fred's (.6 mi.)

TRANSIT ASSESSMENT

- Provides transportation services for low-income and disabled population via the Human Services Transit program
- Senior citizen center located in Crawford provides daily transportation for its members
  - Two-hour morning and afternoon routes
  - Funded by the County and the Georgia Division on Aging Services
- No connectivity to the Athens Transit

The Senior Center in Crawford

TRANSIT RECOMMENDATIONS FOR CONSIDERATION

- Park-and-Ride/Carpool Lots in Crawford and/or Lexington
- Rideshare Programs to Match Commuters Interested in Carpooling
- Commuter Shuttle to Athens
- On-Demand Human Services Transportation

POLICY GUIDANCE

- Access Management
- Development Reviews
- Intersection Operation and Maintenance
- Corridor Strategy Guidance

Stakeholder Input

Georgia Department of Transportation

STAKEHOLDER DISCUSSION

- Needs Assessment and Potential Improvements
  - What's missing?
  - What are your questions?

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Next Steps

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NEXT STEPS

- Develop and Finalize Potential Improvements
- Develop Costs and Benefits
- Conduct Project Prioritization
- Develop Long Range Transportation Plan
- Develop Policy Guidance

Georgia Department of Transportation

www.dot.ga.gov/oglethorpestudy

CONTACT INFORMATION

Georgia Department of Transportation

Attention: Mr. Tom Caiafa

Phone: (404) 631-1987

tcaiafa@dot.ga.gov

Oglethorpe County Long Range Transportation Study
Stakeholder Advisory Group Meeting Minutes

Date: October 15, 2013

Location: Historical Crawford Depot

Time: 10:30 AM

Meeting Attendees:

Billy Pittard	Oglethorpe County Commission
Josh Hawkins	Oglethorpe County
Cary Fordyce	Chamber of Commerce
Jim Dove	North Georgia Regional Commission
Mott Beck	North Georgia Regional Commission
Greg Banks	Arnoldsville Mayor
Sherry McDuffie	Athens-Clarke County - MACORTS
Brad Griffin	Athens-Clarke County - MACORTS
Cherie Dallon	Athens-Clarke County - MACORTS
Randy Yeargin	Oglethorpe County Board of Education
Tracy Graham	Georgia Forestry Commission
Radney Simpson	GDOT Office of Planning
Kyle Mote	GDOT Office of Planning
Tom Caiafa	GDOT Office of Planning
Garth Lynch	HNTB
Jennifer Zhan	HNTB
Mary Huffstetler	MPH

Meeting Summary:
Tom Caiafa, Georgia Department of Transportation (GDOT) Office of Planning, Project Manager, started the meeting and welcomed the group to the second meeting of three planned meetings for this study.

Mr. Caiafa then presented a PowerPoint presentation that described the purpose of the plan, highlighted the schedule and completed tasks, summarized the key observations from the public survey, explained the development of travel demand model and application towards assessing existing and future roadway conditions. In addition to roadway needs and improvements, Mr. Caiafa also presented the needs and potential improvements for intersections, bridges, bicycle and pedestrian facilities and public transit. He further mentioned that the stakeholder and public input was incorporated to develop those potential improvements.

The level of service maps for both existing and future (2040) conditions along with potential improvements for the top three prioritized intersections were displayed around the meeting room.

Mr. Radney Simpson thanked everybody for coming and asked the stakeholders for their priorities that they would like to see coming out of this transportation study. The following section documents the inputs from the stakeholder advisory group:

- Tracy Graham: He is interested in what effects will new transportation improvements have on the County? A majority of the landowners in the county have agricultural land. Burning practices are tied to transportation. There is a February 2014 deadline to determine new burning guidelines.
- Billy Pittard: He wants to understand current and future needs to ensure the County is ready for the future. He feels that the input gathered and the depth of the plan will be useful in obtaining quick response funding. He is pleased to have an evaluation of needs based on population and geographical characteristics.
- Jim Dove: He feels that Oglethorpe County needs to develop a clear vision during the long range plan process and the plan should tie into other surrounding counties and cities. In addition, the Regional Commission needs a firm plan for Oglethorpe County to tie into regional efforts.
- Josh Hawkins: He is interested in a fresh and comprehensive assessment of the transportation system. As a local so closely involved with the study, he wants the outside experts to point out things that may have been overlooked and are needed in Oglethorpe County.
- Brad Griffin: He is looking for regional cooperation with the Athens MPO.
- Cary Fordyce: He stated that it is nice to see economic and community development reflected in this comprehensive plan. He feels that the framework needs to align with the plan and economic development and he is happy to see this plan can be used as a good tool for supporting new and growing businesses in the county.
- Greg Banks: He is primarily concerned with Arnoldsville Highway.
- Randy Yeargin: He is interested in identifying intersections with potential hazardous conditions so he can be sure to route busses along the safest routes.

There was an extensive discussion on rural versus urban Level of Service classification. Mr. Hawkins also mentioned that he would like to see the safety analysis extend beyond intersections. Ms. Jennifer Zhan responded that the safety analysis was also conducted at the segment level to identify corridors or segments that may be in need of improvement. Ms. Zhan also pointed out that there will be policy guidance provided in addition to infrastructure recommendations.

Mr. Caiafa concluded the meeting with a discussion of the next steps of the study, which include developing and finalizing potential improvements; developing planning level cost estimation; conducting project prioritization; developing final documentation of Long Range Transportation Plan and policy guidance.

The PowerPoint presentation is available at the project website:
www.dot.ga.gov/Oglethorpestudy

Oglethorpe County Long Range Transportation Study
Stakeholder Advisory Committee Meeting – October 15th, 2013
SIGN-IN SHEET
Please Print

Name	Company and/or Address	Phone	E-Mail
RADNEY SIMPSON	GDOT		
KYLE MOTE	GDOT		
TOM CAIAFA	11 11 11		
Jennifer Zhan	HNTB		
KAMPY YEARLIN	OC BOS		
Tracy M. Graham	GFC		
Cherie Dalton	NGC Planning		
Sherry McDuffie	MACORTS		
Brad Griffin	MACORTS		
Matt Beck	NEGRC		
Jim Dove	NEGRC		
Greg Banks	Arnoldsville Mayor		
BILL HARD	Chair - BOC		
Josh Hawkins	Planner		
Garth Lynch	HNTB		
Mary Huffstetler	MPH		
Carly Forcyce	OCCE		

Oglethorpe County
Long Range Transportation Study

Stakeholder Advisory Committee
Meeting #3

February 18, 2014

Georgia Department of Transportation

AGENDA

- Study Purpose and Update
- Plan Outcomes
- Needs Assessment and Additional Analysis
- Draft Potential Improvements
- Project Prioritization
- Discussion and Next Steps

Georgia Department of Transportation

www.dot.ga.gov/oglethorpestudy

Study Purpose and Update

Georgia Department of Transportation

WHY DEVELOP A TRANSPORTATION PLAN?

- Ensure that Oglethorpe County and its municipalities are able to meet the current and future mobility needs of residents and businesses
- Ensure transportation priorities match community priorities
- Coordinate with other planning efforts
- Develop a listing of tiered transportation projects
- Early identification of funding issues and opportunities

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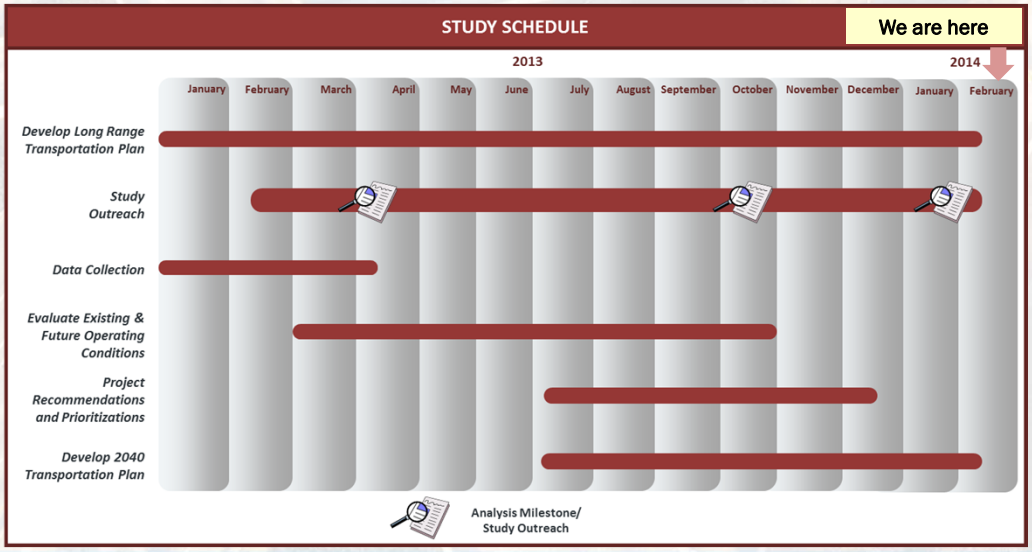
SCHEDULE



Georgia Department of Transportation

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STUDY GOALS

- Goal 1:
  - Preserve the County's ***rural, agricultural, natural, and environmental-sensitive*** areas and enhance the character of the ***historic and existing communities*** in the County.
- Goal 2:
  - Optimize utilization of existing infrastructure and maintain a ***safe, reliable and efficient*** transportation network which will ***sustain economic activity and promote economic development***.
- Goal 3:
  - Promote ***environmental sustainability*** through the coordination of ***land use and transportation plans***.
- Goal 4:
  - Provide a range of ***mobility options*** and enhance ***health and quality of life*** for all residents.

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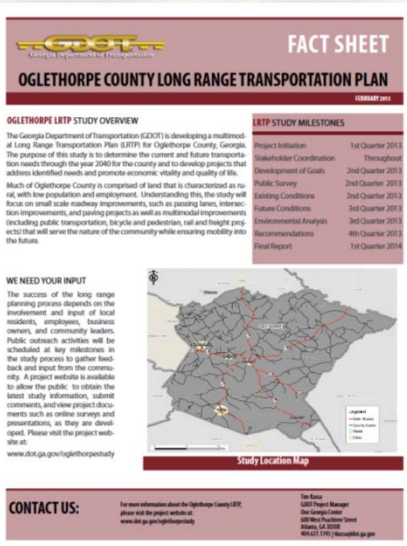
Stakeholder and Public Outreach

- Stakeholder Advisory Group
- Fact Sheet
- Website

  www.dot.ga.gov/oglethorpestudy
- Public Survey
  - Online Survey
  - County school system
  - 188 surveys completed


FACT SHEET

OGLETHORPE COUNTY LONG RANGE TRANSPORTATION PLAN

OGLETHORPE LRTP STUDY OVERVIEW

LRTP STUDY MILESTONES

WE NEED YOUR INPUT

Study Location Map

CONTACT US:

Public Survey Key Observations on Transportation Needs

Priority issues	Priority locations
• Improve traffic operations and safety in the vicinity of the schools • Improve roadway condition • Some support for public transportation needs	• US 78 segment • US 78 @ Buddy Faust Road • US 78 @ Bunker Hill Road • US 78 @ SR 22 • Activity centers

Plan Outcomes

Georgia Department of Transportation

PLAN OUTCOMES - WHAT WE HEARD FROM YOU

- To conduct a fresh and comprehensive assessment of the transportation system
- To fully understand current and future needs
- To develop a clear vision and ensure the plan ties into other surrounding counties and cities
- To develop a plan that is consistent with other regional efforts
- To develop a framework that is aligned with future economic development
- To identify problematic intersections and improve the operating conditions

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Needs Assessment and Additional Analysis

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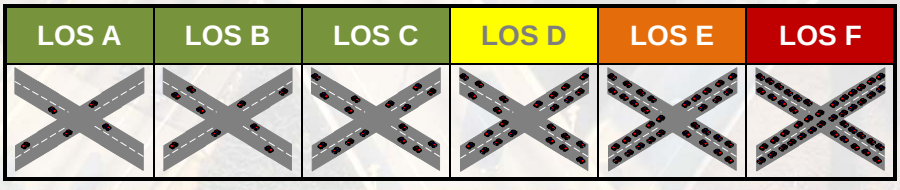
ROADWAY OPERATING CONDITIONS

- Roadway operating conditions were evaluated using Level of Service (LOS)
- LOS compares volumes along the roadway to the capacity of that roadway
- LOS was derived using the Travel Demand Model
- Existing (2010) and Future (2040) Operating Conditions were Evaluated



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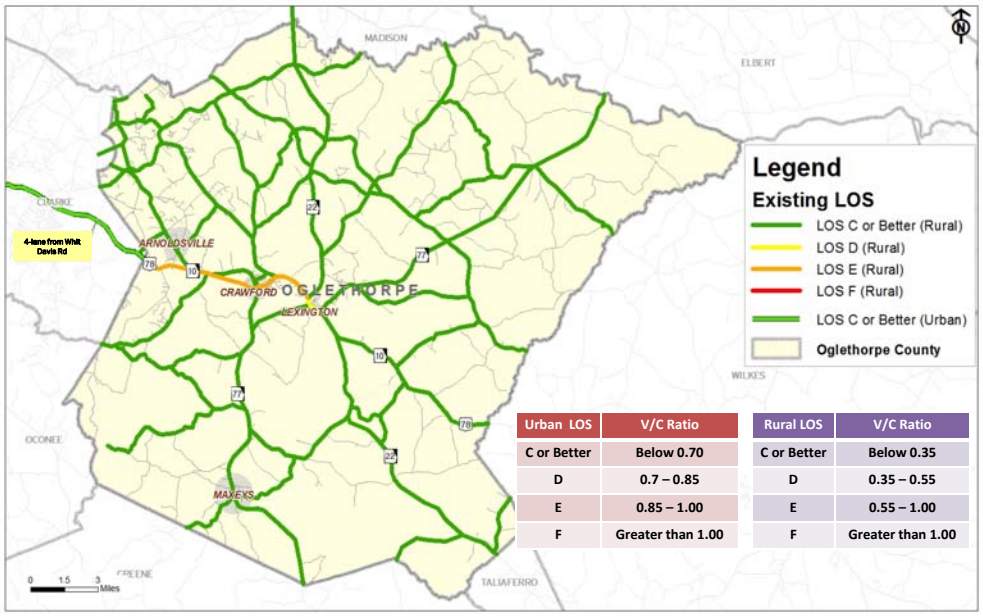
2010 Level of Service



Urban LOS	V/C Ratio
C or Better	Below 0.70
D	0.7 – 0.85
E	0.85 – 1.00
F	Greater than 1.00

Rural LOS	V/C Ratio
C or Better	Below 0.35
D	0.35 – 0.55
E	0.55 – 1.00
F	Greater than 1.00

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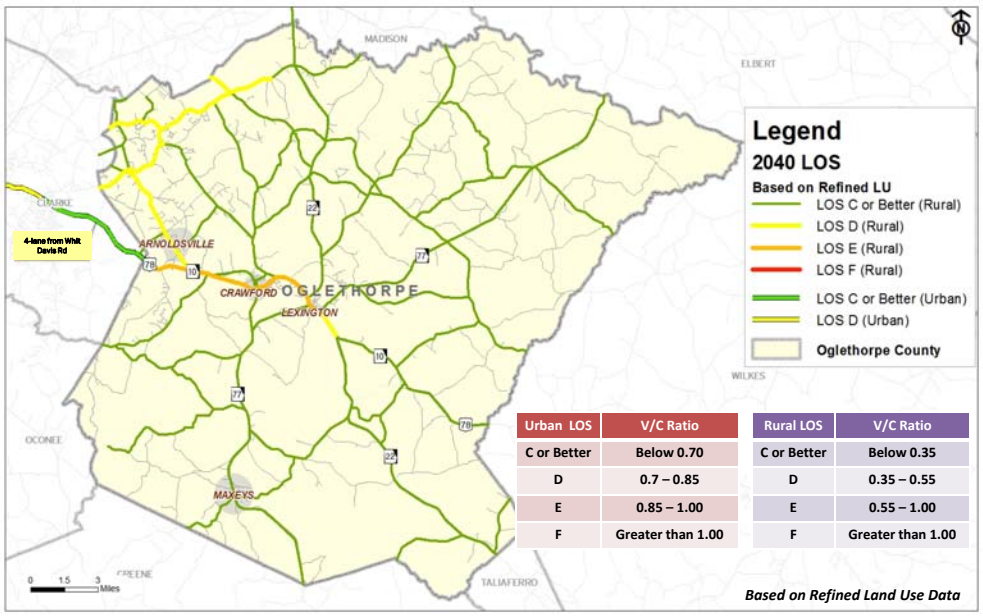
2040 Level of Service (Existing Network)



Urban LOS	V/C Ratio
C or Better	Below 0.70
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F	Greater than 1.00

Rural LOS	V/C Ratio
C or Better	Below 0.35
D	0.35 – 0.55
E	0.55 – 1.00
F	Greater than 1.00

Based on Refined Land Use Data

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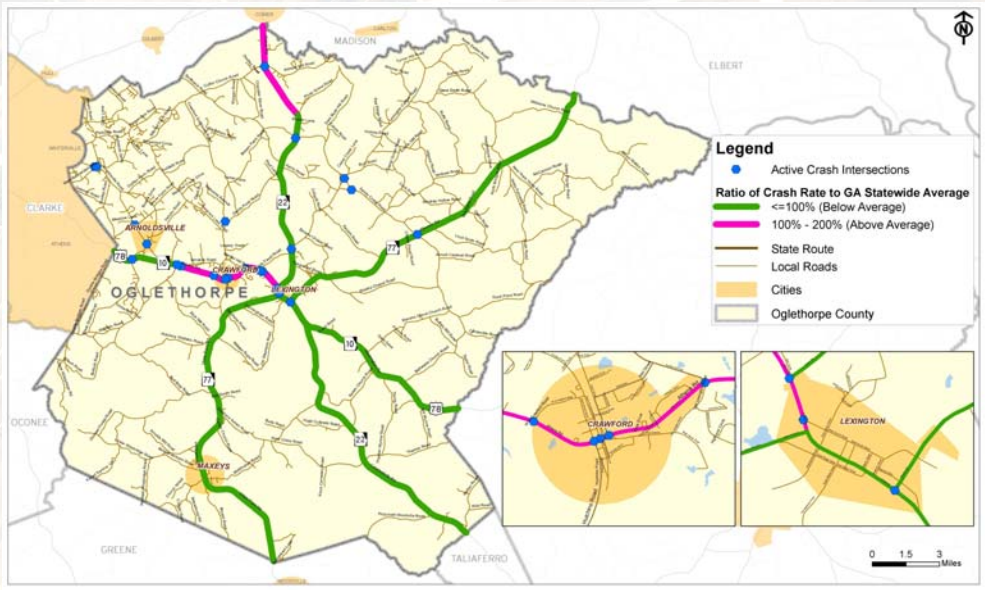
SAFETY ANALYSIS



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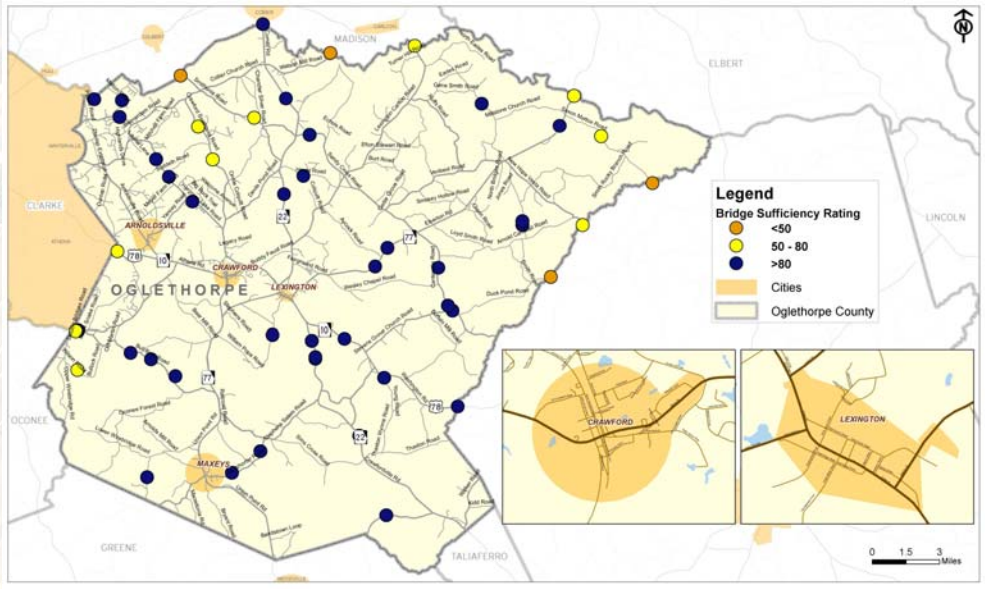
BRIDGE ANALYSIS



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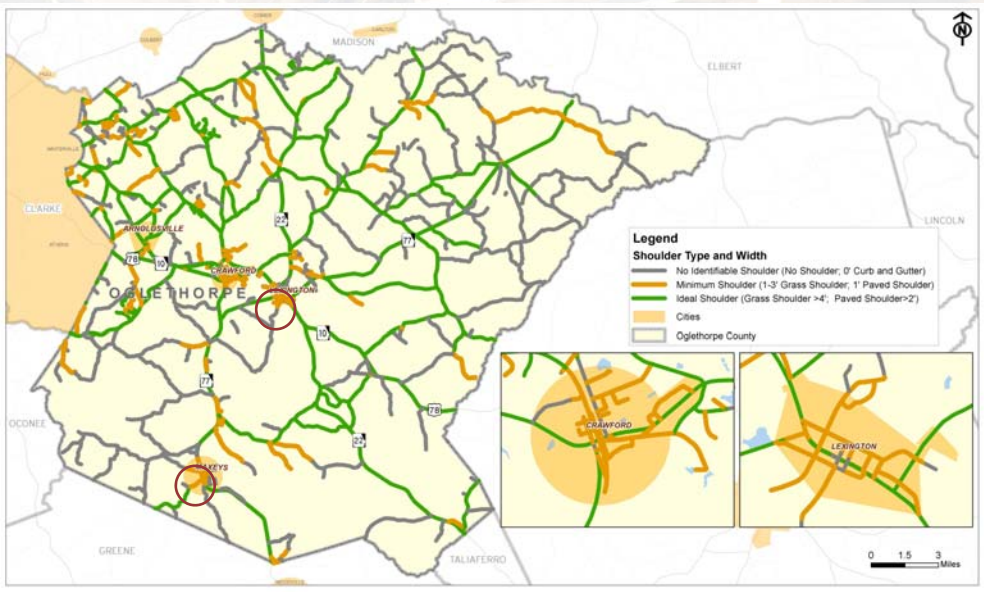
Shoulder Type and Width Analysis



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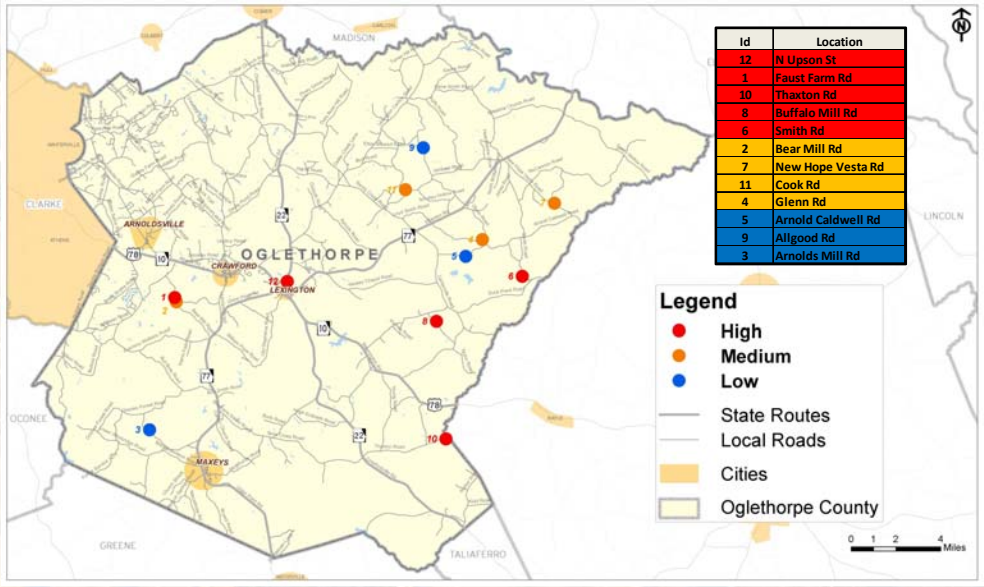
Ford Analysis



Id	Location
12	N Upson St
1	Faust Farm Rd
10	Thaxton Rd
8	Buffalo Mill Rd
6	Smith Rd
2	Bear Mill Rd
7	New Hope Vesta Rd
11	Cook Rd
4	Glenn Rd
5	Arnold Caldwell Rd
9	Allgood Rd
3	Arnolds Mill Rd

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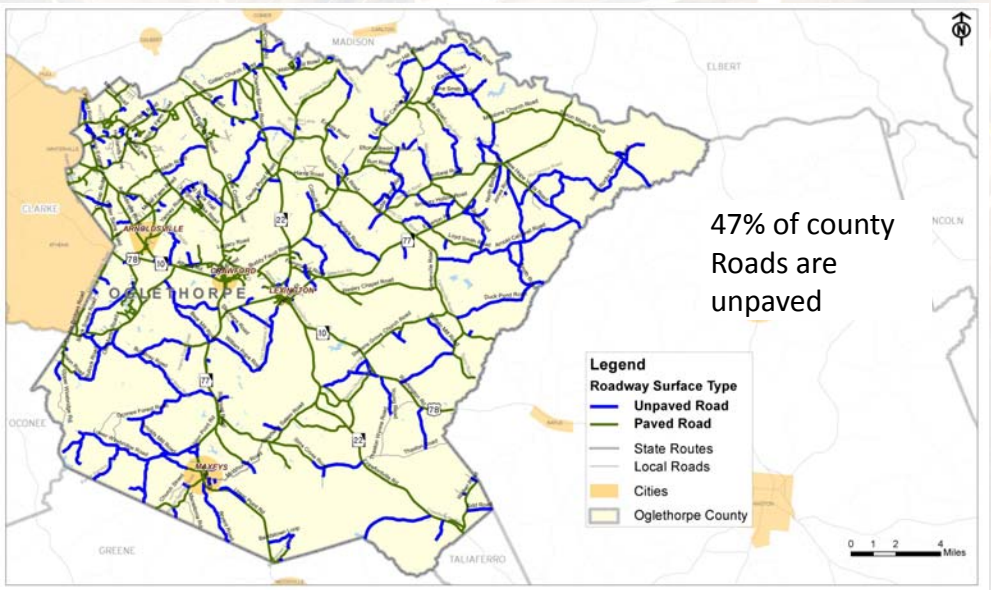
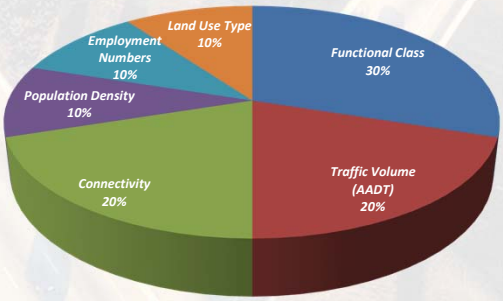
Road Surface Type



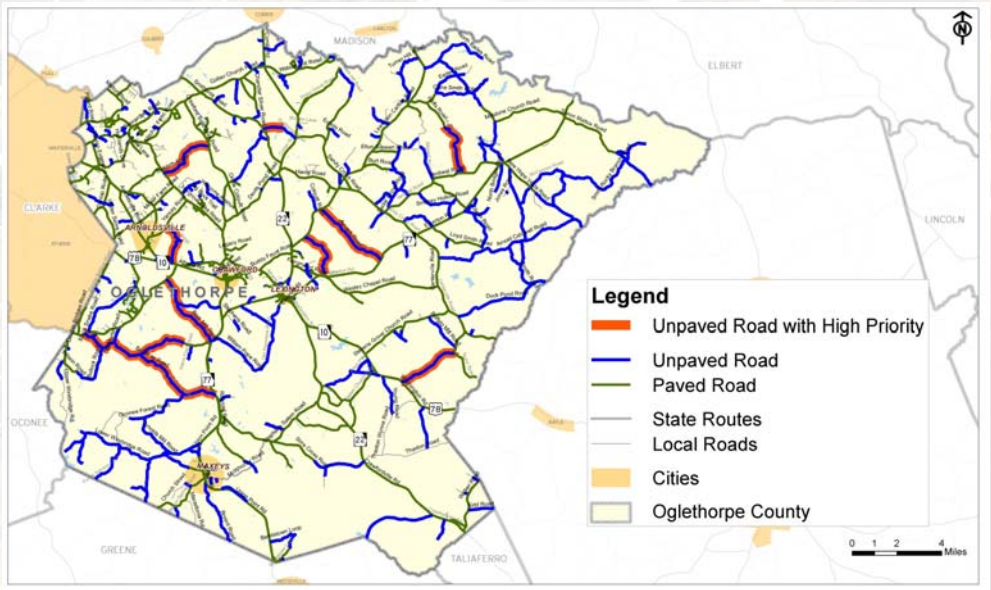
47% of county Roads are unpaved

Pavement Analysis

- Pavement Needs Evaluation Criteria:
  - Functional Classification
  - Annual Average Daily Traffic (AADT)
  - Connectivity
  - Population Density
  - Employment Numbers
  - Land Use Type



Pavement Analysis Results



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Draft Potential Improvements

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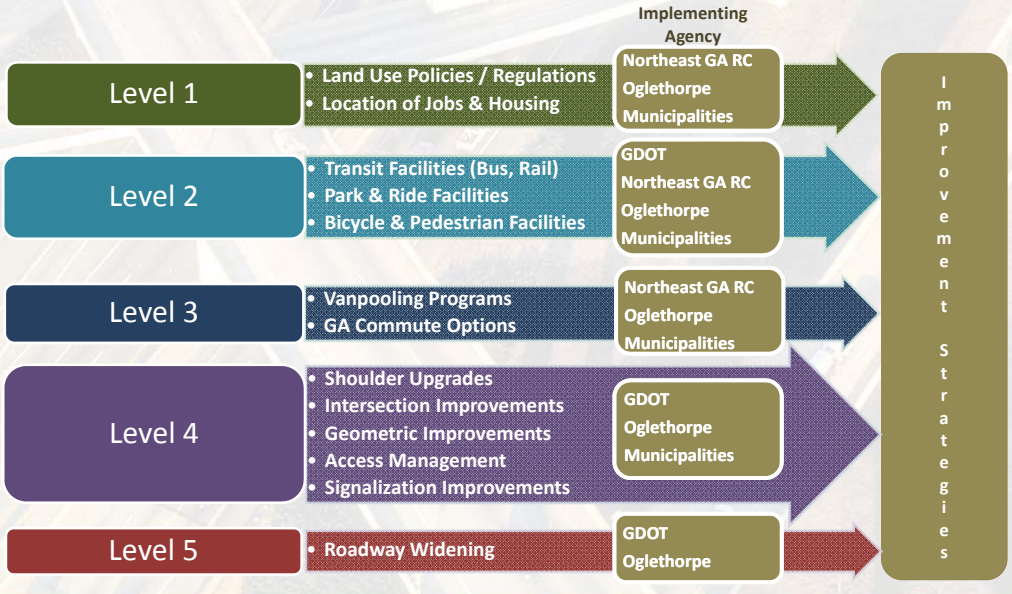
Types of Improvement Alternatives

What are the right type of improvements in Oglethorpe County?

- Maintain and manage current facilities
- Operational / safety improvements
- Diversify modes
- Expand existing facilities
- New facilities

Development of Strategies



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POTENTIAL ROADWAY IMPROVEMENTS
ROADWAY CAPACITY

- Widening / New Construction
  - US 78 Widening
    - PI # 132660-: from CR26/Smokey Road to CR166/Whit Davis Road
  - Bypass
    - PI # 231910-: Crawford/Lexington Bypass

POTENTIAL ROADWAY IMPROVEMENTS
ROADWAY CAPACITY

- US 78 Widening
  - Approved Northern Alignment
    - Practical Alternatives Report (PAR) completed
    - Logical Termini approved by FHWA
  - Southern Alignment
    - Considered during Alternative Analysis Process
    - Screened out due to environmental impacts

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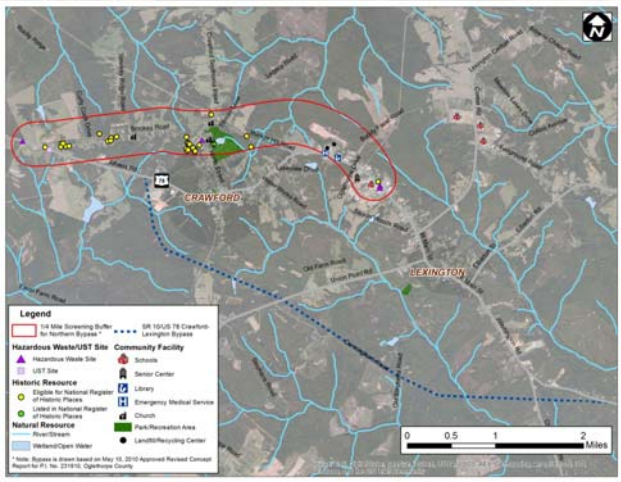
Potential Roadway Improvements
Roadway Capacity

- Local Northern Bypass
  - Moderate to high potential impact for historic resources

Environmental Screening



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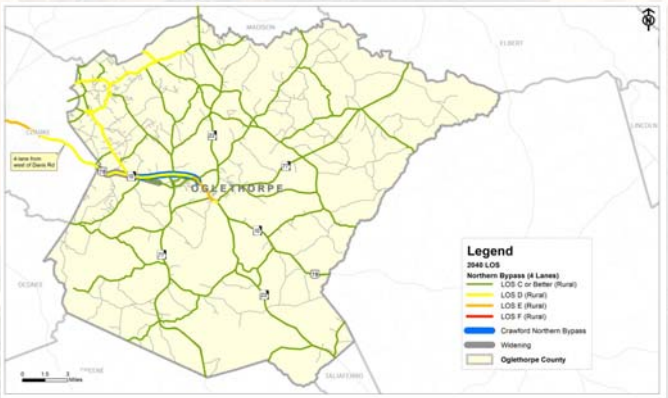
Potential Roadway Improvements
Roadway Capacity

- Local Northern Bypass
  - Moderate to high potential impact for historic resources
  - Level of Service: D and E (East of Northern bypass)
  - Recommend further evaluation through Alternative Analysis process for PI # 231910-

Future (2040) Operational Analysis
Northern bypass: 2-lane in each direction



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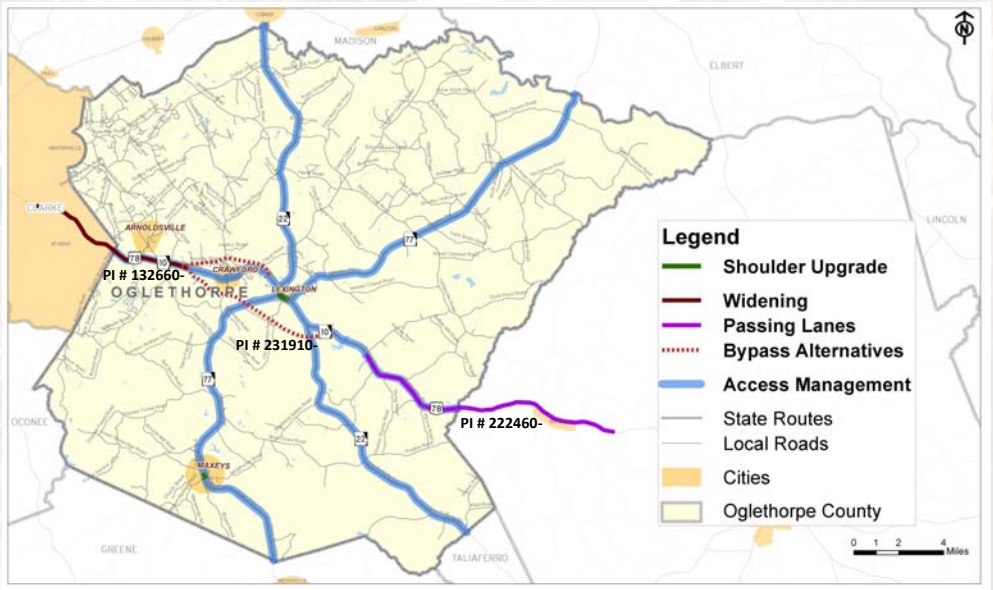
Potential Roadway Improvements
Operational Improvements

- Passing Lanes
  - PI # 222460-: US 78 from east of Stevens Grove Church Road to east of Beaver Dam Road (Wilkes County)
- Shoulder Upgrade
  - SR 77/S Main St from south of Hill Street to south of Church Street in Maxeys
  - SR 77/Union Point Street from west of Boggs Street to US 78/Atlanta Street in Lexington

Potential Roadway Improvements
Access Management Guidance

- US 78
- SR 22 (esp. segment from Salem Church Road to Harris Road)
- SR 77 (esp. segment from Hutchins Wolfskin Road to Sandy Cross Road)

POTENTIAL ROADWAY IMPROVEMENTS



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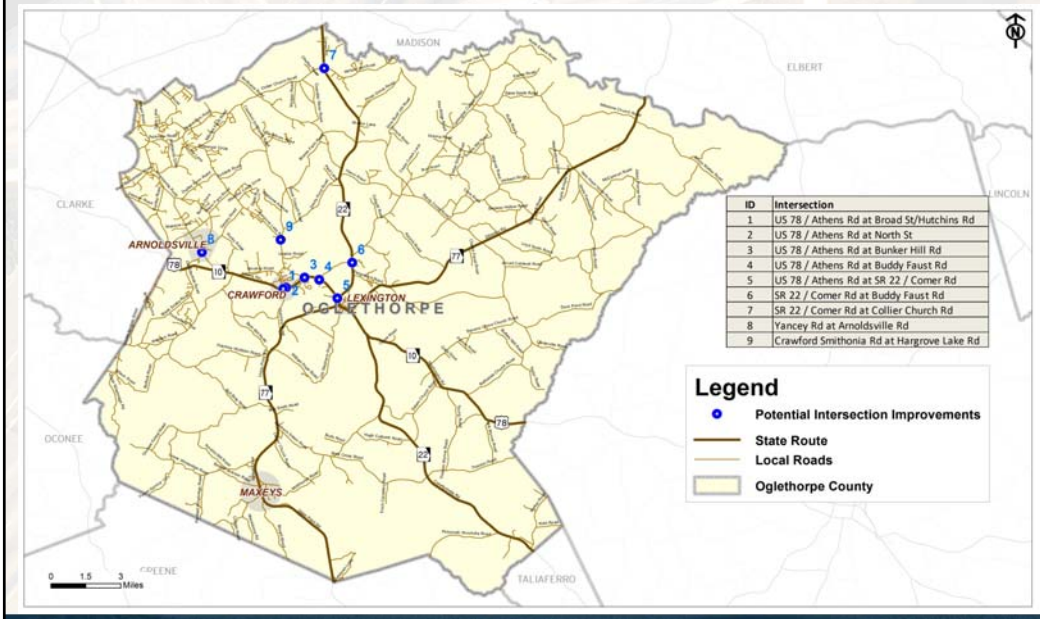
INTERSECTION IMPROVEMENTS



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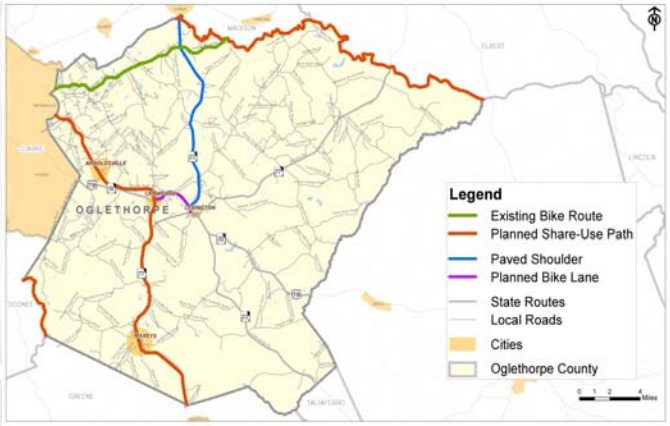
BICYCLE & PEDESTRIAN IMPROVEMENTS

- Paved Shoulder
  - SR 22
- Bike Lane
  - US 78
- Greenway
  - Broad River Madison -Elbert-Oglethorpe
  - Oconee River Clarke -Oconee-Oglethorpe -Greene
- Rail-Trail
  - Clarke-Oglethorpe-Greene Firefly Trail



Source: NEGRC – Northeast Georgia Plan for Bicycling and Walking, 2010.

BICYCLE & PEDESTRIAN POTENTIAL IMPROVEMENTS

- Add Sidewalk(s)
  - US 78 from Oglethorpe Builders Supply to East Elbert in Crawford
  - East side of North Street from US 78 to Bryan Park in Crawford
  - North side of US 78 connecting school and activity centers in Lexington
- Pedestrian Signal
  - US 78/North Street Intersection in Crawford
- Restripe
  - Pedestrian Crosswalk at Depot in Crawford

TRANSIT RECOMMENDATIONS FOR CONSIDERATION

- Park-and-Ride/Carpool Lots in Crawford and/or Lexington
- Rideshare Programs to Match Commuters Interested in Carpooling
- Commuter Shuttle to Athens
- On-Demand Human Services Transportation

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Project Prioritization

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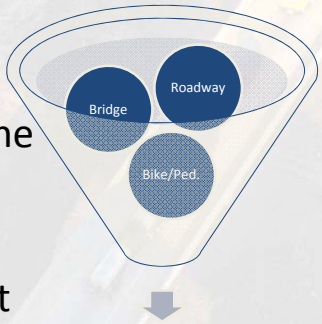
Project Prioritization

- Transportation Plan Identified Need
- Safety
- Connectivity
- Protection of Downtowns
- Project Readiness
- Supports Comprehensive Planning Efforts
- Maintains Transportation and Land Use Linkage

Plan Prioritization Factors

- Set the framework for identifying recommendations to address transportation needs.
- Include both qualitative and quantitative criteria that address the overall goals and objectives.
- Weighting of evaluation factors informs the prioritization of project recommendations in the Plan.



Plan Recommendations

Discussion and Next Steps

Georgia Department of Transportation

NEXT STEPS

- Finalize Potential Improvements
- Provide Long Range Transportation Plan
- Provide Policy Guidance

The plan and policy guidance will serve as "living" documents to help County protect the mobility and promote quality of life into the future.

Georgia Department of Transportation

www.dot.ga.gov/oglethorpestudy

CONTACT INFORMATION

Georgia Department of Transportation

Attention: Mr. Tom Caiafa

Phone: (404) 631-1987

tcaiafa@dot.ga.gov

Oglethorpe County Long Range Transportation Study
Stakeholder Advisory Group Meeting Minutes

Date: February 18, 2014

Location: Historical Crawford Depot

Time: 10:30 AM

Meeting Attendees:

Billy Pittard	Oglethorpe County Commission
Josh Hawkins	Oglethorpe County
Cary Fordyce	Chamber of Commerce
Jim Dove	North Georgia Regional Commission
Mott Beck	North Georgia Regional Commission
Jessica Colquitt	Oglethorpe Echo
Keith Wooster	Georgia Forestry commission
Neil Frankel	GA State Patrol
Neal O'Brien	GDOT District 2
Randy Yeargin	Oglethorpe County Board of Education
Tracy Graham	Georgia Forestry Commission
Kyle Mote	GDOT Office of Planning
Tom Caiafa	GDOT Office of Planning
Jennifer Zhan	HNTB
Scott Sugar	HNTB

Meeting Summary:
Kyle Mote, Georgia Department of Transportation (GDOT) Office of Planning, Project Manager, started the meeting and welcomed the group to the third and final meeting for this study.

Mr. Tom Caiafa then presented a PowerPoint presentation that described the purpose the study update, plan outcomes, needs assessment and additional analysis, draft of the potential improvements, project prioritization and discussed what the next steps are. He further mentioned that the stakeholder and public input was incorporated to develop the potential improvements and the next steps.

The study area with stakeholder input, draft potential improvements, ford and unpaved roads and existing condition analysis boards were displayed around the room for viewing and discussion.

Mr. Tom Caiafa thanked everybody for coming and asked the stakeholders for their thoughts and input on this transportation study. The following section documents the inputs from the stakeholder advisory group:

- Billy Pittard: He wants to know what the status is of the intersection improvements.

- Billy Pittard: He wants to make sure that northern bypass alignment is more important than the southern bypass for the county.
- Josh Hawkins: He is interested in a fresh and comprehensive assessment of the transportation system. He wants to make sure that this report reflects improvements that are in Oglethorpe's comprehensive plan.
- Mott Beck: He doesn't want to see too much traffic diverted from the central business district due to the northern bypass. He also thinks that there is not enough need for the southern bypass. There is not enough truck traffic.
- Josh Hawkins and Billy Pittard: What is the status about US 78 Widening toward Athens?

There was an extensive discussion about how to proceed with the preferred northern bypass. Mr. Mote explained to write Mr. Toby Carr in GDOT planning on behalf of Oglethorpe County that they want to move forward with the northern bypass and need state funds to help this project take place. Billy was also interested about what the status is on the intersection/ safety improvements. Mr. Mote and Mr. Neal O'Brien talked about how many of the stakeholder identified improvements have been made or in the process of being upgraded.

Mr. Caiafa concluded the meeting with a discussion of the study outcomes and discussion of the boards presented in the meeting for developing final documentation of Long Range Transportation Plan and policy guidance.

The PowerPoint presentation is available at the project website:
www.dot.ga.gov/Oglethorpestudy

Oglethorpe County Long Range Transportation Study
Stakeholder Advisory Committee Meeting – February 18th, 2014
SIGN-IN SHEET
Please Print

Name	Company and/or Address	Phone	E-Mail
Jim Dove	NEGRC	706 369-5650	jdove@negrc.org
Neal O'Brien	GDOT District 2	478-552-4829	
Cary Fendyce	Oglethorpe CofC	706-743-3113	office oglethorpecofc.org
Josh Hawkins	O. County	706-743-8159	jhawkins@oglethorpe.com
Matt Beck	NEGRC	706 369-5650	mbeck@negrc.org
Randy Yearwin	OC BOC	706-202-9873	RLyearwin@aol.com
Tracy Graham	GFC	706 743 5703	tgraham@gfc.state.
Jessica Colquitt	Oglethorpe Echo	706-743-5510	jcolquitt@oglethorpeecho.com
Keith Wooster	GFC	706 743 5703	
Billy Pittard	Oglethorpe BOC	706-743-5270	
Neil Frankel	GA State Patrol	706-202-3185	NFRANKEL@GSP.NET
Jennifer Zhan	HNTB	404-946-5700	YZHAN@HNTB.com
Scott Sugar	HNTB	404-946-5700	SSUGAR@HNTB.com
Kyle Mote	GDOT office of planning	404-631-1000	KMOTE@DOT.GA.GOV
Tom Caiafa	GDOT office of planning	404-631-1000	TCAIAFA@DOT.GA.GOV

APPENDIX C

PUBLIC SURVEY

OVERVIEW

The Oglethorpe County Multi-Modal Transportation Plan's Public Survey queried the general public about various transportation topics related to traffic operations, safety, trucks, road conditions, bridges, sidewalks and bicycle routes, and public transit. The survey consisted of 21 questions that captured respondents' place of residence, commuting patterns, transportation concerns, and improvement priorities. The survey questions were structured to both secure specific 'Yes' and 'No' answers to targeted questions while also allowing respondents to describe locations, comments, and concerns related to the particular question topic. This methodology provided insight into the general public's priorities for transportation planning while allowing lower priority issues to also have a voice.

The survey was made available to the general public online on the Study website (www.dot.ga.gov/oglethorpestudy) from March 2013 through June 2013. The survey was also distributed in paper format to students of the Oglethorpe County school system to take home to their families. Approximately 200 surveys were completed via online or in paper format which provided invaluable information that was then incorporated into the study assessment and recommendations.

Each survey question is presented below as it appeared to participants. Detailed, tabulated results are also provided for each question which show how many respondents answered the question, skipped the question, etc. Question 1 was the only question requiring a response. Respondents could choose to reply or skip Questions 2 thru 21. Additionally, a number of questions allowed or asked for multiple responses. These questions are marked with an asterick* in the 'Response Count' tabulation column for the particular question.

Respondents were encouraged to indicate locations where particular transportation problems or insufficiencies occur. Tables presenting these locations are included with each question. Many survey respondents also invested time to describe problems and issues in detail. These respondent-specific comments are also included as part of the public survey results.

The public survey questions and their responses and comments are presented below.

1. What is your 5 digit postal zip code?

Of the 188 responses to Question 1, 51% were from Oglethorpe County residents. Twenty-two percent (22%) came from Madison County residents followed by 20% from Clarke County residents. The breakdown of all responses is shown in Table 1 below.

Table 1 Survey Responses by Zip Code

Zip Code	Location	County	Response Percent	Response Count
30683	Winterville	Clark	19.7%	37
30630	Crawford	Oglethorpe	19.2%	36
30648	Lexington	Oglethorpe	19.2%	36
30628	Colbert	Madison	8.5%	16
30627	Carlton	Madison	7.9%	15
30619	Arnoldsville	Oglethorpe	6.4%	12
30667	Stephens/Maxeys	Oglethorpe	5.9%	11
30629	Comer	Madison	5.3%	10
30660	Rayle	Wilkes	4.3%	8
30669	Union Point/Woodville	Greene	1.6%	3
30561	Cornelia	Habersham	0.5%	1
30605	Athens	Clark	0.5%	1
30662	Royston	Franklin	0.5%	1
30671	Maxeys	Oglethorpe	0.5%	1
		Total	**100.0%**	**188**
		Answered Question		**188**
		Skipped Question		**2**

2. Please select the category that best describes your daily travel for work.

A majority of survey respondents, 60%, commute to work outside of Oglethorpe County, as seen in Table 2 below:

Table 2 Daily Commute For Work

Answer Options	Response Percent	Response Count*
I commute to work within the county	24.2%	45
I commute outside of the county to work	59.6%	111
I do not commute to work outside of my home	17.7%	33
Total	**100.0%**	**189**
Answered Question		**186**
Skipped Question		**4**

*Respondents permitted to select more than one choice

3. If you do commute to work, in which County/City do you work?

Survey respondents commute to work primarily in Clarke County. Sixty-four percent (64%) report commuting for work to Clarke County, Athens, and Winterville. Nearly 20% of respondents commute to/within Oglethorpe County for work, as shown in Table 3 below.

Table3 County/City of work

County/City	Response Percent	Response Count*
Clarke County - Athens	31.3%	41
Clarke County	29.0%	38
Oglethorpe County - Lexington	8.4%	11
Oglethorpe County	5.3%	7
Oglethorpe County - Crawford	5.3%	7
Madison County	4.6%	6
Surrounding Counties	2.3%	3
Clarke County - Winterville	2.3%	3
None	2.3%	3
Clarke County - Athens, and Oglethorpe County	1.5%	2
Greene County	1.5%	2
Oconee County - Watkinsville	1.5%	2
Wilkes County	1.5%	2
Fulton County	0.8%	1
Greene and Wilkes Counties	0.8%	1
Morgan County	0.8%	1
Oglethorpe, Elbert, Wilkes, Telfair, Lincoln Counties	0.8%	1
Total	**100.0%**	**131**
Answered Question		**131**
Skipped Question		**59**

*Respondents permitted to select more than one choice

4. What do you see as the three highest transportation priorities for Oglethorpe County?

Respondents were asked to select their top three transportation priorities for Oglethorpe County from a list of choices, as shown in Table 4-1 below. According to survey results, the top three priorities are to:

- Improve roadway safety (51%)
- Add or coordinate traffic signals, turn lanes, and other features to improve traffic flow (44%)
- Provide transportation services for the elderly, disabled, and/or the general public (39%).

Table 4 Top Three Transportation Priorities

Answer Options	Response Percent	Response Count*
Improve roadway safety	50.6%	91
Add or coordinate traffic signals, turn lanes, and other features to improve traffic flow	43.9%	77
Provide transportation services for the elderly, disabled, and/or the general public	38.9%	68
Enhance the operations and maintenance of the current transportation system	27.2%	49
Relieve traffic congestion	23.9%	43
Enhance bicycle and pedestrian amenities	20.2%	36
Other (please define)**	18.3%	33
Address truck travel	14.4%	26
Improve connectivity	13.9%	25
Total		**448**
Answered Question		**180**
Skipped Question		**10**

*Respondents permitted to select more than one choice

Respondents were also provided with the option to identify additional transportation priorities. Table 4-2 provides a list of respondent-specific comments.

TABLE 4-2 OTHER TRANSPORTATION PRIORITIES

**Priority	Comment	Comment Count
Road Conditions	Pave dirt roads	9
	Improve all roads (resurfacing, potholes, Bob White Road maintenance)	7
	Improve shoulders, soft shoulders between SR 22 and SR 77	3
	Keep weeds cut on sides of roads	2
	Gravel on roads	1
	Dirt roads need "Children at Play" signs.	1
	Standing water	1
Public Transportation	Public transportation is needed.	4
	The bus needs to travel to Oglethorpe.	1
	Add a bus system that runs to Athens.	1
Safety	Correct some dangerous curves on U.S. 78	1
	Move emergency response service for accidents	1
Transportation Operations	Buddy Faust Road and SR 22 at U.S. 78 could use a red light	1
	Traffic signal on Old Edwards Road	1
	Passing lanes around school area for traffic not turning in mornings; better traffic flow around schools	2
	Turning speed mountains into speed bumps that do not ruin front end alignments in Crawford	1
	Congestion due to slow moving traffic and large trucks is a constant commute problem. This situation is exacerbated by the Crawford traffic light and lack of a turning lane at that light, resulting in traffic snarls at the worst time of day (7:00 am – 9:00am; 3:00pm – 5:00pm)	1
Bicycle and Pedestrian	Bike lanes	1
	Total	**39**

5. What transportation corridors are of most concern to you within Oglethorpe County?

From a given list, survey takers were asked to indicate corridors of concern. Multiple selections were permissible. U.S. 78, both east and west of Lexington, was the predominant choice, as shown in Table 5-1.

Table 5-1 Transportation Corridors of Concern

Answer Options	Response Percent	Response Count*
U.S. 78 (West of Lexington)	57.8%	100
U.S. 78 (East of Lexington)	48.0%	81
S.R. 77	13.9%	24
S.R. 22	19.7%	34
Other (please define):**	9.2%	16
Total		**255**
Answered Question		**173**
Skipped Question		**17**

*Respondents permitted to select more than one choice

Additionally, survey takers were given the option to define other corridors of concern. The respondent-specific comments are shown in Table 5-2.

Table 5-2 Other Corridors of Concern

**Other Corridors of Concern	Count
Side roads entering U.S. 78	2
Corridors with cyclists; corridors with cyclists in the middle of the road	2
Hargrove Lake Road	2
Smithsonia Road	2
Stephens Salem Road	2
Intersection of SR 22 and U.S. 78 in Lexington	1
Traffic signal needed at the intersection of U.S. 78 and Buddy Faust Road.	1
Arnoldsville Road between Winterville and Arnoldsville	1
Dunlap Road	1
Secondary Roads – maintenance and repair needed (potholes, repaving, relining)	1
SR 72 – Colbert (in Madison County)	1
Total	**16**

6. Within the County, have you experienced traffic backup on roads or at intersections?

A majority of survey respondents (54%) indicated that they experience traffic backups on roads or at intersections, as shown in Table 6-1. Ninety-one respondents provided over 120 specific locations where traffic backups occur. U.S. 78 was the most frequently cited location, particularly where it intersects SR 22, Bunker Hill Road, and Buddy Faust Road. Table 6-2 summarizes specific locations with traffic backups, as provided by survey respondents.

Table 6-1 Traffic Backups on Roads or Intersections

Answer Options	Response Percent	Response Count
Yes	54.2%	97
No	45.8%	82
Location(s):**		91
Total	**100.0%**	
Answered Question		**179**
Skipped Question		**11**

Table 6-2 Locations with Traffic Backups

**Location(s)	Count
U.S. 78 and SR 22/Comer Road	19
SR 22 - Around Schools	18
U.S. 78 and Bunker Hill Road	17
U.S. 78 and Buddy Faust Road	16
U.S. 78	14
Buddy Faust Road	10
Bunker Hill Road	6
Crawford	5
SR 22 and Buddy Faust Road	4
SR 77	2
Anywhere with cyclists	1
Hargrove Lake Road	1
Hutchens Road at Firetower	1
Lexington	1
SR 22 and Fairground Road	1

**Location(s)	Count
SR 77 and County Road to Crawford	1
U.S. 78 and Arnoldsville Road	1
U.S. 78 and Union Point Road	1
U.S. 78 and Woodlawn Road	1
Wolfskin Road	1
Total	121

Respondents provided specific feedback regarding traffic backup areas. Their comments are listed in Table 6-3 below.

TABLE 6-3 TRAFFIC BACKUP AREAS COMMENTS BY PRIORITY

Priority	Comment	Comment Count
Schools	Around the schools and intersections U.S. 78 and SR 22	8
	Mornings around schools coming out of Oglethorpe Drive	1
	On SR 22 in front of the Primary and Elementary school every morning at 7:30. At the intersection of SR 22 and U.S. 78 during mornings and afternoons due to school traffic. There is no right hand passing lane for those not turning left onto SR 22 and there is no right lane on SR 22 for those not turning left onto U.S. 78.	1
	Turning from SR 22 onto U.S. 78 during morning and afternoon rush needs a traffic light.	1
Library	In front of the library in the morning	1
U.S. 78 and SR 22	SR 22 north at U.S. 78 needs a traffic light.	1
	Stop sign at U.S. 78 and SR 22	1
U.S. 78 and Buddy Faust Road	The intersection of Buddy Faust and U.S. 78 gets congested when there is a wreck.	1
U.S. 78	U.S. 78, west of Lexington - intermittent as traffic is eased by passing zones placed in two locations between Crawford and Athens.	1
	Total	**16**

7. Within the County, have you experienced any safety issues?

Like traffic backups in Question 6 above, a majority of respondents have also experienced safety issues. Over 53% indicated that there are safety issues, with 94 respondents providing specific locations and areas where safety is compromised.. Table 7-1 summarizes the findings.

Table 7-1 Safety Issues on Roads

Answer Options	Response Percent	Response Count
Yes	53.4%	95
No	46.6%	83
Location(s):**		94
Total	**100.0%**	
Answered Question		**178**
Skipped Question		**12**

The intersection of U.S. 78 and Buddy Faust Road was the most frequently sited location where safety concerns exist, as seen in Table 7-2 below. Many other locations and types of safety concerns were also noted.

Table 7-2 Location/Type of Safety Issues

**Location/Type	Count
U.S. 78 and Buddy Faust Road	16
School Access and Traffic	9
Road Conditions	7
U.S. 78 and Bunker Hill Road	6
Bicycle and Pedestrian Concerns	5
U.S. 78 at the Library	5
Speed	4
U.S. 78 and Cherokee Corner	4
U.S. 78 and Wolfskin Road	4
Smithsonia Road	3
U.S. 78 and SR 22	3
U.S. 78 and Yancey Road	3
Buddy Faust Road	2
Traffic Director	2
U.S. 78	2

**Location/Type	Count
U.S. 78 and Thaxton Wynn Road	2
Centerville Road	1
Crawford	1
Eastment Drive	1
EMS	1
Hargrove Lake Road	1
Hutchins Road	1
Lexington	1
Sandy Cross Road	1
U.S. 78 and Arnoldsville Road	1
U.S. 78 and Fairground Road	1
U.S. 78 and Faust Farm Road	1
U.S. 78 and Firetower Road	1
U.S. 78 and Old Edwards Road	1
U.S. 78 and Smokey Road	1
U.S. 78 and South Broad Street	1
U.S. 78 and Walter Sams Road	1
U.S. 78 in Crawford	1
Wesley Chapel Road	1
Total	**95**

Additional comments were captured regarding safety concerns. Respondent-specific comments are provided in Table 7-3 below.

TABLE 7-3 COMMENTS REGARDING SAFETY ISSUES BY LOCATION/TYPE

Location/Type	Comment
U.S. 78 and Buddy Faust Road	The sun at certain times of the day is very dangerous and fog is sometimes an issue.
	Problems making a left turn onto U.S. 78 from Buddy Faust Road Turn off to child care at U.S. 78 and Buddy Faust Road is unsafe.
Schools Access and Traffic	Child care turn-off at Firetower Road
	Lack of four lanes and a turn lane in front of the high school causes hazard for school traffic as cars pass cars waiting to turn left across the highway by passing on the right hand side.
	School traffic and sunlight at U.S. 78 and Buddy Faust Road

Location/Type	Comment
	Sunlight limiting view at High School from Crawford to Lexington
	More police are needed in school areas to direct traffic.
	Turning out of Buddy Faust Road or SR 22 en route to school causes safety concern.
Road Conditions	Conditions on U.S. 78, especially at Cherokee Corner and Yantzee Road are such that you experience heavily crumbling, cracked pavement, limited visibility, and a somewhat sharp curve all in the same mile from Arnoldsville Road to the bridge at Cherokee Corner.
	Large potholes/potholes everywhere
	Potholes on West Beaver Dam that the county cannot seem to keep fixed
	Potholes along U.S. 78
	Soft Shoulders on SR 22 and SR 77
Bicycle and Pedestrian	Bike riders along county and state roads which are narrow and curvy
	Bicycles along Hargrove Lake Road, SR 22, and Wolfskin Road
	All roads due to bicycles
	Pedestrian/cyclists in Lexington
	Roaming packs of bicyclists are impossible to pass.
	Pedestrian crossings needed on U.S. 78.
	U.S. 78 needs more sidewalks.
U.S. 78 and Bunker Hill Road	Limited visibility and high speeds at Bunker Hill Road and U.S. 78 have led to close calls and severe back ups on Bunker Hill Road for those trying to turn left onto U.S. 78.
U.S. 78 and SR 22	U.S. 78 and SR 22 need traffic signals.
Speed	Speeding on Smithsonia Road
	Log truck speeding
	Speed through Lexington
	Passing slower people who do not keep right
Emergency Services	Time delay or lack of emergency services
Traffic Directors	Officers directing traffic.
	Concern for people directing traffic
Hargrove Lake Road	Curves and subdivision along Hargrove Lake Road
Smithsonia Road/Whitetail Lane	Smithsonia Road and Whitetail Lane needs some kind of road change sign.
U.S. 78 and Arnoldsville	U.S. 78 coming from Athens very dangerous where it meets the turn to Arnoldsville.

Location/Type	Comment
U.S. 78 at Crawford	U.S. 78 toward Crawford needs a turning lane.
U.S. 78 at the Library	Concern turning into the Library from U.S. 78 as cars pass very close to the right.
	Bad turning lanes by the library
U.S. 78 and Thaxton Wynn Road	Bad curve at U.S. 78 and Thaxton Wynn Road
U.S. 78 and Yancey Road	It is difficult to see over the hill when turning left off of U.S. 78 onto Yancey Road.
Wesley Chapel Road	Traffic turning right onto Wesley Chapel Road do not yield.

8. Within the County, have you experienced a need for a stop sign at an intersection?

The majority of respondents did not feel that there was a need for a stop sign at any intersections in the county, as shown in Table 8-1. For those responding 'Yes' to this question, locations cited are shown in Table 8-2 below.

Table 8-1 Need for Stop Sign at an Intersection

Answer Options	Response Percent	Response Count
Yes	9.0%	16
No	91.0%	162
Location(s):**		17
Total	**100.0%**	
Answered Question		**178**
Skipped Question		**12**

Table 8-2 Locations Needing Stop Signs

**Location(s)
U.S. 78 and Buddy Faust Road
U.S. 78 and Bunker Hill Road
U.S. 78 and Stevenson Road near the Dollar General
U.S. 78 and Wolfskin Road
U.S. 78 and SR 22
U.S. 78 through Lexington – all vehicles drive too fast
U.S. 78 where it meets the turn to Arnoldsville. Very dangerous left turn if coming from Athens.
Mitchell Farm Road and Beaverdam – everyone runs the stop sign.
Faust Farm Road
Lexington
Paradise Hogan Road needs "Children at Play" signs.
SR 22 at school intersections
SR 22 North at U.S. 78 at the Golden Pantry
Traffic lights needed.
Wire Bridge Road and Wolfskin Road (Several crashes observed at this intersection and nearly had incident with a bicyclist.
Wolfskin Road and Belmont Road
So far all the roads have stop signs.

9. Within the County, have you experienced a need for turn lanes at an intersection?

While the majority (66%) of respondents did not experience a need for turn lanes at particular intersections, 34% indicated that they did, as shown in Table 9-1. Fifty-seven (57) respondents provided over 60 specific locations, which are summarized in Table 9-2 below.

Table 9-1 Need for Turn Lanes at an Intersection

Answer Options	Response Percent	Response Count
Yes	34.1%	62
No	65.9%	120
Location(s):**		57
Total	**100.0%**	
Answered Question		**178**
Skipped Question		**12**

Table 9-2 Locations Needing Turn Lanes

**Location(s)	Count
U.S. 78 and SR 22	11
At schools	9
U.S. 78 and Buddy Faust Road	9
Crawford	6
U.S. 78 and Bunker Hill Road	6
U.S. 78 and Yancey Road	3
U.S. 78	2
U.S. 78 and Walter Sams Road	2
U.S. 78 and Wolfskin Road	2
Bunker Hill Road	1
Firetower Road	1
Library	1
SR 22 and Buddy Faust Road	1
SR 22 and Fairground Road	1
U.S. 78 and Fairground Road	1
U.S. 78 and North Street	1
U.S. 78 and Old Lexington Road	1

**Location(s)	Count
U.S. 78 and Smokey Road	1
U.S. 78 and South Broad	1
Walter Sams Road and Dunlap Road	1
Wolfskin Road	1
Total	**62**

Additional comments were captured regarding locations needing turn lanes. Respondent-specific comments are provided in Table 9-3 below.

TABLE 9-3 COMMENTS REGARDING TURN LANES BY LOCATION

Location	Comment	Comment Count
Crawford	At the Valero gas station and Family Dollar	3
	Turning into the Funeral Home	2
	The Crawford traffic light has no turning lane. In the event that a driver needs to turn left from the east-bound lane, traffic is often backed up over 500 feet.	1
U.S. 78	Buddy Faust Road needs to omit the left turn onto U.S. 78 during morning hours.	2
	At Fred's Pharmacy (U.S. 78)	1
	I drive a scooter on U.S. 78 and people often pass illegally.	1
	At U.S. 78 and Buddy Faust Road - While I believe the turn lane might have helped some, I believe that a traffic light would drastically cut down on the wrecks in that area.	1
	At Old Lexington Road off of U.S. 78 westbound. Big trucks lock down their brakes for one person trying to turn during A.M rush hour.	1
	At Walter Sams Road off of U.S. 78 eastbound – wrecks have occurred.	1
	Turning left onto SR 22 towards Oglethorpe County Primary School and Oglethorpe County Elementary School backs up on U.S. 78.	1
	Total	**14**

10. Within the County, have you experienced any problems with heavy truck traffic?

A vast majority of respondents (74%) indicated that they have not experienced any problems with heavy truck traffic, as seen in Table 10-1. Of those respondents who provided location information, the majority point to truck traffic on U.S. 78. Specific locations cited are provided in Table 10-2 below.

Table 10-1 Problems with Heavy Truck Traffic

Answer Options	Response Percent	Response Count
Yes	26.1%	46
No	73.9%	130
Location(s):**		42
Total	**100.0%**	
Answered Question		**178**
Skipped Question		**12**

Table 10-2 Locations with Heavy Truck Traffic

**Location(s)	Count
U.S. 78	19
SR 22	5
U.S. 78 at US 22	6
Bunker Hill Road to Lexington	1
Cherokee	1
Hearthstone Drive	1
Lexington Carlton Road	1
Smithsonia Road	1
Smokey Road (Old U.S. 78)	1
SR 22 at Buddy Faust Road	1
SR 22 at Fairground Road	1
SR 22 at SR 77	1
SR 77 and Veribest Road	1
U.S. 78 at Woodlawn Avenue	1
Wolfskin Road	1
Total	**42**

Additionally, respondents provided specific comments regarding truck traffic. These are summarized as follow.

TABLE 10-3 COMMENTS REGARDING HEAVY TRUCK TRAFFIC BY LOCATION

Location	Comment	Comment Count
U.S. 78	U.S. 78 through Crawford and Lexington	4
	U.S. 78 is obviously the main thoroughfare for the county and this is expected, however, the county would greatly benefit from five-lane highway configuration (four travel lanes, one turning lane) for the entire distance between Lexington and Athens-Clarke County.	1
	SR 22 and U.S. 78 - Trucks pulling onto U.S. 78	1
	U.S. 78 west of Lexington (almost throughout)	1
U.S. 78 to Athens	U.S. 78 but truck traffic must get through to Athens and surrounding areas.	1
	U.S. 78 to Athens	1
Truck Traffic Around Schools	Speeding around the high school on U.S. 78	1
	U.S. 78 at Oglethorpe County High School	1
	U.S. 78 in the morning with buses	1
	U.S. 78 and primary, elementary. and middle school (am)	1
	U.S. 78 and SR 22 during school hours	1
Logging Trucks	There is an abundance of truck traffic on SR 22, particularly logging.	1
Poultry Trucks	Chicken trucks	1
	U.S. 78 - chicken trucks	1
Granite Trucks	Granite trucks on SR 77 and Veribest Road	1
Speed	Speeding all over	1
	Total	**19**

11. Within the County, have you been unable to pass slow moving vehicles?

Survey respondents have experienced the inability to pass slow moving vehicles. Over 40% provided a positive response to this question, as shwon in Table 11-1. Specific locations mentioned are listed in Table 11-2.

Table 11-1 Unable to Pass Slow Moving Vehicles

Answer Options	Response Percent	Response Count
Yes	40.9%	72
No	59.1%	104
Location(s):**		58
Total	**100.0%**	
Answered Question		**176**
Skipped Question		**14**

Table 11-2 Locations Where Unable to Pass Slow Moving Vehicles

**Location(s)	Count
U.S. 78	24
SR 22	9
SR 77	6
Lexington Carlton Road	3
U.S. 78 to Athens	3
Wolfskin Road	3
Arnoldsville Road	2
Hargrove Lake Road	3
Sandy Cross Road	2
U.S. 78 in Crawford	2
Beaverdam Road	1
Schools	1
Smithsonia Road	1
South Broad Street	1
SR 22 between Devil's Pond and Sandy Cross Road	1
U.S. 78 at Arnoldsville Road	1
U.S. 78 to the county line	1

**Location(s)	Count
U.S. 78 in Lexington	1
Total	**65**

Additionally, respondents provided specific comments regarding truck traffic. These are as follows:

TABLE 11-3 COMMENTS REGARDING SLOW MOVING VEHICLES BY LOCATION

Location	Comment
U.S. 78	All of U.S. 78 – it is only two lanes.
	Anytime U.S. 78 is single lane. They usually start driving about 70 mph once it turns double lane.
	Coming down U.S. 78 towards Crawford/Lexington area
	U.S. 78 heading from Athens to Crawford
	U.S. 78 between Crawford and Athens
	U.S. 78 coming into and leaving Oglethorpe County
	U.S. 78 when one lane
SR 22	On SR 22 between Devil's Pond Road and Sandy Cross Road there are only two spots that are shorter than a football field to try and pass. It only takes one Grandma to make everyone late for work on a given day. There is not edge on the road for slow drivers to even pull over to let others pass along this stretch.
Oglethorpe County into Athens	Just coming into Oglethorpe from Athens, cars speed and a passing section should be implemented.
Schools	Numerous, especially during school drop offs
	Traffic seems to flow pretty good except around the schools.
Other	All over
	Inside City Limits
	Occasionally
	Put more signals up to keep right.
	South Broad Street - have trouble passing bikes too.
	Yes on many curvy two-lane roads

12. Within the County, have you experienced a lack of paved roads?

Thirty-six percent (36%) of survey respondents indicated that they have experienced a lack of paved roads in the county, as shown in Table 12-1. Fifty-three (53) respondents identified 55 specific locations, as listed in Table 12-2 below.

Table 12-1 Lack of Paved Roads

Answer Options	Response Percent	Response Count
Yes	36.1%	65
No	63.9%	115
Location(s):**		53
Total	**100.0%**	
Answered Question		**180**
Skipped Question		**10**

Table 12-2 Locations Lacking Paved Roads

**Location(s)	Count
Howington Road	4
Brown's Chapell Road	3
Bull Bray Road in Stephens	3
Smithsonia Road	3
Bud Road in Stephens	2
Wire Bridge Road	2
Melton Road	2
Oconee Forest Road	2
Old Lexington Road	2
Ruff Road	2
Smokey Hollow Road	2
SR 22	2
Upson Circle Road	2
Wildwood Lane	2
Bob White Road	1
Collins Avenue	1
Critter Crossing Road	1

**Location(s)	Count
Davids Road	1
Dora Bush Hill Road	1
Dusty Road	1
Eastment Drive	1
Glade Road	1
Hearthstone Drive	1
Loyd Smith Road	1
Meadow Creek Drive	1
Martin Luther King Drive off of Fairground Road	1
Off of Thaxton Wynn Road	1
Morgan Road	1
Old Palmetto Community (back behind the Vesta, Goosepond, Centerville communities)	1
Paradise Hogan Road	1
Saxon Maddox Road	1
Smokey Ridge Road	1
Shady Oaks Lane	1
Veribest Road	1
Vesta	1
Walter Sams Road	1
Total	55

Specific comments regarding unpaved roads are shown in Table 12-3 below.

Table 12-3 Comments Regarding Lack of Paved Roads

Comments
All over
The remaining road off Collins Avenue. It's sad that the bus has to drop into large potholes and it isn't safe for children.
Fire Department on SR 22 and Crossroads
Love the dirt roads but county needs to maintain better.
Mostly side roads for houses that are not used for traveling to other area of the county
My dirt road
Our driveway

Comments
SR 22 needs repaving - raining makes it a safety issue.
The road in Lexington going down by Russell Chapel and Friendship Church
There are many locations that need rehabilitation or replacement.
Very poor paving throughout Lexington.
Walter Sams Road is in terrible condition.
Several roads are not paved and most that are need to be repaved.
Wish there was a more direct route between Crawford/Smithsonia Road and SR 22 without having to backtrack on Devil's Pond Road.

13. Within the County, have you experienced any problems with roadway connectivity?

The majority of respondents (91%) have not experienced any problems with roadway connectivity within the county, as shown in Table 13-1 below. Those who did indicate problems offered a number of locations, as listed in Table 13-2 below.

Table 13-1 Problems with Roadway Connectivity

Answer Options	Response Percent	Response Count
Yes	8.6%	15
No	91.4%	160
Location(s):**		11
Total	**100.0%**	
Answered Question		**175**
Skipped Question		**15**

Table 13-2 Locations/Comments Regarding Problems with Roadway Connectivity

**Locations and Comments
U.S. 78 and SR 22
U.S. 78 and Wolfskin Road
Yielding from U.S. 78 going toward Arnoldsville from Old Edwards Road
U.S. 78
Bridges on U.S. 78
Amber Lane and Smokey Road are dangerous and shrubbery needs to be maintained.
Between Veribest Road and the Glade
Bunker Hill Road
Not sure what you are asking here? Are you asking about roads staying connected verses starting and stopping like the dreaded Beaverdam Road?
South Broad
There needs to be an easier way from Oglethorpe County to Athens or Crawford.
Don't understand question

14. Within the County, have you experienced a need for bridge rehabilitation/replacement?

Eighty-eight percent (88%) of respondents have not experienced a need for bridge rehabilitation or replacement, as shown in Table 14-1 below.

Table 14-1 Need for Bridge Rehabilitation/Replacement

Answer Options	Response Percent	Response Count
Yes	12.4%	22
No	87.6%	155
Location(s):**		17
Total	**100.0%**	
Answered Question		**177**
Skipped Question		**13**

Location-specific data regarding bridge rehabilitation/replacement was provided by 17 respondents. These are shown in Table 14-2 below.

Table 14-2 Locations/Comments Regarding Bridge Rehabilitation/Replacement

**Location(s) and Comments	Count
Dora Bush Hill Road	2
Repairing bridges so that buses can cross them.	1
Centerville Road	1
Repairs needed to the crumbling, low-lying bridge at Cherokee Corner.	1
Inside Hawk's Landing between Phase I and Phase II	1
Long Creek Bridge (Old Palmetto Community)	1
Replacing old wire bridge	1
Saxon Maddox Road	1
Smithsonia Road	1
Pleasant Hill Community	1
SR 22	1
Stratton Bridge	1
U.S. 78	1
Walter Sams Road	1
Old steel bridge on Pine Grove Road	1

**Location(s) and Comments	Count
Paradise Hogan Road	1
Critter Crossing Road	1
Total	**18**

15. Within the County, have you experienced a lack of roadway shoulders?

A lack of roadway shoulders has been experienced by only 24% of respondents, as shown in Table 15-1. Locations specifically mentioned are listed in Table 15-2.

Table 15-1 Lack of Roadway Shoulders

Answer Options	Response Percent	Response Count
Yes	24.3%	43
No	75.7%	134
Location(s):**		34
Total	**100.0%**	
Answered Question		**177**
Skipped Question		**13**

Table 15-2 Locations Lacking roadway Shoulders

**Location(s)	Count
County-wide	9
U.S. 78	9
SR 22	6
SR 77	4
South Broad Street	2
Smokey Ridge Road	1
Maxey's Road	1
Other	5
Total	**37**

Survey respondents also provided feedback regarding roadway shoulders. These comments are presented in Table 15-3 below.

Table 15-3 Comments Regarding Roadway by Location

Location	Comment
County-wide	All over county
	All through Oglethorpe except U.S. 78
	Every back road between Winterville and Crawford

Location	Comment
County-wide	Everywhere - this county doesn't know what a shoulder is.
	Everywhere, no bicycle lanes
	Too numerous to list
U.S. 78	U.S. 78 and the Winterville Area
	U.S. 78 - there is a sharp curve after you pass Bud Alewine's Auto Salvage (Washington Road in Lexington) - both sides need guardrails.
SR 22	Dirt used as fill on SR 22 and SR 77 becomes soft every rain and you can see where cars have wrecked or almost wrecked due to soft dirt.
	SR 22 has some spots with very little shoulder area and steep drops near the edges of the road. This is very scary when you have an inexperienced or beginning driver.
	SR 22 Lexington to Comer
	Within the first half mile on SR 22 north to Comer from the intersection with U.S. 78, there is no shoulder and the landscape drops approximately 20 - 30 feet at the edge of the roadway.
SR 77	US 77 South
Other	Due to tall grass
	Need shoulders for vehicles.
	Potholes
	Several Roads
	Smokey Ridge Road should be widened.
	The road by the library needs to be extended.

16. Within the County, have you experienced a lack of sidewalks

While only 38% of respondents said that they had experienced a lack of sidewalks, respondents provided valuable feedback as to location. Their responses are presented in the Table 16-1 with specific locations listed in Table 16-2 below.

Table 16-1 Lack of Sidewalks

Answer Options	Response Percent	Response Count
Yes	37.6%	67
No	62.4%	111
Location(s):**		58
Total	**100.0%**	
Answered Question		**178**
Skipped Question		**12**

Table 16-2 Locations Lacking Sidewalks

**Location(s) and Comments	Count
All over the county	25
There are no sidewalks in the county	7
U.S. 78	5
Crawford	4
Lexington	4
Maxeys	3
SR 22	3
Schools	2
Bryan Park	1
Dunlap Road	1
Hargrove Lake Road	1
Pittard Park	1
Smokey Road (Old U.S. 78)	1
SR 77	1
Vesta	1
Total	**60**

Respondents provided numerous comments about the lack of sidewalks in the county. Specific remarks are listed in Table 16-3 below.

TABLE 16-3 COMMENTS REGARDING LACK OF SIDEWALKS BY LOCATION/AREA

Location/Area	Comment
County-wide	No sidewalks at all
	Don't recall any sidewalks.
	Everywhere, no visible sidewalks in Oglethorpe
	Throughout - If added this would show that Oglethorpe County is promoting a healthy lifestyle in addition to the most needed safety right of way for those without transportation.
	Too numerous to list
	No sidewalks that I know of
	There are no sidewalks in Oglethorpe County.
	There are none.
	There are very few sidewalks anywhere in Oglethorpe County.
	We have sidewalks?
	Where are there sidewalks?
	Lots of places
U.S. 78	U.S. 78 connecting Lexington with Crawford
	Sidewalks are present along the Oglethorpe County High School, Historic Lexington and Historic Crawford - the rest of the businesses along U.S. 78 have no sidewalks adjoining them.
	U.S. 78 between Crawford and Lexington
Crawford	Near Bryan Park in Crawford
	Crawford for locals to walk to local stores
	Down Crawford extending to Red Rabbit
Winterville	In Winterville, near Pittard Park
Lexington	Everywhere in Lexington
	Mainly throughout City of Lexington
Schools	Around schools
Bike/Pedestrian	Live outside the city - don't use sidewalks.
	Need safe sidewalks and real bike lanes, not just a lane in which to share the road.

17. Within the County, have you experienced a lack of bicycle routes?

While only 31% of respondents indicated that they have experienced a lack of bicycle routes, comments are divided on the need for bicycle routes, as shown in Table 17-1 and 17-2 below.

Table 17-1 Lack of Bicycle Routes

Answer Options	Response Percent	Response Count
Yes	31.0%	54
No	69.0%	120
Location(s):**		43
Total	**100.0%**	
Answered Question		**174**
Skipped Question		**16**

Table 17-2 Locations lacking Bicycle Routes

**Location(s)	Count
Throughout the county	18
Hargrove Lake Road	5
SR 22	4
Do Not Want Bike Lanes	3
U.S. 78	3
Wolfskin Road	4
Crawford	2
Winterville	2
Roads to Athens	1
Bryan Park	1
Double Bridges Road	1
Dunlap Road	1
Lexington	1
Arnoldsville Road	1
SR 77	1
Watson Mill Road	1
Total	**49**

Comments were divisive regarding bicycle routes and are listed in Table 16-3 below.

TABLE 16-3 COMMENTS SUPPORTING/NOT SUPPORTING BICYCLE ROUTES

	Comment
Supporting bicycle routes	A bike trail in Bryan Park would be nice.
	All roads should be wide enough to accommodate multi-modal transportation.
	Bicyclers like to use small back-roads like Double Bridges Road.
	I worry about taking my child on Arnoldsville Road and Dunlap Road without a proper bike lane.
	It would be nice to ride into Athens without worry.
	SR 22 especially during races or special events.
	There are lots of bicycles on the roads and many wrecks have almost happened due to lack of routes.
	There are many people that use the quieter country roads to ride bikes. This is fine when they share the road, however many times they do not follow road rules and can be a danger to vehicle drivers and themselves. It would not hurt to put in a few feet of bike lanes on the most commonly used roads.
	Too numerous to list
	We don't have any.
	We should promote the Firefly Trail more since this is already a big issue. Many people do not exactly understand what it is and the benefits many will reap from it.
	Wolfskin Road - a lot of bicycles with lots of narrows and curves
	Yes, they ride everywhere within the county.
Against bike routes	Bicycles shouldn't have road rights.
	No bicycle routes
	No routes - too dangerous

18. Within the County, have you experienced a lack of on-demand transit services?

When asked about on-demand transit services, only 29% of survey respondents said that they experienced a lack of services, as shown in Table 18-1. Respondents identified locations that lacked transit services, which are shown in Table 18-2.

Table 18-1 Lack of On-Demand Transit Services

Answer Options	Response Percent	Response Count
Yes	24.9%	50
No	70.6%	120
Location(s):**		32
Total	**100.0%**	
Answered Question		**170**
Skipped Question		**20**

Table 18-2 Locations with a lack of On-Demand Transit Services

**Location(s)	Count
All locations in Oglethorpe County	11
Lexington	2
U.S. 78	2
Total	**15**

Most of the location responses provided by survey-takers expressed opinion regarding transit services rather than providing specific locations lacking transit services. Their comments are listed in Table 18-3 below.

Table 18-3 Comments Regarding on-Demand Transit Services

	Comment	Comment Count
Transit Services Not Needed	We have no public transportation, but we're so rural I don't think we need it.	1
	None needed	1
Transit Services Needed	Transit system is needed.	4
	Bus option like the one in Athens	2

	Comment	Comment Count
	There is none that I know of. I don't need them but it would be nice to have for other residents, I'm sure.	1
	I haven't really seen a need but with the growth it will be needed.	1
	Would be great for people in the county.	1
	Bus to Wal-Mart in Athens 2-3 times a day	1
Other Comments	Never seen a transit system.	7
	There is no public transportation and walking in Oglethorpe County really isn't an option when everything is so spread out.	1
	Unable to find services that will bring people out to the county without it costing ridiculous prices.	1
	Total	**21**

19. WITHIN THE STUDY AREA, HAVE YOU EXPERIENCED ANY OTHER TRANSPORTATION PROBLEMS?

When asked if there were any other transportations problems other than those covered in the survey, only 21% of respondents indicated that there were, as shown in Table 19-1 below.

TABLE 19-1 OTHER TRANSPORTATION PROBLEMS NOT COVERED IN SURVEY

Answer Options	Response Percent	Response Count
Yes	20.8%	35
No	79.2%	133
Location(s):**		31
Total	**100.0%**	
Answered Question		**168**
Skipped Question		**22**

Thirty-one (31) respondents provided feedback regarding both locations and types of other transportation problems they experience in Oglethorpe County. This data is summarized in Table 19-2 and detailed in Table 19-3 below.

TABLE 19-2 LOCATION/TYPE OF OTHER TRANSPORTATION PROBLEMS

**Location/Type	Count
Road conditions (pavement, potholes, etc.)	5
U.S. 78 (various locations)	4
Bicycles	3
Schools	3
Speed	3
Trucks	3
Transit	2
All Over	2
Cherokee Corner	1
Glade Road	1
Howington Road	1
Melton Road	1
Traffic signals	1
Turn Lanes	1
Wildwood Lane	1

**Location/Type	Count
Total	32

Table 19-3 Comments Regarding Other Transportation Problems By Location/Type

Location/Type	Comment
Road Conditions	Black tar on roads is slippery and dangerous for motorcyclist.
	Lack of salt trucks for those rare winters when we need ice removal
	Potholes and rough uneven places in main roads
	Quality of pavement for my own roadway Harris Road (adjoining Lexington-Carlton Road and SR 22/Comer Road) is very poor. Rough tar and gravel roadways are durable yet they tend to damage the vehicle exterior and Harris Road was not engineered for rainwater and tends to hold water after any minor rainfall.
	Unpaved roads and roads with uneven pavement, as well as roads with large potholes
U.S. 78	Need a traffic signal at U.S. 78 and Hutchins Road in Crawford.
	I just really worry about the Buddy Faust and U.S. 78 intersection - needs a traffic light. Several Oglethorpe County High School students travel by that intersection on U.S. 78 and as a mom I really hope that problem is addressed.
	There needs to be traffic lights at South Broad and U.S. 78 and another on SR 22 and U.S. 78.
	U.S. 78 intersections at Buddy Faust Road, Wolfskin Road, and Cherokee Corner
Bicycles and Pedestrian	Bicycles on Hargrove Lake Road need to end!
	Not enough places for bikes to ride
Schools Access, Safety and Traffic	Need traffic light at high school.
	Safety around the high school
	Oglethorpe County Primary School, Oglethorpe County Elementary School, Oglethorpe County Middle School in the mornings
Speed	No speed limit signs on lots of roads
	Speed Thru Traffic on Smokey Road
	Speeding and reckless driving on SR 77
Trucks	Four-wheelers everywhere
	Heavy truck traffic on Smokey Road

Location/Type	Comment
Trucks	Speeding trucks
Public Transportation	Public transportation is needed.
	No bus line
Turn Lanes	Turning lanes needed
Traffic Signals	Traffic signals needed

20. Considering questions 6-19, what is your top transportation issue you feel is in need of improvement? Issue(s) and Location(s):

Survey responders provided numerous comments regarding their top transportation issues/locations in need of improvement. Road conditions top the list, with many respondents expressing concern about pavement, potholes, gravel roads, and roadway shoulders. Concerns related to traffic operations were prevalent, with many suggestions offered on locations for traffic signals, turn lanes, and passing lanes. Bicycle and pedestrian issues were also pressing, with many respondents commenting on the need for bike lanes and sidewalks, and expressing safety concerns related to bicyclists in general. Over 100 responses provided numerous locations and issues, as shown in Table 20-1.

Table 20-1 Top Transportation Issues/Locations in Need of Improvement

Answer Options	Response Percent	Response Count
		116
Answered Question		**116**
Skipped Question		**74**

The top transportation issues and/or locations in Oglethorpe County, as expressed by survey respondents, are categorized in the Table 20-2 and detailed in Table 20-3 below.

Table 20-2 Transportation Issues/Locations in Need of Improvement

Issues/Location	Count
Road conditions	24
Traffic operations	15
Bicycle and pedestrian	13
School access/safety and traffic	13
U.S. 78 and Buddy Faust Road	12
Public transportation	11
U.S. 78 and Bunker Hill Road	10
U.S. 78 and SR 22	8
U.S. 78	7
Bunker Hill Road	3
Downtown Crawford	3
No bikes	2
Trucks	2

Issues/Location	Count
U.S. 78 and Yancey Road	2
Safety	2
Bob White Road	1
Buddy Faust Road	1
Cherokee Corner	1
Double Bridges	1
Hargrove Lake Road	1
Howington Road	1
Lexington	1
No issues	1
Regional connectivity	1
All issues important Safety	1
Speed	1
SR 22	1
SR 22 and SR 77	1
U.S. 78 to Arnoldsville	1
U.S. 78 at Cherokee Corner	1
U.S. 78 Smokey Road	1
U.S. 78 Walter Sams Road	1
U.S. 78 Wolfskin Road	1
Wolfskin Road	1
Total	**146**

TABLE 20-3 COMMENTS REGARDING TRANSPORTATION ISSUES AND LOCATIONS

Type	Comment	Comment Count
Road Conditions	Dirt roads need to be paved/repaired.	12
	Fix Potholes.	3
	Need to cut grass more.	1
	Fix roads all over.	1
	Trees down on roads	1
	Re-do the shoulders off SR 77 South.	1
	Pave Hearthstone Drive due to heavy truck traffic.	1
	Allgood Road is in bad shape.	1

Type	Comment	Comment Count
Road Conditions	Gravel is needed on Saxon Maddox Road.	1
	The shoulders of SR 22 have slowly improved with the grass and root systems, but soft shoulders so close to the road make for unsafe conditions after the rain.	1
	Smokey Hollow Road is the road I live on. The conditions increases wear and tear on my vehicle has caused loss of work due to poor conditions - car getting stuck, bus not able to pick children up etc.	1
	Yes, I would love to see Bob White Road paved, but if that isn't possible, then scrapped and gravel laid every six months or so. That would be great. With the road the way it is now it puts so much wear and tear on our vehicles and others on the road are one income families so they aren't able to afford to maintain the road. I know that I am just one family in a large county but we have two small children and are trying to raise them along with keeping up a home and can't afford to keep up the road. So I am pleading that someone have a voice, stand up, and fix Bob White Road.	1
	Howington Road needs fixing so school buses are able to come down.	1
Traffic Operations	Additional traffic signals	8
	Turn lanes at busy intersections	4
	More passing lanes	2
	Four lane around Lexington	1
	Slower traffic sign through Community Street	1
	Traffic signal needed in Downtown Crawford at Commercial Bank (Church Street, Main Street)	1
	Stop Signs	1
	Traffic backup	1
	Widening of roads	1
	Changing lanes	1
	Making traffic flow	1
Bicycle and Pedestrian	Bicycle lanes	9
	Sidewalks	3
	Sidewalks are only on U.S. 78 by Papa Pizza	1
	Packs of bicyclists (20 or more) on back roads with no way to pass, taking up an entire lane the length of several tractor trailer	1

Type	Comment	Comment Count
Bicycle and Pedestrian	trucks on Beaverdam Road and Smithsonia Road into Winterville.	
	Pedestrian/cyclists safety in Lexington	1
	Lack of pedestrian/cyclist friendly amenities (sidewalks, trails, bike lanes)	1
School Access, Safety, and Traffic	Car flow/traffic flow at school intersections	5
	Traffic issues at Oglethorpe County Primary School – SR 22	3
	A passing lane in front of the primary school for those cars not waiting to turn into the parking lot. Often we wait a long time for nothing just because one car needs to turn in and there is no way to get around the car. There is no outgoing traffic. The oncoming traffic does not affect anyone needing to continue straight on SR 22 that if there was a passing lane we could continue on our way to the elementary where we can once again wait for our turn.	1
	Oglethorpe County Elementary School needs a turning lane both ways to enter into the school. (left and right lanes)	1
	Safety around the high school	1
	Pulling onto U.S. 78 below Farm Bureau backs up traffic around the schools.	1
	Some way to keep police and teachers from having to direct traffic	1
	Buses causing traffic to back up 6 to 10 cars long, possibly they could pull over to let excess traffic pass.	1
	More school buses	1
Public Transportation	Need public transportation.	4
	Bus service needed in Oglethorpe County.	3
	On demand transit service	1
	Public transit from Winterville to Athens to Crawford	1
	Transportation for the elders	1
U.S. 78 and Buddy Faust Road	Dangerous left and right turns off Buddy Faust road onto U.S. 78	5
	Traffic lights at U.S. 78 and Buddy Faust Road	2
	The intersection of U.S. 78 and Buddy Faust Road needs more than the one turning lane-very dangerous intersection. And as a parent of a soon to be driver, this concerns me even more.	1
	U.S. 78 and Buddy Faust Road - people have been killed or	1

Type	Comment	Comment Count
U.S. 78 and Buddy Faust Road	severely injured and something needs to be done to prevent it.	
	U.S. 78 and Buddy Faust Road - blind spots during the morning (sun) and often fog	1
U.S. 78 and Bunker Hill Road	Traffic signal needed at Bunker Hill Road and U.S. 78	8
	Congestion and slow moving traffic on U.S. 78 and Bunker Hill Road	1
	Safety issues on U.S. 78 at Bunker Hill Road	1
	U.S. 78 and Bunker Hill Road needs something, not sure whether a traffic signal.	1
U.S. 78 and SR 22	Traffic signal needed at SR 22 and U.S. 78.	3
	Turn lanes needed at SR 22 and U.S. 78.	2
	Trying to turn left onto U.S. 78 from SR 22 North, especially in mornings	1
	U.S. 78 at SR 22 - there is always a backup and the big trucks are really bad.	1
U.S. 78	Traffic on U.S. 78	3
	Need more traffic signals along U.S. 78 to slow traffic and increase safety.	1
	Number of traffic lanes on U.S. 78 West of Lexington	1
	Widening and improving U.S. 78 through the county	1
	Unsafe areas on U.S. 78	1
Bunker Hill Road	Pulling out of Bunker Hill Road in the mornings	1
	Speeding log trucks and congestion on Bunker Hill Road	1
	Turning onto and off of Bunker Hill Road needs to be easier.	1
Trucks	Log trucks	2
U.S. 78 and Yancey Road	U.S. 78 at Yancey Road is BAD!!!	1
Buddy Faust Road	A light is needed at Buddy Faust Road.	1
Cherokee Corner	Cherokee Corner - Road banked wrong and causes bad curve.	1
Double Bridges Road	Double Bridges Road is very dangerous.	1
Hargrove Lake Road	Improve visibility at several intersections with subdivision roads entering Hargrove Lake Road in a curve.	1
Lexington	Mainly the traffic congestion coming out of Clarke County towards Lexington	1
Regional Connectivity	Other regional transportation connectivity	1
Safety	Safety and right of way issues	1
Speed	The speed through Crawford and especially Lexington by the	1

Type	Comment	Comment Count
	court house	
SR 22	Widening and improving SR 22 towards Greene County	1
SR 22 and SR 77	Traffic Lights at SR 22 and SR 77	1
U.S. 78 to Arnoldsville	U.S. 78 where it meets the turn to Arnoldsville. VERY dangerous left turn if coming from Athens!	1
U.S. 78 and Cherokee Corner	Safety issue at U.S. 78 and Cherokee Corner	1
U.S. 78 and Smokey Road	Intersection at U.S. 78 Smokey Road	1
Wolfskin Road	People not paying attention turning onto Wolfskin Road	1
No issues	We should improve/maintain what we have. At this time there is no need to spend state monies on unnecessary road projects that aren't realistic until another 25 years.	1
Other	Make sure that we have the equipment and supplies when we need them and to have qualified employees doing their jobs.	1
	Total	**146**

21. Are there additional transportation issues which were not covered in this Survey?

For Question 21, 24 respondents indicated that there were additional transportation issues not covered in the survey, as shown in Table 21-1 below. Road conditions and traffic operations garnered the most comments.

Table 21-1 Additional Issues Not Covered in the Survey

Answer Options	Response Percent	Response Count
Yes	51.0%	24
No	49.0%	23
Location(s):**		23
Total	**100.0%**	
Answered Question		**47**
Skipped Question		**143**

The types of issues addressed by respondents are summarized in Table 21-2 below. Specific comments are then listed in Table 21-3.

Table 21-2 Location/Type of Additional Issues Not Covered in the Survey

**Location/Type of Issue	Count
Road conditions	8
Traffic operations	5
Bike	4
Public transportation	2
Speed	2
Trucks	1
Other	1
Total	**23**

Table 21-3 Comments Regarding Additional Issues by Type

Location/Type	Comment
Road Conditions	Maintain the roads – pot holes and shoulders.
	Repair older dirt roads.
	Roads that have pot holes are not fixed properly.

Location/Type	Comment
Road Conditions	They need to learn when and how to scrape dirt roads because they always mess up my driveway and drainage ditch as well as knock down my mailbox.
	Need to keep dirt roads up to date and scrape them more often.
	Pave some of the dirt roads.
	Our road was "partially" repaved a couple of years ago – it is narrow and there is no walking access and are no lines on Walter Sams Road.
	Road signs (street name signs), likely due to theft, are terribly lacking throughout the county.
Traffic Operations	There is nowhere for my daughter's bus to turn around on SR 77 at the Elbert County line which creates problems for me having to load and unload four kids to go pick her up.
	The intersection at Arnoldsville Road and Yancey Road should be squared off.
	Traffic signal is needed at U.S. 78 and SR 22, as well as at U.S. 78 and South Broad Street.
	Traffic signal needed at U.S. 78 and Firetower Road.
	Widen lanes to Athens
Bicycle and Pedestrian	Bike lanes
	Need bike lanes into Athens.
	Cross Walks
	Please don't waste our tax dollars on public transportation or bicycle routes, and sidewalks are for subdivisions.
Public Transportation	The county is huge, and if you have no vehicle, you're basically stuck without transportation.
	A park and ride from Crawford to Athens would be nice.
Speed	Speed limits need to be adjusted.
	50 miles per hour is too fast through town.
Trucks	Large trucks need to be held accountable for the messes they make on the roads.
Other	Every dollar that you allocate to highway projects comes off the backs of the children that are in our public schools. Please stop. Realize that we are in a time of "make do"; that's when you understand that we must make-do with what we have and prioritize the rest. My grandfather's generation would not have spent so frivolously. Here's wishing common sense prevails.

APPENDIX D

ENVIRONMENTAL SCREENING

1. INTRODUCTIONS

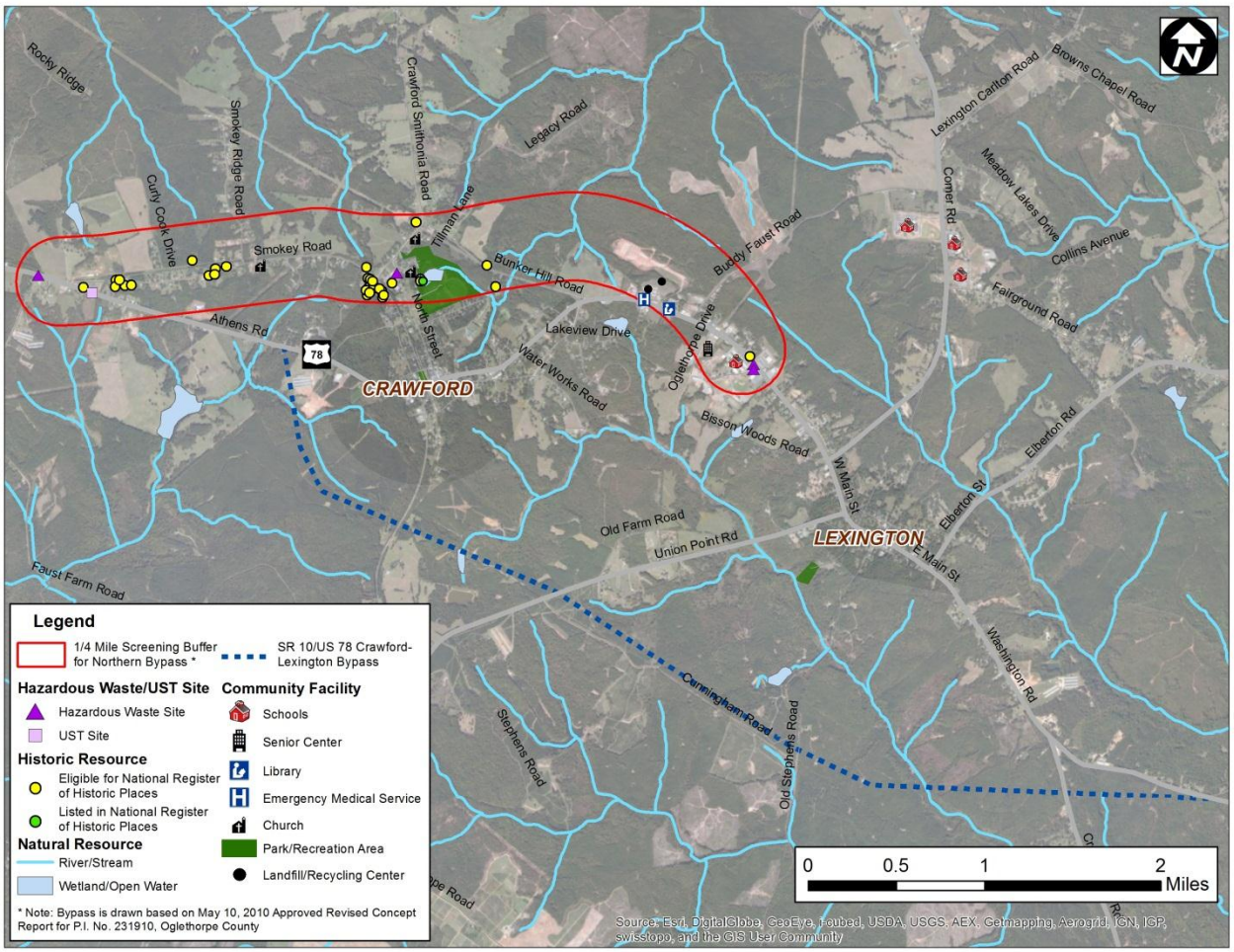
The Approved Revised Concept Report dated January 4, 2010 for GDOT Project STP-0014-01(067) proposed construction of a new four lane bypass for SR 10/US 78 around the south side of Crawford and Lexington from east of CR 26/Smokey Rd. to the SR 22/US 78 Intersection.

During the development of Oglethorpe *Transportation Plan*, the potential realignments of the Northern Bypass (4.2 mile), as an alternative to the 7.4 mile Southern Bypass alignment (PI # 231910-) was requested to be evaluated further by the Study Advisory Committee. The preliminary alignment for the Northern Bypass alternative would begin from roughly the CR 26/Smokey Road and SR 10/U.S. 78 intersection and closely follow the abandoned railroad to the vicinity of Smokey Trail where the bypass would continue in an easterly direction and intersecting with Old Mill Road and Bunker Hill Road, at which point the bypass would continue southeastern direction and would intersect with Buddy Faust Road before it rejoined SR 10/U.S. 78 northwest of Lexington. A preliminary environmental screening was conducted to understand whether there is any fatal flaw for the Northern Bypass alignment.

This screen was a preliminary step in the National Environmental Policy Act (NEPA) process designed to identify resources or issues of concern through background research and desktop survey for an alternative to the Crawford/Lexington Bypass (PI No. 231910-). This section documents those issues or resources which are readily apparent at the preliminary screening level and therefore, should not be considered exhaustive. This environmental screening does not fulfill FHWA's requirements for final approval; approval through NEPA will be required.

A ¼ mile screening buffer was applied along a preliminary proposed alignment corridor to screen for the presence of resources and/or areas of concern. Figure 1 on the next page illustrates the ¼ mile screening buffer and environmental constraints for the Northern Alignment.

FIGURE 1: 1/4 MILE SCREENING BUFFER AND ENVIRONMENTAL CONSTRAINTS



The following sections document the environmental screens for:

- Regional Air Quality Compliance;
- Cultural resources;
- Wetlands and streams;
- Threatened and endangered species;
- Hazardous waste sites and USTs; and
- Community Facilities.

2. Regional Air Quality Compliance

Both the NEPA and the Clean Air Act (CAA) Amendments require that air quality be considered during project development. The CAA Amendments require that transportation investments conform to the state air quality plan for meeting air quality standards. Referred as "Conformity", non-attainment areas must demonstrate that their transportation plan conforms to the region's air quality goals. A conforming transportation plan demonstrates that the emissions from traffic on the region's system are consistent with air quality goals found in the State Implementation Plan (SIP). This project is located in Oglethorpe County, which is outside of an ozone and PM2.5 non-attainment area, therefore the conformity procedures do not apply.

The NEPA requires a discussion of project-related carbon monoxide (CO) and Mobile Source Air Toxics (MSAT) during project development. Therefore a further project level CO and MSAT assessment needs to be conducted to fulfill FHWA's requirement at the project implementation stage.

All stages of construction operations would temporarily contribute to air pollution. Future assessment and control strategy on the impact of the construction is needed. Rules and Regulations for Air Quality Control outlined in Chapter 391-3-1, Rules of GA EPD, would be followed during the construction of the project.

3. Cultural Resources

A review of data available on Georgia's Natural, Archaeological and Historical Geographic Information System (NAHRGIS) and other sources was conducted. NAHRGIS is Georgia's interactive web-based registry and geographical information system designed to catalog information about the natural, archaeological, and historic resources of Georgia. A review of NARHGIS revealed 35 previously recorded historic resources within the ¼ mile area of potential effect (APE) used for this screening. A review of the NAHRGIS Archaeological Density map1 revealed that the APE falls within a low density rate for previously recorded archaeological resources. The APE examined here may not be appropriate for Section 106 or NEPA documentation and will have to be determined, in consultation with the State Historic Preservation Office (SHPO), and appropriate federal agency(ies), in compliance with 36 CFR 800.4.

As stated, NAHRGIS identified 35 historic resources that should be considered potentially eligible for the NRHP for the purposes of this screening. However, further research and a formal evaluation of each property in compliance with Section 106 is necessary before final eligibility

1 University of Georgia, Carl Vinson Institute of Government, Information Technology Outreach Services (ITOS). GNAHRGIS/Archaeology Density, accessed from ITOS GIS Server.

recommendations can be made. The 35 potentially eligible historic resources are listed in Table 1.2.2. Based on the spatial distribution of the resources, their dates of construction, and their proximity to Jefferson Mill (Resource ID 54086), it seems reasonable to conclude that the 17 potential resources (highlighted in Table 1.2.2) identified in the vicinity of the Smokey Road and Old Mill Road intersection would be grouped into a single historic district.

Although not identified in NAHRGIS, the abandoned railroad corridor which parallels the north side of Smokey Road at the west side of the APE will most likely be eligible for listing in the NRHP. The railroad corridor is a segment of the historic Georgia Railroad. The Georgia Railroad Company was chartered December 21, 1833 by a group of Athens citizens, led by James Camak, to build a railroad from Athens to Augusta. Construction began in Augusta in 1835 and appears to have been completed to Athens by the close of 1841.2 The citizens in the nearby county seat at Lexington preferred to keep the railroad at a safe distance resulting in the establishment of a train stop known as Lexington Depot approximately 3 miles east along the Georgia Railroad. Farmers and merchants brought cotton by the wagonload to ship out by train and camped at the depot overnight before going home with goods delivered by the same train. A public well was dug for their convenience, and people later began building permanent dwellings there. Lexington Depot was incorporated in 1876 as Crawford. The depot was added to the National Register of Historic Places in 1977.3 The NRHP listed depot does not fall within the ¼ mile APE.

TABLE 1: PREVIOUSLY IDENTIFIED HISTORIC RESOURCES WITHIN 1/4 MILE SCREENING APE

Resource ID (NAHRGIS)	Resource Type	Resource Name	Date of Construction
53559	Building	Unknown (House)	1880
53564	Building	Unknown (House)	1910
53569	Building	Unknown (House)	1910
53573	Building	Unknown (House)	1910
53575	Building	Unknown (House)	1910
53578	Building	Unknown (House)	1939
237183	Building	Unknown (House)	1895
53562	Building	Unknown (House)	1910
53568	Building	Unknown (House)	1920

2 Storey, Steve. Georgia's Railroad History and Heritage. "Georgia Railroad." Accessed on-line 13 November 2013 at www.railga.com.

3 Cooksey, Elizabeth B. New Georgia Encyclopedia. "Oglethorpe County." Edited 3/3/2013 Accessed on-line 13 November 2013 at www.georgiaencyclopedia.org; and Ebel, Carl. New Georgia Encyclopedia. "Lexington." Edited 6/25/2013. Accessed on-line 13 November 2013 at www.georgiaencyclopedia.org.

Resource ID (NAHRGIS)	Resource Type	Resource Name	Date of Construction
53574	Building	Unknown (House)	1910
53577	Building	Unknown (House)	1910
53525	Building	Unknown (Store)	1920
53555	Building	Unknown (House)	1880
53557	Building	Unknown (House)	1925
53571	Building	Unknown (House)	1910
53576	Building	Unknown (House)	1910
53641	Building	Unknown (House)	1844
53429	Building	Unknown (House)	1930
53833	Building	Unknown (House)	1910
53524	Building	Unknown (Store)	1920
53550	Building	Unknown (House)	1935
53556	Building	Unknown (House)	1884
53570	Building	Unknown (House)	1910
53560	Building	Unknown (House)	1910
53565	Building	Unknown (House)	1910
53566	Building	Unknown (House)	1910
53567	Building	Unknown (House)	1910
53572	Building	Unknown (House)	1910
53526	Building	City Hall	1884
53563	Building	Unknown (House)	1910
53549	Building	Unknown (House)	1940
53558	Building	Unknown (House)	1920
53561	Building	Unknown (House)	1920
53832	Building	Unknown (House)	1935
54086	Building	Jefferson Mill	1907

Source: GNAHRGIS
Note: The shaded resources may be considered as a single historic resource (district) under Section 106.

Furthermore, a review of the 1971 USGS 7.5-Minute Crawford Quadrangle revealed three cemeteries within the ¼ mile APE:

- New Zion Church Cemetery is located approximately one mile east of the CR 26/Smokey Road intersection on the south side of Smokey Road. This cemetery could not be located on Google Maps (Imagery ©2013 DigitalGlobe); its current status is unknown.

- Edwards Church Cemetery is located on Silman Road, on the east side of North Street and directly south of Old Mill Road and is less than one mile north of Crawford. This cemetery appears to continue to be associated with an adjacent church, as observed in Google Maps (Imagery ©2013 DigitalGlobe).
- Unnamed Cemetery is located about one mile north of Crawford on the southeast side of Old Mill Road. This cemetery is visible on Google Maps (Imagery ©2013 DigitalGlobe) about 200 ft. southeast of Old Mill Road.

The Georgia Railroad, which runs along Smokey Road within the ¼ mile APE, and the three cemeteries identified above will most likely be considered eligible for the NRHP based on previous guidelines developed by the SHPO.

While NAHRGIS records a low density for previously recorded archaeological resources in the ¼ mile screening area, the presence or absence of buried cultural deposits has to be evaluated is unknown. If it is determined that any of the resources will be adversely affected by the project, alignment alternatives to avoid these resources must be explored per Section 4(f) of the US DOT Act. Figure 1.2 shows the previously documented historic resources within the screening APE.

4. Wetlands and Streams

An assessment of jurisdictional waters that could be impacted by the proposed project was performed using US Geological Survey (USGS) topographic maps (Crawford Quad). According to the 1974 USGS Hydrologic Unit Maps of Georgia, the subject site is located in the Upper Oconee River Basin (HUC 03070101). Topographic mapping and the United States Fish and Wildlife Service (USFWS) interactive National Wetland Inventory map were reviewed for the project area. The desktop review identified eleven stream crossings within the project corridor. Associated named perennial streams of the stream crossings located outside of the project corridor include: Big Clouds Creek, Barrow Creek, Grove Creek, and Troublesome Creek. Big Clouds Creek represents two of the stream crossings and is located northwest of the project corridor. Three of the stream crossings flow into Barrow Creek southwest of the proposed project. Six potential stream crossings are associated with Grove Creek, which lies northeast of the project. One stream crossing located at the most eastern end of the project corridor flows into Troublesome Creek to the southeast. There is the potential for wetlands located adjacent to streams and open waters throughout the project corridor.

This environmental screening identified the potential presence of streams and the potential for wetlands and open waters in the study area. Field investigations should be conducted to confirm the findings of this screening. Permitting through the US Army Corps of Engineers prior to construction will likely be required. The need to mitigate impacts to streams and wetlands is also anticipated; however, the level of mitigation required cannot be determined until an ecological survey and wetlands delineation have taken place. Construction plans are required prior to the assessment of impacts.

5. Threatened and Endangered Species

The US Fish and Wildlife Service (FWS) County Listing of Threatened and Endangered Species and the Georgia Department of Natural Resources (DNR), Wildlife Resources Division's "Known occurrences of special concern plants, animals and natural communities" were reviewed to determine the proposed new roadway's potential impact to protected species in Oglethorpe County. One federally designated threatened species was identified, Amphianthus pusillus. Since an exhaustive search for the presence of threatened or endangered species within the study area is beyond the scope of this screening, a summary of the state and federally listed species potentially present within Oglethorpe County is included in Table 1.2.4. A habitat assessment was not conducted for this screening.

A thorough investigation of the presence of protected species and/or suitable habitat would be required during the NEPA clearance phase and preliminary engineering design concept development. This information would aid in the determination of an alternative that would minimize impacts to protected species and/or their suitable habitat. In addition, early coordination with USFWS and GADNR would be conducted to refine the list of threatened and endangered species present once an alternative is chosen. The impacts to these protected species cannot be determined prior to conducting protected species surveys which would identify potential habitat and individual protected species for both terrestrial and aquatic flora and fauna.

Table 2: Threatened and Endangered Species

Common Name	Scientific Name	Federal Status	State Status	Habitat
Animal Occurrences				
Lean Crayfish	Cambarus strigosus	None	T	Complex burrows adjacent to streams or in low areas where the water table is near the surface of the ground.
Broad River Burrowing Crayfish	Distocambarus devexus	None	T	Simple and complex burrows adjacent to streams or in low areas where the water table is near the surface of the ground. A single specimen was collected from a burrow that did not penetrate the water table and was only damp in the bottom. This species, particularly juveniles, are frequently collected in temporary pools and ephemeral streams.
Sandbar Shiner	Notropis scepticus	None	R	The sandbar shiner is found over sandy bottoms in flowing pools near gravel rocky riffles in medium-sized streams. It usually avoids small headwater tributaries, large rivers and reservoirs.

Common Name	Scientific Name	Federal Status	State Status	Habitat
Plant Occurrences				
Pool Sprite/ Little amphianthus	Amphianthus pusillus	T	T	Shallow, flat-bottomed depressions (solution pits, vernal pools) on granite outcrops, with thin, gravelly soils and winter-spring inundation. Pools must be deep enough to hold water for several weeks and must be in full sun.
Carolina Trefoil	Lotus helleri	None	E	Openings in post oak and blackjack oak woodlands with clay soils, over bedrock high in iron and magnesium, such as ultramafic rock; clearings, roadsides, and rights-of-way through these habitats.
Indian Olive	Nestronia umbellula	None	R	Dry, open, upland woods with mixed hardwood-pine canopy.
Oglethorpe Oak	Quercus oglethorpensis	None	T	Wet clay soils of Piedmont seepage swamps, stream terraces, and moist hardwood forests upslope from these habitats; roadsides and pasture edges near these habitats. Often with cherrybark oak or chalk maple.
Granite Stonecrop	Sedium pusillum	None	T	Piedmont granite outcrops, usually in mats of moss (Hedwigia ciliata) beneath red cedar trees.

Key: T = Threatened; E = Endangered; R = Rare
Source: U.S. Fish and Wildlife Service and Georgia Department of Natural Resources
Source: US Fish and Wildlife Service. Web accessed November 1, 2013:
http://ecos.fws.gov/ipac/wizard/trustResourceList!prepare.action

6. Hazardous Waste Sites and Underground Storage Tanks

A review of existing information for the presence of hazardous waste sites and underground storage tanks (USTs) has been undertaken through the US Environmental Protection Agency's (EPA) Facility Registry System (FRS) and the Georgia Environmental Protection Division's (EPD) UST Database and Hazardous Waste Site Inventory (HSI).

The US EPA's FRA and GA EPD's HSI identified three regulated facilities or cleanup locations within the ¼ mile screening buffer. These facilities include:

- Wolfskin IDW Site (EPD Site No. 10706) – located at the intersection of Wolfskin Road and SR 10/US 78 at the west end of the screening area;
- Jefferson Mills, Inc. – located north of Crawford on North Street near Silman Drive;
- Oglethorpe County High School – located at 749 Athens Road (SR 10/US 78) at the east end of the screening area. NOTE: the FRA identified two occurrences at this single location.

The GA EPD UST database identified one known facility, the Old J W Griffith Salvage Yard (Facility ID 10001307), at 1559 Athens Road just east of the intersection with Smokey Road at the west end of the screening area. Previously identified hazardous waste sites and USTs are depicted on Figure 1.2.

7. Community Facilities

For the purposes of this screening, community facilities have been identified within the ¼ mile screening buffer. The NEPA process will require analysis for potential impacts to churches and institutions:

- New Zion Church – on Smokey Road east of its intersection with Garden Drive at the west side of the screening area;
- Edwards Church – on Silman Drive north of Crawford in the center of the screening area;
- Saint John AME Church – on Old Mill Road north of Crawford in the center of the screening area;
- Oglethorpe County Emergency Medical Service – on Athens Road, west of the intersection with Buddy Faust Road, at the east side of the screening area;
- Oglethorpe County Library – 858 Athens Road west of the intersection with Buddy Faust Road, at the east side of the screening area;
- Oglethorpe County Senior Center – 19 Oglethorpe Drive south of Athens Road and east of Buddy Faust Road at the east side of the screening area; and
- Oglethorpe County High School – 749 Athens Road at the east end of the screening area.

Parks and recreational facilities were also examined, particularly for their potential to trigger Section 4(f) analysis. One park was identified within the ¼ mile screening buffer, Bryan Park. Bryan Park is located north of Crawford and is maintained by the Oglethorpe County Parks and Recreation Department. The county Parks and Recreation Department operates out of Bryan Park, as well.

8. Summary

An environmental screening was conducted based on a review of state and federal data sets. This environmental screening for the preliminary design concept for the SR 10/US 78 Northern Bypass around Crawford is summarized below:

- Cultural resources
    - Unknown potential for NRHP listed/eligible archaeological impact(s)
    - Moderate potential for NRHP listed/eligible historic resources impact(s)
    - Moderate potential for Section 4(f) impact(s)
- Wetlands and streams
    - Low to moderate potential for stream and wetland impact(s)
- Threatened and endangered species
    - Unknown potential for impacts; multiple present in County

- Hazardous waste sites and USTs
    - Low to moderate potential for impact(s)
- Community Facilities
    - Moderate potential for impact(s)
    - Moderate to high potential for Section 4(f) impact(s)

APPENDIX E

UNPAVED ROAD ANALYSIS

1. INTRODUCTIONS

During the existing analysis, roadway surface type was reviewed from GDOT's RC Database. Roadway surface dramatically affects the capacity, useful life and safety of a particular facility.

Table 1 below shows the mileage and the paved road percentage for all the road classifications in Oglethorpe County.

TABLE 1: MILEAGE AND PAVED ROAD PERCENTAGE

Classification	Total Lane Mileage	Paved Lane Mileage	% Paved
Principal Arterials	37	37	100%
Minor Arterials	68	68	100%
Major Collector	181	163	90%
Minor Collector	142	124	87%
Local	687	194	56%
Total	1,115	586	53%

The roadway surface type analysis showed that approximately 529 miles of roadways in Oglethorpe County are dirt or gravel. This constitutes approximately 47 percent of the total roadway mileage of Oglethorpe County. The majority (92%) of the unpaved road are local roads. The rest (8%) are rural collectors. As part of Oglethorpe County Multi-Modal Transportation Plan, in addition to prioritizing roadway capacity and operation projects, criteria has been established to evaluate and prioritize dirt and gravel roads to be paved if funding becomes available.

The following sections discuss the criteria selected for analyzing the unpaved roads and the analysis results.

2. EVALUATION CRITERIA

Both qualitative and quantitative criteria were established to evaluating unpaved roads for future improvements if funding becomes available. The criteria include the following:

- What is the functional classification of the unpaved roadway segment?
- What is Annual Average Daily Traffic (AADT) of the unpaved road?
- Does the unpaved road connect collectors or arterials?
- What is the level of population density along the unpaved roadway segment?
- What is the level of employment density along the unpaved roadway segment?
- What kind of land use types along the unpaved roadway segment?

By comparing unpaved road segments to these established criteria, it was possible to determine which segments scored highest against these critical measures. Table 2 below documents the scoring used for the unpaved road improvement prioritization.

TABLE 2: UNPAVED ROAD EVALUATION CRITERIA

Ford Improvement Prioritization Criteria	Possible Points	
Roadway Functional Classification What is functional classification of the unpaved roadway segment?	Local Road Rural Minor Collector Rural Major Collector	0 24 30
Annual Average Daily Traffic (AADT) What is Annual Average Daily Traffic (AADT) of the unpaved road?	0 - 99 100 - 499 500 - 1560	0 10 20
Connectivity Does the unpaved road connect collectors or arterials?	Other Collector to Collector Arterial to Collector	0 10 20
Population Density What is the level of population density along the unpaved roadway segment?	Very Low Low Moderate	0 5 10
Employment Numbers What is the level of employment density along the unpaved roadway segment?	Very Low Low Moderate	0 5 10
Land Use Type What kind of land use types along the unpaved roadway segment?	Agricultural, Residential and/or Others Commercial, Industrial, and/or Public Institutional	0 10
Total Possible Points	100	

3. EVALUATION RESULTS

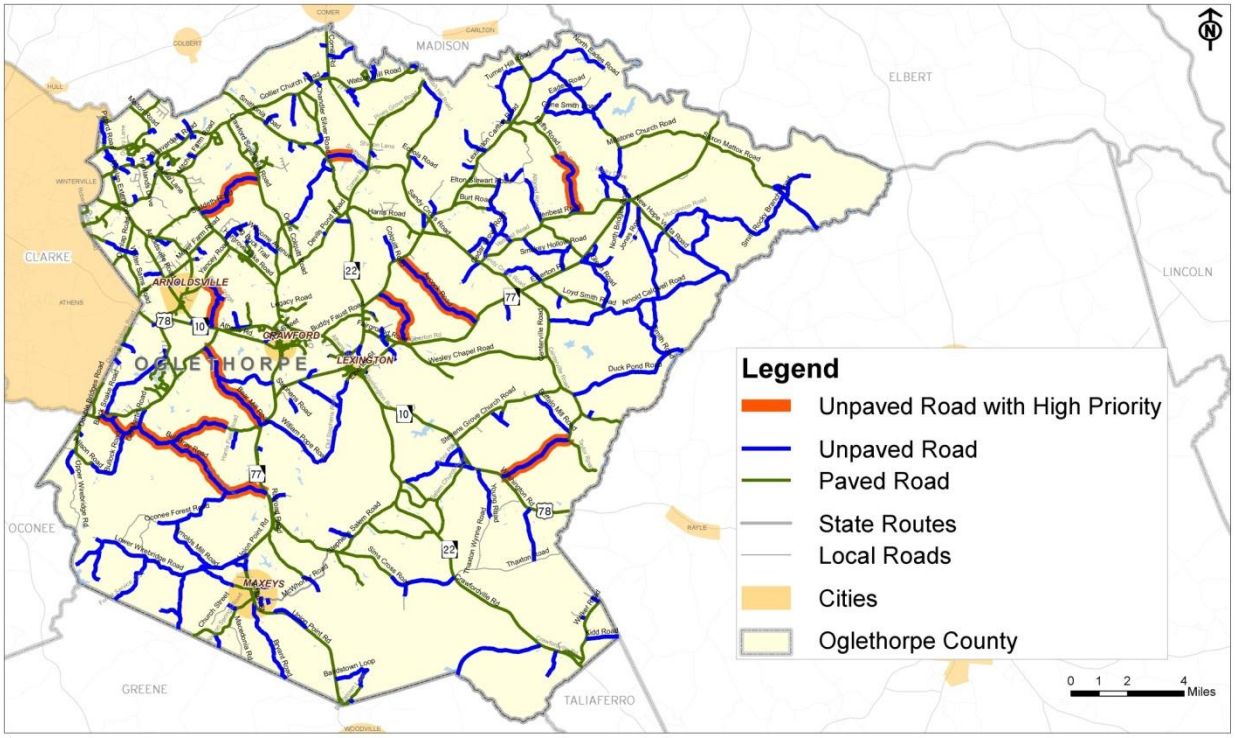
The evaluation criteria and analysis scoring resulted in the following unpaved roadway segments with high priority for future improvements:

- Smithonia Road between Whitetail Lane and Comer Road
- Hutchins Wolfskin Road between Wolfskin Road and Union Point Road
- Faust Farm Road between Wolfskin Road and Bear Mill Road
- Ruffs Road between Veribest Road and Eades Road
- Bear Mill Road between Faust Farm Road and Union Point Road
- Suddeth Road between Hargrove Lake Road and Crawford Smithonia Road
- Wildflower Drive between Wildflower Drive and Athens Road
- Brown's Chapel Road between Lexington-Carlton Road and Elberton Road
- Bull Bray Road between Hutchins Wolfskin Road and Union Point Road
- Rocky Ridge Road between Yancey Road and Wildflower Drive
- Aycock Road between Lexington-Carlton Road and Elberton Road

- Bethesda Church Road between Washington Road and Centerville Road

Figure 1 displays the unpaved road improvements with high priority.

FIGURE 1: UNPAVED ROAD IMPROVEMENTS PRIORITIZATION



APPENDIX F

INTERSECTION ASSESSMENT AND POTENTIAL IMPROVEMENTS

Oglethorpe County
Long Range Transportation Study

Intersection Assessment and Potential Improvements

Georgia Department of Transportation

BACKGROUND

The Georgia Department of Transportation (GDOT) is developing a multimodal Long Range Transportation Plan (LRTP) for Oglethorpe County, Georgia. Much of Oglethorpe County is comprised of land that is characterized as rural, with low population (close to 0.5 people per acre) and employment. Understanding this, the plan focuses on small scale and context sensitive solutions to serve the character of the community while ensuring mobility into the future.

The plan conducts a thorough operational and crash analysis for the top nine (9) intersections based on safety analysis and local stakeholder input. A variety of potential improvements are recommended for each intersection including advanced warning signs, operational improvements and access management strategies.

CONTENTS AND DEFINITIONS

Each intersection consist of two slides:

The first slide of each intersection assessment includes the following information:

- *Physical Condition - summarized the intersection type and lane configuration*
- *Traffic Characteristics – highlighted turning movement counts (TMC) for both AM and PM peak hours which were collected at all intersections on 4/24/2013.*
- *Safety Analysis – summarized the safety analysis results which were based on the crash data from the last five years (2007-2011). Safety analysis was used to assist in identifying safety issues and selecting countermeasures to improve them.*
- *Peak Hour Level of Service Analysis – summarized the operational analysis results for both AM and PM peak hours using Highway Capacity Software (HCS).*
- *Stakeholder and Public Input – recapped the input from stakeholders and summarized the public survey results.*

The second slide of each intersection assessment includes the proposed countermeasures to improve the safety and operations for the intersection. For each improvement, the following information is included:

- *Crash Type Addressed – highlighted the crash type to which the proposed improvement is intended to address.*
- *Benefits – discussed the expected benefits associated with the proposed improvement.*
- *Timeline for implementation – referred to the relative approximate time it can take to implement the proposed intersection improvements. Three categories include:*
  - ❑ *Short (< 1 year)*
  - ❑ *Short to Moderate (1 to 3 years)*
  - ❑ *Moderate (> 3 years)*
- *Estimated Cost – provided categories of planning-level estimated costs of the intersection improvements related to one another. All improvements are considered low cost, low to moderate or moderate cost. Costs could vary considerably due to right-of-way costs.*
  - ❑ *Low (< $100,000)*
  - ❑ *Low to Moderate ($100,000 to $500,000)*
  - ❑ *Moderate (>$500,000)*
- *Crash Reduction Factor (CRF) – CRFs are the quantitative results from research and/or evaluation studies, indicating the percentage reductions in crashes that can be expected after implementing treatments. Crash Reduction Factors (CRFs) are from FHWA's "Issue Brief 8: Toolbox of Countermeasures and Their Potential Effectiveness for Intersection Crashes" and "Desktop Reference for Crash Reduction Factors".*

1 - Intersection of US 78 / Athens Road at Broad Street / Hutchins Road

Existing Condition Analysis

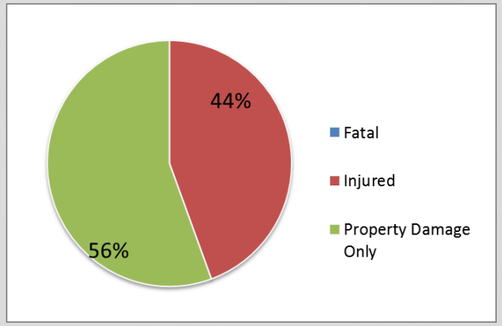
Physical Condition

- Two-way stop controlled intersection
- One lane per direction for all approaches
- No exclusive turn lanes

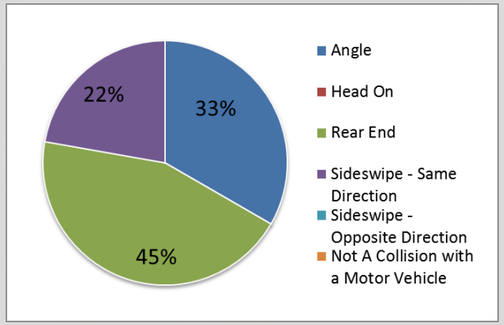
Safety Analysis

- 9 crashes in total during 2007 to 2011 with majority of them being angle collisions
- Drivers' unawareness of the intersection could be the main cause for crashes

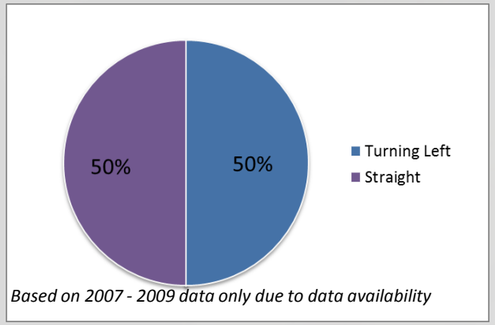
Percentage of Crashes by Severity and Cause



Crash Severity



Manner of Collision



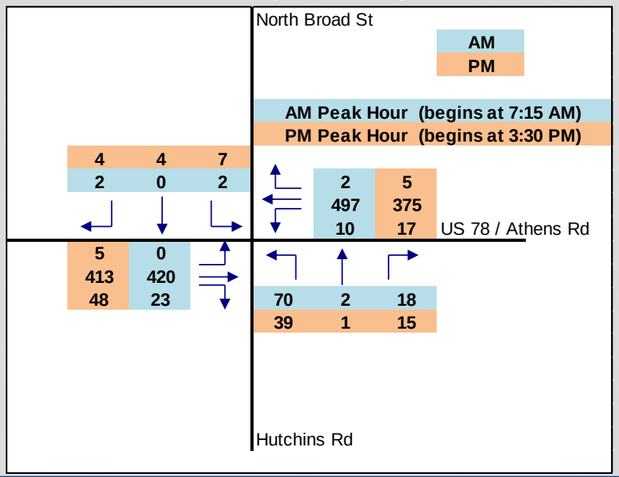
Based on 2007 - 2009 data only due to data availability

Vehicle Maneuver

Traffic Characteristics

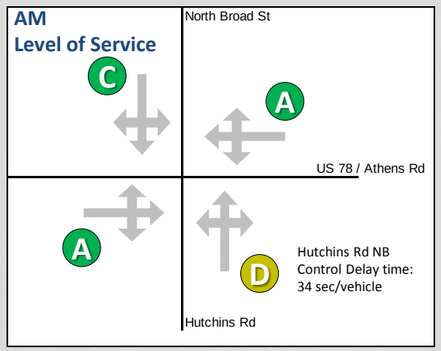
2013 Existing Peak Hour Turning Movement Counts

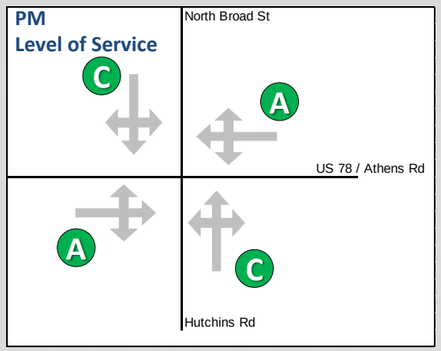
- AM Peak Hour: 7:15 am – 8:15 am
- PM Peak Hour: 3:30 pm – 4:30 pm



Peak Hour Level of Service Analysis

- AM Peak Hour: 7:15 am – 8:15 am
- PM Peak Hour: 3:30 pm – 4:30 pm





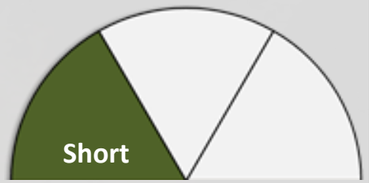
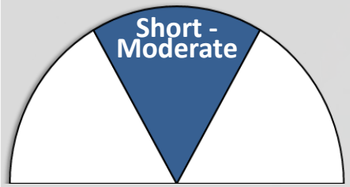
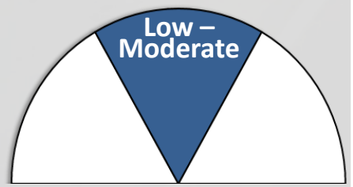
Stakeholder and Public Input

- Public suggested adding a left turn lane on Hutchins Road northbound approach.

Georgia Department of Transportation

1 - Intersection of US 78 / Athens Road at Broad Street / Hutchins Road

Potential Improvements for Further Evaluation

	Next Steps and Potential Improvements	Crash Type Addressed	Benefits	Timeline for Implementation	Estimated Cost	Crash Reduction Factor (CRF)*
No. 1	Consider providing advance intersection warning signs along US 78 / Athens Road eastbound. Consider adding advisory speed plaque if speed is a factor. 	Right angle and rear end crashes attributed to drivers being unaware of the intersection	Could provide approaching motorists with additional information and help them make safer decisions as they approach the intersection			**40%**
No. 2	Consider providing a right turn lane on Hutchins Road northbound to decrease control delay. 	Rear end crashes attributed to right turning vehicles hit from behind	Could help motorists make safer decisions as they approach the intersection and improve traffic operations by increasing the capacity			**14% - 26%**

2 - Intersection of US 78 / Athens Road at North Street

Existing Condition Analysis

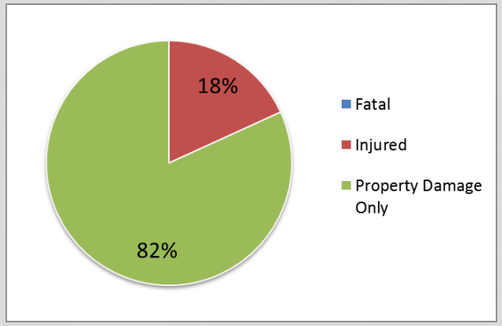
Physical Condition

- Signalized intersection
- One lane per direction for all approaches
- On-street parking next to US 78 / Athens Road eastbound

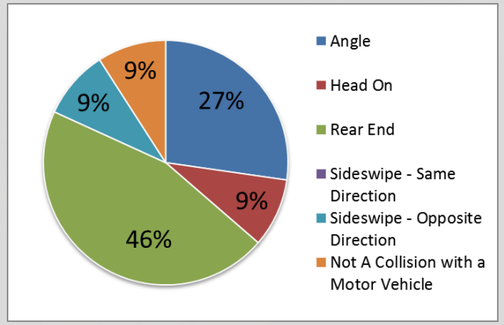
Safety Analysis

- 11 crashes in total during 2007 to 2011 with majority of them being rear end or angle collisions
- Drivers' failure to yield could be the main causes for crashes

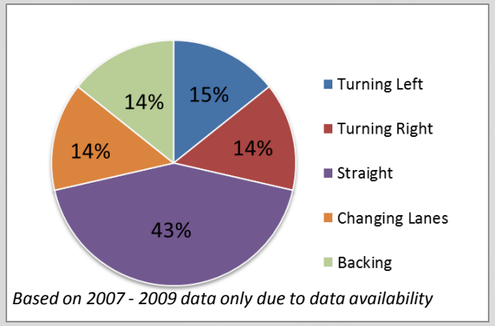
Percentage of Crashes by Severity and Cause



Crash Severity



Manner of Collision



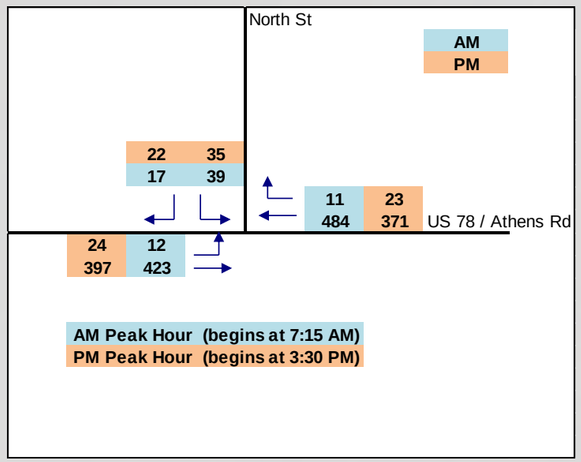
Based on 2007 - 2009 data only due to data availability

Vehicle Maneuver

Traffic Characteristics

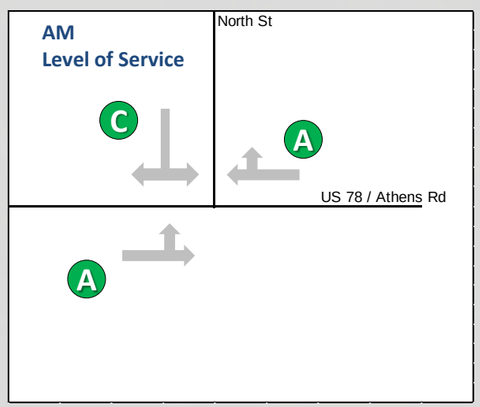
2013 Existing Peak Hour Turning Movement Counts

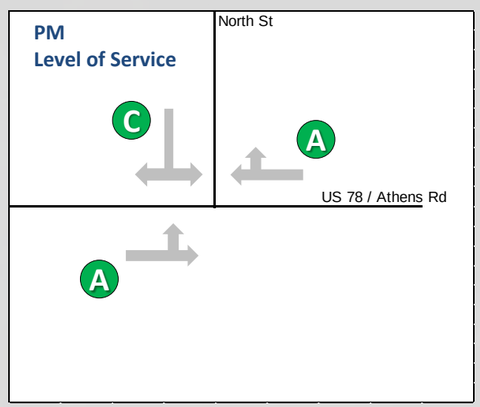
- AM Peak Hour: 7:15 am – 8:15 am
- PM Peak Hour: 3:30 pm – 4:30 pm



Peak Hour Level of Service Analysis

- AM Peak Hour: 7:15 am – 8:15 am
- PM Peak Hour: 3:30 pm – 4:30 pm



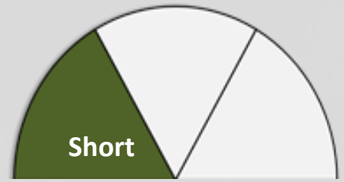
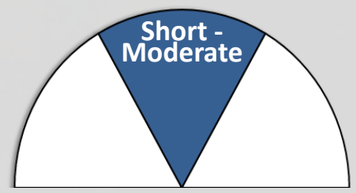
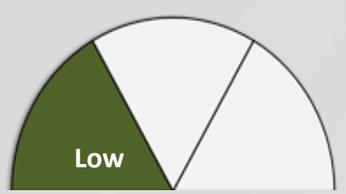
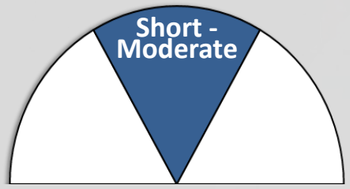
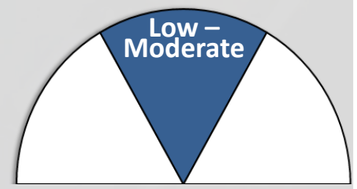


Stakeholder and Public Input

- No specific comments are expressed regarding this intersection.

Georgia Department of Transportation

Potential Improvements for Further Evaluation

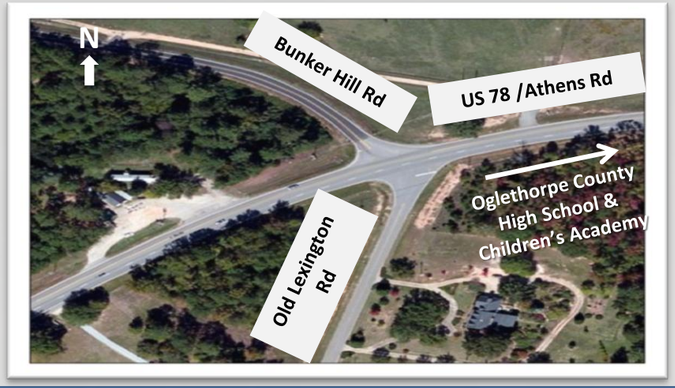
Next Steps and Potential Improvements		Crash Type Addressed	Benefits	Timeline for Implementation	Estimated Cost	Crash Reduction Factors (CRF)*
No. 1	Evaluate sight distance on North Street southbound and consider adding a no right turn on red sign. 	Angle or sideswipe crashes attributed to limited sight distance, motorists failing to yield, or misjudging gaps in the mainline traffic	Could reduce number of conflict points and improve overall safety			40%
No. 2	Consider access control of The Commercial Bank on US 78. 	Angle crashes attributed to motorists being unaware of stop signs, unaware of conflicting traffic at the access point, or misjudging gaps in the mainline traffic	Could reduce number of conflict points and improve overall safety			7%
No. 3	Consider access management of W Elbert St. such as changing into one way street (south direction traffic only) or completely closing it. 	Angle and rear end crashes attributed to motorists unaware of the presence of intersection, failing to stop, or misjudging gaps in the mainline traffic	Could reduce number of conflict points and improve overall safety - key for US 78 corridor to improve safety and proactively address potential access-related deficiencies.			7%

3 - Intersection of US 78 / Athens Road at Bunker Hill Road

Existing Condition Analysis

Physical Condition

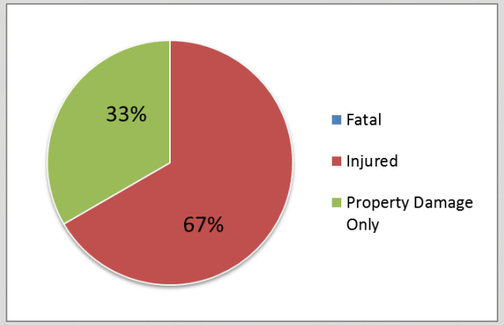
- Two-way stop-controlled intersection
- Two lanes on US 78 / Athens Road eastbound; one lane on all other approaches
- No exclusive turn lanes



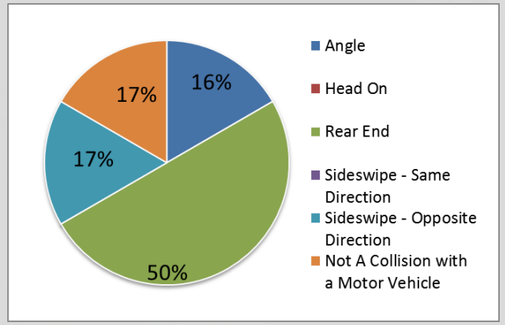
Safety Analysis

- 6 crashes in total during 2007 to 2011 with majority of them being rear end collisions
- Drivers' unawareness of the intersection and/or road curvature could be the main causes for crashes

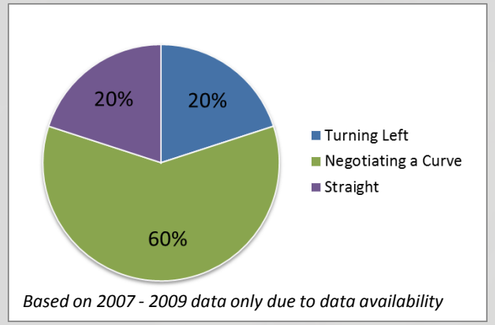
Percentage of Crashes by Severity and Cause



Crash Severity



Manner of Collision



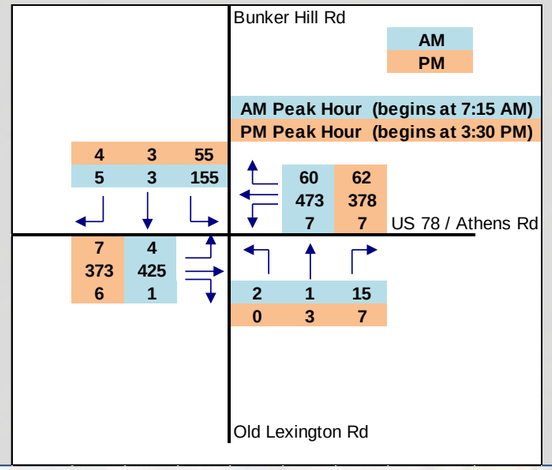
Based on 2007 - 2009 data only due to data availability

Vehicle Maneuver

Traffic Characteristics

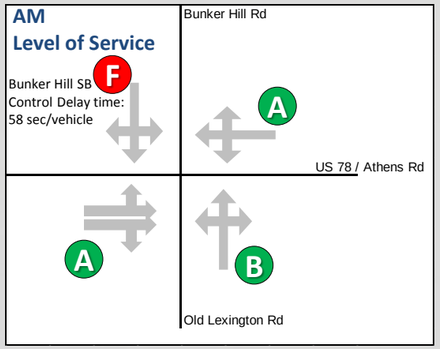
2013 Existing Peak Hour Turning Movement Counts

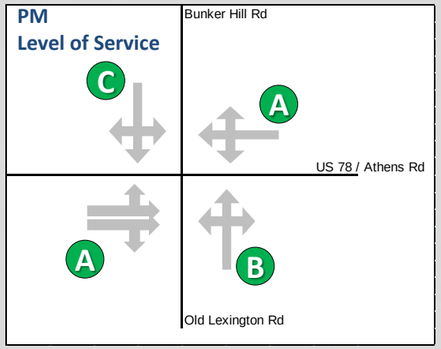
- AM Peak Hour: 7:15 am – 8:15 am
- PM Peak Hour: 3:30 pm – 4:30 pm



Peak Hour Level of Service Analysis

- AM Peak Hour: 7:15 am – 8:15 am
- PM Peak Hour: 3:30 pm – 4:30 pm





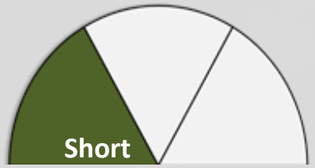
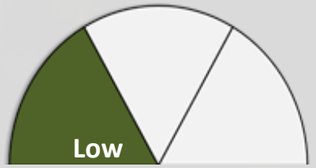
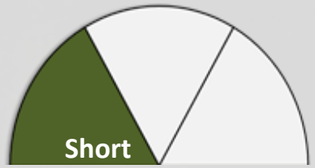
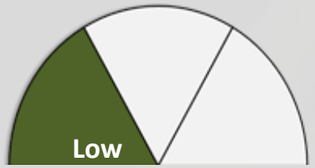
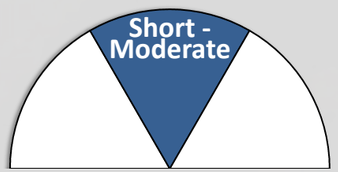
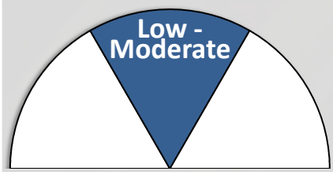
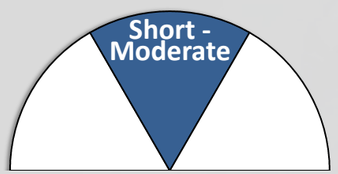
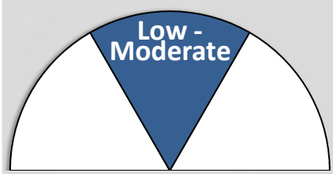
Stakeholder and Public Input

- There is a flow issue on the mainline on US 78 / Athens Road.
- During the AM and PM peak periods, drivers experienced long queues on Bunker Hill Road southbound.
- It is difficult to make left-turn movement on Bunker Hill Road due to limited sight distance and high speed on US 78.
- Public expressed safety concern over this intersection.
- Public suggested signalizing this intersection or implementing four-way stop control and adding left turn lanes on US 78 and Bunker Hill Road southbound approach.

Georgia Department of Transportation

3 - Intersection of US 78 / Athens Road at Bunker Hill Road

Potential Improvements for Further Evaluation

	Next Steps and Potential Improvements	Crash Type Addressed	Benefits	Timeline for Implementation	Estimated Cost	Crash Reduction Factors (CRF)*
No. 1	Replace 30-inch with 36-inch stop signs on Bunker Hill Road southbound. 	Right angle and rear end crashes attributed to drivers unaware of the intersection or failing to stop at the stop sign	Could provide approaching motorists with additional information and help them make safer decisions as they approach the intersection			**67%**
No. 2	Consider providing “Chevron” signs for southbound Bunker Hill Road. 	Sideswipe crashes or crashes attributed to negotiating a curve	Could provide approaching motorists with additional information and help them make safer decisions as they approach the intersection			**20%-64%**
No. 3	Consider offsetting the intersection and cul-de-sacing the driveway to the church to improve operations and safety.	Crashes attributed to insufficient sight distance and awkward sight lines at a skewed intersection	Could address problems like vehicle alignment, long exposure in the intersection, and potential driver confusion			Varies * The CRF varies by the degree of skew
No. 4	Consider adding right turn lane from US 78 to Bunker Hill Road and converting the current passing lanes to two-way left-turn lane (TWLTL) .	Crashes between (1) vehicles turning left and following vehicles and (2) vehicles turning left and opposing through vehicles	TWLTL can allow through vehicles to continue without stopping while turning vehicles can use left turn lanes.			**23%-48%**

Note: Roundabout was initially considered as a potential improvement. It was determined that geometry limits the feasibility for roundabout improvement at this intersection.

4 - Intersection of US 78 / Athens Road at Buddy Faust Road

Existing Condition Analysis

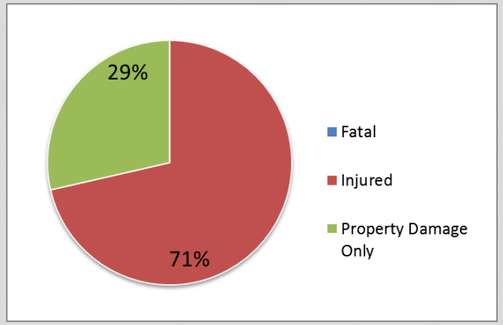
Physical Condition

- One-way stop-controlled intersection
- Two lanes on US 78 / Athens Road; One lane on Buddy Faust Road
- Exclusive left turn lane on US 78 / Athens Road eastbound

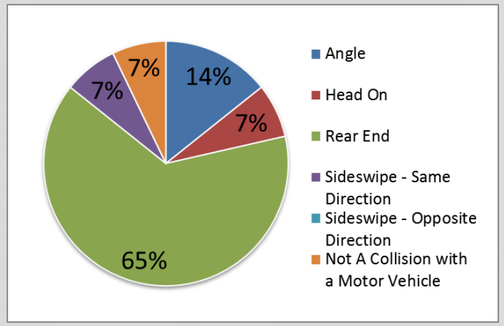
Safety Analysis

- 14 crashes in total during 2007 to 2011 with majority of them being rear end collisions
- Drivers' unawareness of the intersection and/or failure to yield could be the main causes for crashes

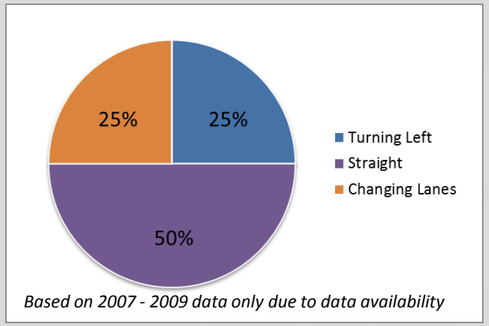
Percentage of Crashes by Severity and Cause



Crash Severity



Manner of Collision

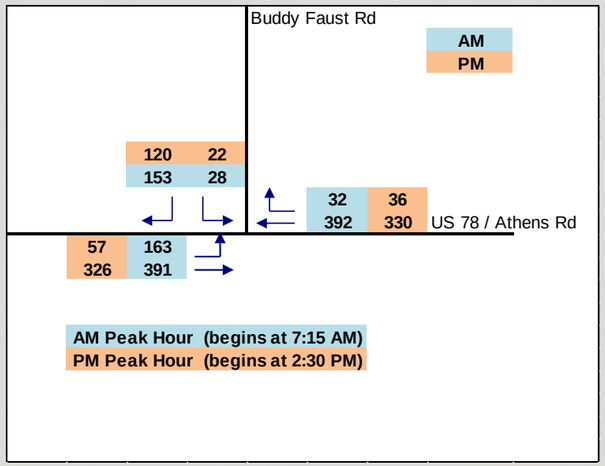


Vehicle Maneuver

Traffic Characteristics

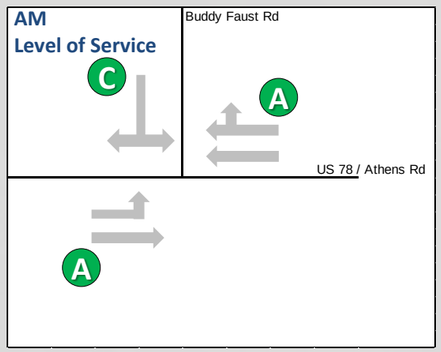
2013 Existing Peak Hour Turning Movement Counts

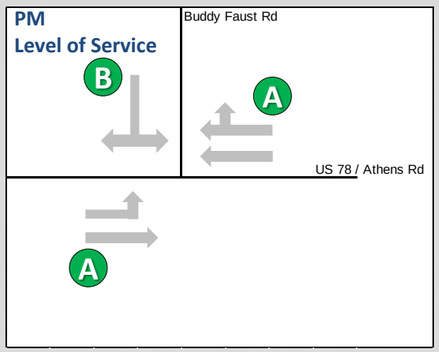
- AM Peak Hour: 7:15 am – 8:15 am
- PM Peak Hour: 2:30 pm – 3:30 pm



Peak Hour Level of Service Analysis

- AM Peak Hour: 7:15 am – 8:15 am
- PM Peak Hour: 2:30 pm – 3:30 pm





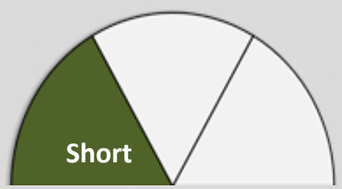
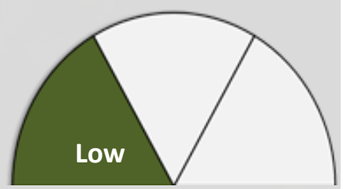
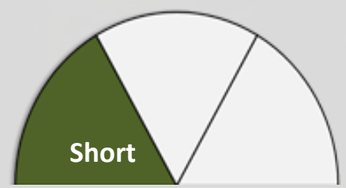
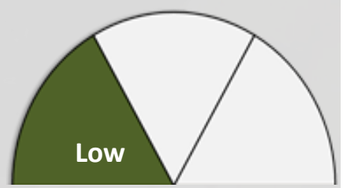
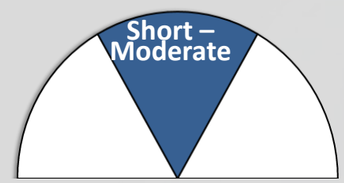
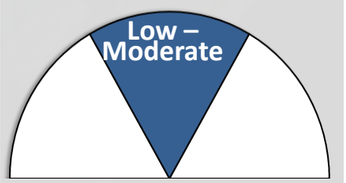
Stakeholder and Public Input

- Left-turn movement vehicles on Buddy Faust Road southbound experience long delay and hold up traffic; public suggested either prohibiting left turn from Buddy Faust Road onto US 78 during AM peak hours or adding a turn lane.
- Public expressed safety concern over this intersection, especially relating to turning movements and blind spots due to sunlight or fog.
- Public suggested implementing three-way stop control or signalizing this intersection.

Georgia Department of Transportation

4 - Intersection of US 78 / Athens Road at Buddy Faust Road

Potential Improvements for Further Evaluation

Next Steps and Potential Improvements		Crash Type Addressed	Benefits	Timeline for Implementation	Estimated Cost	Crash Reduction Factors (CRF)*
No. 1	Consider correcting and relocating current signs and stripping solutions on US 78 westbound. Currently there are lots of signs associated with merging traffic.	Right angle and rear end crashes attributed to drivers being unaware of the intersection	Could provide approaching motorists with clear information and help them make safer decisions as they approach the intersection			**None Identified**
No. 2	Consider providing a right turn lane on US 78 westbound to Buddy Faust Road and a right turn lane on Buddy Faust Road southbound to US 78 westbound. 	Rear end crashes attributed to right turning vehicles hit from behind	Could help motorists make safer decisions as they approach the intersection and improve traffic operations by increasing the capacity			**14%-26%**
No. 3	Consider providing left turn lane at US 78 eastbound to improve intersection performance and safety. 	Rear end attributed to motorists being unaware of stop signs, unaware of conflicting traffic at the intersection, or misjudging gaps in the mainline traffic	Could improve delay for through and right turn movements if they do not have to wait behind left vehicles			**23%-48%**

Note: Will need more detailed accident data to support further evaluation on the proposed improvements (No. 2 and No.3).
Roundabout was initially considered as a potential improvement. It was determined that geometry limits the feasibility for roundabout improvement at this intersection.

5 - Intersection of US 78 / Athens Road at SR 22 / Comer Road

Existing Condition Analysis

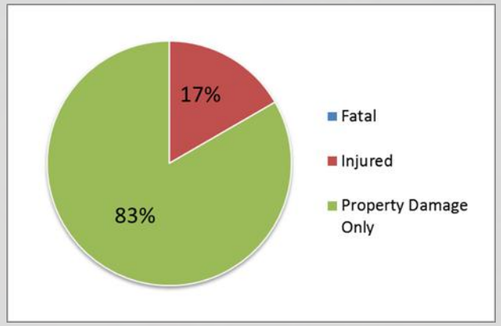
Physical Condition

- One-way stop-controlled intersection
- One lane per direction for all approaches
- No exclusive turn lanes

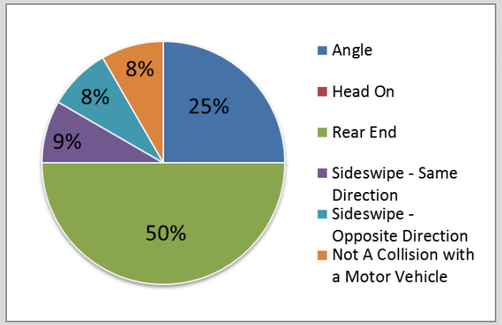
Safety Analysis

- 12 crashes in total during 2007 to 2011 with majority of them being rear end collisions
- Drivers' unawareness of the intersection and/or complicated configuration could be the main causes for rear end and angle crashes

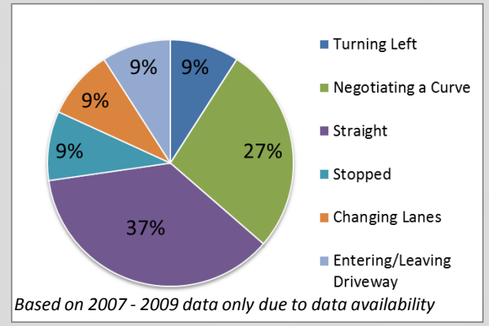
Percentage of Crashes by Severity and Cause



Crash Severity



Manner of Collision



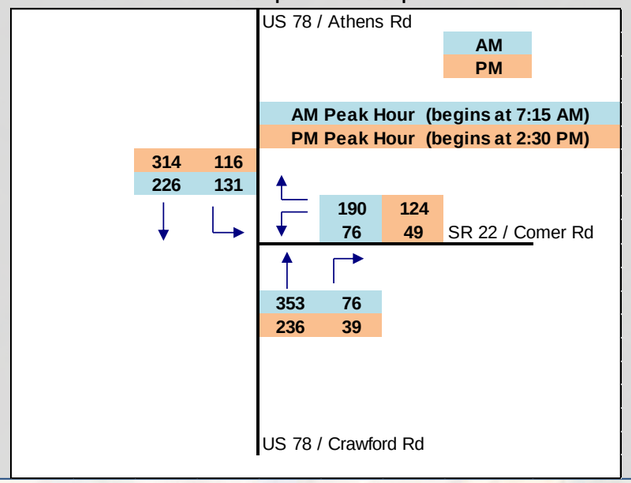
Based on 2007 - 2009 data only due to data availability

Vehicle Maneuver

Traffic Characteristics

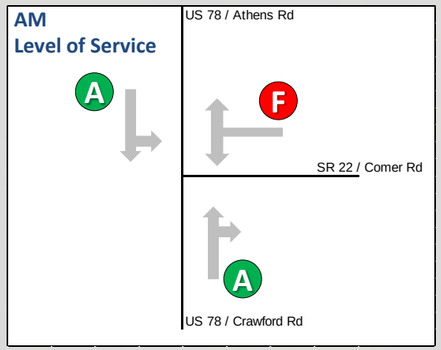
2013 Existing Peak Hour Turning Movement Counts

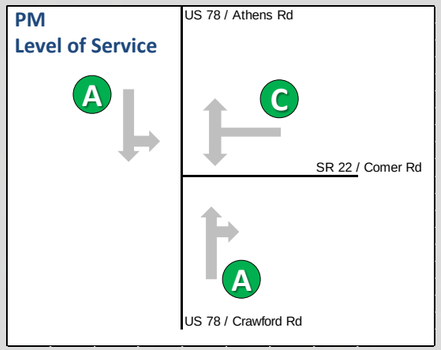
- AM Peak Hour: 7:15 am – 8:15 am
- PM Peak Hour: 2:30 pm – 3:30 pm



Peak Hour Level of Service Analysis

- AM Peak Hour: 7:15 am – 8:15 am
- PM Peak Hour: 2:30 pm – 3:30 pm





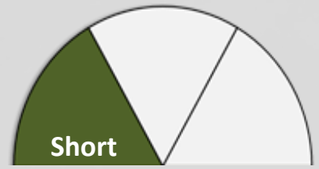
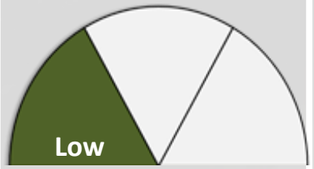
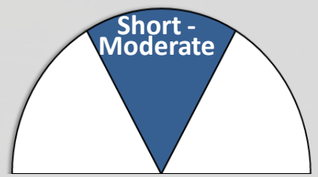
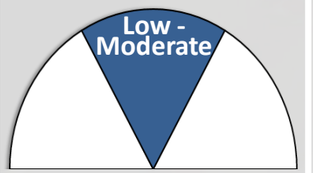
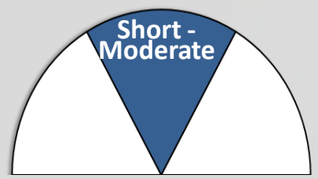
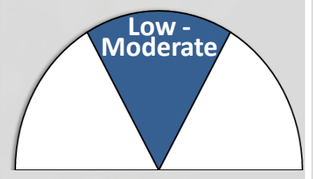
Stakeholder and Public Input

- There is traffic backup at this intersection, especially during AM and PM peak periods due to school traffic.
- Left-turn vehicles on US 78 / Athens Road southbound and SR 22 / Comer Road westbound experience long delay and thereby holding up traffic.
- Public expressed safety concern over this intersection.
- Public suggested signalizing this intersection or implementing three-way stop control, and adding turn lanes.

Georgia Department of Transportation

5 - Intersection of US 78 / Athens Road at SR 22 / Comer Road

Potential Improvements for Further Evaluation

Next Steps and Potential Improvements		Crash Type Addressed	Benefits	Timeline for Implementation	Estimated Cost	Crash Reduction Factors (CRF)*
No. 1	Consider consolidating the signs – currently there are lots of sings on US 78 in the vicinity of this intersection, which could create driver confusion and hinder the sight distance.	Right angle and rear end crashes attributed to drivers being unaware of the intersection	Could provide approaching motorists with clear information and help them make safer decisions as they approach the intersection			**None Identified**
No. 2	Consider closing the intersection of Clark Cir and SR 22 / Comer Road and adding a cul-de-sac for vehicle to turn around. Alternative intersection with US 78 is approximately 1,000 ft away.	Right angle and sideswipe crashes attributed to motorists being unaware of conflicting traffic at the intersection or misjudging gaps in the mainline traffic	Could reduce number of conflict points and improve overall safety			**7%**
No. 3	Consider adding right turn markings, restriping, adding keep moving sign for SR 22 / Comer Road right turn, and possibly lengthening right turn bay as well.	Rear end crashes attributed to right turning vehicles hit from behind	Could help motorists make safer decisions as they approach the intersection and improve traffic operations by increasing the capacity			**14% - 26%**

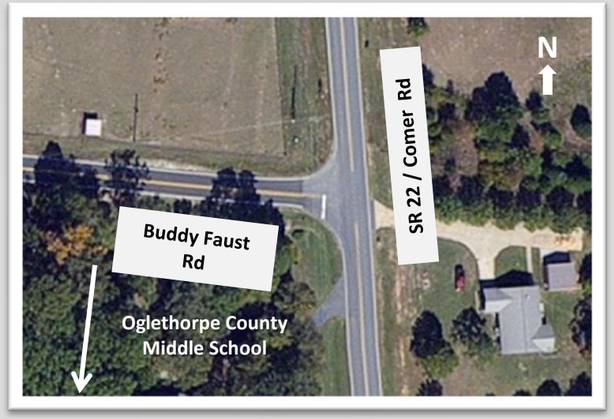
Note: Improvement No. 2 will require buy-in from locals. If a cul-de-sac of Clark Circle is in place, then the additional right turn lane can be added relevant quickly. These two improvements combined will greatly improve the operations and safety at this intersection.

6 - Intersection of SR 22 / Comer Road at Buddy Faust Road

Existing Condition Analysis

Physical Condition

- One-way stop-controlled intersection
- One lane per direction for all approaches
- No exclusive turn lanes



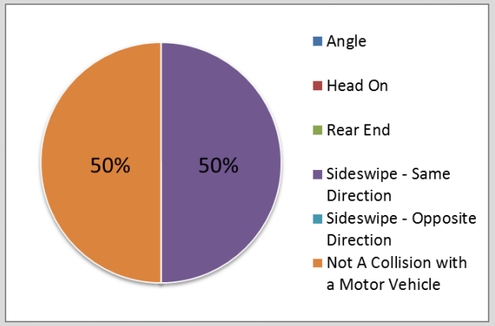
Safety Analysis

- One sideswipe crash and one fence collision during 2007 to 2011

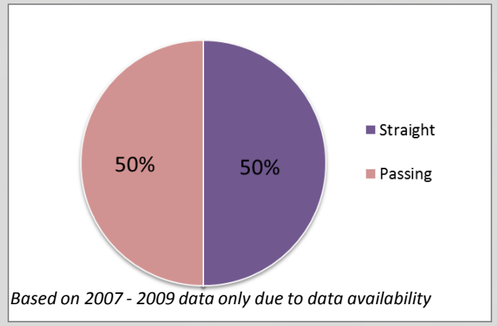
Both crashes were property damage only.

Crash Severity

Percentage of Crashes by Severity and Cause



Manner of Collision

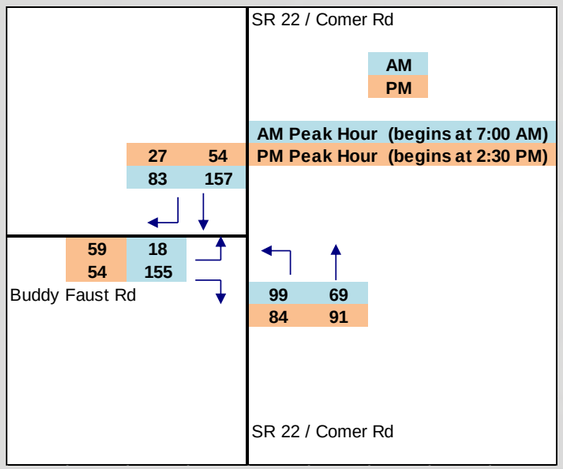


Vehicle Maneuver

Traffic Characteristics

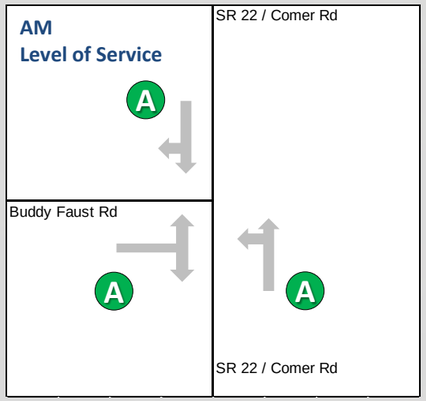
2013 Existing Peak Hour Turning Movement Counts

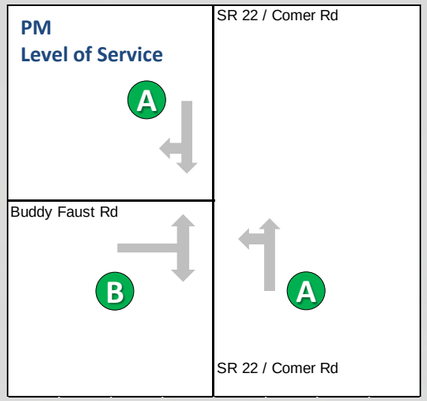
- AM Peak Hour: 7:00 am – 8:00 am
- PM Peak Hour: 2:30 pm – 3:30 pm



Peak Hour Level of Service Analysis

- AM Peak Hour: 7:00 am – 8:00 am
- PM Peak Hour: 2:30 pm – 3:30 pm





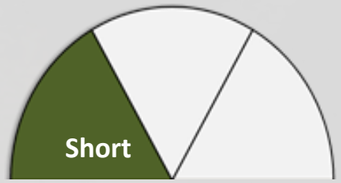
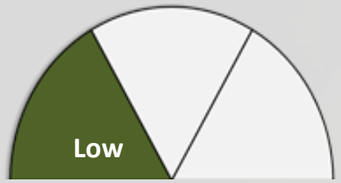
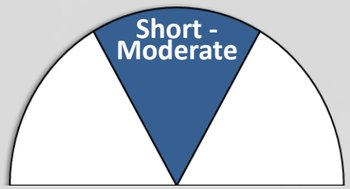
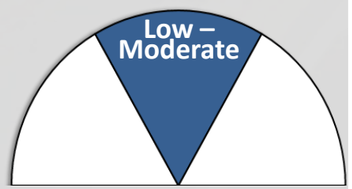
Stakeholder and Public Input

- Public suggested adding turn lanes.

Georgia Department of Transportation

6 - Intersection of SR 22 / Comer Road at Buddy Faust Road

Potential Improvements for Further Evaluation

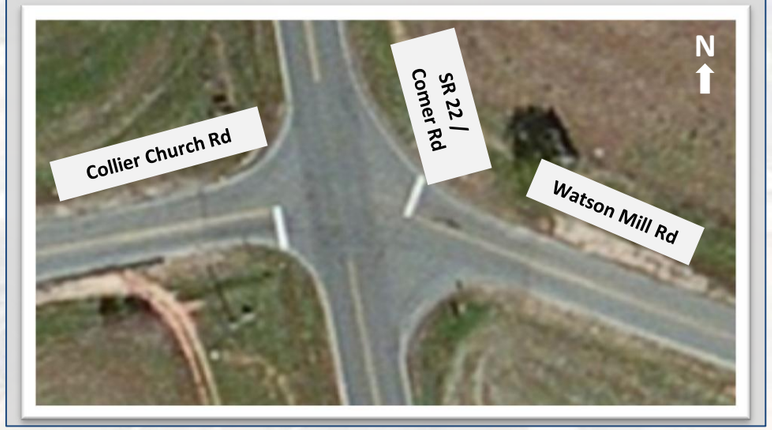
Next Steps and Potential Improvements		Crash Type Addressed	Benefits	Timeline for Implementation	Estimated Cost	Crash Reduction Factors (CRF)*
No. 1	Consider day-lighting (removing vegetation around) the stop ahead and stop signs at this intersection.	Right-angle crashes attributed to drivers unaware of the intersection or failing to stop at the stop sign	Could improve the visibility of the stop ahead and stop signs and improve the overall safety			**None Identified**
No. 2	Consider providing eastbound right turn lane off Buddy Faust Road, auxiliary lane or upgrading shoulder (runaround) on SR 22. 	Read end crashes attributed to right turning vehicles hit from behind	Could help motorists make safer decisions as they approach the intersection and improve traffic operations by increasing the capacity			**14% - 26%**

7 - Intersection of SR 22/ Comer Road at Collier Church Road

Existing Condition Analysis

Physical Condition

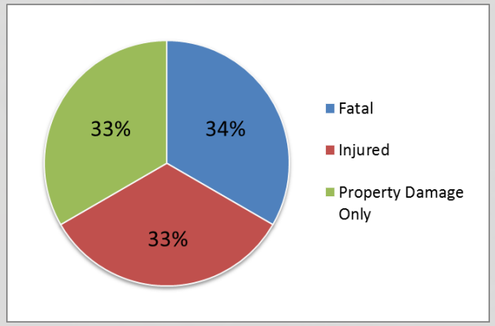
- Two-way stop-controlled intersection
- One lane per direction for all approaches
- No exclusive turn lanes



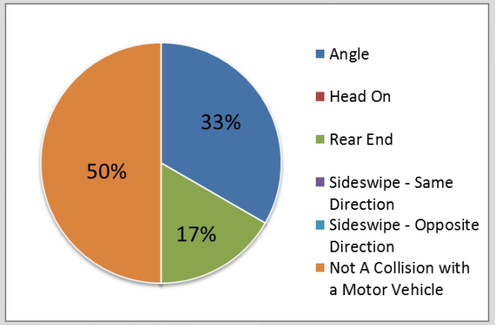
Safety Analysis

- 6 crashes during 2007 to 2011 which half of them was a collision with a fixed object
- Drivers' unawareness of the intersection and/or speeding could be the main causes of the crash

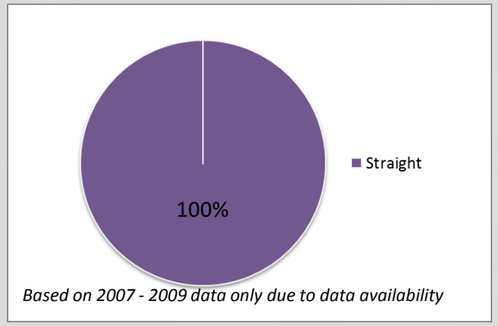
Percentage of Crashes by Severity and Cause



Crash Severity



Manner of Collision



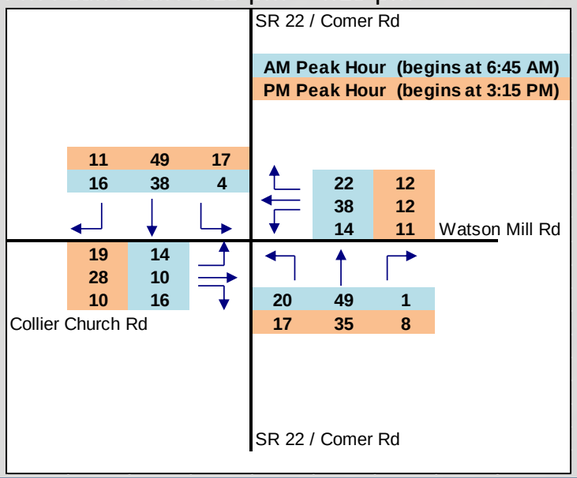
Based on 2007 - 2009 data only due to data availability

Vehicle Maneuver

Traffic Characteristics

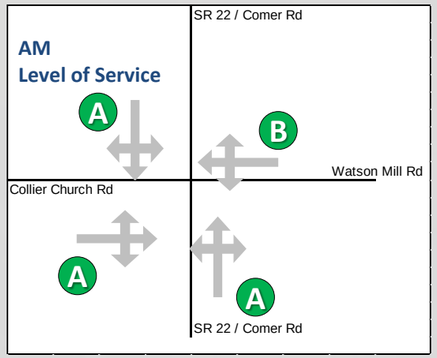
2013 Existing Peak Hour Turning Movement Counts

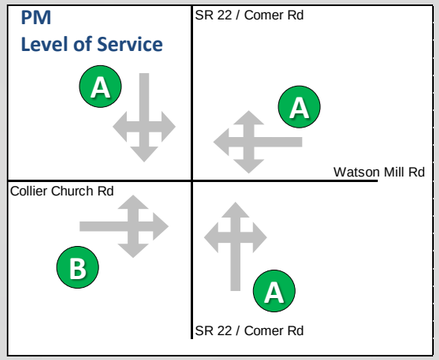
- AM Peak Hour: 6:45 am – 7:45 am
- PM Peak Hour: 3:15 pm – 4:15 pm



Peak Hour Level of Service Analysis

- AM Peak Hour: 6:45 am – 7:45 am
- PM Peak Hour: 3:15 pm – 4:15 pm





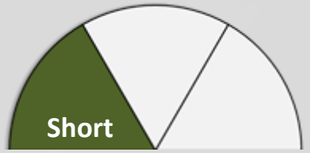
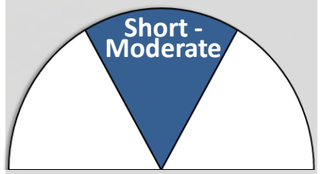
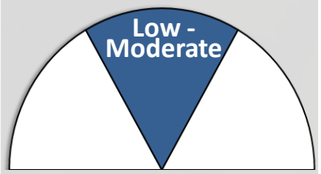
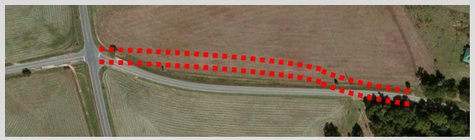
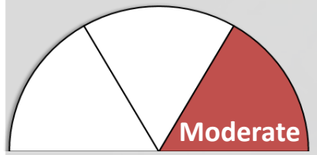
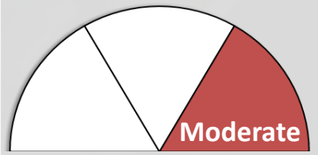
Stakeholder and Public Input

- No specific comments are expressed regarding this intersection.

Georgia Department of Transportation

7 - Intersection of SR 22/ Comer Road at Collier Church Road

Potential Improvements for Further Evaluation

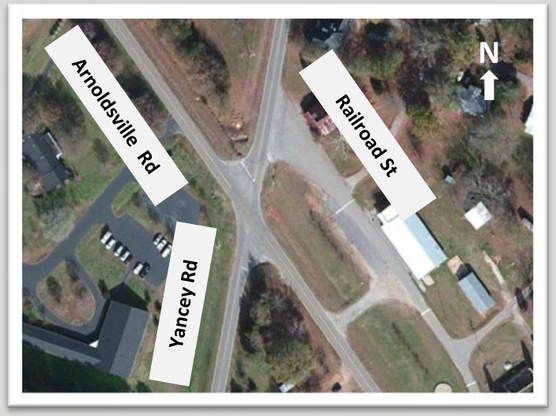
	Next Steps and Potential Improvements	Crash Type Addressed	Benefits	Timeline for Implementation	Estimated Cost	Crash Reduction Factors (CRF)*
No. 1	Consider providing advance intersection warning signs on Collier Church Road eastbound and Watson Mill Road westbound. 	Right angle and rear end crashes attributed to drivers being unaware of the intersection	Could provide approaching motorists with additional information and help them make safer decisions			**40%**
No. 2	Consider installing transverse rumble strips on minor roads.	Right angle and roadway departure crashes attributed to motorists being unaware of stop or yield signs	Could provide approaching motorists with additional information and help them make safer decisions			**28% - 35%**
No. 4	Consider realigning the intersection. 	Crash attributed to insufficient sight distance, motorists being unaware of stop signs, unaware of conflicting traffic at the intersection, or misjudging gaps in the mainline traffic	Could address problems like vehicle alignment, long exposure in the intersection, and potential driver confusion			Varies * The CRF varies by the degree of skew

8 - Intersection of Yancey Road at Arnoldsville Road – Local Intersection

Existing Condition Analysis

Physical Condition

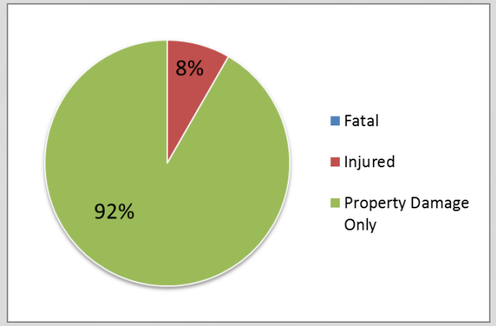
- Two-way stop-controlled intersection
- One lane per direction for all approaches
- No exclusive turn lanes



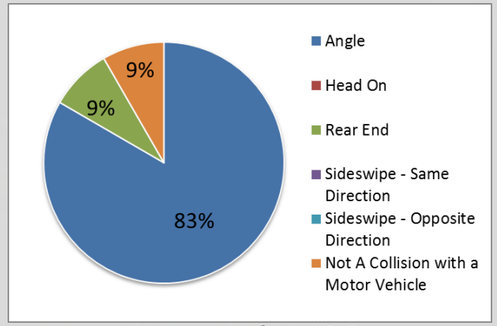
Safety Analysis

- 12 Crashes in total during 2007 to 2011 with majority of them being angle collisions
- Drivers' unawareness of the intersection and/or skewed configuration could be the main causes for crashes

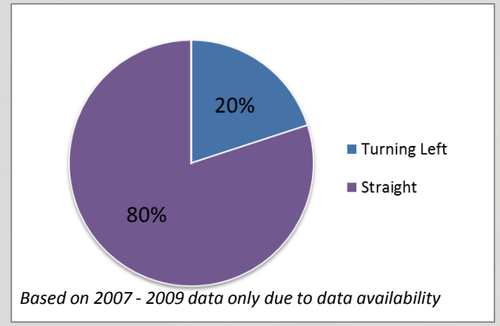
Percentage of Crashes by Severity and Cause



Crash Severity



Manner of Collision



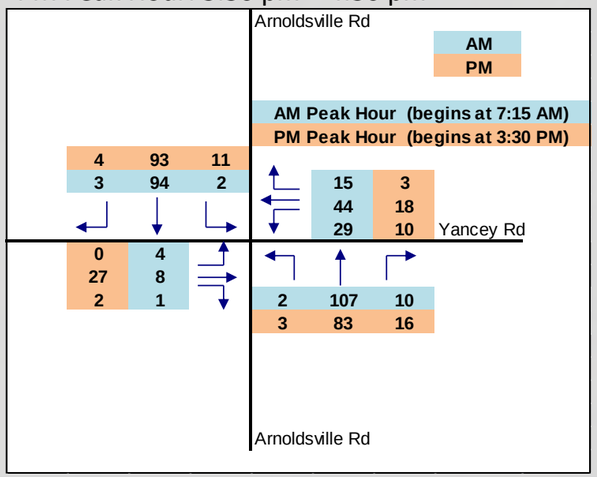
Based on 2007 - 2009 data only due to data availability

Vehicle Maneuver

Traffic Characteristics

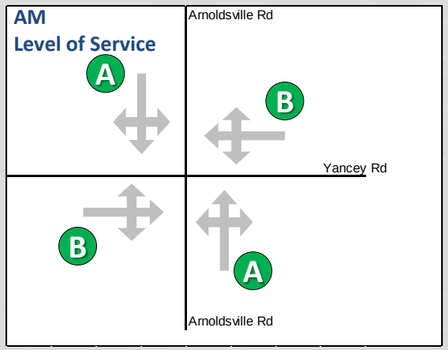
2013 Existing Peak Hour Turning Movement Counts

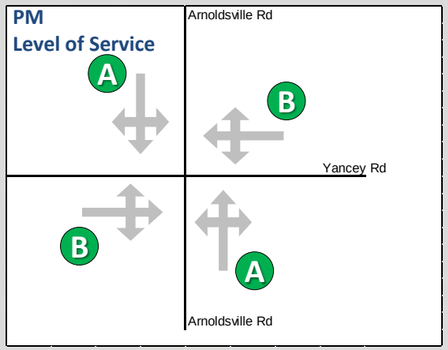
- AM Peak Hour: 7:15 am – 8:15 am
- PM Peak Hour: 3:30 pm – 4:30 pm



Peak Hour Level of Service Analysis

- AM Peak Hour: 7:15 am – 8:15 am
- PM Peak Hour: 3:30 pm – 4:30 pm





**Highway Capacity Software (HCS) was used as the analysis tool.*

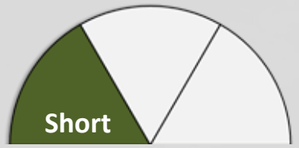
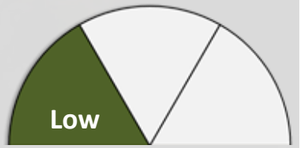
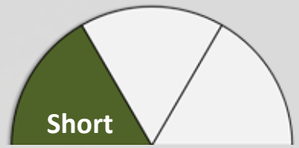
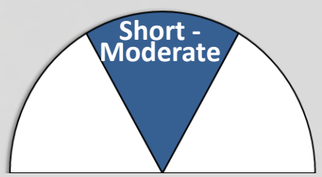
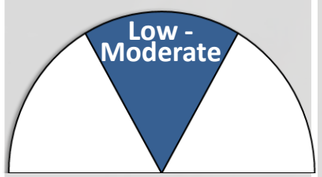
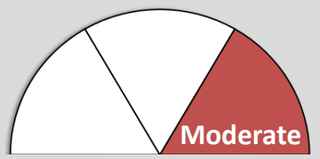
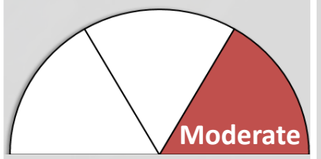
Stakeholder and Public Input

- Public expressed safety concern over this intersection.

Georgia Department of Transportation

8 - Intersection of Yancey Road at Arnoldsville Road - – Local Intersection

Potential Improvements for Further Evaluation

	Next Steps and Potential Improvements	Crash Type Addressed	Benefits	Timeline for Implementation	Estimated Cost	Crash Reduction Factors (CRF)*
No. 1	Consider providing advance intersection warning signs on Arnoldsville Rd; Consider adding speed warning signs. 	Angle and rear end crashes attributed to drivers being unaware of the approaching intersection	Could provide approaching motorists with additional information and help them make safer decisions as they approach the intersection			**40%**
No. 2	Review Yancey Road northbound sight distance looking right and consider providing necessary Improvement. 	Angle and rear end crashes attributed to poor sight distance	Could provide better intersection sight distance and help motorists make safer movements at the intersection			**5% - 17%**
No. 3	Consider closing Railroad at Yancey Rd and repaving road across from Stewart Circle. 	Angle and rear end crashes attributed to drivers unaware of the intersection, failing to yield, or misjudging gaps in the mainline traffic	Could reduce conflict points and avoid unexpected turning movements.			**7%**
No. 4	Consider realigning to improve intersection angle or performing high-level roundabout analysis to check the necessity and feasibility of installing roundabout.	Right angle and left-turn crashes attributed to motorists being unaware of stop signs, unaware of conflicting traffic at the intersection, or misjudging gaps in the mainline traffic	Could reduce number of conflict points and reduce intersection speeds.			**29%**

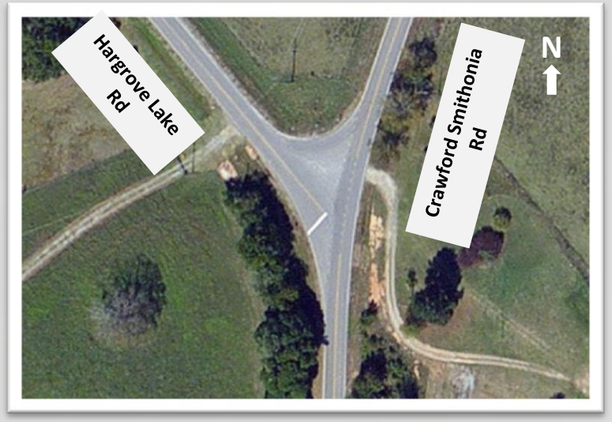
Note: This is a local intersection and it is not under GDOT's jurisdiction.

9 - Intersection of Crawford Smithonia Road at Hargrove Lake Road – Local Intersection

Existing Condition Analysis

Physical Condition

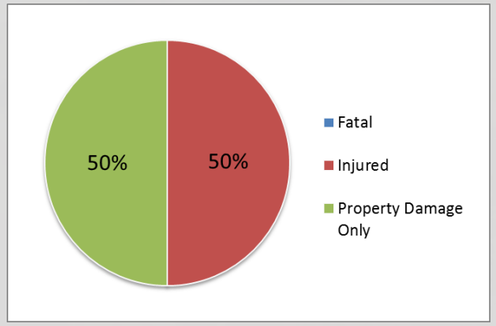
- One-way stop-controlled intersection
- One lane per direction for all approaches
- No exclusive turn lanes



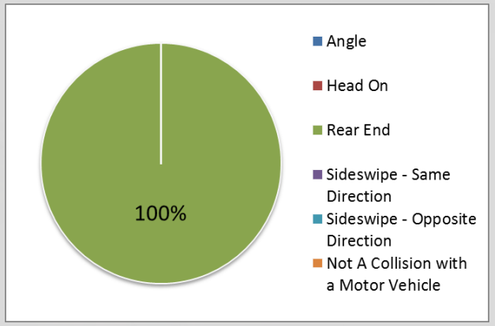
Safety Analysis

- 2 crashes during 2007 to 2011 with both of them being rear end collisions
- Drivers' unawareness of the intersection could be the main cause for crashes

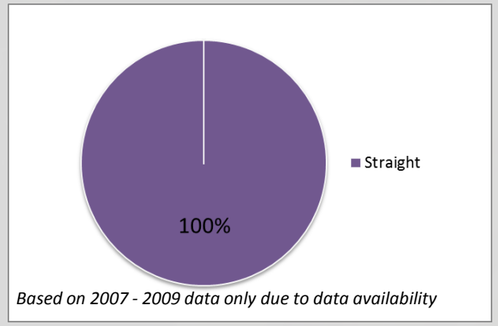
Percentage of Crashes by Severity and Cause



Crash Severity



Manner of Collision



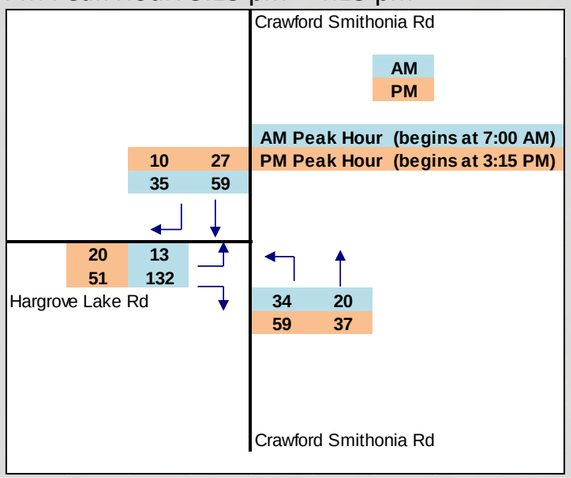
Based on 2007 - 2009 data only due to data availability

Vehicle Maneuver

Traffic Characteristics

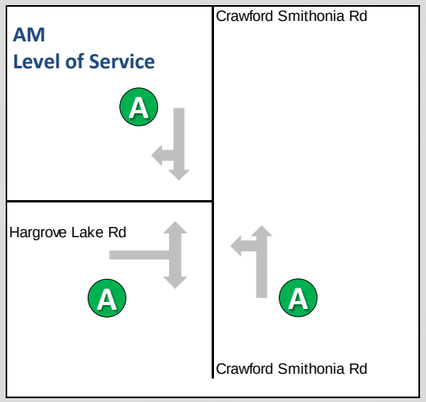
2013 Existing Peak Hour Turning Movement Counts

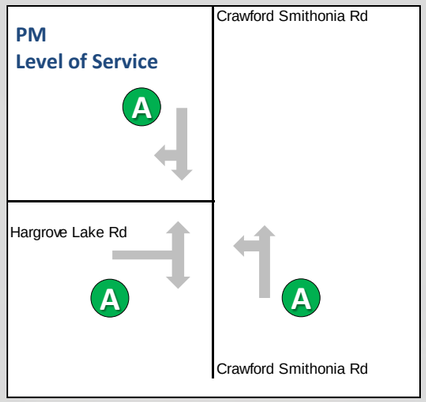
- AM Peak Hour: 7:00 am – 8:00 am
- PM Peak Hour: 3:15 pm – 4:15 pm



Peak Hour Level of Service Analysis

- AM Peak Hour: 7:00 am – 8:00 am
- PM Peak Hour: 3:15 pm – 4:15 pm





Stakeholder and Public Input

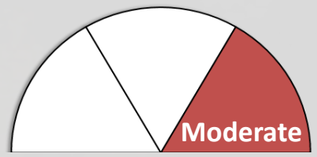
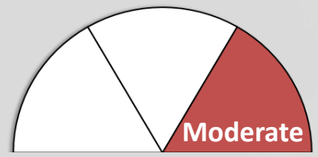
- No specific comments are expressed regarding this intersection.

Georgia Department of Transportation

9 - Intersection of Crawford Smithonia Road at Hargrove Lake Road – Local Intersection

Existing Condition Analysis

Potential Improvements for Further Evaluation

Next Steps and Potential Improvements		Crash Type Addressed	Benefits	Timeline for Implementation	Estimated Cost	Crash Reduction Factors (CRF)*
No. 1	Consider evaluating the necessity and feasibility of improving intersection angle.	Crash attributed to insufficient sight distance, motorists being unaware of stop signs, unaware of conflicting traffic at the intersection, or misjudging gaps in the mainline traffic	Could address problems like vehicle alignment, long exposure in the intersection, and potential driver confusion			**29%**

Note: This is a local intersection and it is not under GDOT's jurisdiction.