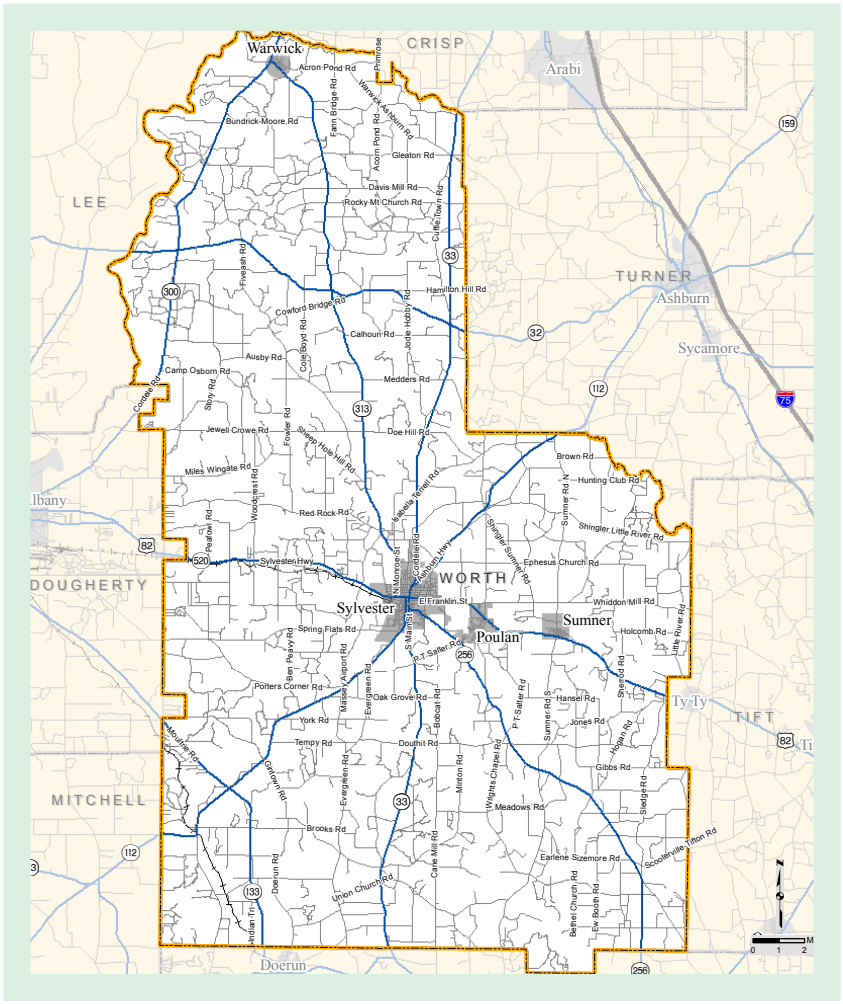
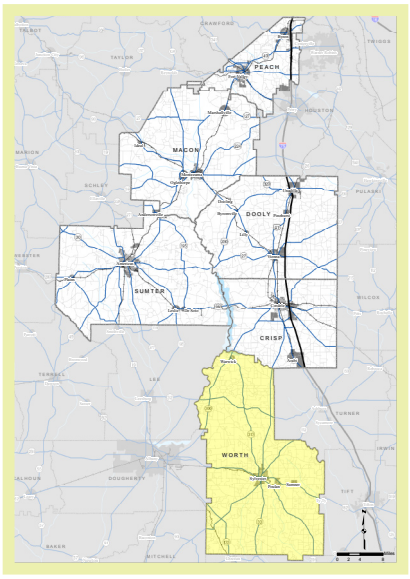
Worth County Long Range Transportation Plan

Southwest Georgia Multi-County Transportation Study

October 2010





Georgia Department of Transportation
Office of Planning

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1. INTRODUCTION

The Georgia Department of Transportation (GDOT) Office of Planning initiated the Southwest Georgia Multi-County Transportation Study in cooperation with the counties of Crisp, Dooly, Macon, Peach, Sumter and Worth; the River Valley, Southwest Georgia, and Middle Georgia Regional Commissions (RCs), and other planning partners. The objective of the study was to identify and recommend transportation improvements necessary within each county to meet existing and future transportation needs through the year 2035. Results and recommendations of this study will be important in identifying transportation deficiencies. The study began in October 2008 and was completed in October 2010.

1.1 STUDY PURPOSE

The ability of the transportation system to meet existing and future travel needs is essential to the economic viability of these six counties. This study will recommend transportation improvements that complement state, regional, and local objectives regarding economic development, quality of life, and the interconnection of people, goods, and services. The final result of this study process will be a 2035 Long Range Transportation Plan (LRTP) for each of the six counties in the study area. The focus of this report is Worth County. The Worth County LRTP will provide a prioritized outline of improvements necessary to address its existing, short term, and long term transportation needs of the county.

1.2 GENERAL DESCRIPTION OF THE SIX-COUNTY STUDY AREA

The study area is located in southwest Georgia from south of Macon to south and east of Albany. The six-county study area includes Crisp, Dooly, Macon, Peach, Sumter and Worth Counties. The study area includes a small portion of the Warner Robins Metropolitan Planning Organization area found in Peach County, which includes the city of Byron.

The six-county study area covers 2,300 square miles and a number of areas of interest that are significant to the state's natural, cultural, and social environments. A map of Worth County can be found in **Figure 1.1** on page 2 and a map of the six-county study area can be found in **Figure 1.2** on page 3. Key local assets include:

- Georgia Veterans Memorial State Park in Crisp County, which features a museum; Lake Blackshear, a privately operated conference center and golf club; and the Savannah, Americus, and Montgomery (SAM) Shortline Excursion Train, which runs from Cordele to Plains, GA.
- Flint River Wildlife Management Area (WMA) in Dooly County, located ten miles south of Montezuma. Activities in the WMA include hunting, fishing, hiking, bird watching and horseback riding.
- Andersonville National Historic Site in Macon County, located just east of the City of Andersonville. This site includes Camp Sumter, which served as the largest Confederate prison during the Civil War; the Andersonville National Cemetery, and the National Prisoner of War Museum.

FIGURE 1.1: MAP OF WORTH COUNTY

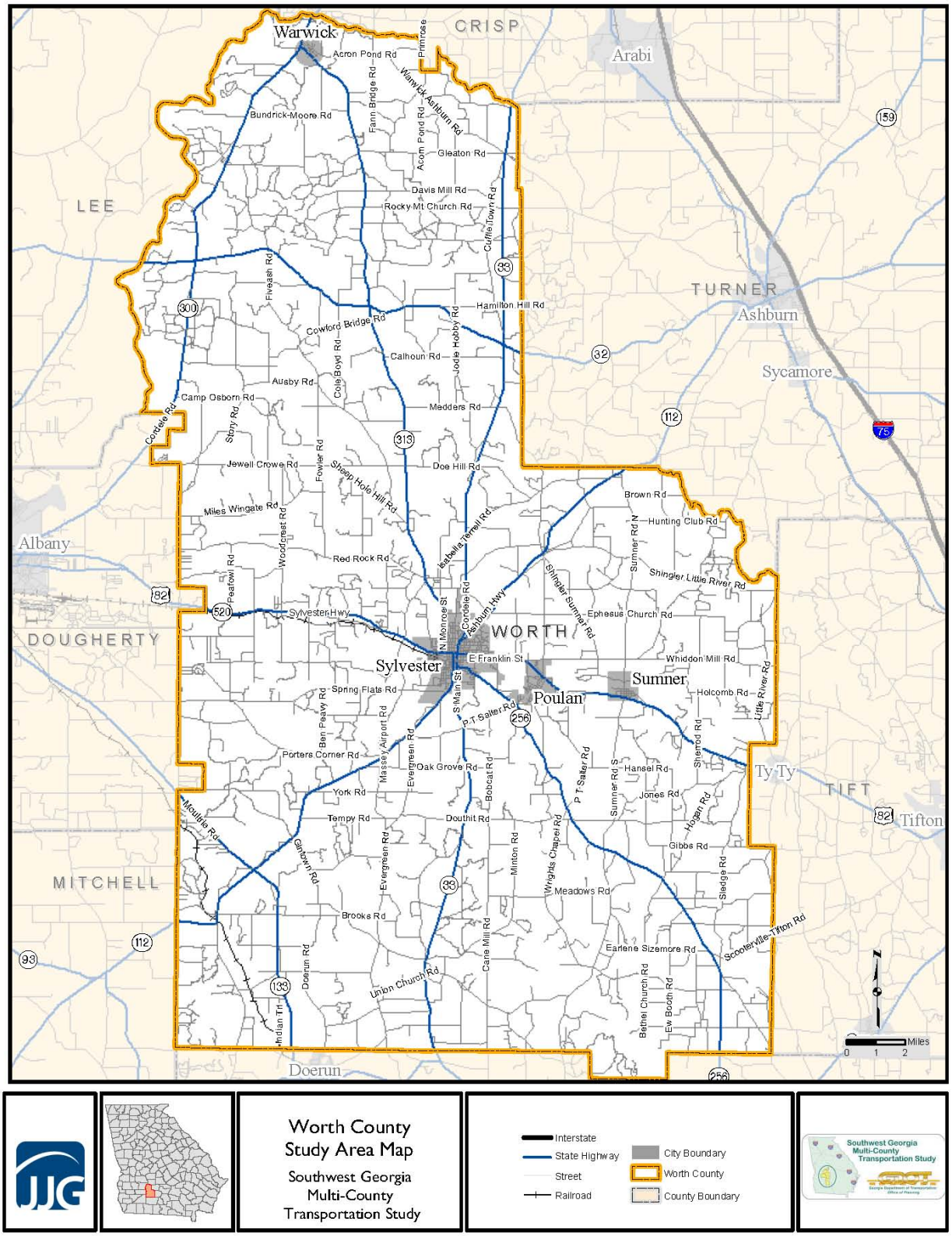
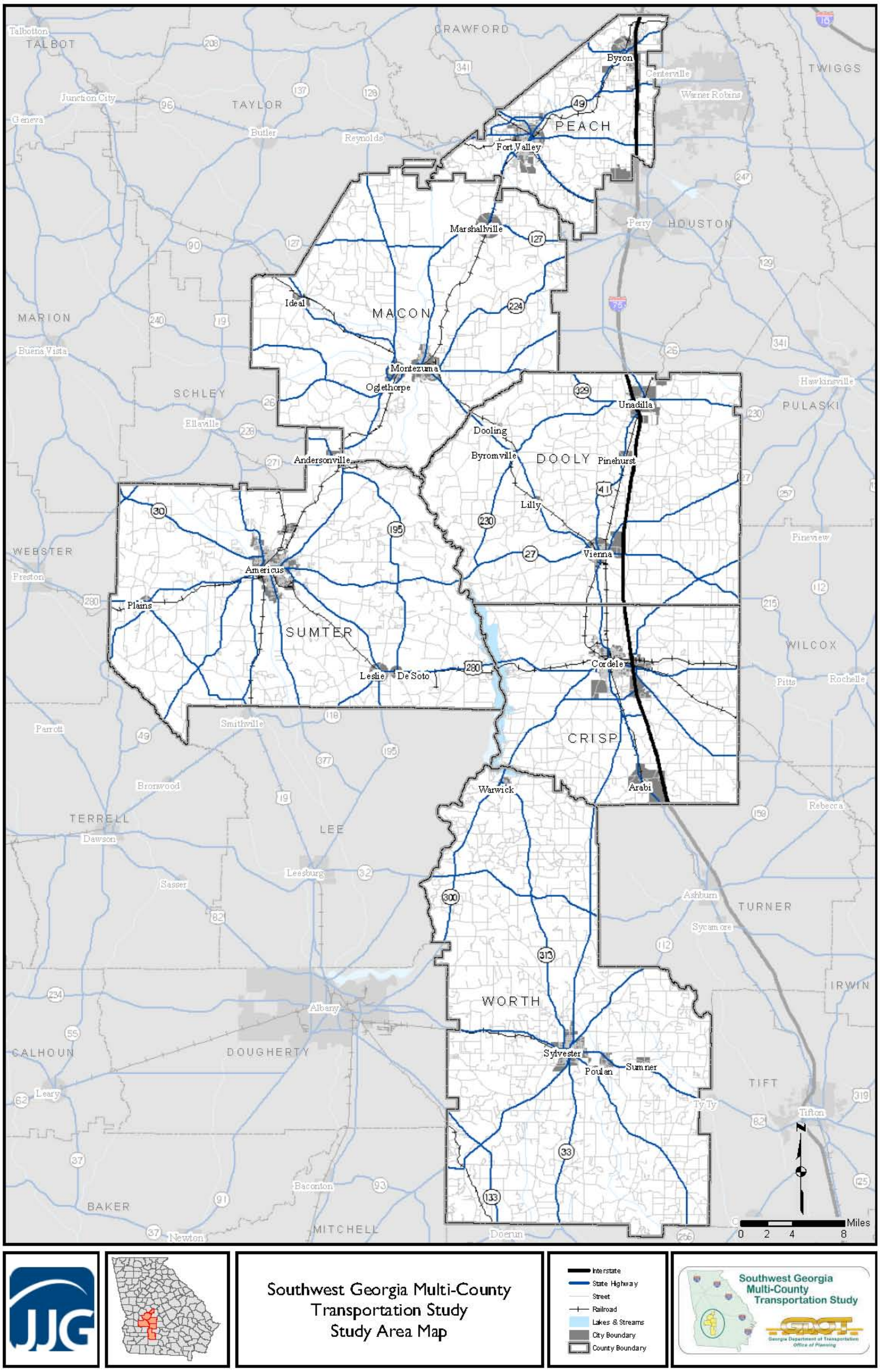


FIGURE 1.2: MAP OF THE SIX-COUNTY STUDY AREA



- Fort Valley State University in Peach County, a Historically Black Land Grant University located in the City of Fort Valley.
- Jimmy Carter National Historic Site in Sumter County. This historic area includes the thirty-ninth president's current residence, boyhood farm, school, and the town railroad depot, which served as his campaign headquarters during the 1976 Presidential Election.
- Worth County's annual Georgia Peanut Festival, held in Sylvester each October.

1.3 Overview of Data Sources

The data presented in the Southwest Georgia Multi-County Transportation Study include a variety of sources ranging from GDOT, counties within the six-county study area, Middle Georgia RC, River Valley RC, Southwest Georgia RC, U.S. Census Bureau, National Wetlands Inventory and key stakeholders in the region. See **Appendix A** for an inventory of all GIS data sources.

Demographic and socioeconomic data were collected primarily from the U.S. Census Bureau, local comprehensive plans and other various planning documents. In addition, this report includes other local studies and data sources from the Georgia Department of Labor (GDOL) and U.S Department of Commerce.

In order to analyze existing and future travel patterns and traffic conditions, a travel demand model was developed for the six-county study area. A travel demand model utilizes information such as roadway networks, population, and employment data to calculate the existing or future demand for transportation facilities. The travel demand model originally developed for the Southwest Georgia Interstate Study (2009) was modified and recalibrated for use in this study.

1.4 Study Process

This study began with the collection of transportation data within the six-county study area, including a review of studies previously conducted in the region. Input from local agencies, stakeholders, and the general public regarding transportation issues and growth patterns was solicited and considered during the development of this study.

A travel demand model was prepared for the six county area based on much of the data presented in this report. This information includes demographic and land use data, existing transportation infrastructure and traffic conditions, as well as planned and programmed projects within each county.

Based on the information gathered, existing conditions and projected future conditions were evaluated. With the aid of stakeholders, the study goals and objectives were developed based on the counties' comprehensive plans. With these goals in mind, transportation recommendations were developed and prioritized for each county. This final transportation study is the result and documentation of these previous steps.

2. DEMOGRAPHICS

The demographic information discussed in this section includes general population, employment, and for environmental justice purposes, minority and low-income households. Demographics in this section are presented by Census Block Group, Census Tract, and Traffic Analysis Zone (TAZ). TAZs are relatively small units of geography used in travel demand modeling to relate different land-use patterns with trip purposes and trip end frequency.

2.1 EXISTING POPULATION

As depicted in **Table 2.1** below, Worth County had 21,967 residents in 2000, due to its 11.3 percent population growth between 1990 and 2000. During the same decade, the percentage of growth and annual rate of growth exhibited in the state of Georgia outpaced that of Worth County.

Between 2000 and 2006, Worth County experienced a minor population decline of less than 0.1 percent, or approximately 29 persons. During these same years, the state of Georgia maintained its strong growth trend of 2.3 percent per year.

TABLE 2.1: HISTORIC POPULATION GROWTH FOR WORTH COUNTY

				1990 - 2000		2000 - 2006	
	1990	2000	2006	Percent Change	Annual Growth Rate	Percent Change	Annual Growth Rate
Worth County	**19,745**	**21,967**	**21,938**	**11.3%**	**1.07%**	**-0.1%**	**-0.02%**
State of Georgia	6,478,216	8,186,453	9,363,941	26.4%	2.37%	14.4%	2.27%

Source: 2000 US Census

Figure 2.1 on page 6 illustrates the population density in Worth County. Due to the overall rural nature of Worth County, the population density maps herein are expressed in persons per ten acres rather than persons per acre. The concentration of population lies in the areas closest to the City of Sylvester along the crossroads of US 82, SR 33, SR 112, SR 256, and SR 313. Approximately 88 percent of land in Worth County is considered to be extremely low-density, with more than ten acres of land for every one person.

2.2 FUTURE POPULATION

Although Worth County has experienced very little growth between 2000 and 2006, it is estimated that the county is expected to grow by over 25 percent during the period between 2006 and 2035, as can be seen in **Table 2.2** below.

TABLE 2.2: WORTH COUNTY POPULATION FORECAST

			2006 - 2035	
	2006	2035	Percent Change	Annual Growth Rate
Worth County	**21,938**	**27,607**	**25.8%**	**0.80%**

Source: Travel Demand Model

Figure 2.2 on page 7 illustrates the 2035 population density in Worth County. The concentration of population is projected to remain in the areas closest to the City of Sylvester along the crossroads of US 82, SR 33, SR 112, SR 256, and SR 313.

FIGURE 2.1: WORTH COUNTY EXISTING (2006) POPULATION DENSITY

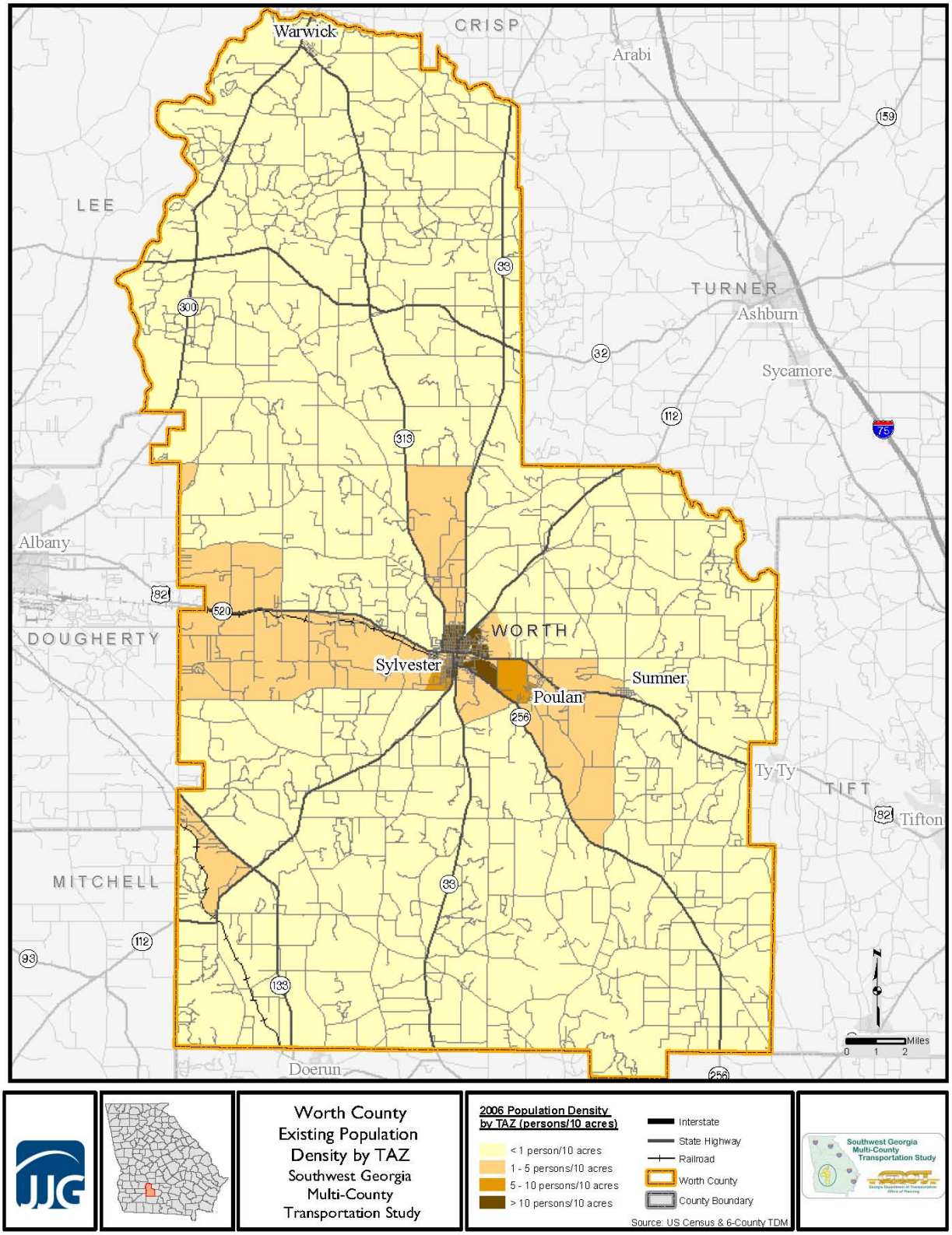
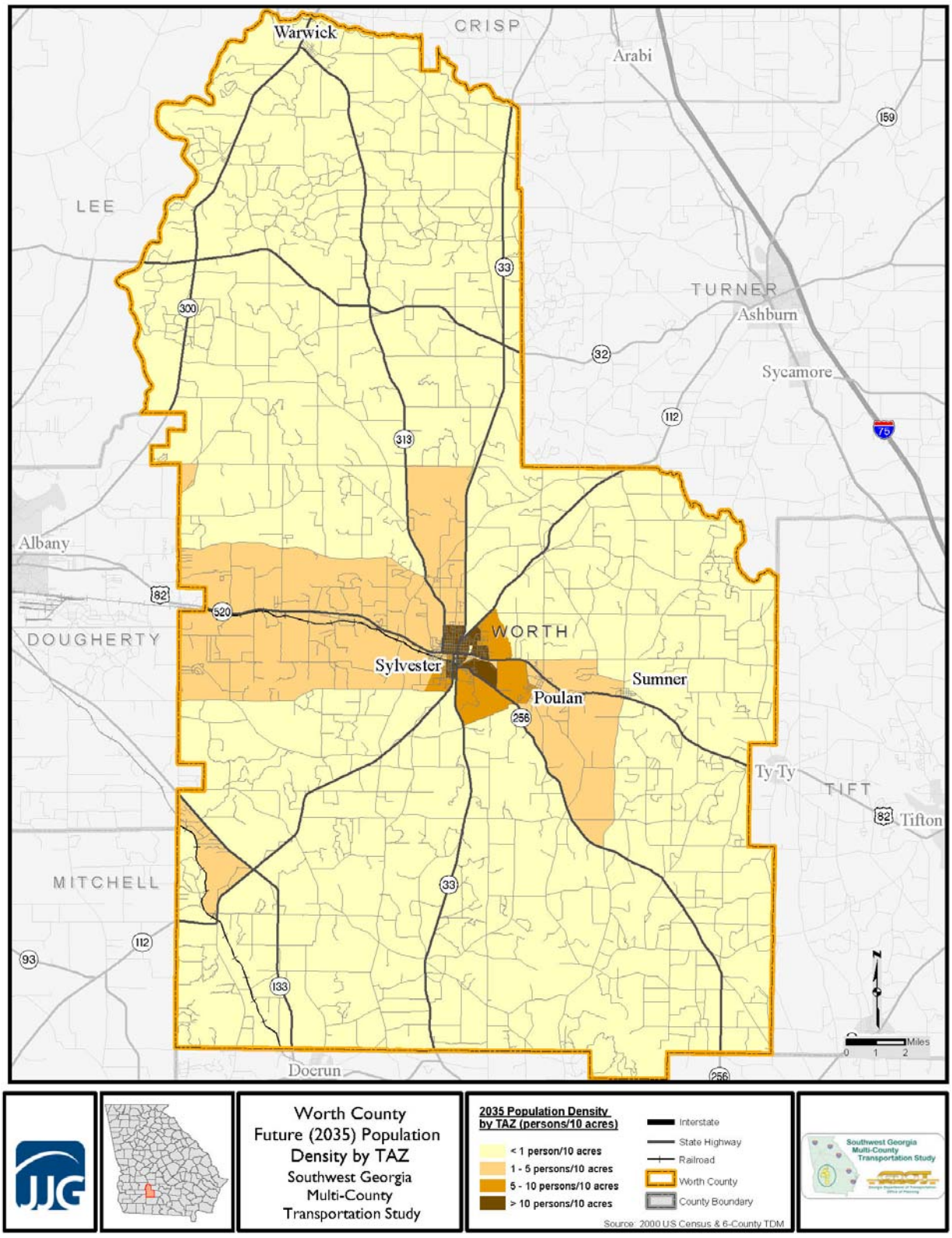


FIGURE 2.2: WORTH COUNTY FUTURE (2035) POPULATION DENSITY BY TAZ



The population estimates in the Worth County comprehensive plan are in line with the estimates in this study. In addition, high-growth areas were ascertained through interviews with representatives of Worth County. Future population for the six-county study area was determined by using growth rates based on continuation of past trends and growth assumptions outlined in the individual county comprehensive plans. The population estimates shown in the county comprehensive plans are very similar to the projections used in this study. The study area is projected to grow by 15.8 percent in the next 30 years, at approximately one-half percent annual growth. For much of the study area, a uniform growth rate was applied. For counties with high growth areas or expected land use changes, population projections were modified to account for these changes. A detailed methodology used to develop the future population data is included in the separate Travel Demand Model Development technical report.

2.3 EXISTING EMPLOYMENT

In 2006, Worth County was home to approximately 3,600 jobs (**Table 2.3** below). The top five largest employers in Worth County include ConAgra, Harveys Supermarkets, Phoebe Worth Hospital, Piggly Wiggly Supermarket, and Sylvester Health Care. With two of the largest employers in the county in the health care business, and one in the supermarket business, it is no surprise that 60 percent of jobs in Worth County are in the service-providing industry. The second largest sector in the county is retail employment, with 16 percent of county employment.

The location of high employment-density areas in Worth County corresponds to the high concentration of strip commercial development along US 82 in Sylvester. A map of the existing employment density in Worth County can be found in **Figure 2.3** on page 9.

TABLE 2.3: WORTH COUNTY CURRENT EMPLOYMENT

County	AMC	MFG	WTW	RET	SER	Total
Worth County 2006	405	242	208	591	2,181	3,627
Share of County Employment	*11%*	*7%*	*6%*	*16%*	*60%*	*100%*

Note: AMC – Agricultural, Mining and Construction employment MFG – Manufacturing employment
WTW – Wholesale, Trucking and Warehouse employment RET – Retail employment
SER-Service employment Source: GDOL; U.S. Bureau of Labor Statistics.

2.4 FUTURE EMPLOYMENT

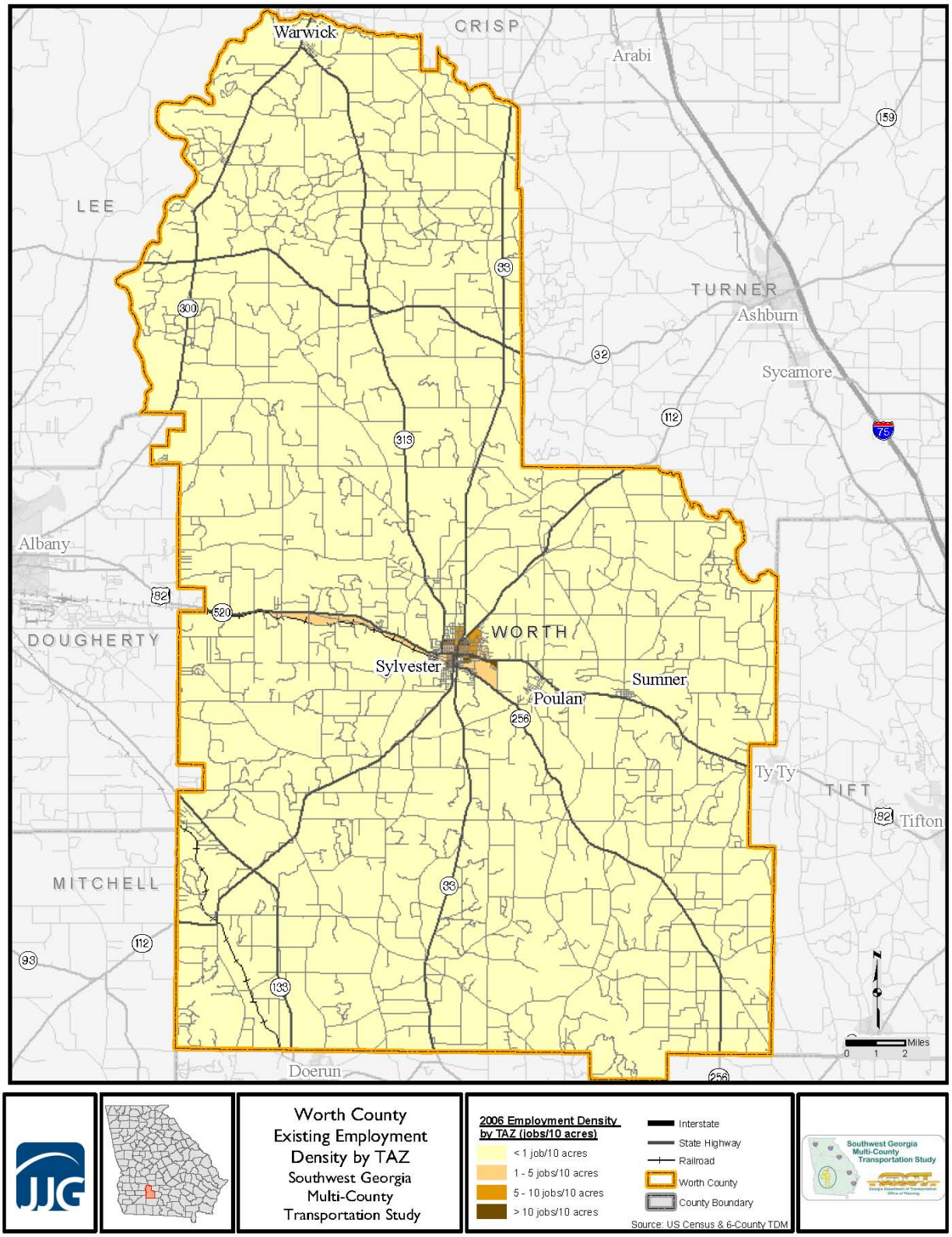
As can be seen from **Table 2.4** below, by 2035, the employment in Worth County is forecast to stay more or less constant, with only 260 new jobs during the 30-year period. This translates to only nine new jobs a year in the county.

TABLE 2.4: WORTH COUNTY FUTURE EMPLOYMENT FORECAST

County	AMC	MFG	WTW	RET	SER	Total	Annual Growth Rate
Worth County 2006	405	242	208	591	2,181	3,627	
Worth County 2035	430	259	221	632	2,338	3,889	0.24%
Growth	6.2%	7.0%	6.3%	6.9%	7.2%	7.2%	

Note: AMC – Agricultural, Mining and Construction employment MFG – Manufacturing employment
WTW – Wholesale, Trucking and Warehouse employment RET – Retail employment
SER-Service employment Source: GDOL; U.S. Bureau of Labor Statistics.

FIGURE 2.3: WORTH COUNTY EXISTING (2006) EMPLOYMENT DENSITY BY TAZ



The addition of 11,600 jobs in the study area equates to an annual employment growth estimate of 0.86 percent over the thirty-year period, greater than the estimated annual population growth rate in the study area of 0.40 percent during that same period.

The service sector is expected to add approximately 260 jobs by 2035, the highest number in Worth County. As can be seen from **Table 2.5** below, the mix of Worth County employment by sector is not expected to shift between 2006 and 2035. The smallest share of jobs in Worth County in 2035 is expected to remain in the wholesale/warehousing industry.

TABLE 2.5: WORTH COUNTY FUTURE EMPLOYMENT CONSTITUTION

County	AMC	MFG	WTW	RET	SER	Total
Worth County 2035	430	259	221	632	2,338	3,889
Share of 2035 county employment	*11%*	*7%*	*6%*	*16%*	*60%*	*100%*

Note: AMC – Agricultural, Mining and Construction employment MFG – Manufacturing employment
WTW – Wholesale, Trucking and Warehouse employment RET – Retail employment
SER-Service employment Source: GDOL; U.S. Bureau of Labor Statistics.

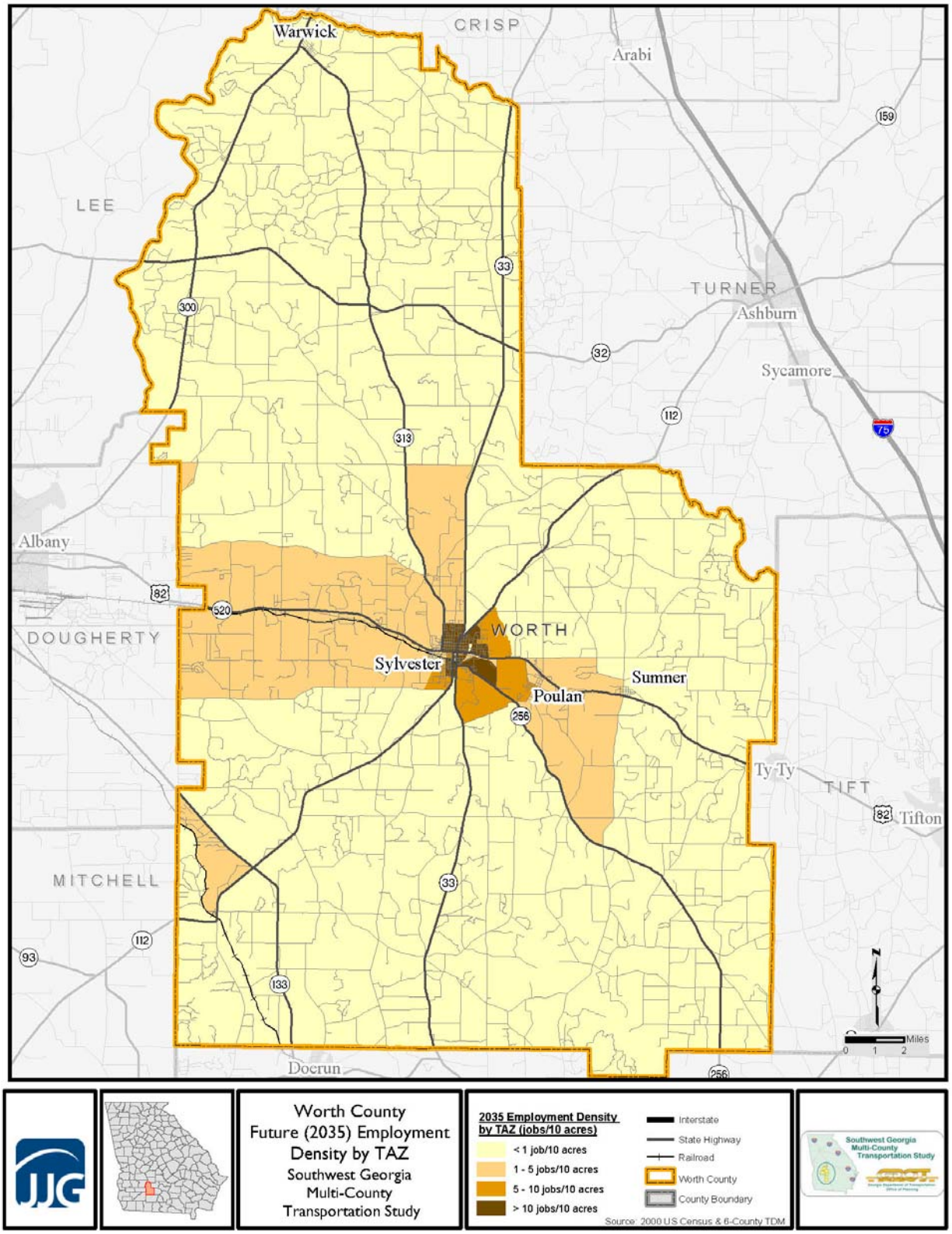
Figure 2.4 on page 11 illustrates Worth County's future employment density in jobs per ten acres. High employment-density areas in Worth County are expected to remain in the areas in which they are currently found and not increase noticeably in density from 2006-2035.

In order to forecast employment for the six-county study area in the year 2035, linear growth estimates were developed at the county level based on GDOL 1990 to 2006 annual employment estimates by county. County level employment data for the 17-year period between 1990 and 2006 did not display a clear directional trend; individual county employment rose and fell during the time period, while for the study area as a whole there was a clear upward trend in employment. In addition to the linear growth rate, plans for future developments were also taken into account. Employment is based on the assumption that all the currently planned developments will reach build out by 2035.

2.5 Environmental Justice

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

FIGURE 2.4: WORTH COUNTY FUTURE (2035) EMPLOYMENT DENSITY BY TAZ



Minority persons are defined as those people belonging to the following groups: Black or African American, American Indian or Alaska Native, Asian, Native Hawaiian or Other Pacific Islander, and Hispanic or Latino Census 2000 defines the first five groups as races, and Hispanic or Latino as an ethnicity. As such, people of this minority group can belong to any racial group but are still considered minorities with respect to Environmental Justice. Low-income persons are defined as those whose median household income is at or below the U.S. Department of Health and Human Services poverty threshold.

Census 2000 data from the P4 (Hispanic or Latino and Not Hispanic or Latino by Race) and P92 (Poverty Status is 1999 of Households by Household Type by Age of Householder) sample datasets were utilized to provide a quantitative analysis of the six counties in the study area with respect to minority and ethnic populations and low-income households. Census data are grouped together by geographic area, of which blocks are the smallest and most precise form. The sensitivity of some information requires the Census Bureau to release it in the more general form of block groups. The data for this study were gathered at the most accurate level for which they were available: for race and ethnicity, at the block level; for income, at the block-group level.

2.5.1 MINORITY POPULATION

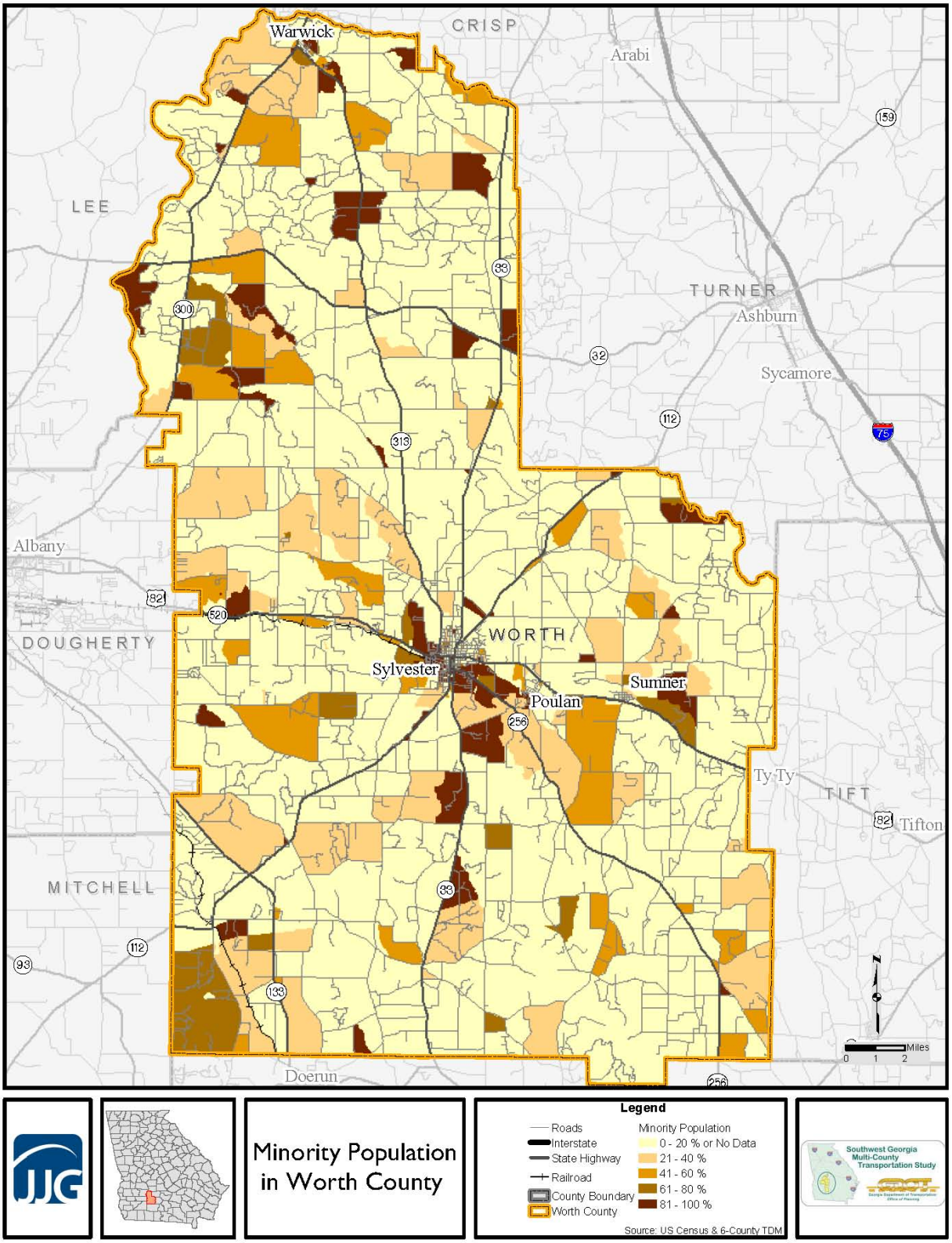
Table 2.6 below presents the percentage of the total population of each county made up of racial and ethnic minorities. The population of Worth County is 31.7 percent minority, a lower percentage than the State of Georgia, which is 37.4 percent minority. Some Census blocks with populations that are 81 to 100 percent minority exist in Sylvester, Sumner, Poulan and Warwick, and elsewhere around the county. A map of the minority population in Worth County can be found in **Figure 2.5** on page 13.

TABLE 2.6: WORTH COUNTY MINORITY POPULATION

	Worth County	**State of Georgia**
Total Population	21,967	8,186,453
Minority Population	6,968	3,057,792
Percent Minority	31.7%	37.4%

Source: 2000 US Census

FIGURE 2.5: MINORITY POPULATION IN WORTH COUNTY (2000)



2.5.1 WORTH COUNTY LOW INCOME POPULATION

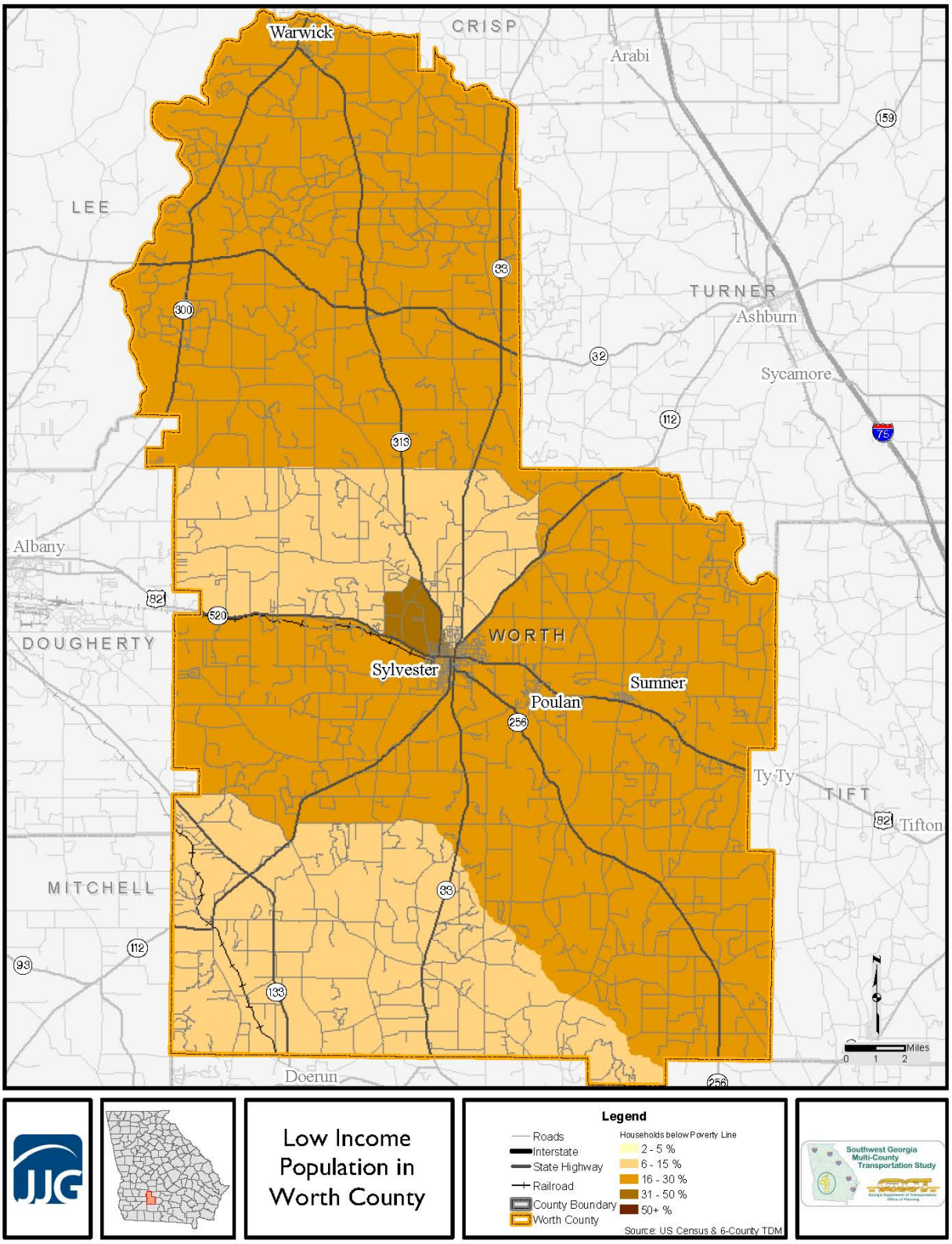
Table 2.7 below presents the percentage of households in each county that have incomes under the poverty rate as determined by the federal government and reported by the US Census Bureau. Of Worth County households, 17.9 percent have incomes under the poverty level, higher than the statewide average of 12.6 percent. As can be seen in **Figure 2.6** on page 15, the highest percentage of low income households was found northwest of Sylvester.

TABLE 2.7: WORTH COUNTY LOW INCOME POPULATION

	Worth County	State of Georgia
Total Households	8,125	3,006,369
Households with incomes below the poverty level, 1999	1,451	380,369
Percentage of low income households	17.9%	12.6%

Source: 2000 US Census

FIGURE 2.6: LOW INCOME HOUSEHOLDS IN WORTH COUNTY (2000)



3. LAND USE

This section presents current and future land use in Worth County, including protected areas and anticipated development. Parks and wetlands are presented here, but further, detailed analysis of park and wetland resources will be necessary for any transportation project to proceed.

3.1 EXISTING LAND USE

Land use in unincorporated Worth County is dominated by agricultural uses, with two major areas of industrial development. Most other uses are drawn to the areas in and around the county's incorporated cities, Poulan, Sumner, Sylvester, and Warwick. Unincorporated crossroads communities in Worth County are located on the fringes of larger cities and supported by very little commercial development. The county's highways serve as gateway corridors, in that they support commercial development and serve as entrances to cities. The areas around US 82/SR 520 and SR 300 are major, well-travelled highways that are expected to develop due to their close proximity to I-75.

The city of Sumner has the majority of its lands in agricultural purposes, and residential uses in its city center, as its downtown has almost no commercial development. The bulk of land use in the City of Sylvester consists of residential uses, with a central business district in its downtown and an industrial area on its eastern border. Agriculture is the main land use within the Cities of Poulan and Warwick, with residential, commercial and green space uses also included. An existing land use map for Worth County can be found in **Figure 3.1** on page 17.

3.2 FUTURE LAND USE

According to the Worth County Comprehensive Plan (2009), unincorporated Worth County plans to retain its agricultural lands and green spaces through 2029, and preserve its crossroads communities by encouraging infill development in those areas. The gateway corridor areas are expected to continue to attract commercial development, and improvements such as the industrial use of land will be sought to create economic opportunities. Growth in the area around US 82/SR 520 will be directed with policies to make the area attractive and safe for motorists, while that around SR 300 will be directed in such a way that it does not interfere with the natural beauty the route now enjoys. A Worth County future land use map can be found in **Figure 3.2** on page 18.

Cities in Worth County are expected to have the following future land uses:

- The City of Sumner, which plans to revitalize its downtown with historical preservation and new businesses that will draw visitors. Sumner also plans renovate the US 82 corridor, in tandem with Sylvester and Poulan, as a gateway to all three cities.
- The City of Sylvester plans to retain its undeveloped forest as a facet of its rural character, reinforce its downtown as a shopping and working destination, and revitalize its declining neighborhoods with Community Home Investment Program (CHIP) funds. Sylvester also expects to see high levels of employment resulting from its expanded light and heavy industrial areas.
- Poulan does not plan to lose significant agricultural acreage to development, and plans to retain its green spaces in the city center. Instead, it expects to increase residential densities around its commercial city center, and capitalize upon any improvements made to the US 82/SR 520 corridor. It also plans to preserve Possum Poke, an historical resource and tourist draw.

FIGURE 3.1: WORTH COUNTY EXISTING LAND USE MAP (2009)

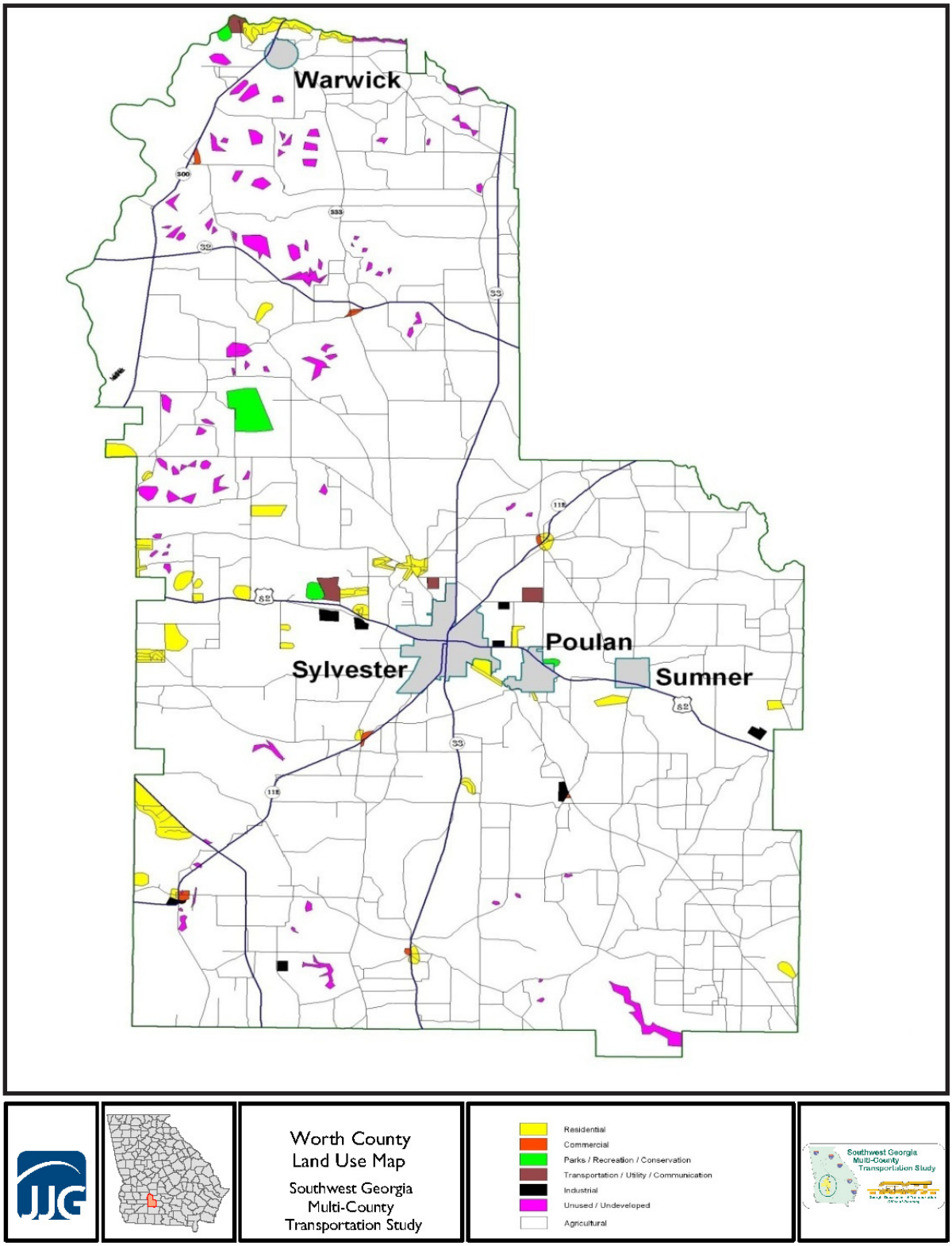
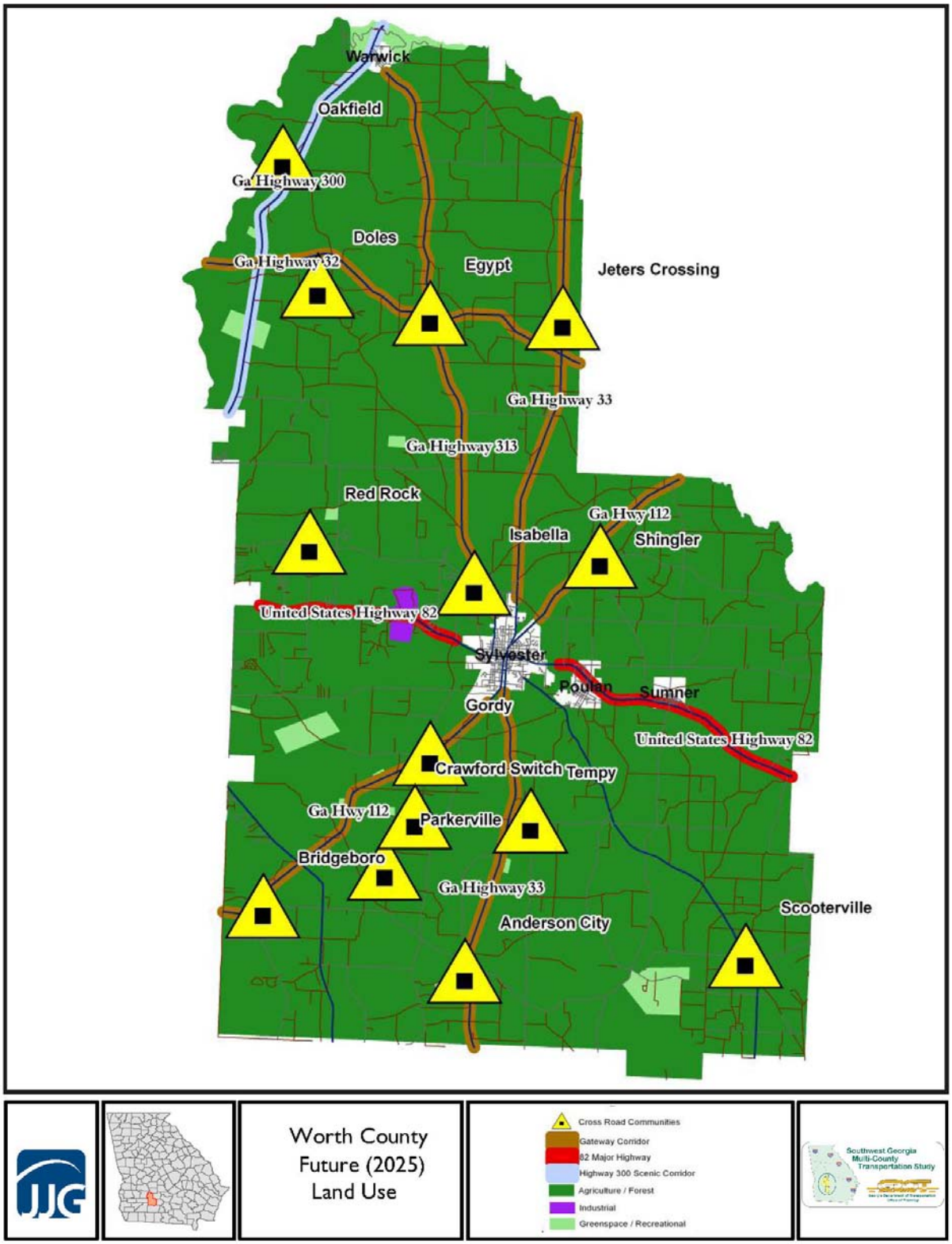


FIGURE 3.2: WORTH COUNTY FUTURE LAND USE MAP (2025)



- There are plans to revitalize north Warwick by attracting new commercial investment and intensifying its connection with downtown, as well as using a CHIP grant for residential improvements. Warwick also plans to partnering with Crisp County for Lake Blackshear area improvements and planning. The City intends to retain its green space and agricultural lands as assets, and should benefit from any improvements made to SR 300.

3.3 Protected Areas

Protected areas are locations which receive protection because of their environmental, cultural or similar value. A large number of protected areas exist which vary by level of protection and by the enabling laws. Examples include parks, reserves, wetlands, wildlife management areas (WMAs), natural areas (NAs), and places and structures of a historic nature. The identification of environmental resources and parks is important in the preparation of a transportation study for two main reasons. First, the preservation of these resources is important to all local, state, and federal stakeholders. Second, the early identification of resources is important when developing transportation plans since their existence could serve to preclude potential transportation facilities or alignments. This discussion focuses on parks, wetlands, and historic locations.

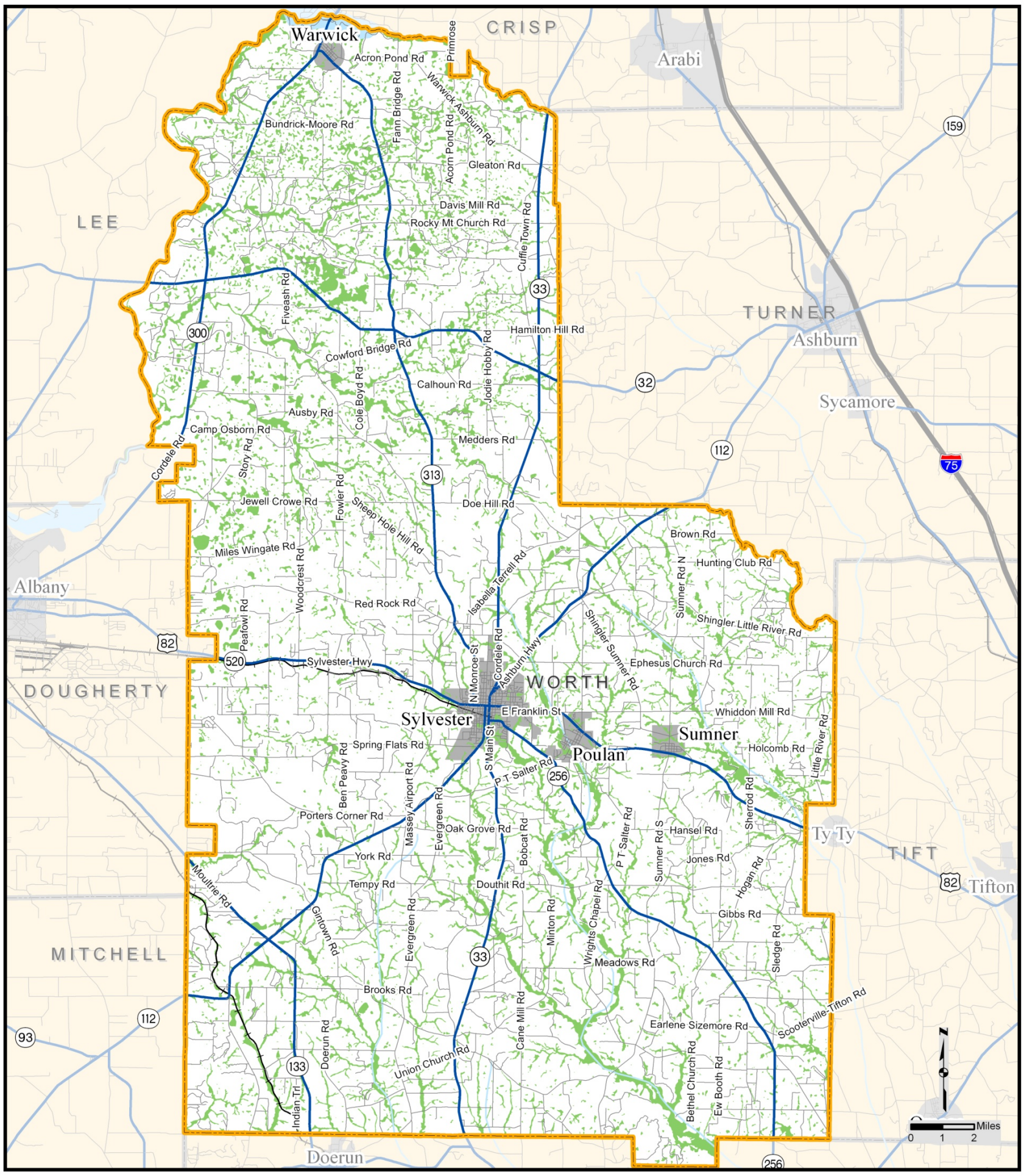
3.3.1 Parks/Protected Natural Areas

Worth County is home to no national or state parks, or any designated wildlife management areas or natural areas. Individual projects may have impacts on local parks, and environmental impacts of proposed projects should be examined on a case-by-case basis.

3.3.2 Wetlands

Wetlands are defined as areas inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes and bogs. Federal law and the Georgia Planning Act require protection of wetlands and other natural resources from adverse impact. Because of this, the Georgia Department of Natural Resources maintains a database that defines, identifies, and maps the categories of freshwater wetlands and habitats. **Figure 3.3** on page 20 depicts the location of wetlands, rivers, and open waters, and locations of key protected areas in Worth County.

FIGURE 3.3: WORTH COUNTY WETLANDS, PROTECTED AREAS, AND PARKS (2009)



3.3.3 NATIONAL REGISTER OF HISTORIC PLACES

According to the National Register of Historic Places, Worth County contains eight places deemed worthy of preservation. They include Possum Poke, the winter home of Michigan Governor Chase S. Osborne, and two historic districts, as well as several other structures. **Table 3.1** below presents the locations in Worth County included in the National Register of Historic Places.

TABLE 3.1: WORTH COUNTY HISTORIC PLACES

City	County	Location	Address
Poulan	Worth	Possum Poke	US 82
Poulan	Worth	Poulan Library	South side of 100 blk. of Church St.
Sumner	Worth	Sumner High School	716 Walnut St.
Sylvester	Worth	Sylvester Commercial Historic District	Within E. Kelly, N. Main, E. Front, and N. Isabella Sts.
Sylvester	Worth	US Post Office-- Sylvester	122 N. Main St.
Sylvester	Worth	Worth County Courthouse	Courthouse Sq.
Sylvester	Worth	Worth County Local Building	118 N. Isabella St.

Source: National Register of Historic Places

3.4 DEVELOPMENTS OF REGIONAL IMPACT

A review was performed for applications for Developments of Regional Impact (DRI) within Worth County filed since 2001 that have been approved or are still pending. DRIs are large-scale projects that are likely to have regional impacts, beyond the boundaries of the local governments of their locations. DRIs are included in this study because, due to their size and/or nature, they can have transportation implications for the regional roadway network.

DRI applications are reviewed by the Regional Commissions, which issue a finding of whether or not the proposed project is in "the best interest of the Region and therefore the State." The local government uses this recommendation in deciding whether to allow the project to proceed. This process is overseen by the Georgia Department of Community Affairs. Analysis of the application list in **Table 3.2** reveals proposed airport and industrial expansion planned within Worth County, which are not expected to place significantly increased demand on the regional roadway network.

TABLE 3.2: DRI APPLICATIONS IN WORTH COUNTY SINCE 2001

DRI ID	Project	Type	Location	Initial Info Sub. Date	Current Status	RC Finding: In the best interest of the region?	Expected time frame: This phase/ Overall project	Total Estimated Traffic Volume
1694	Sylvester Airport	Airports	Sylvester, Worth Co.	12/21/07	Initial Form Submitted	Pending	NA/2009	NA
1550	Worth County Industrial Park West 2 Expansion	Industrial	Uninc. Worth	8/1/2007	Initial Form Submitted	Pending	January, 2010/NA	NA

Source: Georgia Department of Community Affairs

4. TRANSPORTATION INVENTORY

This section presents an inventory of existing transportation facilities within the six-county study area as well as Worth County. This inventory includes roadway functional classifications, surfaces, and lane configurations, bridges, pedestrian and bicycle facilities, railroads, public transportation services, and safety of roadway segments and intersections.

4.1 ROADWAY INVENTORY

4.1.1 FUNCTIONAL CLASSIFICATION

Functional classification is the process by which street and highway facilities are grouped into classes, or systems, according to the character of traffic service that they are intended to provide. The functional classification designation of a given road also determines whether it is eligible for federal funds. Federal-aid roads are:

- Principal arterials,
- Minor arterials,
- Urban collectors, and
- Rural major collectors.

In addition, rural minor collectors can be eligible for federal funds. Urban or rural local roads are not eligible for federal-aid.

The hierarchy of roadway networks is defined by the role each type of road serves meeting access and mobility requirements within the system. The role of a local road is to provide access to land, with little emphasis on system mobility. Conversely, arterials emphasize a high level of mobility, serving long trips between activity centers with little concern for land access. Collectors offer a balance between mobility and land access, and provide connections between local roads and streets and arterials.

Urban and rural areas have fundamentally different characteristics as to density and types of land use, density of street and highway networks, nature of travel patterns, and the way in which all these elements are related in the definitions of highway function. Although there are a number of cities in the six-county study area, the vast majority of the road network in the study area is defined as rural. The following section describes the differences in roads for rural and urban areas.

Functional Systems for Rural Areas

Rural principal arterials typically serve substantial statewide or interstate travel. These continuous facilities emphasize regional mobility and connect larger urban areas. These roads are designed for a relatively high rate of speed and often have limited access to adjacent land uses and street networks. Rural principal arterials are comprised of Interstate facilities as well as major rural highways. Rural minor arterials, in conjunction with rural principal arterials comprise a rural network that connects cities with towns. While generally not designed with limited or controlled access, these facilities allow for higher speeds and mobility than provided by collector roadways.

Rural major and minor collectors generally serve travel of primarily intra-county, rather than statewide or regional importance. These facilities provide a balance between mobility and land access. Trip length is

therefore generally shorter than rural arterials and posted speeds generally more moderate than rural arterials.

Rural local roads typically provide access to adjacent land and provide service to travel over shorter distances than collector and higher order systems. Rural local roads represent the largest type of road network within the six-county study area.

Functional Systems for Urban Areas

Urban principal arterials serve the major centers of activity in a metropolitan area, are the highest traffic volume corridors, and serve the longest urban trips. These facilities carry a high proportion of the total urban area travel. Urban principal arterials should carry the major portion of trips entering and leaving the urban area, as well as the majority of through movements desiring to bypass the city centers. Characteristics of these roads include partially and fully controlled access and high speeds.

The urban minor arterial street system should connect to and support urban principal arterials and provide slightly lower mobility than the principal arterials. These usually serve a smaller geographic area and provide some local access. Urban minor arterials are usually lower speed facilities and generally do not have limited or controlled access.

Urban collectors provide land access service and traffic circulation within residential neighborhoods, commercial and industrial areas. This classification of street is typically designed to distribute trips from the arterials to their ultimate destination. Speeds on these streets are relatively moderate.

Urban local streets comprise all facilities not on one of the higher systems. These streets serve primarily to provide direct access to abutting land and to the higher order systems. Speeds are typically low and through traffic movement is usually discouraged.

These classifications allow the safety of facilities across the state of Georgia to be evaluated relative to other facilities of similar design, traffic volumes and purpose. GDOT is responsible for collecting performance information from local and state reporting agencies for street and highway facilities. In most cases, GDOT also provides the functional classifications for state road facilities. Typical information collected includes Average Annual Daily Traffic (AADT), accident locations and equipment involved injuries and fatalities.

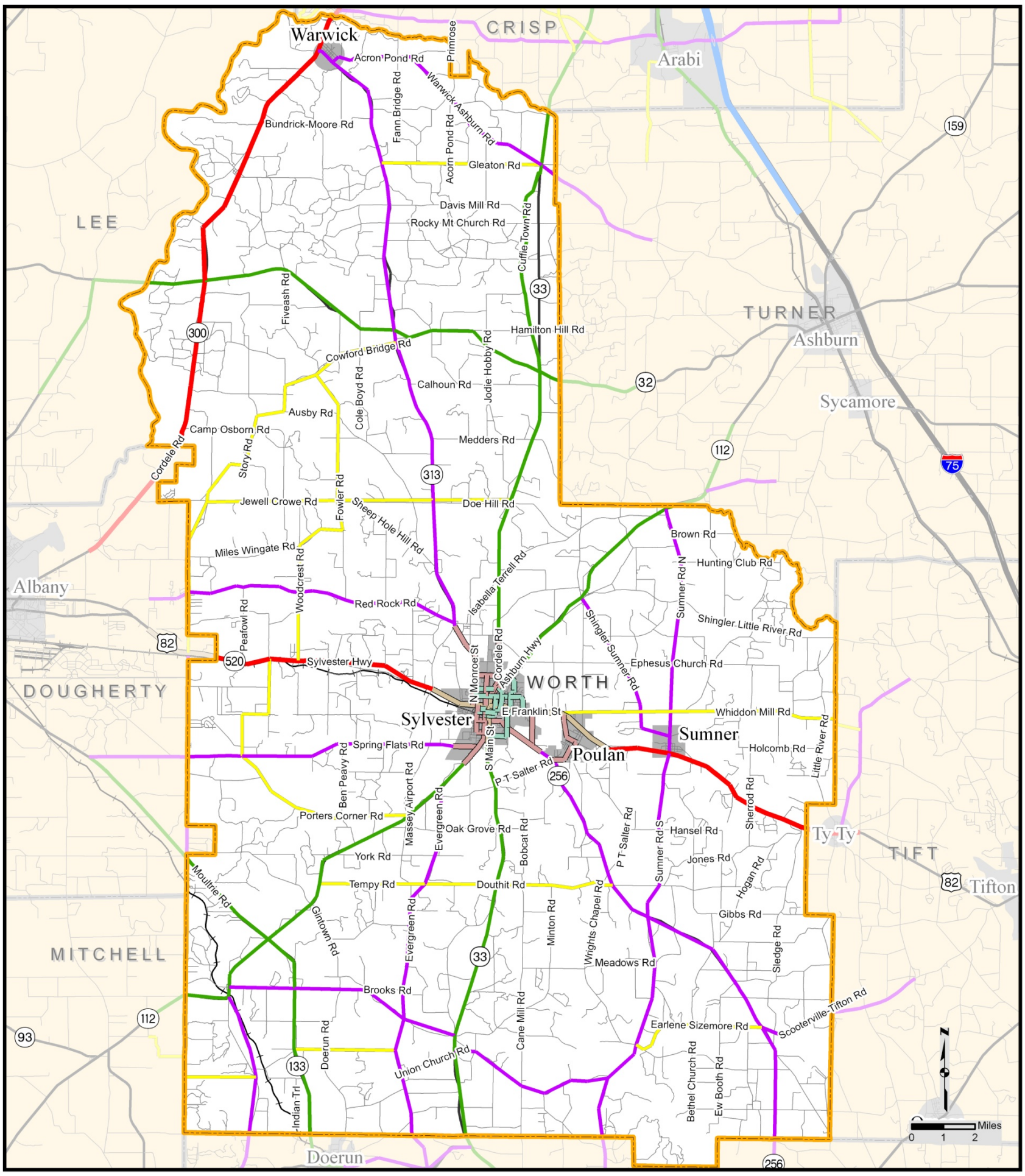
Figure 4.1 on page 24 presents the Worth County roadways by functional classification. While Worth lacks direct access to interstates, the county is the largest in terms of land mass. **Table 4.1** below presents the mileage and VMT for each functional classification in Worth County.

TABLE 4.1: FUNCTIONAL CLASSIFICATIONS IN WORTH COUNTY

	Rural Roadways		Urban Roadways	
	Mileage	**VMT**	**Mileage**	**VMT**
Interstate	0.00	0	0.00	0
Arterial	103.67	482,142	24.72	149,394
Collector	194.82	129,107	9.18	5,854
Local	617.36	176,457	56.87	46,886
Road Total	915.85	787,706	90.77	202,134

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

FIGURE 4.1: WORTH COUNTY ROADWAY FUNCTIONAL CLASSIFICATIONS (2008)



Worth County
Functional Classification

Southwest Georgia
Multi-County
Transportation Study

Functional Classification

Rural:	Urban:	
Interstate	Interstate	Railroad
Principal Arterial	Principal Arterial	Lakes & Streams
Minor Arterial	Minor Arterial	City Boundary
Major Collector	Collector	Worth County
Minor Collector		County Boundary
Local Street		

Source: GDOT Roadway Characteristics Data

Southwest Georgia Multi-County Transportation Study

4.1.2 ROAD SURFACE

The surface type of a road determines capacity of a facility, its maintenance requirements, and the uses of its surrounding land. Nearly 32 percent of Worth County roadways are paved. Of the county's 1,477 mile network, 470 miles are currently unpaved. **Table 4.2** below presents the road mileage by surface type for Worth County.

TABLE 4.2: WORTH COUNTY ROAD MILEAGE BY SURFACE TYPE

	Worth County			State Totals		
Road Type	Total Mileage	Unpaved	Percent Unpaved	Total Mileage	Unpaved	Percent Unpaved
State Routes	156	0.0	0.0%	18,096	1	0.0%
County Roads	792	469	59.2%	84,558	27,986	33.1%
City Streets	59	1	1.7%	14,584	486	3.3%
Road Total	1,007	470	46.7%	117,238	28,473	19.5%

Source: GDOT Office of Transportation Data 2007

4.1.3 LANE CONFIGURATION

Another important attribute reviewed from GDOT's RC database is the number of lanes provided on each road in the six-county study area. Roads in Worth County primarily serve traffic in both directions. Additionally, the majority of the roads in Worth County are two-lane facilities. **Figure 4.2** on page 26 illustrates the number of lanes on roadways in Worth County.

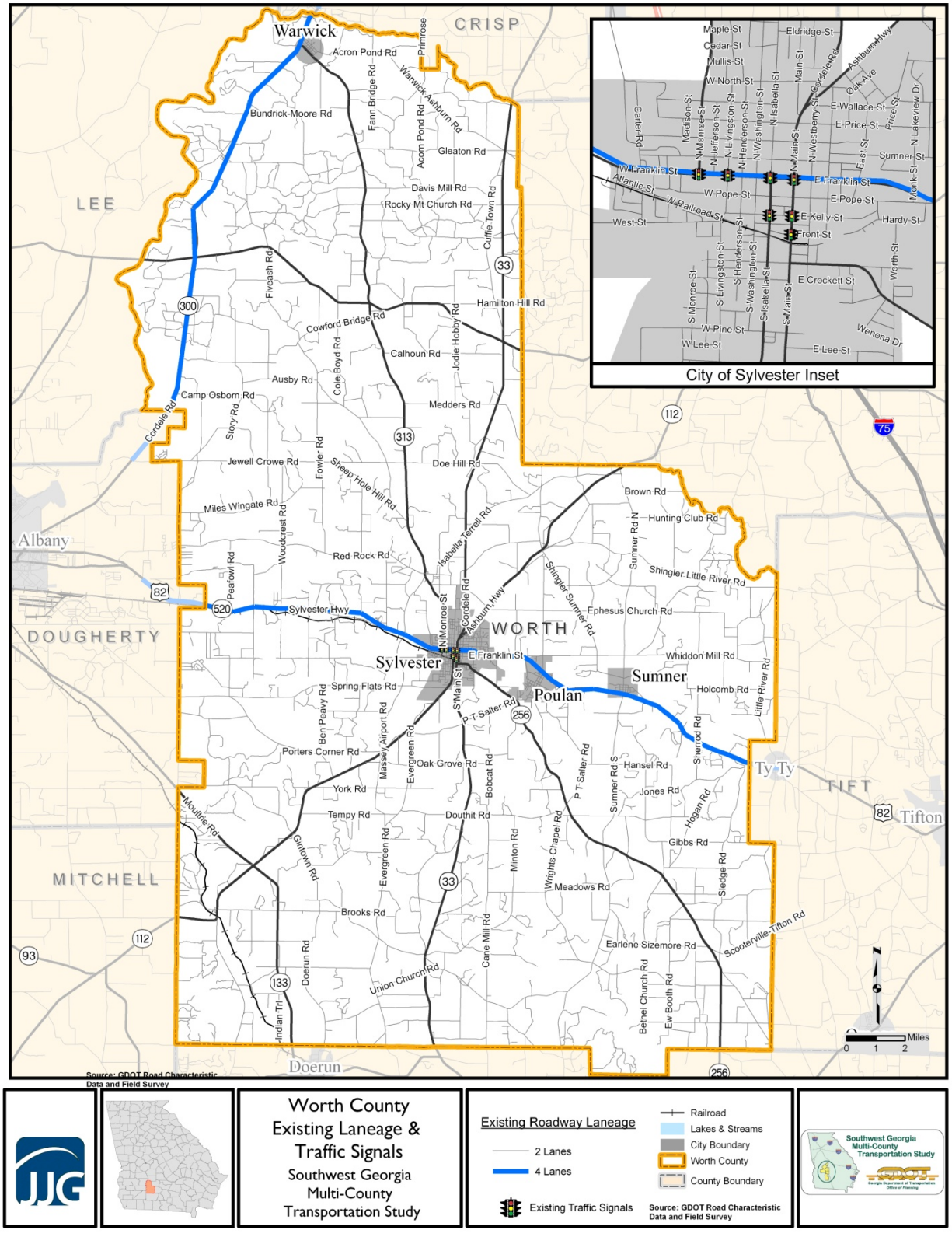
4.2 BRIDGE INVENTORY AND CONDITIONS ASSESSMENT

The following section will provide an analysis of current bridge conditions relative to sufficiency and importance to the overall roadway network in the study area. Maintaining bridges in good condition is important for safety and to avoid delays due to road closures and weight limits. The bridge sufficiency rating formula was created in part as a universally accepted method of collectively evaluating factors which indicate a bridge's condition and its ability to remain in service. The result of the standardized formula is a number between zero and 100, for which 100 represents an entirely sufficient bridge and zero represents an entirely insufficient or deficient bridge.

The collective factors which form a sufficiency rating are collected by GDOT and submitted to the Federal Highway Administration (FHWA) on an annual basis. Key factors which make up a sufficiency rating include the number of lanes relative to the roadway it carries, AADT, structural condition and deck condition.

It is important to note that sufficiency ratings do not necessarily indicate a bridge's ability to safely carry traffic loads. Measures used to determine a bridge's sufficiency also include metrics not related to the structural integrity. Factors that are used to calculate sufficiency that are not related to structural integrity include under-clearances, the bridge's location on the national highway system, conditions of the bridge approaches, and traffic safety features, like railing height, and the length of a detour should the bridge be closed. In total, there are 18 key factors used to calculate sufficiency ratings.

FIGURE 4.2: WORTH COUNTY EXISTING LANEAGE AND TRAFFIC SIGNALS (2008)



The Highway Bridge Program uses sufficiency ratings to help prioritize bridges in need of repair or replacement. The Highway Bridge Program is authorized and funded by the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU). To qualify for federal replacement funds, a bridge must have a rating of 50 or below. Bridges with a sufficiency of 50 to 80 meet the minimum qualifications for rehabilitation funding. Rehabilitation can include maintenance or repair of bridge decks, expansion joints, bridge railings, foundations, piers, etc. Bridge rehabilitation can be a cost efficient solution for bridges with sufficiency ratings below 50 if it can be demonstrated that the rehabilitation will improve the bridge to an acceptable sufficiency rating. It should be noted that bridges that qualify for federal funding by their sufficiency ratings are not guaranteed to receive such funds.

Worth County had nine bridges, or approximately 21 percent of bridges in the county, with sufficiency ratings below 50, that met minimum requirements for FHWA bridge replacement funding. None of these bridges are on the state Route system. See **Table 4.3** below and **Figure 4.3** on page 28 for further details and locations.

TABLE 4.3 WORTH COUNTY BRIDGES WITH SUFFICIENCY RATINGS BELOW 50

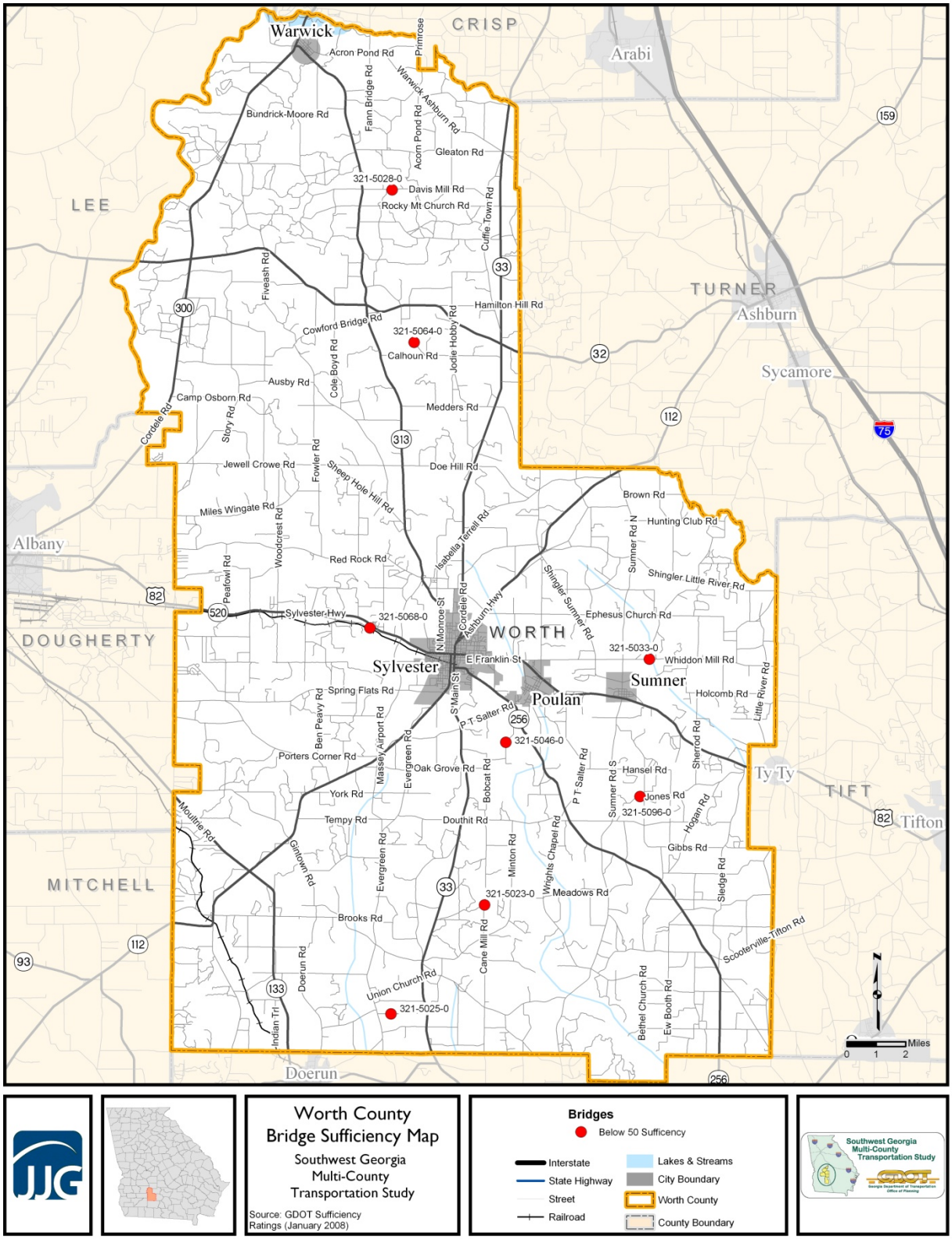
Bridge Serial Number	Facility Carried	Feature Intersected	Sufficiency	Year Built	On State Route System?	PI No.?
321-5042-0	Evergreen Road	Horse Creek	12.98	1925	No	No
321-5069-0	Church Street	Abandoned Railroad	15.50	1928	No	No
321-5096-0	Jones Road	Lolly Creek	25.35	1990	No	No
321-5033-0	Whiddon Mill Road	Ty Ty Creek	27.43	1965	No	No
321-5064-0	Red Oak Road	Little Abrams Creek	31.70	1978	No	No
321-5023-0	Cane Mill Creek Road	Horse Creek	35.43	1970	No	No
321-5046-0	Melton Road	Town Creek	37.69	1986	No	No
321-5028-0	Davis Mill Road	Jones Creek	39.66	1960	No	No
321-5025-0	Southwood Road	Little Ochlocknee River	49.05	1992	No	No
321-5068-0	Old State Route 50	Little Piney Woods Creek	40.02	1925	No	No

Source: GDOT January 2008

4.3 PEDESTRIAN AND BICYCLE FACILITIES

The information in this section regarding existing and planned bicycle and pedestrian facilities comes from the *Southwest Georgia Regional Bicycle and Pedestrian Plan (2005)*, which was prepared by the Southwest Georgia RC and submitted to GDOT in 2005, and from GDOT planned and programmed projects. Planned near-term pedestrian and bicycle facility improvements are included in GDOT's State Transportation Improvement Program (GDOT STIP) 2008-2011 and Work Program. The nature of the GDOT STIP and Work Program are covered in the GDOT Planned and Programmed Improvements Section presented later in this document.

FIGURE 4.3: WORTH COUNTY BRIDGE SUFFICIENCY (2008)



4.3.1 EXISTING BICYCLE AND PEDESTRIAN FACILITIES

Worth County Sidewalks were inventoried for the *Southwest Georgia Regional Bicycle and Pedestrian Plan (2005)*. The City of Sumner has sidewalks on one block of Main Street between College Street and McLeod Street/Church Street. The City of Sylvester has sidewalks on Franklin Street/South Georgia Parkway, on Main Street, and on a few other city streets. The City of Warwick has sidewalks on a block and a half of East Railroad Street, in its city center, between Monroe Street and Peachtree Street. The City of Poulan was not inventoried.

State Bicycle Route # 20 runs east-west across north Worth County, along SR 32. As the *Southwest Georgia Regional Bicycle and Pedestrian Plan* (2005) notes, however, the state bicycle route designation does not imply access to bicycle facilities, and shared bicycle and vehicular traffic should be expected along these routes. Furthermore, there are no signs that mark roadways as state bicycle routes. Existing bicycle routes in the study area are mapped in **Figure 4.4** on page 30.

4.3.2 PROPOSED PEDESTRIAN AND BICYCLE FACILITIES

An inventory of recommendations from the *Southwest Georgia Regional Bicycle and Pedestrian Plan* (2005) and GDOT are listed in **Table 4.4** below. Proposed bicycle routes in the six-county study area are mapped with the existing bicycle routes in **Figure 4.4**.

TABLE 4.4: PEDESTRIAN RECOMMENDATIONS IN WORTH COUNTY

Source	County	Facility Type	Recommendation
SW GA RC	Worth	Bike & Ped	Post more signage to identify existing bicycle routes, parks and trails throughout region.
SW GA RC	Worth	Ped	Construction of 5-foot sidewalks with guard rails and planting strips along SR 256/Martin Luther King, Jr. Drive, Welch St., and Worth St in Sylvester.
SW GA RC	Worth	Ped	Construction of 5-foot sidewalks from Walnut drive to Pinson Street on Carter Street in Sylvester.
SW GA RC	Worth	Bike	New bicycle route along SR 313 from Warwick to Sylvester, to intersect with the east-west State Bicycle Route #20.
SW GA RC	Worth	Bike	New bicycle route along SR 33 from Sylvester to Moultrie to connect to State Bicycle Route #10, which runs along US 84.
GDOT	Worth	Bike & Ped	Three Facilities in Sylvester
GDOT	Worth	Bike & Ped	Streetscapes in Sylvester

Source: Southwest Georgia Regional Bicycle and Pedestrian Plan

4.4 RAILROADS

Historically, a number of thriving communities within the six-county study area were established along the railroad lines at key locations to serve commerce. Today, a number of these railroads continue serving the study area. Please see **Figure 4.5** on page 31 for a map of these railroads in the study area.

Worth County is served by a short line that connects Sylvester with Albany, in Dougherty County to the west. A second short line passes through the southwest portion of the county as it travels from Albany south to Moultrie. Both lines are part of the Georgia and Florida railway owned and operated by Omnitrax.

FIGURE 4.4: EXISTING AND PROPOSED BICYCLE ROUTES IN THE SIX-COUNTY STUDY AREA (2009)

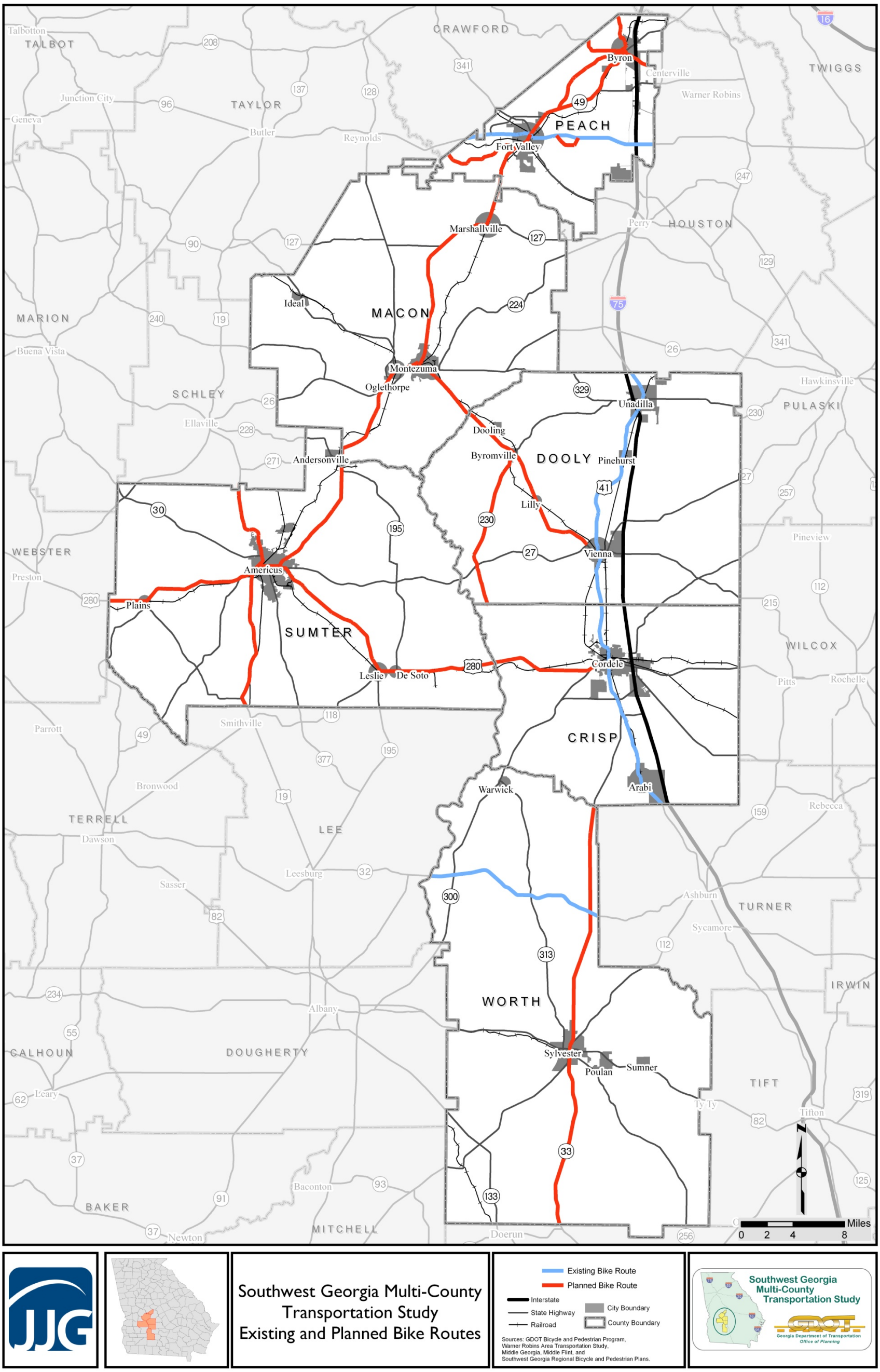
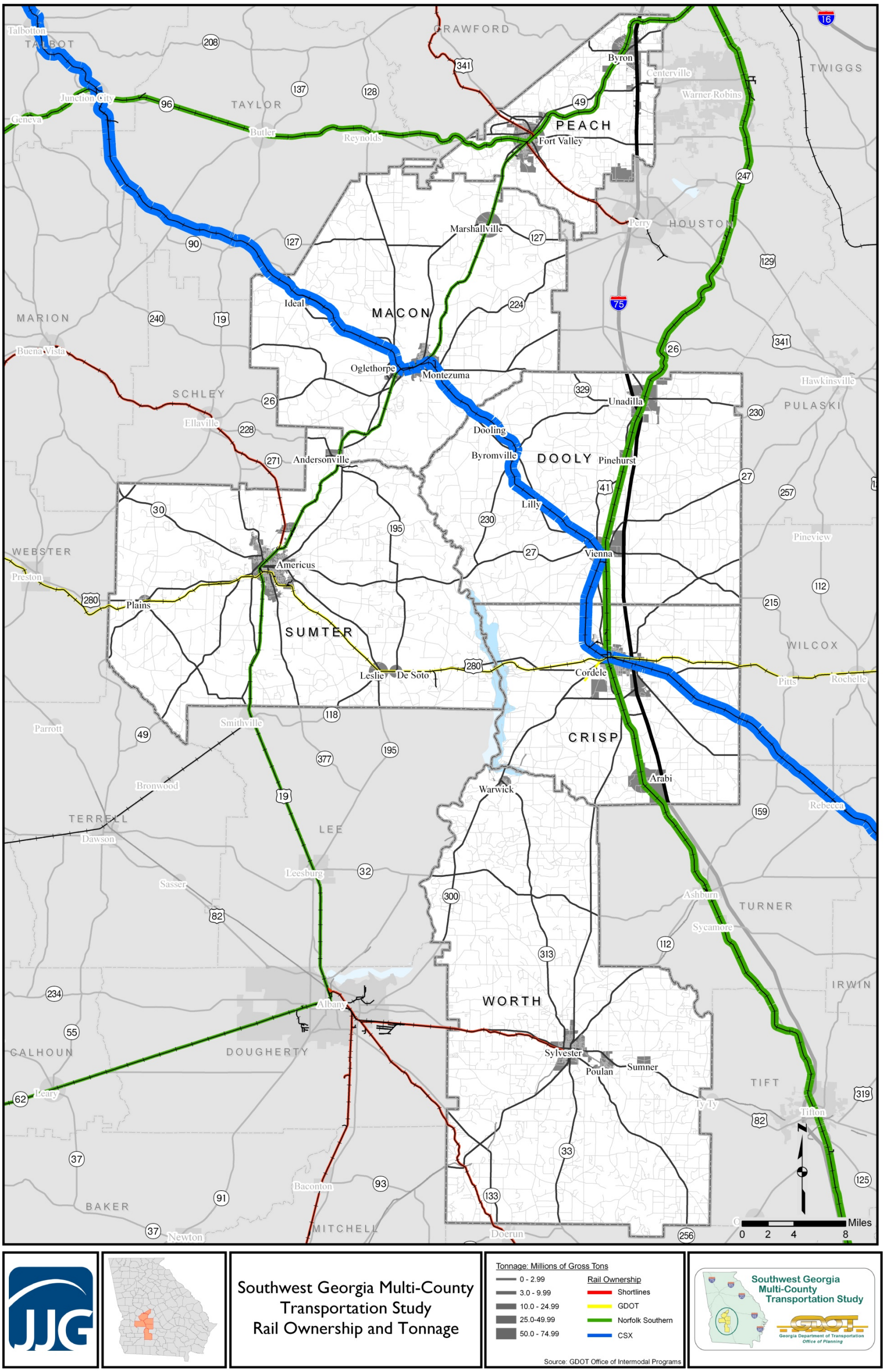


FIGURE 4.5: RAIL OWNERSHIP AND TONNAGE (2005)



4.5 PUBLIC TRANSPORTATION

Rural transit service can take the form of fixed-route, demand-responsive, or deviated fixed-route. Rural transit service can take the form of fixed-route, demand-responsive, or deviated fixed-route. A fixed-route system operates along a particular route according to a fixed schedule, such as a typical city bus service. A demand responsive system could include van services and shuttle bus systems that provide services only when or where they are required. Deviate fixed-route service combines aspect of both types of service by breaking from fixed-route service to make trips at other times or locations when requested.

The service is often infrequent and is designed to accommodate persons traveling for medical, shopping and other personal business needs rather than commuting. Service tends to be catered to the individual due to the clientele and number of requested trips. Service is usually open to the general public unless otherwise noted. Service hours tend to be limited to weekdays, with schedules designed to allow for same day return trips on days service is provided. Worth County does not provide public transportation. The Southwest Georgia Regional Commission (229-522-3552) however does provide transit services within the county through a pilot program administered in coordination with GDOT and the Georgia Department of Human Resources.

4.6 SAFETY

Crashes occur most frequently at intersections, but can also occur along segments of a street or highway for many different reasons. Understanding where and why crashes occur is useful in measuring relative need and prioritizing projects. To pursue this end, crash data were analyzed using three distinct approaches.

First, a county analysis was conducted which compared crashes within each county to that of the state, per population, for the years 2000-2007. This analysis provides a generalized tool which compares each county relative to the likelihood of a crash occurring.

Second, an analysis was completed by road segment. Segment termini were established by using county lines, termini of a roadway facility, or location where a facility type changed. An example of a segment terminus would be the location where an urban arterial road facility type changed to a rural arterial, or from a local collector to an arterial, etc. Segments with crash rates higher than the state rate per 100 million vehicle miles (MVM) for their respective facility type were identified and noted. This analysis was conducted using the year 2007 data.

Facilities with high crash rates were compared to the statewide averages for their respective functional classifications. Functional classifications analyzed in this study were Urban Interstate, Rural Interstate, Urban Principal Arterial, Rural Principal Arterial, Rural Minor Arterial, Urban Collector, and Rural Major Collector.

Rates were normalized for each segment by comparing crashes per 100 million vehicles miles (MVM). Crash, injury and fatality rates were compared against the average of similar facilities across the State of Georgia, as is industry standard.

The third process used to analyze crash information identified intersections throughout the six-county study area with consistently high numbers of reported crashes annually. GDOT funds the use of Critical Analysis Reporting Environment (CARE) software for crash data analysis in Georgia. CARE software was used in this study to examine reported crashes and their respective locations for the years 2000-2007. Intersections which averaged higher than five crashes per year between 2000 and 2007 were considered to experience relatively high crash rates.

High crash rates at intersections are generally the result of high traffic volumes and congestion, not poor intersection geometry. In almost all instances, high crash rate intersections are on the most heavily travelled roadways within a county. When intersections with safety concerns are identified by local input or field investigation, these intersection are compared with the list of high crash intersections in order to identify whether operational or geometric improvements are necessary.

Between the years 2000 and 2007, Worth County averaged just over one crash per day or 17.1 crashes per 1,000 people, lower than the State of Georgia rate of 37.8. In each year observed, Worth consistently experienced a lower rate than the State of Georgia. Worth County averaged 374 crashes, 259 traffic related injuries and 4.9 fatalities annually during the same time period.

During the segment review of the Worth County road network, five segments experienced relatively high crash rates, but only one segment had a higher crash rate than the state average by roadway type. The five segments three portions of State Route 112 and two of State Route 33. All five segments were on the State Route system. **Table 4.5** below details segments and associated statistics. **Figure 4.6** on page 35 identifies the location of the roadway with the crash rate higher than state average.

TABLE 4.5: 2007 WORTH COUNTY CRASH RATE BY ROADWAY SEGMENT

Roadway			Crashes	Crash Rate (per 100 million vehicle-miles (MVM))		Injuries
GDOT Route Number	Functional Classification	Beg MP - End Mp	Number	Worth County Road Segment	Statewide Avg.	Number
SR 33	Urban Principal Arterial	13.1 - 14.5	16	451	441	6
SR 33	Rural Minor Arterial	14.6 - 32	6	68	154	4
SR 112	Rural Minor Arterial	0 - 12.4	6	78	154	7
SR 112	Urban Minor Arterial	12.5 - 16.3	8	169	404	3
SR 112	Rural Minor Arterial	16.4 -24	4	84	154	3

Source: CARE Data 2000-2007

The intersection analysis conducted in Worth County revealed three intersections as having more than five crashes per year. All three locations were on the State Route system, within the City of Sylvester along State Route 520. **Table 4.6** on page 34 provides a list of crashes and other information for each of the hotspot intersections. Please see **Figure 4.6** for a map identifying locations of each intersection.

Intersections are difficult to compare to one another over time and space, due to the differences in roadway types, intersection geometries, and factors such as signalization and sight-distance. GDOT maintains statewide crash rates for intersections by type; however, for the purposes of this study, intersection crash rates were compared within the county.

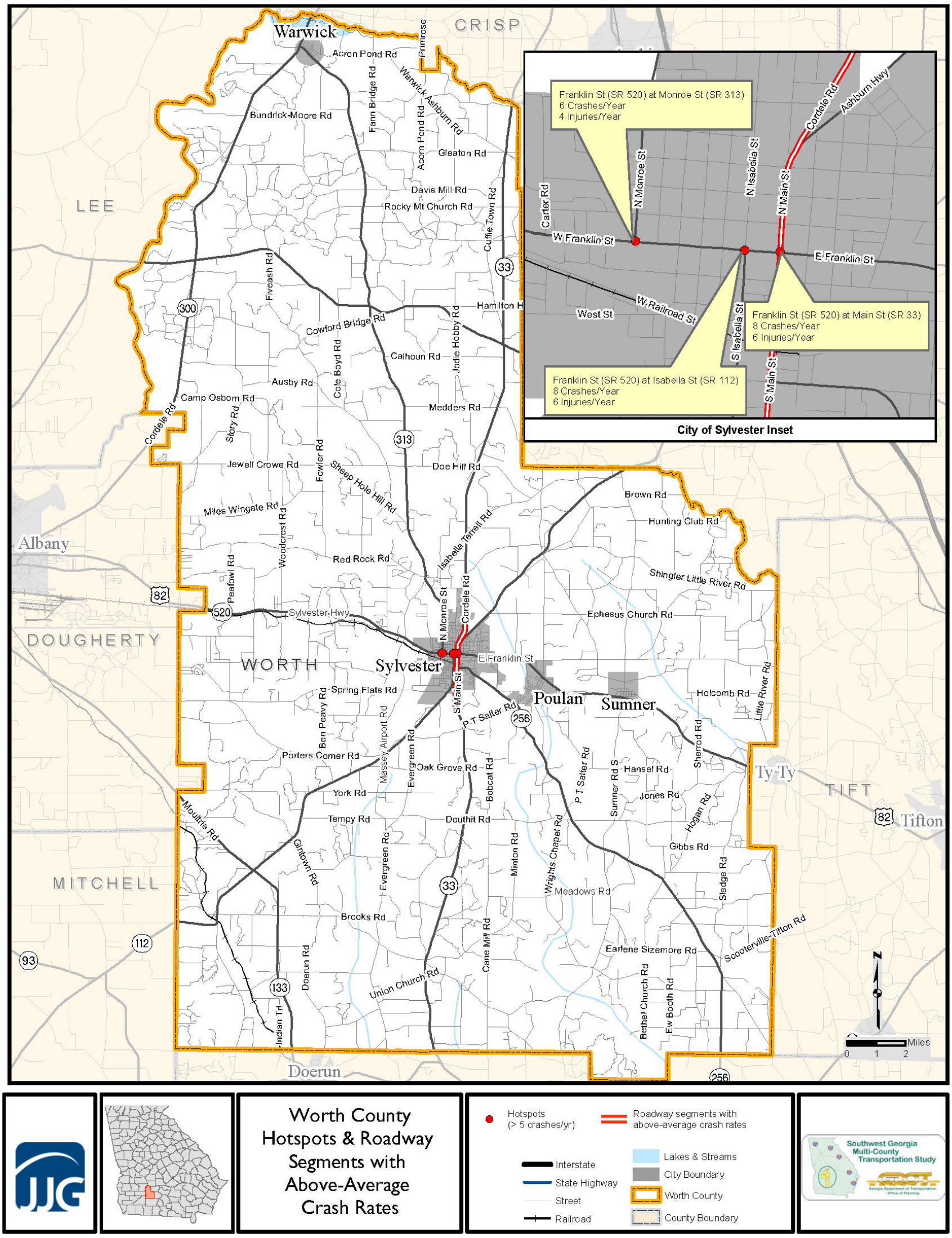
High crash rates at intersections are generally the result of high traffic volumes and congestion, not poor intersection geometry. In almost all instances, high crash rate intersections are on the most heavily travelled roadways within a county. High rates of accidents on segments or intersections many not be indicative of skewed geometry and may not be open to remediation based on geometric redesign.

TABLE 4.6: WORTH COUNTY HOTSPOTS

Intersection Location			Total (2000-2007)			Annual Average		
Location	Mile-post	City	Crash	Injury	Fatality	Crash	Injury	Fatality
Franklin Street(SR 520) at Main Street(SR 33)	8.96	Sylvester	97	35	0	12	4	0
Franklin Street(SR 520) at Isabella Street(SR 112)	8.84	Sylvester	67	45	0	8	6	0
Franklin Street(SR 520) at Monroe Street(SR 313)	8.45	Sylvester	45	34	0	6	4	0

Source: CARE Data 2000-2007

FIGURE 4.6: HOTSPOTS AND ROADWAY SEGMENTS WITH ABOVE-AVERAGE CRASH RATES IN WORTH COUNTY (2000-2007)



5. EXISTING AND FUTURE TRAFFIC CONDITIONS

In order to evaluate existing and future traffic conditions on roadways within each study county, a travel demand model was developed for the entire six-county study area. A travel demand model is a computer model used to estimate traffic volumes and travel patterns utilizing study area information such as roadway networks, land use information, and demographic data including population and employment. The travel demand model originally developed for the Southwest Georgia Interstate Study (2009) was modified and recalibrated for use in this study. The base, or existing, model year utilized was 2006 since this is the most recent year for accurate employment data from the Georgia Department of Labor. The future, or horizon, year utilized for this study was 2035.

The travel demand model was utilized to determine traffic conditions on all six-county study area roadways for base (2006) and horizon year (2035). Traffic conditions on study roadways are evaluated based on a Level-of-Service (LOS) analysis. LOS is a qualitative measure describing operational conditions and driver perceptions within a traffic stream. According to the 2000 Highway Capacity Manual (2000 HCM), six LOS are defined for each type of facility. Letters designate each level, from A to F, with LOS A representing free-flow conditions with minimal delay and LOS F representing severe congestion with long vehicle delays. **Figure 5.1** on page 37 presents a graphical representation of the six levels of service.

LOS for a roadway segment is based on the volume to capacity (V/C) ratio. V/C compares the traffic volumes on a roadway with the carrying capacity of that segment of road. V/C is the quantitative measure generated by the travel demand model that is utilized to determine the LOS of a roadway segment. The threshold for each LOS based on V/C is presented in **Table 5.1** below.

TABLE 5.1: LEVEL OF SERVICE THRESHOLDS

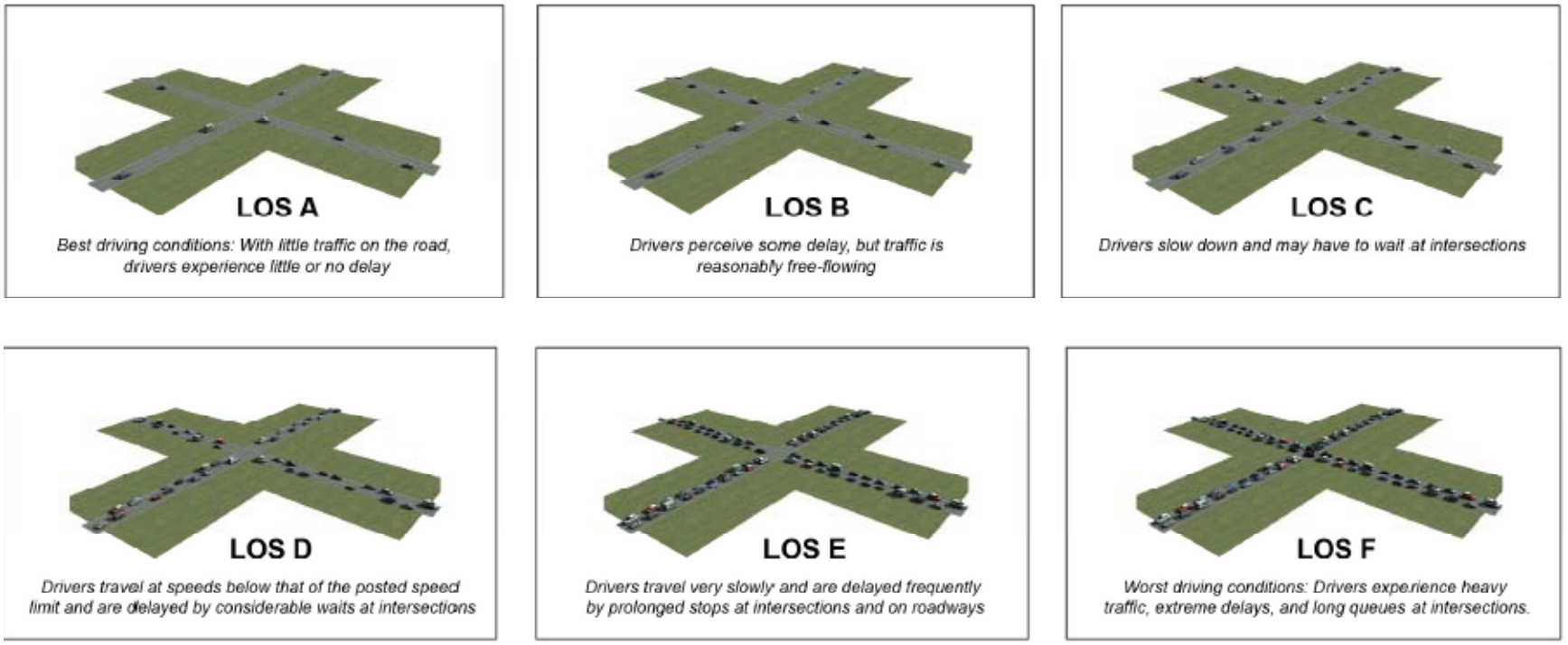
Level of Service (LOS)	Volume/Capacity Ratio
LOS A, B, C	V/C < 0.75
LOS D	0.75 <= V/C < 0.85
LOS E	0.85 <= V/C < 1.00
LOS F	V/C >= 1.00

The travel demand model was utilized to identify existing and future roadway segments with deficient LOS. For planning level analysis, GDOT considers LOS C or better to be acceptable and considers LOS D, E, or F to be deficient. When developing long range transportation plans in rural counties, GDOT strives to provide LOS C or better for all study roadways. This section presents the existing (2006) and future (2035) traffic conditions for Worth County.

5.1 EXISTING (2006) TRAFFIC CONDITIONS

Under existing conditions, all roadways within Worth County operate at an acceptable LOS (C or better). There are currently no roadway segments that operate at an unacceptable LOS (D or worse). As presented in **Figure 5.2** on page 38, there are no deficient roadway segments in Worth County under existing conditions.

FIGURE 5.1: REPRESENATION OF LOS



5.2 FUTURE (2035) TRAFFIC CONDITIONS

Under future conditions, most roadways within Worth County operate at an acceptable LOS (C or better). The only roadway segment that operates at an unacceptable LOS (D or worse) is presented in **Table 5.2** below. A map identifying this deficient segment is presented in **Figure 5.3** on page 40.

TABLE 5.2: FUTURE (2035) DEFICIENT ROADWAY SEGMENTS IN WORTH COUNTY

Roadway	From	To	LOS	Traffic Volume (AADT)
SR 133	Oak Grove Drive	County Line Road	D	11,460

Source: Travel Demand Model

As presented in **Table 5.2** and **Figure 5.3**, SR 133 in western Worth County is expected to operate at LOS D by 2035. This minor arterial is the primary route between the cities of Moultrie and Albany.

FIGURE 5.2: EXISTING (2006) DEFICIENT ROADWAY SEGMENTS IN WORTH COUNTY

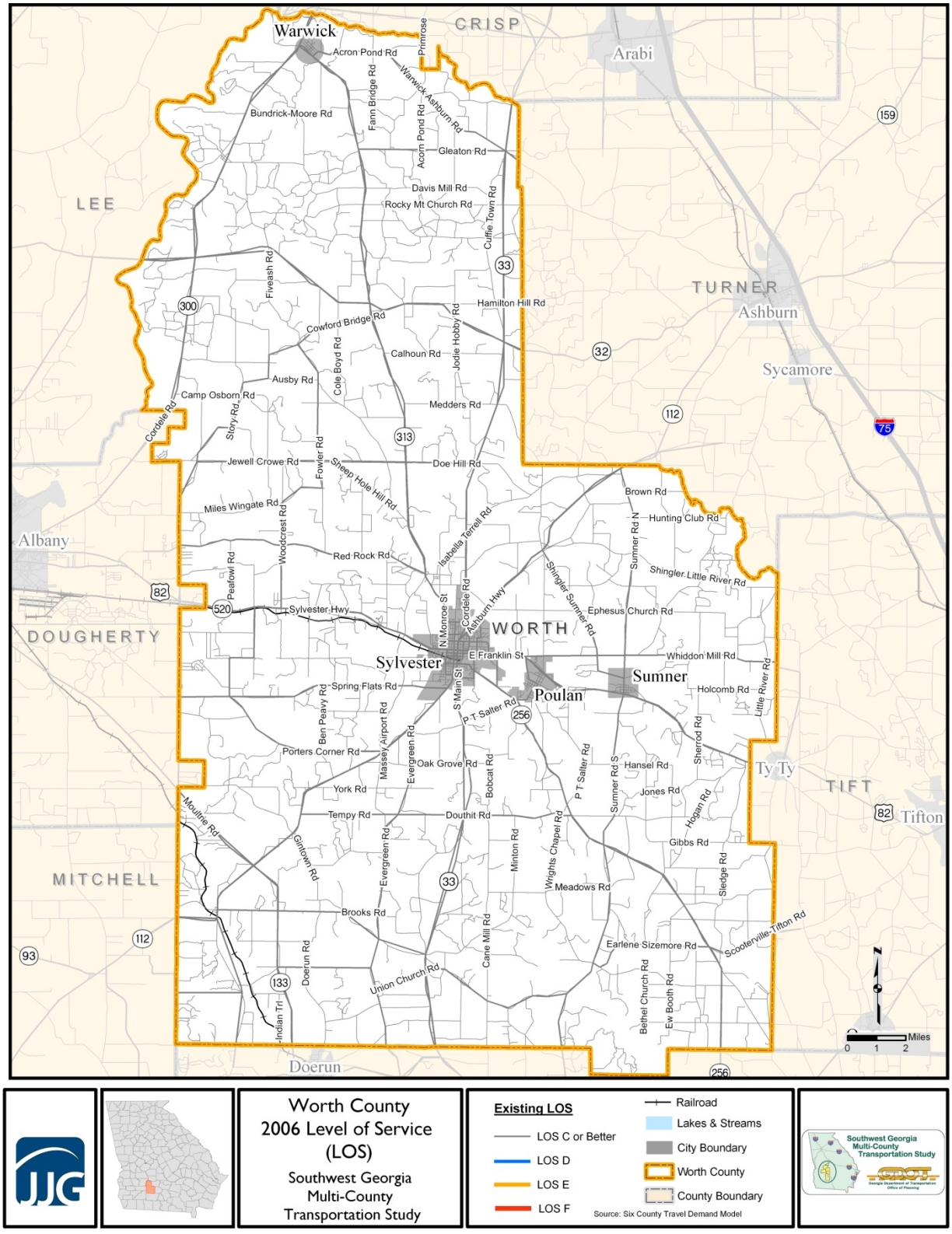
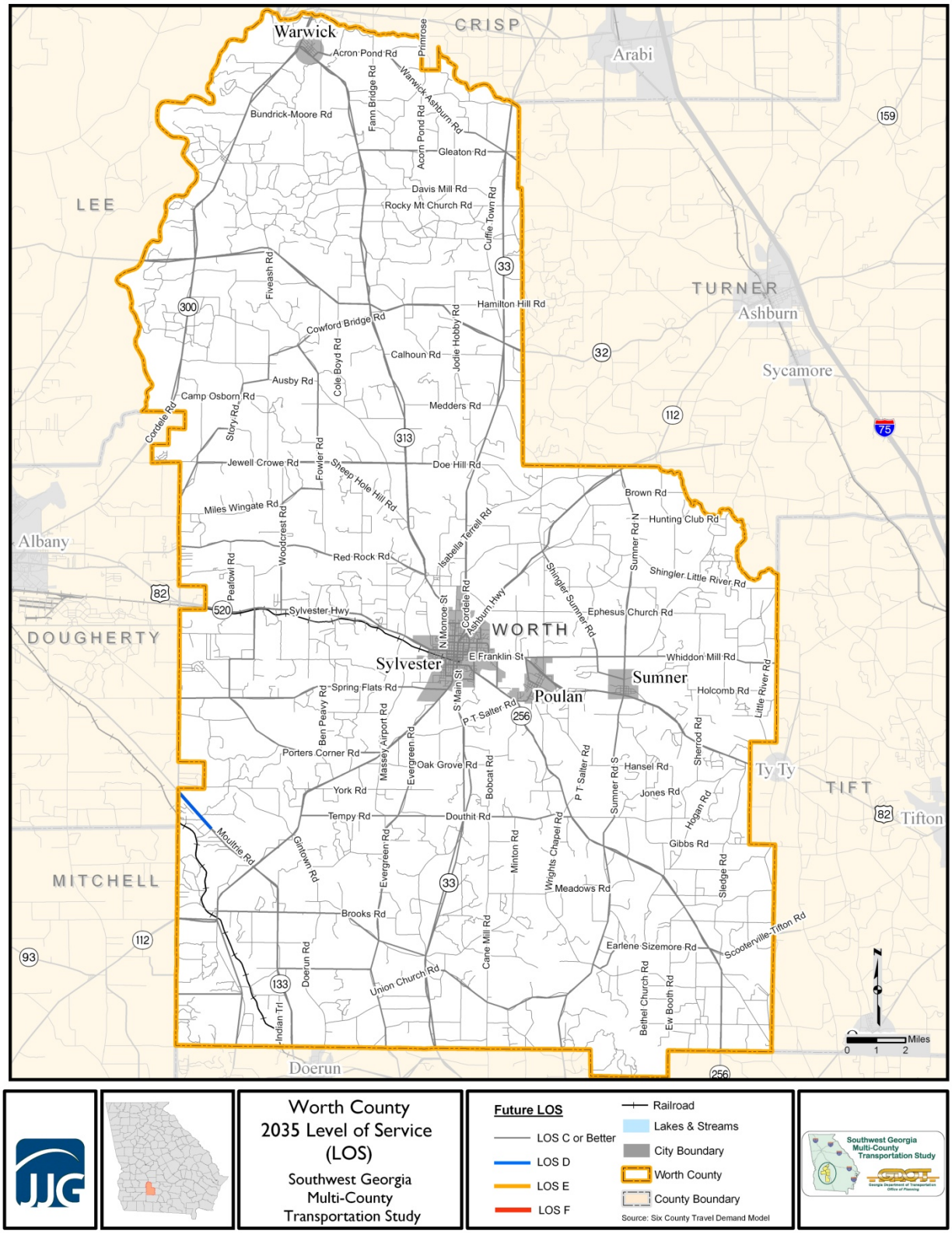


FIGURE 5.3: FUTURE (2035) DEFICIENT ROADWAY SEGMENTS IN WORTH COUNTY



6. GDOT PLANNED AND PROGRAMMED PROJECTS

This section presents the projects planned and programmed for Worth County from the GDOT STIP (2008-2011) and Work Program.

6.1 GDOT STIP (2008-2011) AND WORK PROGRAM

GDOT maintains two lists of transportation improvement projects, the State Transportation Improvement Program (mandated by the federal government) and the Work Program. The following paragraphs explain the differences between the two programs.

- The GDOT STIP for the 2008-2011 period– includes a list of federally funded and state funded priority transportation project elements (Preliminary Engineering, Right-of-Way, or Construction) proposed to be carried out in the current and next three years (a four-year plan). It is financially constrained (dollar value of projects programmed is equal to the anticipated revenues per program year), and includes projects consistent with the Statewide Transportation Plan. The GDOT STIP is approved by the FHWA and Federal Transit Administration (FTA) and includes all TIP projects as adopted by the Metropolitan Planning Organizations (MPO) and approved by the Governor.
- The Work Program is a listing of identified transportation projects that are eligible for federal and state funding with all project phases scheduled beyond the current GDOT STIP outside the fiscal years of the GDOT STIP.

Improvements listed in the GDOT STIP (2008-2011) and Work Program include improvements to transit, pedestrian and bicycle facilities, airports, and roadways. Those improvements applicable to pedestrian and bicycle facilities are covered in that section of this document. Roadway improvements planned within the study are listed in this section.

6.2 GDOT PLANNED AND PROGRAMMED PROJECTS FOR WORTH COUNTY

Table 6.1 on page 42 and **Figure 6.1** on page 43 present the projects and their descriptions as listed in the current GDOT STIP (2008-2011) and Work Program for Worth County, including the type of work, funding source, and construction programmed date for each.

Projects that utilize lump sum funding originate with exclusive federal and state funding and are administrated by the Georgia Department of Transportation (GDOT). A portion of the GDOT STIP funding is set aside for non-capacity adding projects in the following categories.

- Maintenance
- Safety
- Preliminary Engineering
- Roadway/Interchange Lightning
- Right of Way
- Transportation Enhancement
- Appalachia Local Access Road Program

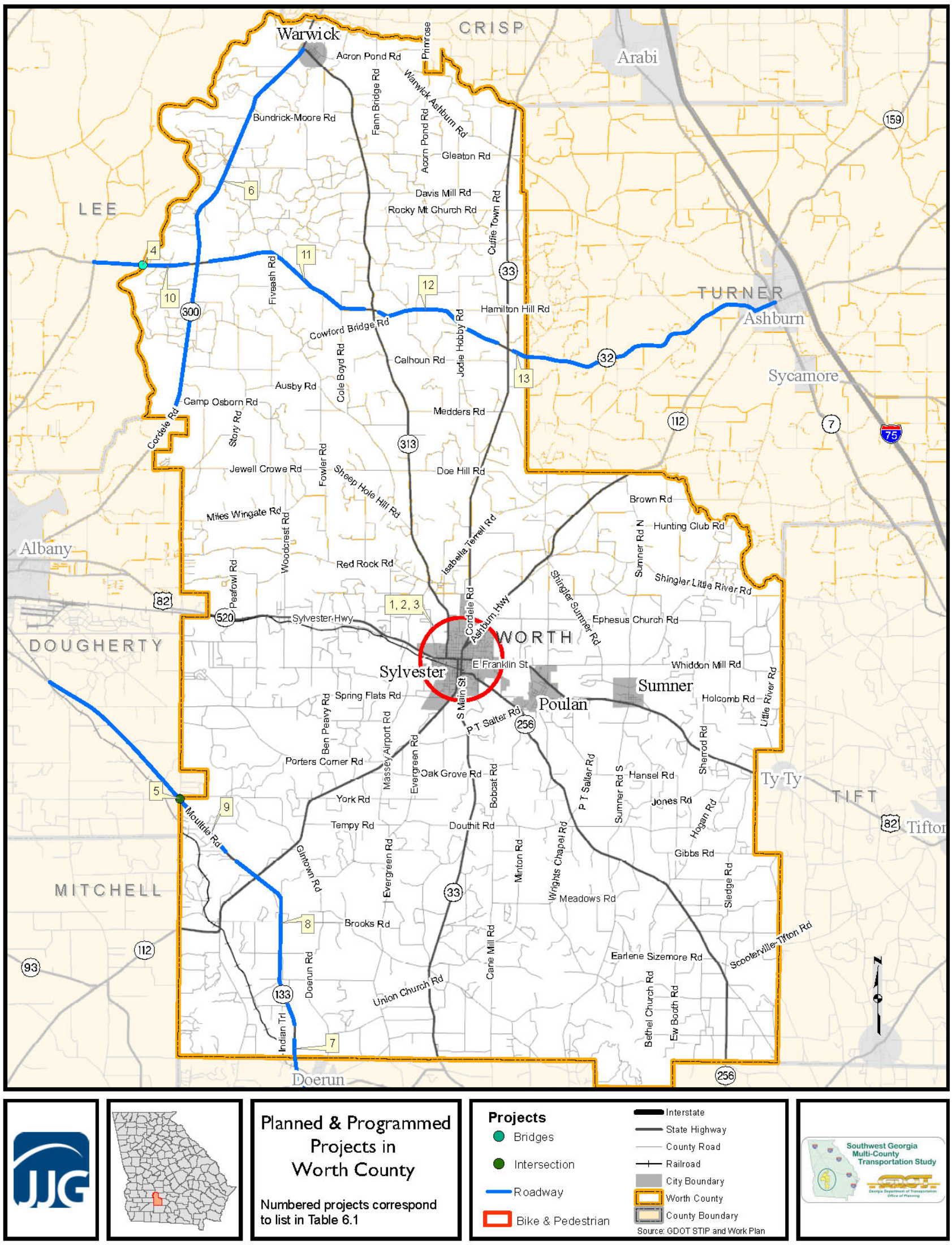
TABLE 6.1: GDOT PLANNED AND PROGRAMMED PROJECTS IN WORTH COUNTY

Note: The most current project schedule can be found on Transportation Explorer under the Quick links sections of the Department's homepage (www.dot.ga.gov).

Map No.	GDOT PI No.	Work Type	Description	Programmed Date	Funding Source
1	0007622	Bike/Ped Facility	Bike/Ped in Sylvester	2012	Federal
2	0007914	Bike/Ped Facility	City of Sylvester Streetscape	2010	Federal
3	0009146	Bike/Ped Facility	Isabella Street Pedestrian Facilities	LUMP	Federal
4	432092	Bridges	SR 32 @ Flint River & Overflow @ Lee/Worth County Line	2011	Federal
5	0000522	Intersection Improvement	SR 133 @ CR 459/County Line Road @ Worth/Dougherty County Line	LUMP	Federal
6	0001572	Turn Lanes	SR 300/US 19 Median Turn Lanes From Dougherty County to Warwick	Beyond 2011	Federal
7	0000520	Widening	SR 133 From South of SR 35/US 319 to North of Colquitt County Line	Beyond 2011	State
8	0000519	Widening	SR 133 from Colquitt County Line to N of SR 112	Beyond 2011	State
9	0000475	Widening	SR 133 From N of SR 112 to N of CR 459/County Line Road	Beyond 2011	Federal
10	0004793	Widening	SR 32 from SR 91/Lee to SR 300/Worth	Beyond 2011	State
11	0004794	Widening	SR 32 from SR 300 to SR 313	Beyond 2011	State
12	0004795	Widening	SR 32 from SR 313 to SR 33	Beyond 2011	State
13	0004796	Widening	SR 32 from SR 33/Worth to SR 7/Turner	Beyond 2011	State

Source: GDOT

FIGURE 6.1: GDOT PLANNED AND PROGRAMMED PROJECTS IN WORTH COUNTY



7. LOCAL INPUT

This section presents the public involvement activities conducted for the Southwest Georgia Multi-County Transportation Study and the resulting input. A complete record of Public Involvement activities can be found in **Appendix C**.

7.1 AGENCY INPUT

On December 3, 2008, GDOT held Agency Kickoff Meetings for the Southwest Georgia Multi-County Transportation Study. Due to the size of the six-county study area, two meetings were held—one in the north of the study area, one in the south. The first meeting took place at 10 a.m. at the Fairfield Inn in Cordele, Georgia, and the second, at 2:30 pm at the Flint Area Housing Authority conference room in Montezuma, Georgia.

Including GDOT and study staff, those attending the meetings were:

Robert Hughes, GDOT
Radney Simpson, GDOT
Pat Smeeton, JJG
Jimmy Watson, Macon County Board of Commissioners
Audra Rojek, JJG
Inga Kennedy, PEQ
Jean Burnnett, City of Cordele
Bob Rychel, Middle Georgia RC
Deborah Bridges, City of Sylvester
Charles West, City of Unadilla
Jenny Lee, JJG
Perry Ivie, City of Unadilla
Shane Pridgen, GDOT 4th District
Gene Crapse, Crisp County Board of Commissioners
Bryan Barnett, Southwest Georgia RC
Carl Gamble, Crisp County Public Works
Stephen Sanders, Dooly County
Gerald Mixon, River Valley RC
Michael Sudduth, Sumter County Planning and Zoning

The meeting began with introductions. Pat Smeeton, a consultant on the study team, gave a presentation about the nature of the study and the purpose of the meeting, copies of which were given to attendees. Attendees broke into groups and provided information about the transportation needs of the counties and cities that they represent. The input for each county from meeting attendees was summarized and used to create maps of perceived needs areas within each county.

Agency members were then asked to fill out questionnaires and provide suggestions for membership on the study's Advisory Committee, potential stakeholder interviewees, and goals and objectives of the study. Lastly, in order to inform more people about the study and to collect public input, Fact Sheets were given to attendees for them to distribute in the areas they represent.

7.2 ADVISORY COMMITTEE

The Advisory Committee was assembled for this study from state and local agency staff from across the six-county study area. The committee provided guidance and strategic direction to the study, primarily through setting the project's goals and objectives. The committee met twice over the course of the study. Each meeting was held twice on the same day in separate locations to accommodate committee members from across the study area.

The first pair of Advisory Committee meetings were held on July 9, 2009, at 10:30 am at the Marriott Fairfield Inn and Suites in Cordele and at 1:30 pm at the Flint Area Consolidated Housing Authority in Montezuma. Including GDOT and study staff, those attending the meetings were:

Robert Hughes, GDOT
Radney Simpson, GDOT
Rickey Blaylock, Peach County Zoning
John G. Turner, Macon County Planning & Zoning
Marcia Johnson, Peach County Administrator
Billie Segars, Peach County Public Works
Ralph Nix, Middle Georgia RC
Michael McDonald, GDOT
Pat Smeeton, JJG
Erik Kruszewski, JJG
Jimmy Watson, Macon County Public Works
Raymond Bridges, Sumter County Public Works
Willie Young, Sumter County Public Works.
Bryan Barnett, Southwest Georgia RC
Shane Pridgen, GDOT

Robert Hughes opened the meeting and began introductions. Then Pat Smeeton gave a presentation on the purpose of the study and progress made to date. The committee reviewed and commented upon the draft study goals that Mr. Smeeton presented. These goals are presented in the following section. After the presentation, the floor was opened to the questions and comments of meeting attendees. Areas that locals felt needed improvements were noted and added to the locally-identified needs areas for analysis.

The second Advisory Committee meetings were held March 25, 2010, at the same times and locations as the first round of meetings. Those attending the meetings were:

Kelly Gwin, GDOT
Radney Simpson, GDOT
Cindy VanDyke, GDOT
Rickey Blaylock, Peach County Zoning
John G. Turner, Macon County Planning & Zoning
Brent Thomas, GDOT
Van Mason, GDOT
David Sparks, GDOT
Brink Stokes, GDOT
Pat Smeeton, JJG
Audra Rojek, JJG
Shane Pridgen, GDOT
Robert McDaniel, Southwest Georgia RC
Bob Rychel, Middle Georgia RC
Gerald Mixon, River Valley RC
Carl Gamble, Crisp County Public Works
Michael Sudduth, Sumter County Zoning Administration

Kelly Gwin opened the meeting by introducing herself as the new project manager and reviewing the purpose of the study. She then introduced Pat Smeeton, who gave a presentation on the means by which the study determined transportation needs in the study area, as well as the study findings. Maps of study recommendations were presented by county in posters for committee review and discussion. Committee feedback from this meeting called for the addition of study recommendations in Sumter County.

7.3 TRANSPORTATION GOALS AND OBJECTIVES

The goals and objectives of this study were prepared from a review of the goals and objectives of local studies and from guidance from stakeholders, primarily those on the Advisory Committee. The goals were determined to be as follows:

- Assure a safe and efficient street and highway network throughout the six-county study area.

- Develop transportation improvements to support desired development patterns for the community.
- Improve roadway network to accommodate vehicle circulation and provide pedestrian & bicycle connections to activity centers

7.4 Stakeholder Interviews

Members of the study team met with stakeholders individually to obtain additional information about the needs of each county. Stakeholder input is summarized in **Appendix C.** Areas that were perceived by stakeholders to be in need of transportation improvements are included in the Locally-Identified Transportation Needs Areas map at the end of this section.

7.5 Fact Sheets and Public Response

Fact Sheets for the study were distributed at the Agency Kickoff Meeting, the Advisory Committee Meeting, and throughout the six-county study area at 45 locations where stakeholders and residents were likely to access them, such as libraries, colleges, chambers of commerce and city halls. A complete list of facilities at which newsletters were distributed is provided in **Appendix C.**

The Fact Sheet explained the purpose of the study and the process by which it would be undertaken, including the study schedule. It also reviewed the many ways the public would be involved in the study, including stakeholder interviews, the Advisory Committee, and the study webpage on the GDOT website.

In addition, inside each Fact Sheet was a stamped questionnaire that residents could fill out, seal, and return to the study team. The study collected ten questionnaires from stakeholders and residents. These responses were collected and added to the Locally Identified Transportation Issues and Needs map found at the end of this section.

7.6 Worth County Locally Identified Transportation Issues and Needs

Stakeholder input from the Agency Kickoff Meeting, Advisory Committee Meeting, stakeholder interviews, and responses to Fact Sheet questionnaires was mapped to create a visual representation of each county's transportation conditions. During the assessment phase, these maps assisted the study team in locating those areas where improvements should be recommended. The issues and needs reported below are numbered in correspondence with the Locally Identified Transportation Issues and Needs maps in **Figures 7.1 and 7.2** on pages 48 and 49.

Roadway Issues and Needs

1. West Road and many others need paving in Poulan.
2. Holcolm Road and about three other roads need paving in Sumner.

Safety/Pedestrian and Bicycle Issues and Needs

3. SR 33 north of Sylvester should have bike lanes to accommodate the bicyclists currently using the facility.
4. In general, all the cities in Worth County have sidewalk issues – lack of sidewalks, no connectivity, and in substandard conditions. Currently, two programs are in place to fund sidewalks near schools, but they are not adequate. Sidewalks are still needed around all the schools and the medical center. SR 112N needs sidewalks. A multi-use path for bikers and pedestrians would be a nice amenity to the County. There is a large group of riders in the

area. The abandoned or seldom used rail line on the east side of Sylvester would provide a nice facility for multi-modal travel.

5. The 'Y' intersection of Cordele Road and Asburn Highway has less than desirable geometry.
6. SR 300 at SR 32 seems to be a high-accident intersection.
7. SR 32 at SR 313 seems to be a high-accident intersection.
8. SR 32 at SR 33 seems to be a high-accident intersection.
9. The City of Sylvester would like a traffic signal on US 82 at East St to improve the operations at this intersection. Others suggested a traffic light at Monk Street at SR 82 in Sylvester. Currently, there are no traffic signals along US 82 in Sylvester east of SR 33. Accidents along US 82 are major concerns for the City of Sylvester, especially near the strip malls characterized by a large number of unsignalized driveways. The City has made efforts to signalize some of these intersections to no avail.
10. Traffic signals on US 82 through Sylvester need retiming.
11. The entrance to the industrial park off of SR 112 may need signalization to safely accommodate traffic.
12. There are high traffic volumes near the post office in Sylvester that cause accidents.

Truck and Railroad Issues and Needs

13. Operational upgrades should be made on SR 133 to accommodate truck traffic. SR 133 should be widened to four lanes (it is currently in the long range plans) to accommodate the traffic to and from Albany. SR 133 was experiencing increasing volumes between Albany and Moultrie. There is a planned project to widen this section of road.
14. Operational upgrades should be made on US 82 (the only 4-lane road in the County) to accommodate truck traffic. US 82 can be congested.
15. Vehicles leaving the Coca Cola distribution facility off US 82 to the west of Sylvester experience difficulty turning left.
16. The Birdsong Peanut Company off US 82, west of Sylvester does not have a median break and trucks are forced to travel past the entrance and make a 'U' turn to get to the plant. A median break would solve this issue.
17. Truck traffic is heavy on SR 33. Also, the roadway edge on SR 33 needs improvements.
18. Truck traffic is heavy on SR 112. SR 112 may require safety upgrades.
19. Truck traffic is heavy on SR 313.

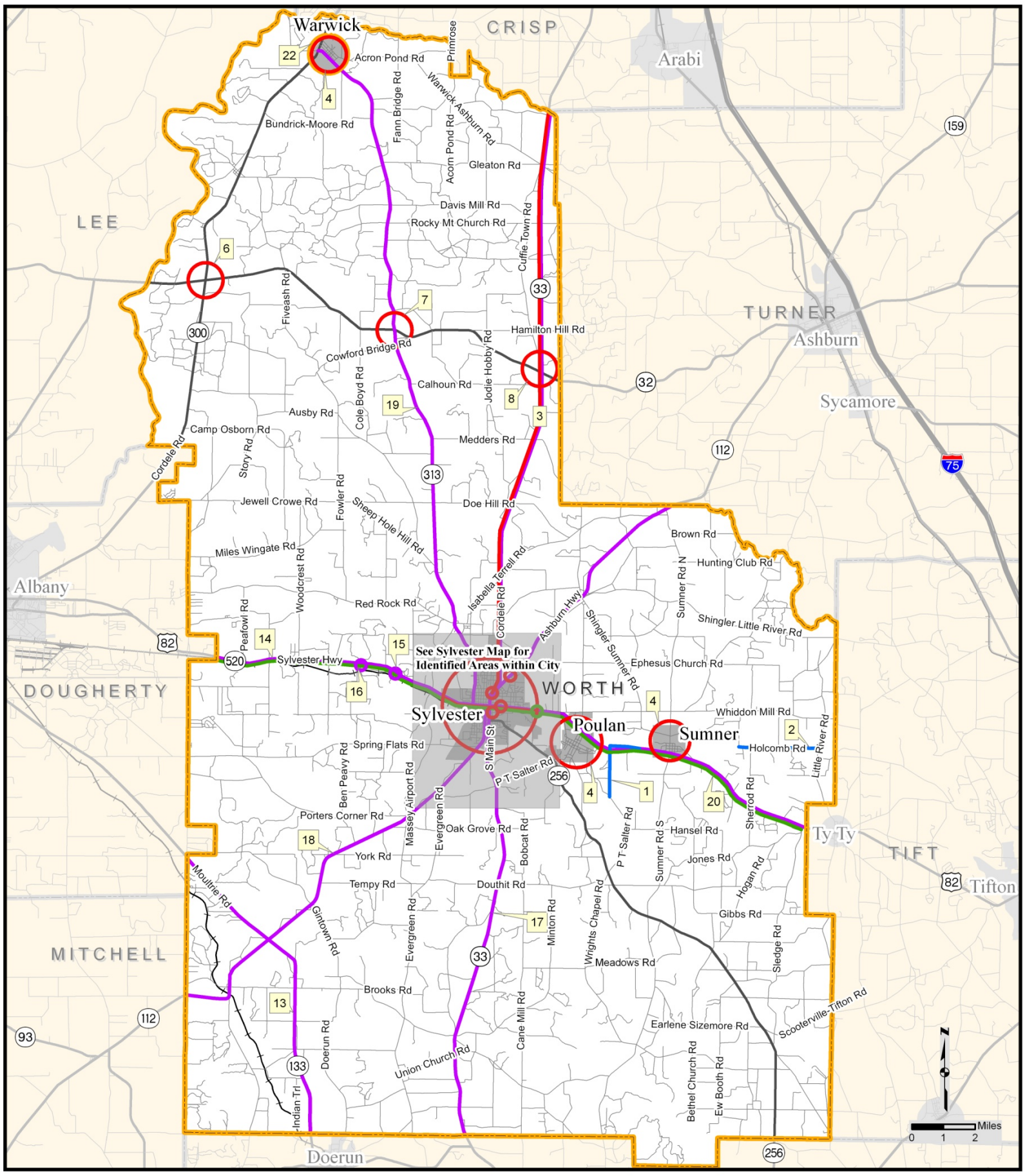
Access/Connectivity Issues and Needs

20. East-west travel to and fro between Albany and Tifton is more predominant than north-south travel in Worth County.
21. There is a planned industrial park in Sylvester. A median break could be added on US 82 for access into the industrial park to attract businesses.

Growth/Development Issues and Needs

22. Warwick in the northern part of the county was experiencing growth due to SR 300.

FIGURE 7.1: WORTH COUNTY LOCALLY-IDENTIFIED ISS UES AND NEEDS



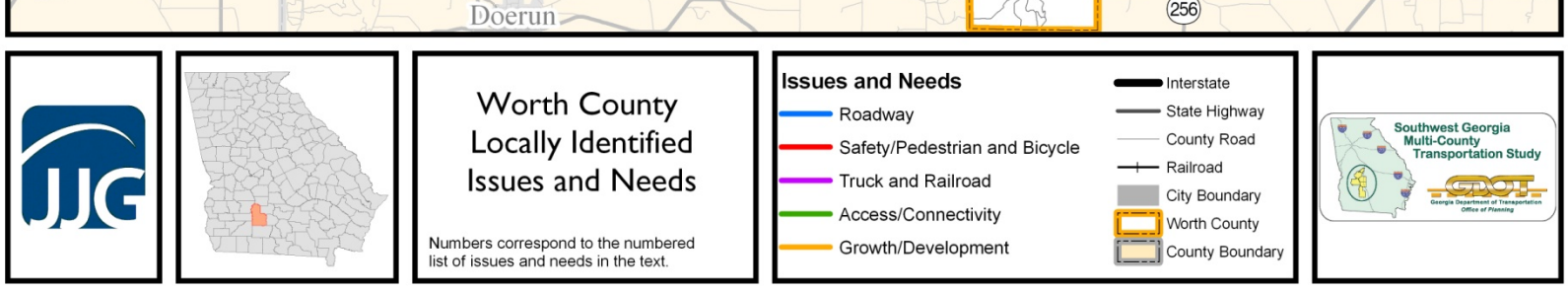
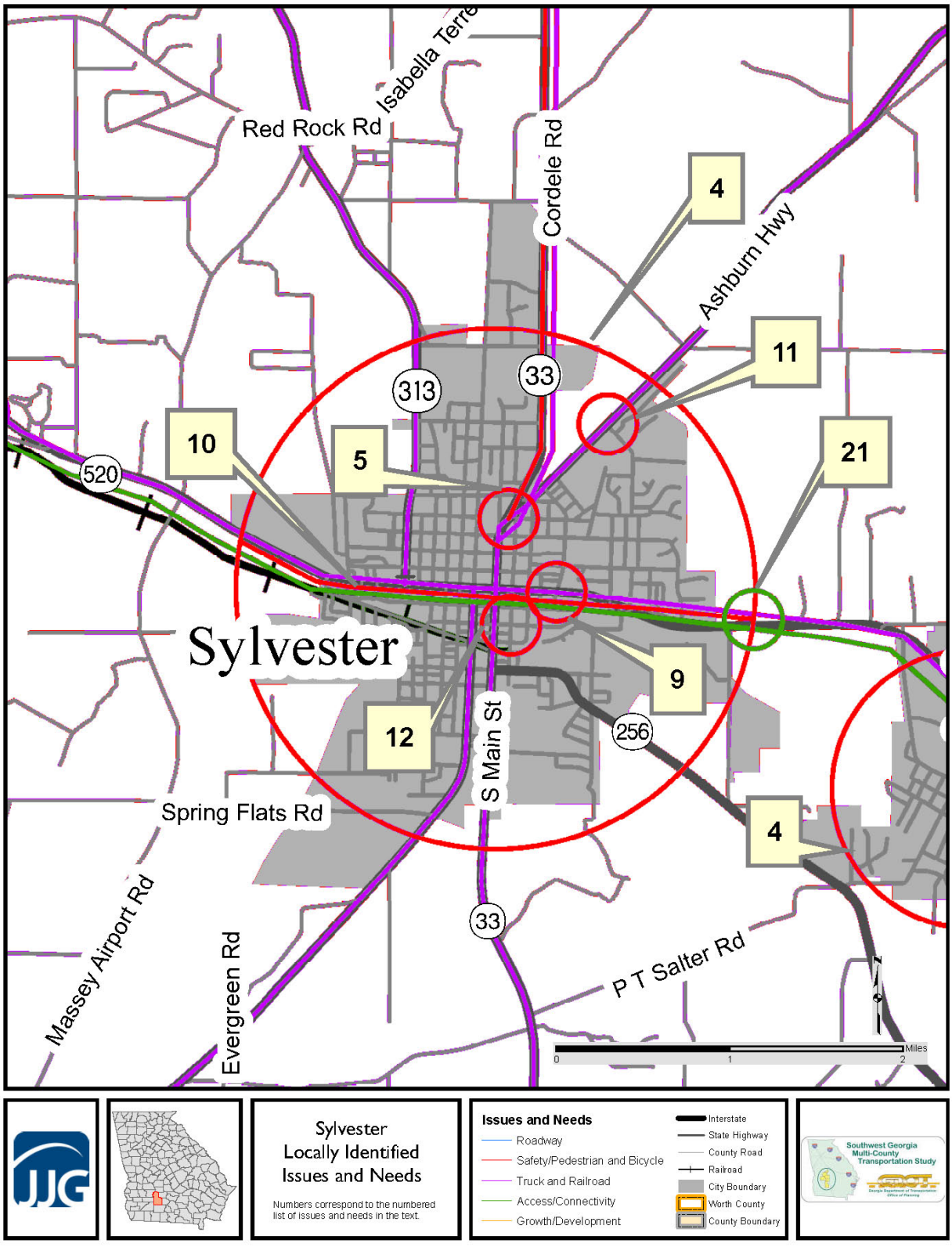


FIGURE 7.2: CITY OF SYLVESTER LOCALLY-IDENTIFIED ISSUES AND NEEDS



8. RECOMMENDATIONS FOR WORTH COUNTY

This section presents the recommended transportation project for Worth County based on the analysis completed as part of this study. The type of projects considered included:

- Capacity Improvements (roadway widenings or new roadways)
- Operational Improvements (interchange or intersection improvements, traffic signal)
- Safety Improvements (roadway or intersection realignments)
- Bridge Replacement or Rehabilitation
- Pedestrian or Bicycle Improvements
- Maintenance

This section describes how the project recommendation was identified, analyzed, and how its planning-level cost was estimated. The final project identified within Worth County is presented with a project sheet providing additional information about the proposed improvement. An inventory of potential funding sources to support the proposed improvement is included at the end of this section.

8.1 METHODOLOGY

Findings from the existing and future conditions, travel demand model projections, field observations, and public and agency input were analyzed to determine the need for potential transportation projects. Due to the six-county size of the study area, bicycle and pedestrian needs identified over the course of this study have been forwarded to the appropriate Regional Commission for review and possible inclusion in their respective regional bicycle and pedestrian plan updates. Locations identified by local agencies and the public as potentially in need of traffic signals, maintenance, or safety measures have been forwarded to the appropriate GDOT District Engineer. Please note that this is a planning-level study, not an official engineering study, and comments or recommendations herein are not a verified reflection of any needed improvements.

The final project recommendation for Worth County can be classified as an operational improvement. Operational improvements are projects that seek to address congestion or safety concerns at intersections or interstate interchanges. These are not roadway segments that need widening, rather, they are bottlenecks in the roadway network that reduce mobility and cause congestion. These projects were identified through local input and field observation. Operational improvements range from the reconstruction of a congested interstate interchange to the addition of turn lanes at a busy intersection.

8.1.1 COST ESTIMATION

Costs were estimated using GDOT Right-of-Way and Utility Relocation Cost Estimate Tool (RUCEST) and Trns-port Cost Estimation System Tool (CES) Software. In addition, Preliminary Engineering costs were set at eight percent of construction costs. Individual assumptions for each project can be found in **Appendix B: Cost Estimates**.

To determine right of way costs, a survey of the project area was conducted using aerial photography and field investigation for adjacent land use types, presence of utilities and potential impacts to homes, businesses and institutions. This information was entered into RUCEST, which determined costs for right of way acquisition based on land use type and county given the additional or new right of way

requirements for the project. RUCEST estimated utility relocation costs by utility type and location, and relocation and improvement costs based on market history. Contingency costs were added to right of way estimates, to cover damages (30 percent), scheduling (55 percent), and administration and court costs (60 percent, all costs cumulative). The resulting right of way and utility cost estimates were included when developing total project costs.

Construction costs were based on width, length and roadway functional classification, to which costs for additional or replacement traffic signals, turn lanes and bridges were added as needed. Turn lanes were included in cost estimates for major intersections or where intersection improvements were deemed necessary. Likewise, traffic signals were included at intersections where widening or other improvements would require their replacement or where they were deemed necessary as an intersection improvement.

In CES, costs for turn lanes were estimated using the same price per ton for asphalt and base/aggregate as the main project; these prices were estimated by CES given size and location of the project. Cost estimates for bridges were determined by CES based on materials costs and historic data. CES construction estimates were utilized in the development of total project costs, which included right of way, utility relocation, and preliminary engineering costs.

8.2 Response to Locally-Identified Needs

During the public involvement process, study stakeholders and the general public were invited to identify transportation needs as they perceived them in the counties in which they live, play and work. These locally identified needs are presented and mapped in Section 8. Each of the perceived needs was then considered for transportation improvements by this study. **Table 8.1** below provides a response to each locally identified need, including projects proposed by this study.

TABLE 8.1: RESPONSES TO LOCALLY-IDENTIFIED NEEDS

Locally Identified Transportation Need	Recommended Activities
West Road and many others need paving in Poulan.	Paving this segment of roadway would improve access and connectivity and is recommended as a potential local project by this study.
Holcomb Road and about three other roads need paving in Sumner.	Paving this segment of roadway would improve access and connectivity and is recommended as a potential local project by this study.
SR 33 north of Sylvester should have bike lanes to accommodate the bicyclists currently using the facility.	Bicycle and pedestrian needs have been forwarded to the Southwest Georgia Regional Commission for study and possible inclusion in the Regional Bicycle and Pedestrian Plan.

Locally Identified Transportation Need	Recommended Activities
In general, all the cities in Worth County have sidewalk issues – lack of sidewalks, no connectivity, and in substandard conditions. Currently, two programs are in place to fund sidewalks near schools, but they are not adequate. Sidewalks are still needed around all the schools and the medical center. SR 112N needs sidewalks. A multi-use path for bikers and pedestrians would be a nice amenity to the County. There is a large group of riders in the area. The abandoned or seldom used rail line on the east side of Sylvester would provide a nice facility for multi-modal travel.	Bicycle and pedestrian needs have been forwarded to the Southwest Georgia Regional Commission for study and possible inclusion in the Regional Bicycle and Pedestrian Plan.
The 'Y' intersection of Cordele Road and Asburn Highway has less than desirable geometry.	This study recommends the realignment of this intersection.
SR 300 at SR 32 seems to be a high-accident intersection.	This intersection does not have a high occurrence of accidents and no improvements are recommended.
SR 32 at SR 313 seems to be a high-accident intersection.	This intersection does not have a high occurrence of accidents and no improvements are recommended.
SR 32 at SR 33 seems to be a high-accident intersection.	This intersection does not have a high occurrence of accidents and no improvements are recommended.
The City of Sylvester would like a traffic signal on US 82 at East St to improve the operations at this intersection. Others suggested a traffic light may at Monk Street at SR 82 in Sylvester. Currently, there are no traffic signals along US 82 in Sylvester eastside of SR 33. Accidents along US 82 are major concerns for the City of Sylvester, especially near the strip malls characterized by a large number of unsignalized driveways. The City has made efforts to signalize some of these intersections to no avail.	A signalization study has been requested at this intersection from the GDOT District Area Engineer.
Traffic signals on US 82 through Sylvester need retiming.	This concern has been forwarded to the GDOT Area Engineer for further study and appropriate maintenance.
The entrance to the industrial park off of SR 112 may need signalization to safely accommodate traffic.	A signalization study has been requested at this intersection from the GDOT District Area Engineer.
Operational upgrades should be made on SR 133 to accommodate truck traffic. SR 133 should be widened to four lanes to accommodate the traffic to and from Albany. SR 133 was experiencing increasing volumes between Albany and Moultrie. There is a planned project to widen this section of road.	Widening of SR 133 is currently included in the GDOT STIP/Work Program.

Locally Identified Transportation Need	Recommended Activities
Operational upgrades should be made on US 82 to accommodate truck traffic. US 82 can be congested.	Existing and projected truck and traffic volumes are accommodated by existing facility. No widening or improvements to this roadway are recommended.
Vehicles leaving the Coca Cola distribution facility off US 82 to the west of Sylvester experience difficulty turning left.	This concern has been forwarded to the GDOT Area Engineer for further study.
The Birdsong Peanut Company off US 82, west of Sylvester does not have a median break and trucks are forced to travel past the entrance and make a 'U' turn to get to the plant. A median break would solve this issue.	This concern has been forwarded to the GDOT Area Engineer for further study and appropriate maintenance.
Truck traffic is heavy on SR 33. Also, the roadway edge on SR 33 needs improvements.	This concern has been forwarded to the GDOT Area Engineer for further study and appropriate maintenance.
Truck traffic is heavy on SR 112. SR 112 may require safety upgrades.	Existing and projected truck and traffic volumes are accommodated by existing facility. No widening or improvements to this roadway are recommended.

8.3 CURRENTLY IDENTIFIED PROJECTS

One mission of the Southwest Georgia Multi-County Transportation Study was to assess currently identified projects, or those projects listed in GDOT's STIP (2008-2011) and Work Program, for their efficacy in remedying the transportation problems of their area. The assessment of currently identified projects in Worth County is presented in **Table 8.2** below.

The Governor's Road Improvement Program (GRIP) consists of proposed economic developmental highways in Georgia. The Georgia General Assembly originally adopted GRIP (Section 32-4-22 of the Official Code of Georgia Annotated (updated 4/29/05)) in 1989, and added new routes in 2001 and 2005. The purpose of GRIP is to foster connectivity among Georgia cities, provide opportunities for growth, and provide safe and effective transportation throughout the state.

TABLE 8.2: CURRENTLY IDENTIFIED PROJECTS IN WORTH COUNTY

GDOT PI No.	Work Type	Description	Recommendation
0007622	Bike/Ped Facility	Bike/Ped in Sylvester	Project addresses previously identified pedestrian and bicycle needs; recommend its continued inclusion in GDOT STIP/Work Program.
0007914	Bike/Ped Facility	City of Sylvester Streetscape	Project addresses previously identified pedestrian and bicycle needs; recommend its continued inclusion in GDOT STIP/Work Program.
0009146	Bike/Ped Facility	Isabella Street Pedestrian Facilities	Project addresses previously identified pedestrian and bicycle needs; recommend its continued inclusion in GDOT STIP/Work Program.

GDOT PI No.	Work Type	Description	Recommendation
432092-	Bridges	SR 32 @ Flint River & Overflow @ Lee/Worth County Line	This bridge provides access and connectivity within the local roadway network and this project's continued inclusion in the GDOT STIP/Work Program is recommended.
0000522	Intersection Improvement	SR 133 @ CR 459/County Line Road @ Worth/Dougherty County Line	Project addresses previously identified safety issue and is recommended for continued inclusion in GDOT STIP/Work Program.
0001572	Turn Lanes	SR 300/US 19 Median Turn Lanes From Dougherty County to Warwick	Project addresses operations issues at this location and is recommended for continued inclusion in GDOT STIP/Work Program.
0000520	Widening	SR 133 From South of SR 35/US 319 to North of Colquitt County Line	Project's continued inclusion in GDOT STIP/Work Program is recommended contingent upon its continued inclusion in GRIP.
0000519	Widening	SR 133 from Colquitt County Line to N of SR 112	Project's continued inclusion in GDOT STIP/Work Program is recommended contingent upon its continued inclusion in GRIP.
0000475	Widening	SR 133 From N of SR 112 to N of CR 459/County Line Road	Project's continued inclusion in GDOT STIP/Work Program is recommended contingent upon its continued inclusion in GRIP.
0004793	Widening	SR 32 from SR 91/Lee to SR 300/Worth	Project's continued inclusion in GDOT STIP/Work Program is recommended contingent upon its continued inclusion in GRIP.
0004794	Widening	SR 32 from SR 300 to SR 313	Project's continued inclusion in GDOT STIP/Work Program is recommended contingent upon its continued inclusion in GRIP.
0004795	Widening	SR 32 from SR 313 to SR 33	Project's continued inclusion in GDOT STIP/Work Program is recommended contingent upon its continued inclusion in GRIP.
0004796	Widening	SR 32 from SR 33/Worth to SR 7/Turner	Project's continued inclusion in GDOT STIP/Work Program is recommended contingent upon its continued inclusion in GRIP.

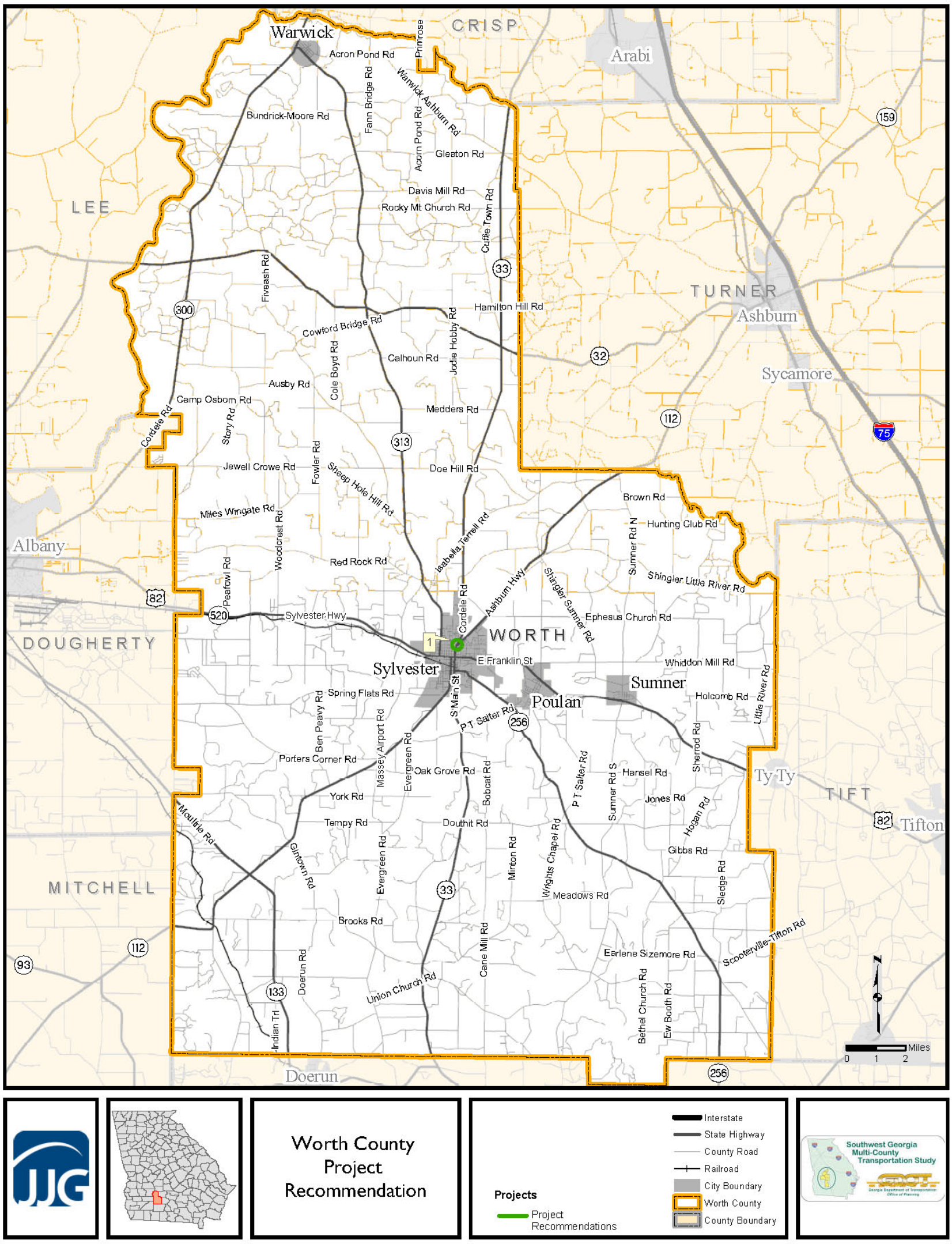
8.4 RECOMMENDED TRANSPORTATION IMPROVEMENTS

From the locally identified needs, field observations, as well as from the results of travel demand modeling projections, a project recommendation for transportation improvements in Worth County was made. This transportation improvement is presented in **Table 8.3** below and mapped in **Figure 8.1** on page 54. A project sheet for the recommendation with further details and location map is presented on page 55.

TABLE 8.3: RECOMMENDATIONS FOR WORTH COUNTY

Map ID	Project Name	Project Description	Cost Estimate
1	Intersection Improvement at SR 33 at SR 112	Re-align “Y” intersection to a 90 degree angle.	$3,645,914.98

FIGURE 8.1: RECOMMENDATIONS FOR WORTH COUNTY



Worth County
Project
Recommendation

Projects
Project Recommendations

Interstate
State Highway
County Road
Railroad
City Boundary
Worth County
County Boundary

8.5 PROJECT SHEET

Project Name: Cordele Road/SR33 and Ashburn Highway/SR 112						
Description: Intersection Improvements at Cordele Road/SR 33 and Ashburn Highway/SR 112					County	Worth
					GDOT District	4
					Congressional District:	2
Traffic Vol.:	2006:	5,200	2035:	6,010	RC/MPO:	Southwest GA RC
Truck %	2006:	16%	2035:	17%	Length (miles):	NA
No. of Lanes	Existing:	NA	Recommended:	NA	Route #:	SR 33, SR 112
Functional Classification:			Urban Principal Arterial		Beginning and Ending Points:	NA

Project Need and Purpose: SR 33 and SR 112 come together on the northern side of Sylvester at a 'Y' intersection. The existing roadway alignment at the intersection has a less than desirable skew angle between the two intersecting roadways. The ideal alignment for an intersection is a perpendicular or 90 degree angle between the intersecting roadways. SR 33 intersects SR 112 at less than 45 degrees, making it difficult for motorists to clearly see oncoming vehicles on the cross road. This project would realign the intersection of these two state routes, providing improved operation and safety for the traffic utilizing this intersection.

Logical Termini: Since this is an operational improvement, the logical termini would be the points at which improvements would tie back into existing roadways.

Project Phase	Preliminary Engineering	Right-of-Way	Utility Relocation	Construction	Total
Cost Estimate	$212,337.47	$351,709.09	$427,654.00	$2,654,218.42	$3,645,914.98

	Project Type (Local/GDOT):	GDOT

Location Map

Intersection Improvement at Cordele Road and Ashburn Highway

8.6 Worth County Recommendations

Table 8.4 on page 58 displays a complete list of projects recommended by this study for Worth County, along with the project limits, configuration, source, type, implementation timeline and potential funding source of each. The source of the recommendation refers to whether the need for the project was first identified by a local representative or by data analysis. The implementation timeline for each project was determined by the general need for the project and the difficulty of financing its implementation. Therefore, projects with higher costs were generally determined to be longer-range in nature. For the purposes of the implementation timeline, short-term projects are expected to be implemented within one to five years; mid-term projects, within five to ten years; and long-range projects, more than ten years from the time of this study. The potential funding sources column notes those funding sources for which each project is eligible. No steps have been taken by this study towards securing such funding nor are any projects guaranteed access to funding.

TABLE 8.4: COMPLETE RECOMMENDATIONS FOR WORTH COUNTY

Project	Project Limits		Configuration		Source	Project Type	Implementation Timeline			Potential Funding Source		
	From	To	Existing	Proposed			Short-term	Mid-term	Long-term	Federal	State	Local
SR 33	SR 112		Y-shaped Intersection	Realigned Intersection	Locally Identified	Intersection Improvement		X		X	X	X
West Road	PT Salter Road	SR 82/US 520	2-lane roadway	2-lane roadway	Locally Identified	Paving		X				X
Holcomb Road	Little River Road	Whiddon Mill Road	2-lane roadway	2-lane roadway	Locally Identified	Paving		X				X

8.7 TRANSPORTATION FUNDING RESOURCES

Planning for and successfully implementing a transportation plan relies on the identification and effective utilization of available transportation funds. Generally, funding is provided at the federal, state and local levels. It is important to note that, while a wide array of funds may be available for transportation improvements, funds at each level are limited.

8.7.1 FEDERAL FUNDING SOURCES

The primary source for relatively costly roadway, transit, bicycle and pedestrian projects is federal funding authorization provided by Safe, Accountable, Flexible, and Efficient Transportation Equity Act: a Legacy for Users (SAFETEA-LU). Federal funding requires that project sponsors contribute a portion of the project's cost, typically 20 percent or more of the total cost. Project sponsors can be state or local, or both. Federal funding sources may be available to those rural roads classified as major collectors or above, or urban roads designated as collectors or above. Due to the large number of projects vying nationwide for federal funding, federal funds are limited and require stringent regulation.

8.7.2 STATE FUNDING SOURCES

State funds are also an important component of transportation funding, primarily for capital projects (those requiring construction or equipment costs). As with federal funds, rural roads classified as major collectors or above, or urban roads designated as collectors or above, are potentially eligible for state funding sources.

The State of Georgia collects two types of taxes on motor fuels to help fund transportation infrastructure projects. Along with the *Prepaid State Tax,* by which three percent of average retail price of fuel is dedicated to transportation, and a bond program, the state of Georgia has the *Fuel Excise Tax,* which places a 7.5 cents tax on each gallon of fuel purchased. Since this tax is based solely on the volume of gasoline sold, it is not indexed to inflation. Revenues increase only with an increase in roadway usage, and revenue increases from travel are offset due to improved engine technology and higher fuel efficiency of vehicles. Due to these factors, the funding ability generated by this tax has been in decline. At this time, State funding is limited, although efforts are underway to identify a potential new source of state funding to supplement the transportation gas tax.

8.7.3 LOCAL FUNDING SOURCES

HB 277 was signed by Governor Sonny Purdue June 2, 2010. The law allows each region to designate a list of selected transportation projects within its boundaries. These projects would be financed by a regional one percent sales tax over ten years, if approved by voters within the region. Project lists will undergo initial developments in the fall of 2010 and referendums will take place in 2012.

Projects along local roads and rural minor collectors are typically funded through local sources. Use of local funding provides local agencies with additional control and direction over the project, but requires expenditure of local resources. Localities within the State of Georgia are able to collect three types of taxes to generate funds for transportation infrastructure projects.

Local governments may, in some cases, also levy fees for this purpose. These may include a *Special Local Option Sales Tax (SPLOST)*, which can be levied by a county via voter referendum for the purpose of raising money to build and maintain transportation and other public facility improvements; *Tax Allocation Districts (TAD)* can fund infrastructure projects, including transportation projects, with bonds

from a limited area targeted for accelerated growth; *Community Improvement Districts (CID)* can fund infrastructure projects, including transportation projects, in a limited area at the discretion of existing commercial property owners; and *Impact Fees,* which are one-time fees charged in association with a new development and are designed to cover part of the cost of providing public facilities to support the development.

Appendix A: Data Sources

Southwest Georgia Multi-County
Transportation Study

October
2010

Georgia Department of Transportation
Office of Planning

APPENDIX A: GIS AND DATA MANAGEMENT FRAMEWORK

Maps for the Southwest Georgia Multi-County Transportation Study were developed using the projected coordinate system of NAD_1983_StatePlane_Georgia_East_FIPS_1001_Feet. GIS data analyzed in the Existing Conditions Report were collected from various sources such as the U.S. Census Bureau, GDOT Roadway Characteristics (RC) data and the Southwest Georgia Travel Demand Model (TDM). Upon completion of the study, all the GIS data will be provided to the client in a CD with a list of the data and their sources. See **Table A.1** for a sample inventory list.

TABLE A.1: GIS DATA INVENTORY

Type	Data	Geographic Type	Source
Socioeconomic & Demographic	Population	Transportation Analysis Zone (TAZ)	Southwest Georgia TDM
	Employment	TAZ	Southwest Georgia TDM
	Minority Population	Census Block	2000 U.S. Census
	Median Household Income	Census Block Group	2000 U.S. Census
Roadway Characteristics	Functional Classification	N/A	GDOT RC Data
	Laneage	N/A	GDOT RC data
	Annual Average Daily Traffic (AADT) Volume	N/A	Southwest Georgia TDM
	Traffic Signals	N/A	Digitized GDOT data
	Crashes (2000 - 2007)	N/A	CARE GDOT Crash Software
	Bridges	N/A	Jan. 2008 GDOT Bridge Inventory
Environmental	Water Features	N/A	National Wetlands Inventory

Worth County LRTP
Appendix B:
Planning-Level Cost Estimate

Southwest Georgia Multi-County
Transportation Study

October
2010

Georgia Department of Transportation
Office of Planning

Worth County Project Recommendation Cost Estimate:

Intersection Improvements to SR 33 at SR 112

Print View Cost Snapshot

CES Project ID: **GDOT PI Number:** **MPO Plan ID:** **Accounting Number:**

Description:
INTERSECTION IMPROVEMENTS AT SR 33/CORDELE RD AT SR 112/ASBURN HIGHWAY

Primary Work Type: Intersection Improvements **Dot District Number:** 4 **Main County:** Worth

Cost Snapshot Name:
WORTH_SR33/SR112_A

Total Amount : $470,150.45

Row Cost Items

Typical Sections
Terrain: Rolling

	Urbanization Level	Typical Section	Width
Existing	**Urban**	**No Roadway**	0 **ft**
Future	Urban	4 Lanes with 14 feet Flush Median (62 feet Pavement) with sidewalks	100 **ft**

Land Costs(help)

County	Land Use Type	Width Needed (ft)	Length Miles	Area in Acres	Cost Per Acre($)	Revised Cost($)	Total Cost($)	Comments	Justification
Worth	Residential	100.00	.18	2.18	30,000.00		65,454.55		-

Last Updated Dates: 3/28/2008

Total Length: 0.18 **mile(s)**

Land Cost SubTotal $65,454.55

Improvement Costs(help)

Improvement	#	Unit Cost($)	Revised Cost($)	Total Cost($)	Comments	Justification
	0	0.00				-

Last Updated Dates 01/01/0001

Improvement Cost SubTotal $0.00

Relocation Costs(help)

Relocation	#	Unit Cost ($)	Revised Cost($)	Total Cost($)	Comments	Justification
	0	0.00				-

Last Updated Dates: 01/01/0001

Relocation Cost SubTotal $0.00

SubTotal (Land + Improvement + Relocation) $65,454.55

Damages Cost Percentage : 30.00 %

Damages Cost $19,636.36

Sub Total $85,090.91

Contingencies Scheduling : 55.00 %

Contingency Cost $46,800.00

SubTotal $131,890.91

Administration And Court Cost : 60.00 %

Contingency Cost $79,134.55

ROW Sub Total $211,025.45

Utility Cost Items(help)

Contingency: 50.00 %

District	Utility Type	Cost Item	Unit Cost ($)	Revised Cost($)	Quantity	Unit	Total Cost($)	Comments	Justification
4	Water	6 inch PVC water lines	30.00		950	lin ft	28,500.00		-
4	Electricity	Power Poles	7,000.00		5	each	35,000.00		-
4	Gas	2 inch plastic gas main (local govt)	25.00		950	lin ft	23,750.00		-
4	Sewer	6 inch and 8 inch PVC sewer lines (gravity)	75.00		950	lin ft	85,500.00		-

Last Updated Dates: 4/4/2008,4/4/2008,4/4/2008,4/4/2008

SubTotal $172,750.00

Contingency SubTotal $86,375.00

Utility Sub Total $259,125.00

Support Documents(help)

Name	Uploaded By	Uploaded Date	Url

Print View Cost Snapshot

CES Project ID: **GDOT PI Number:** **MPO Plan ID:** **Accounting Number:**

Description:
INTERSECTION IMPROVEMENTS AT SR 33/CORDELE RD AT SR 112/ASBURN HIGHWAY

Primary Work Type: Intersection Improvements **Dot District Number:** 4 **Main County:** Worth

Cost Snapshot Name: WORTH_SR33/SR112_B **Total Amount :** $309,208.64

Row Cost Items

Typical Sections
Terrain: Rolling

	Urbanization Level	Typical Section	Width
Existing	**Urban**	**No Roadway**	0 ft
Future	Urban	4 Lanes with 14 feet Flush Median (62 feet Pavement) with sidewalks	100 ft

Land Costs(help)

County	Land Use Type	Width Needed (ft)	Length Miles	Area in Acres	Cost Per Acre($)	Revised Cost($)	Total Cost($)	Comments	Justification
Worth	Residential	100.00	.12	1.45	30,000.00		43,636.36		-

Last Updated Dates: 3/28/2008

Total Length: 0.12 **mile(s)**

Land Cost SubTotal $43,636.36

Improvement Costs(help)

Improvement	#	Unit Cost($)	Revised Cost($)	Total Cost($)	Comments	Justification
	0	0.00				-

Last Updated Dates 01/01/0001

Improvement Cost SubTotal $0.00

Relocation Costs(help)

Relocation	#	Unit Cost ($)	Revised Cost($)	Total Cost($)	Comments	Justification
	0	0.00				-

Last Updated Dates: 01/01/0001

Relocation Cost SubTotal $0.00

SubTotal (Land + Improvement + Relocation) $43,636.36

Damages Cost Percentage : 30.00 %

Damages Cost $13,090.91

Sub Total $56,727.27

Contingencies Scheduling : 55.00 %

Contingency Cost $31,200.00

SubTotal $87,927.27

Administration And Court Cost : 60.00 %

Contingency Cost $52,756.36

ROW Sub Total $140,683.64

Utility Cost Items(help)

Contingency: 50.00 %

District	Utility Type	Cost Item	Unit Cost ($)	Revised Cost($)	Quantity	Unit	Total Cost($)	Comments	Justification
4	Water	6 inch PVC water lines	30.00		630	lin ft	18,900.00		-
4	Gas	2 inch plastic gas main (local govt)	25.00		630	lin ft	15,750.00		-
4	Sewer	6 inch and 8 inch PVC sewer lines (gravity)	75.00		630	lin ft	56,700.00		-
4	Electricity	Power Poles	7,000.00		3	each	21,000.00		-

Last Updated Dates: 4/4/2008,4/4/2008,4/4/2008,4/4/2008

SubTotal $112,350.00

Contingency SubTotal $56,175.00

Utility Sub Total $168,525.00

Support Documents(help)

Name	Uploaded By	Uploaded Date	Url

TEXT FILE ATTACHMENT – for CES project WORTH_SR33/SR112

PI # WORTH_SR33/SR112 TPRO Description: ***INTERSECTION IMPROVEMENTS AT SR 33/CORDELE RD AT SR 112/ASBURN HIGHWAY***
Date estimate done: 03/01/2010
Estimate done by: *Audra Rojek* Agency: *JJG*
Let With: PI # _____ (if applicable)

Total Cost of Entire Project (including all bridges, signals, intersections, turn lanes, etc.) = 2,654,218.42

Total Length: .30 miles Width assumed: 56 feet Concept: New four lane roadways with sidewalks

A: SR 33 realignment North
Length: .18 miles Width assumed: 56 feet Concept: New four lane roadway with sidewalks

Area Type Assumptions:
Area type (Urban or Rural) Urban
Primary County for Costing: WORTH

Widening Width Assumptions:
New Travel Lanes includes inside and outside shoulders + curb & gutter and sidewalks
Total – 56'

Earthwork Percent Assumptions:
Earth work appropriate for rolling Georgia region.

B: SR 33 realignment South
Length: .12 miles Width assumed: 56 feet Concept: New four lane roadway with sidewalks

Area Type Assumptions:
Area type (Urban or Rural) Urban
Primary County for Costing: WORTH

Widening Width Assumptions:
New Travel Lanes includes inside and outside shoulders + curb & gutter and sidewalks
Total – 56'

Earthwork Percent Assumptions:
Earth work appropriate for rolling Georgia region.

Intersection Improvements (Turn lanes)
All turn lanes are assumed to have the same unit costs per ton for Asphalt and Base/Aggregate as the main widening project to produce a more accurate planning level cost estimate. These units costs are:
Asphalt: $ 60.65692 per ton
Base/Aggregate: $ 41.65841 per ton

Intersection #1
Description: Intersection improvement at SR 33 at SR 112
Includes left and right turn lanes on SR 112 approaches
Intersection of State Route with: State Route Speed (Low/High): Low Median (Narrow/Wide): Narrow
Left turn lanes: 350' / 14' Quantity 1
Right turn lanes: 275' / 12' Quantity 1

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Total number of turn lanes by Type: Type A: 275’ by 14’ Quantity 1 Total length: 0.0663 miles Total CES Cost Estimate: $ 113,617.95 Type E: 275’ by 12’ Quantity 1 Total length: 0.0521 miles Total CES Cost Estimate: $ 74,912.92