

TROUP COUNTY

Multi-Modal Transportation Study

MULTI-MODAL TRANSPORTATION PLAN REPORT

November 2006

PREPARED FOR

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ES-1.0 Introduction

Growth in Troup County has resulted in increased travel demand. The Georgia Department of Transportation (GDOT), in conjunction with Troup County and the City of LaGrange, initiated a study to develop a Multi-Modal Transportation Plan to serve the County through the planning horizon, 2035. HNTB coordinated with GDOT, Troup County, local cities and other partners in the planning, development, review, and approval of study recommendations. Additionally, a comprehensive and interactive public involvement program was conducted. This ensured that recommended transportation improvements were not only coordinated with various governments, but afforded individual citizens and interested groups the opportunity to provide their input in developing and evaluating potential improvements to the County's transportation network.

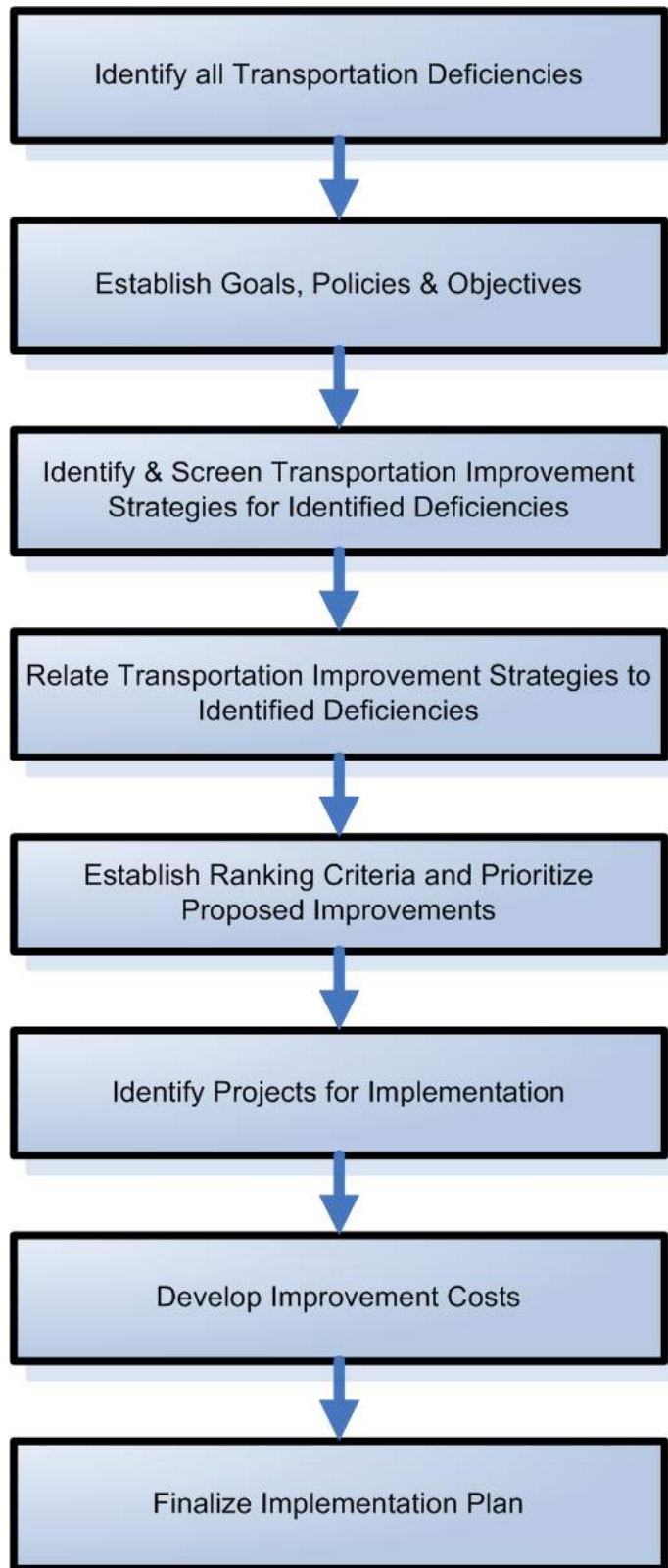
Ultimately, study efforts produced a Long Range Transportation Plan (LRTP) that guides the efficient movement of people and goods within and through the County through the horizon year of this study, 2035. Interim year analysis was conducted for the year 2015. The format of the LRTP, and the process by which it was developed, is prescribed by federal legislation known as the Transportation Efficiency Act for the 21st Century (TEA-21) and the most recent federal transportation legislation, the Safe, Accountable, Flexible, Efficient, Transportation Equity Act – A Legacy for Users (SAFETEA-LU). As part of this effort existing and future operating conditions were documented for the following modes: highways, bicycle and pedestrian improvements, freight, transit, railways and airports. Figure ES-1.0 displays a flow chart depicting the study process.

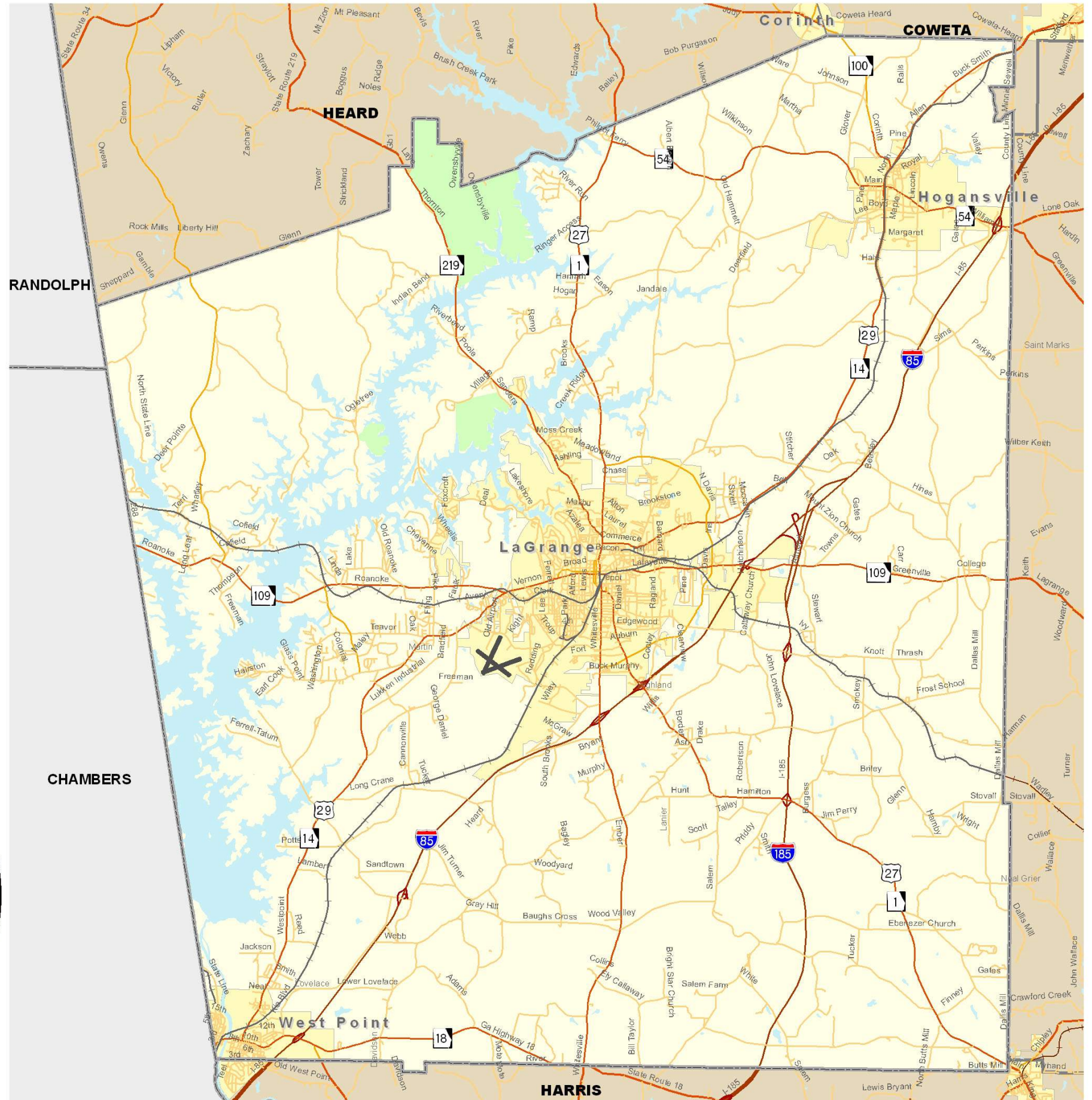
ES-1.1 Study Area Description

Troup County is located in west Georgia on the Alabama border southwest of Atlanta and north of Columbus and covers a land area of approximately 414 square miles. There are three incorporated municipalities within Troup County – LaGrange, West Point, and Hogansville. The study area is displayed in Figure ES-1.1.

Troup County is traversed by the I-85 corridor, one of the Southeastern US's most dynamic corridors for economic development and business growth. In recent years, communities located in the I-85 corridor from Virginia to Alabama have recognized the economic importance of the corridor in attracting manufacturing, distribution, logistics, and warehousing operations and the associated residential, commercial, and office development that supports these valuable businesses. The significance of the population and commercial growth in this multi-state corridor has even prompted the states to examine the feasibility of introducing new interstate rail service in the I-85 corridor connecting the Middle Atlantic and Southern states from Richmond, Virginia to Birmingham, Alabama. The appeal of this corridor to attract growth is recognized by the decision of KIA Motor Corporation to locate a manufacturing facility in West Point.

Figure ES-1.0
Study Process





ES-2.0 Public and Stakeholder Involvement

The purpose of the public involvement program was to inform the public and include them in the decision-making process. Area stakeholders, individual citizens and interested groups were given multiple opportunities to become involved in the planning process. Citizens with an interest in the study were informed of the study's progress and provided various forums for input into the decision-making process, including newsletters and web site updates. Through the public involvement process, the Study Team was able to identify improvements that meet the needs of stakeholders and residents of Troup County. Table ES-2.0 documents the public involvement activities during this study.

Table ES-2.0
Public Workshop Participation

Meetings	Date	Location	# of Newsletters	# of Attendees	# of Comments
Workshop #1	31-Jan-06	Troup County Government Center	350	81	31
Workshop #2	30-Mar-06	Troup County Government Center	450	99	15
Workshop #3	25-July-06	West Point Recreation Center Gym	500	400	18

Additionally, the Study Team was available for presentations to other groups. As part of this effort presentations were made to the residents of Vernon Road, West Georgia Flyers and Troup County Historical Preservation Society. A complete summary of public involvement activities is provided in the Public Involvement Report.

ES-3.0 Demographic Information

Table ES-3.0 presents selected demographic data to more fully illustrate the characteristics of the population living in Troup County, its households, and other socio-economic factors.

Table ES-3.0
Year 2000 General Demographic Characteristics

Demographic	Troup County
Total Population	58,779
Median Age	34.6
Households	21,920
Average Household Size	2.61
Total Housing Units	23,824

Source: 2000 US Census

ES-3.1 Future Population

Table ES-3.1 displays the projected growth, provided by the Troup County Comprehensive Plan, for Troup County through the horizon year of 2035.

**Table ES-3.1
Projected Population**

	2000	2005	2010	2015	2020	2025	2030	2035
Projected Population	58,779	62,619	66,458	73,177	79,896	91,655	103,413	113,500

Source: Troup County Comprehensive Plan

ES-3.2 Employment Data

In Troup County, manufacturing is the largest employment sector providing about one-third of the total jobs. Other important sectors are education, services and retail trade. Among the major employers in the County are Milliken & Co. (1,750 employees), Wal-Mart (1,600 employees), West Georgia Medical Center (1,300 employees), Interface (900 employees), and Duracell (475 employees). Thirty-five companies in Troup County employ 100 or more employees. The number, type, and location of jobs in the County have direct implications to the types of transportation facilities needed by business operators and employees in the area. The County's per capita income (\$17,626) in 1999 was significantly lower than Georgia's statewide average of \$27,324 and the national average of \$28,546.

ES-4.0 Land Use and Development

Based on Troup County's 1993 Comprehensive Plan, currently being updated, the existing and future land use patterns for the County continue to show a substantial percentage of land devoted to residential and agricultural land uses. Development is projected to occur both north and south of LaGrange – with concentrations in the southeast and southwest quadrants. Additionally, at the time of this study a major employment center (KIA Motors facility) was anticipated just north of West Point. These two factors suggest that transportation enhancements will be required to adequately service future travel demand, particularly employment related demand throughout the County.

ES-5.0 Previous Studies

An effective Transportation Plan coordinates with other planning efforts to ensure continuity between planning documents and to ensure that goals and related projects for the transportation system are consistent with the established community vision. It is important to recognize that this Plan is not the first transportation planning effort for the County. GDOT continually conducts planning efforts throughout the state – this study will build on these efforts. The following planning studies and programs were reviewed:

- GDOT State Transportation Improvement Program and Six Year Construction Work Program;

- GDOT Statewide Bicycle and Pedestrian Plan (GABPP);
- GDOT Statewide Interstate System Plan;
- Chattahoochee - Flint Regional Development Center (RDC) Bicycle and Pedestrian Plan;
- Troup County Comprehensive Plan; and,
- City of LaGrange Comprehensive Plan.

ES-6.0 Assessment of Transportation Facilities

Extensive data was collected for the transportation facilities within Troup County. Based on the existing conditions inventory and assessment, an analysis of operating conditions was conducted for the following elements:

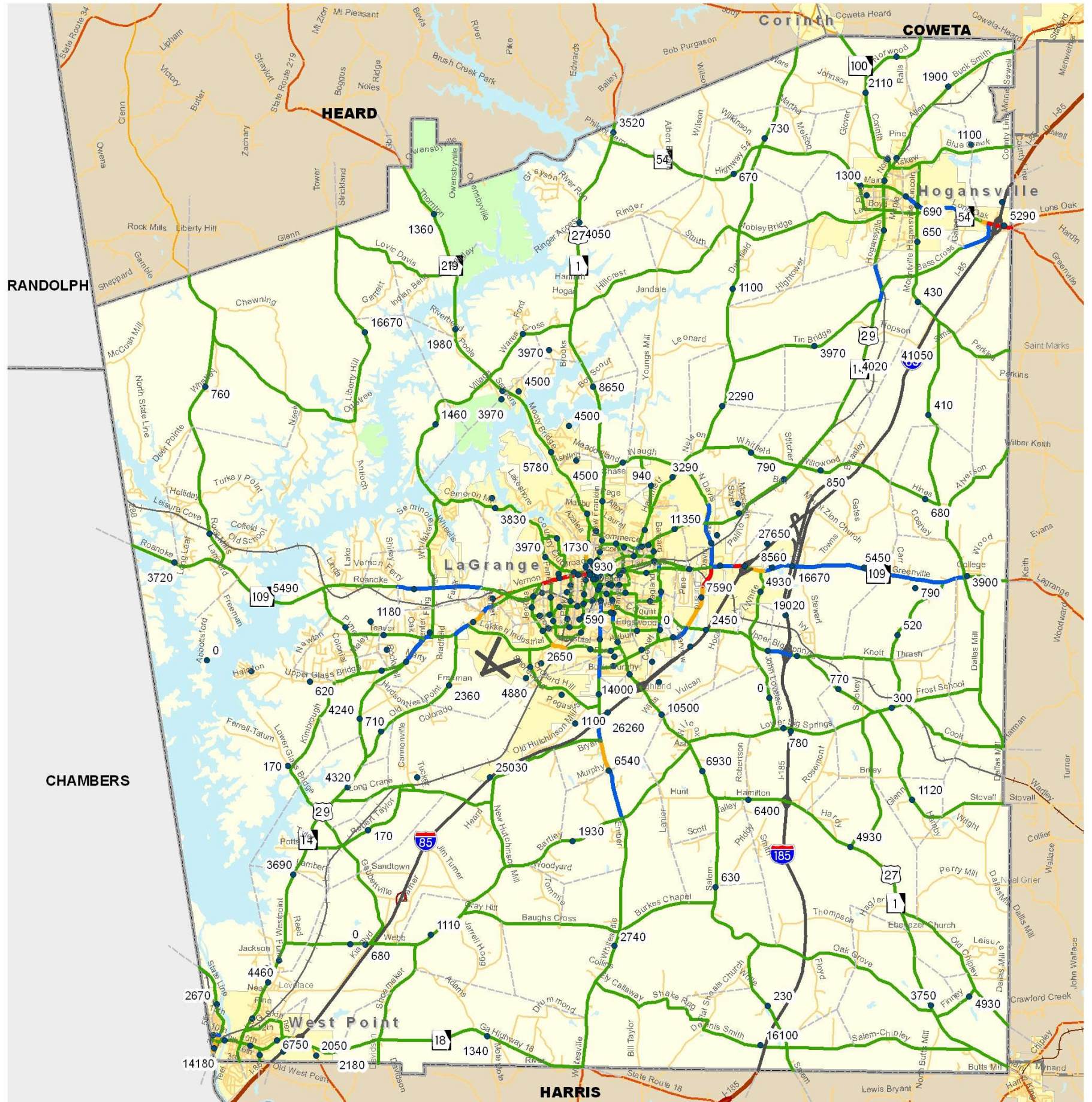
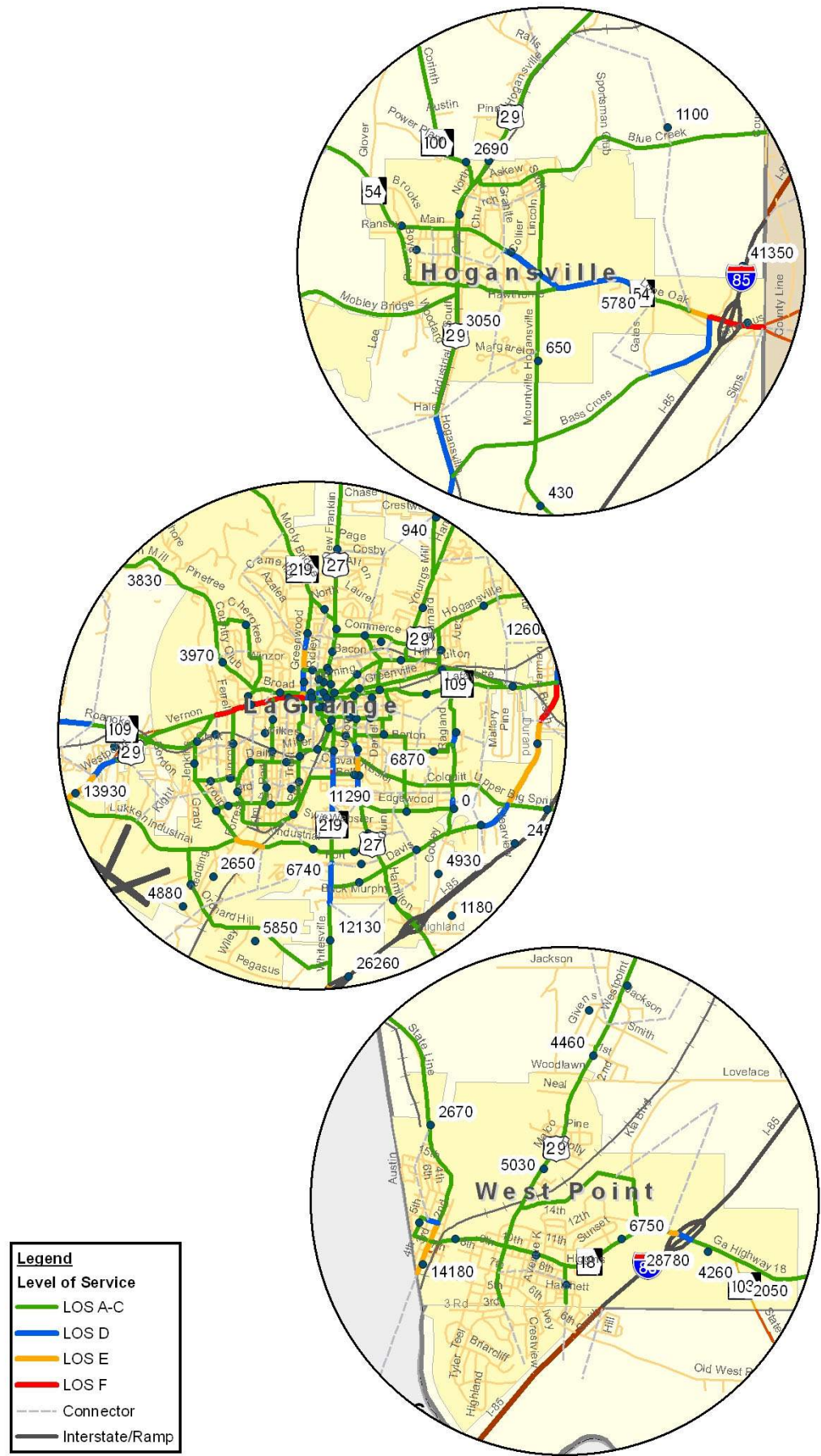
- Public Transit;
- Freight;
- Aviation Facilities;
- Bicycle and Pedestrian Facilities;
- Bridge Inventory;
- Safety Assessments;
- Roadway Operating Conditions; and,
- Citizen and Stakeholder Input.

ES-6.1 Sketch Planning Tool

In addition to the collected data, a county level sketch planning tool was developed to assist in the evaluation of existing and future travel conditions through the County. The key output from the sketch planning tool is a volume to capacity ratio for each roadway segment. The volume to capacity ratios correspond to a level of service based on accepted methodologies from the 2000 Highway Capacity Manual. A qualitative description of the different levels of service is provided below.

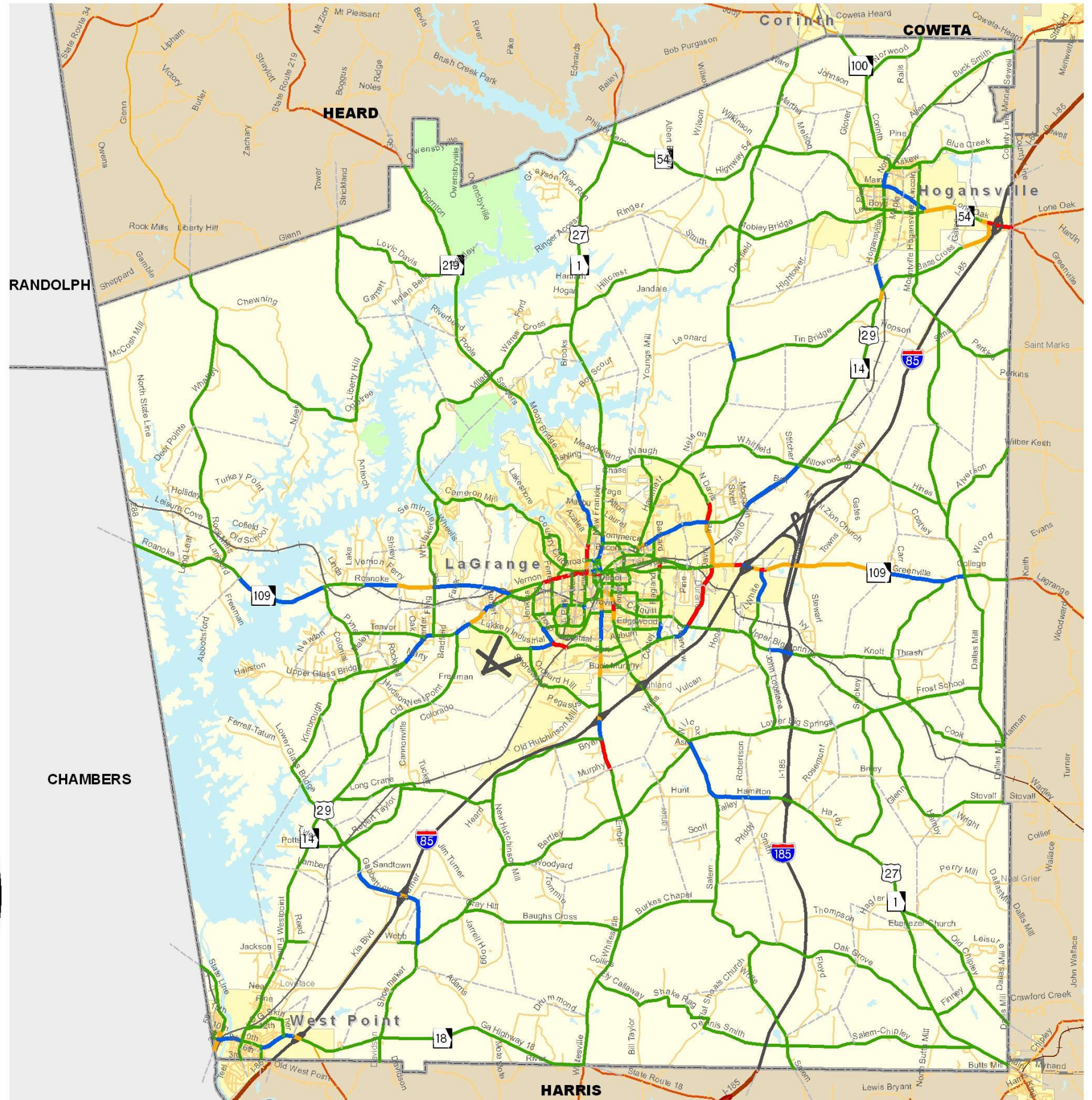
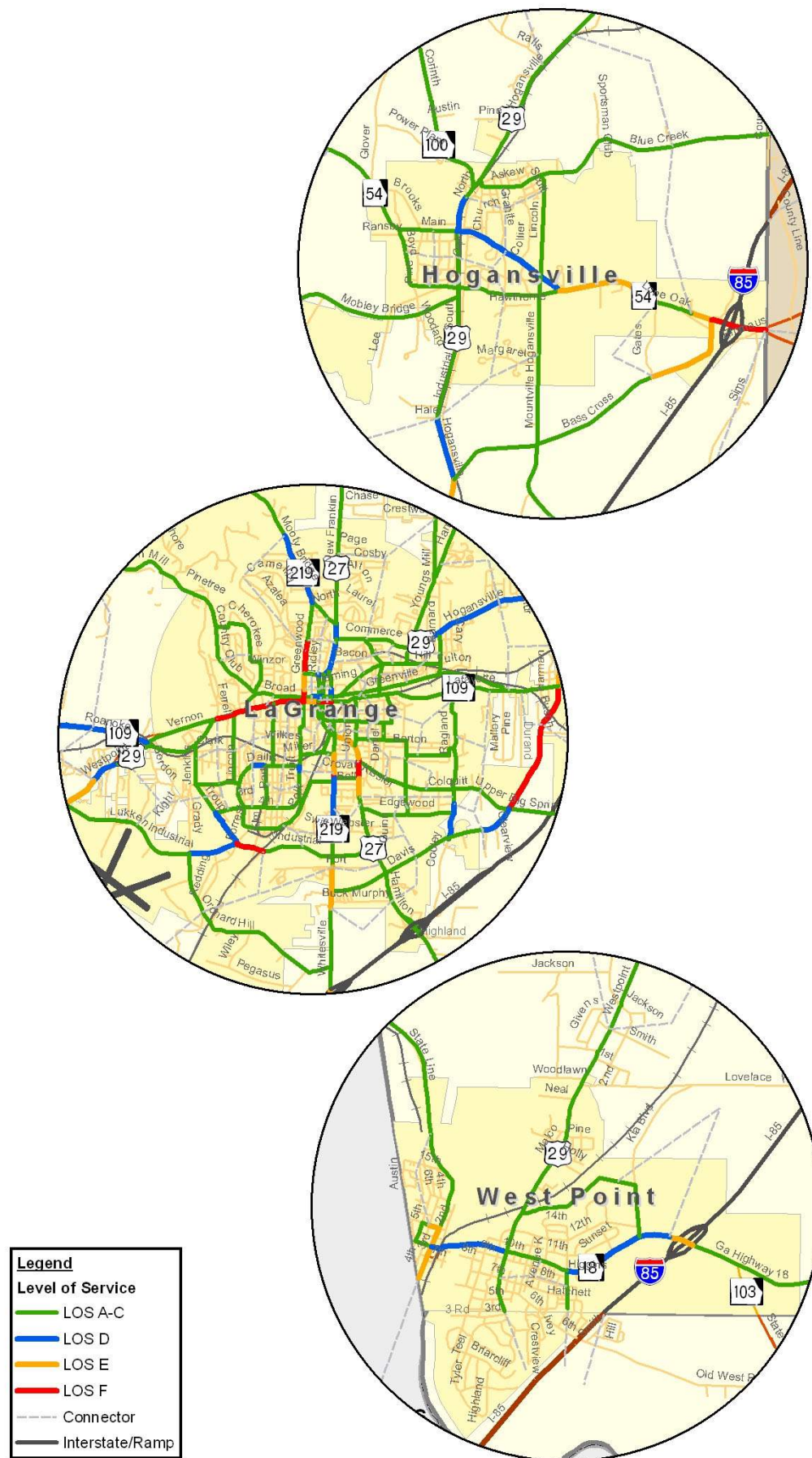
- **LOS A** – Drivers perceive little or no delay and easily progress along a corridor.
- **LOS B** – Drivers experience some delay but generally conditions are favorable.
- **LOS C** – Travel speeds are slightly lower than the posted speed with noticeable delay in intersection areas.
- **LOS D** – Travel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

Figures ES-6.1 through ES-6.3 display the level of service on Troup County's roadway network for the study years 2004, 2015 and 2035.

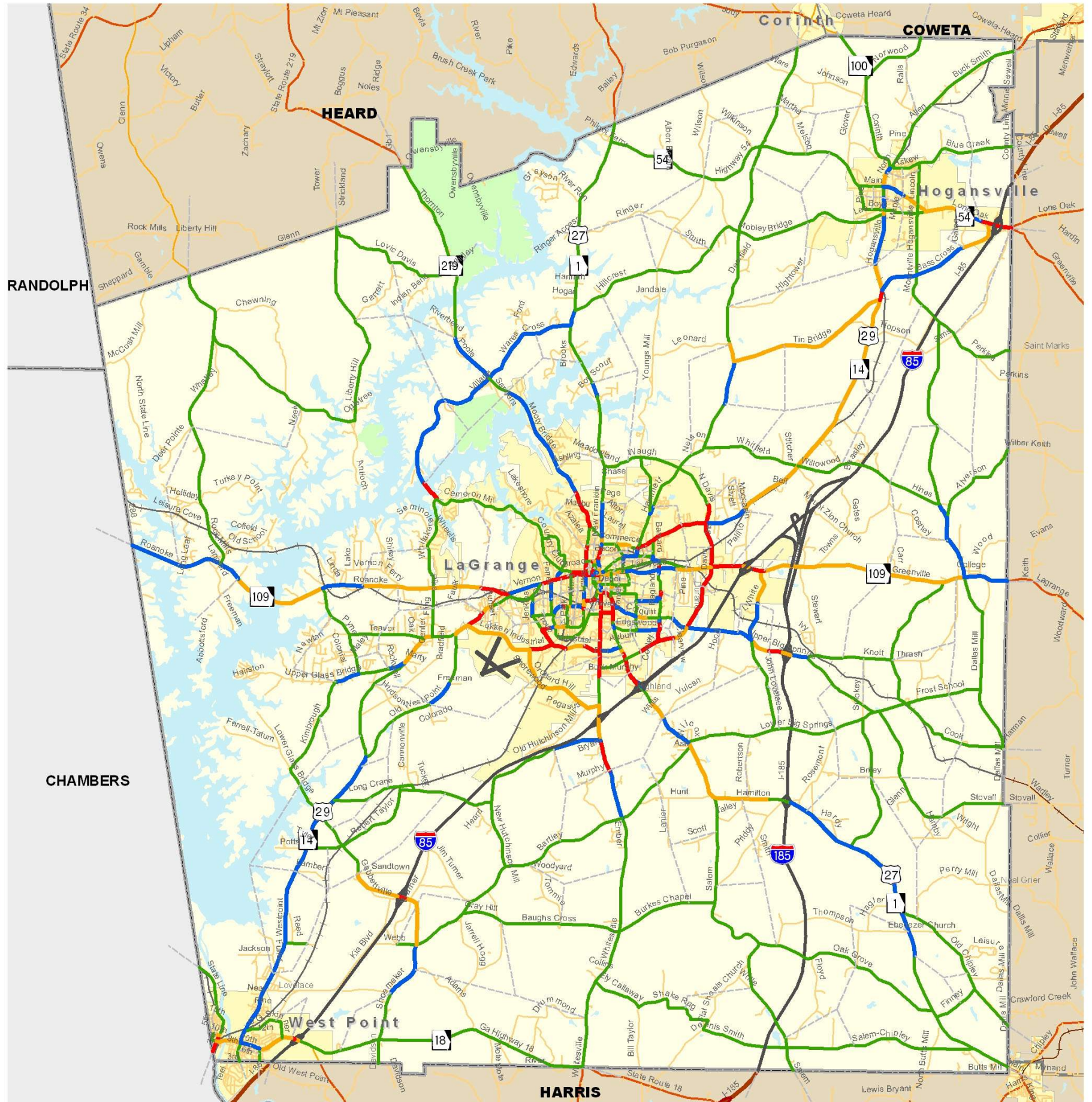
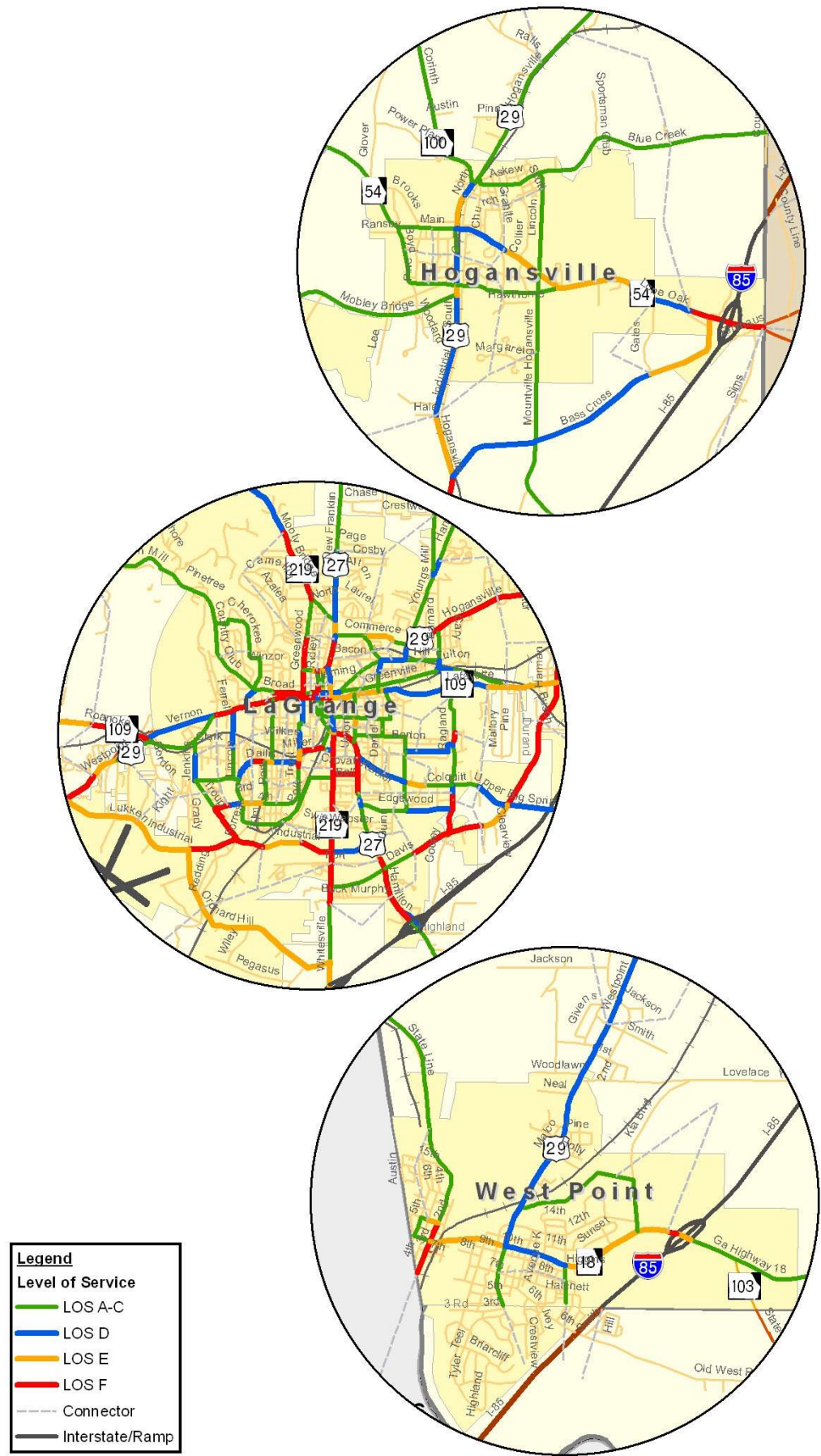


Existing Daily Deficient Segments
Troup County Multi-Modal Transportation Study

Figure No: ES-6.1



2015 Daily Deficient Segments
Troup County Multi-Modal Transportation Study



2035 Daily Deficient Segments
Troup County Multi-Modal Transportation Study

Figure No: ES-6.3

Development of the sketch planning tool followed the process presented below:

- Network Development;
- Traffic Analysis Zone (TAZ) Development;
- Traffic Count Database Development;
- O-D Matrix Estimation; and,
- Traffic Assignment Process.

The development of the future conditions sketch planning tool is as follows:

- Network Development;
- Trip Table Forecasting; and,
- Traffic Assignment.

ES-6.2 Summary of Key Findings

This study addresses most modes of passenger travel: including auto, public transportation, bicycle and pedestrian, freight, and aviation. Some of the key findings of the data analysis report include:

Previous and On-Going Studies

- 42 projects in the Statewide Transportation Improvement Program and Construction Work Program

Roadway System Characteristics

- 175 miles of State and US Roads
- 543 miles of County Roads
- 194 miles of Collectors and Local Streets

Public Transportation

- 58,334 one-way trips with Troup Transit in 2005

Freight Transport

- 7 designated truck routes: I-85, I-185, US 27, US 29, SR 18, SR 109, and SR 219
- 60 miles of rail line operated by CSX

Airports

- LaGrange-Callaway Airport (LGC)
 - Level III airport
 - 2 runways - 5,600' x 150' and 5,000' x 100'

Bicycle and Pedestrian Facilities

- 4 pedestrian fatalities from 2002 to 2004
- Additional infill and sidewalks recommended within a one-mile buffer of schools, libraries, parks and community centers

Bridges

- 165 bridges
- 23 bridges with a sufficiency rating less than 50 – meaning they are candidates for rehabilitation or repair.
- 18 additional bridges have a sufficiency rating less than 75 and may be considered candidates for rehabilitation or replacement through the horizon year, 2035.

Safety

- 6,847 crashes
- 2,111 injuries
- 45 fatalities (16 on Interstates)
- 11 intersections with 30 or more crashes over the three-year analysis period
 - US 27 & US 29
 - US 29 & Davis Road
 - US 29 & S Greenwood Street
 - US 27 & N Lafayette Square
 - Davis Road & SR 109
 - Broad Street & SR 219
 - US 29 & Horace King Street
 - US 29 & Broad Street
 - US 29 & SR 109
 - US 29 & Forrest Avenue
 - US 29 & Hartwell Avenue

Deficient Segments

- Existing - 10 deficient segments
- 2015 - 15 deficient segments
- 2035 - 28 deficient segments

ES-7.0 Goals and Objectives

Using existing plans, meetings with County and GDOT staff and input received from the general public, the following Goals and Objectives were established to guide the transportation decision-making process for Troup County.

- Goal 1.0 - Strategic Investment to Provide Connectivity and Accessibility throughout the County
- Goal 2.0 - Optimize Utilization of Existing Infrastructure for the Safe and Efficient Movement of People and Goods
- Goal 3.0 - Accommodate Users without Access to Automobiles
- Goal 4.0 - Provide a Range of Mobility Options
- Goal 5.0 - Provide a Connection Between Land Use and Transportation Decisions
- Goal 6.0 - Enhance the Quality of Life for All Residents

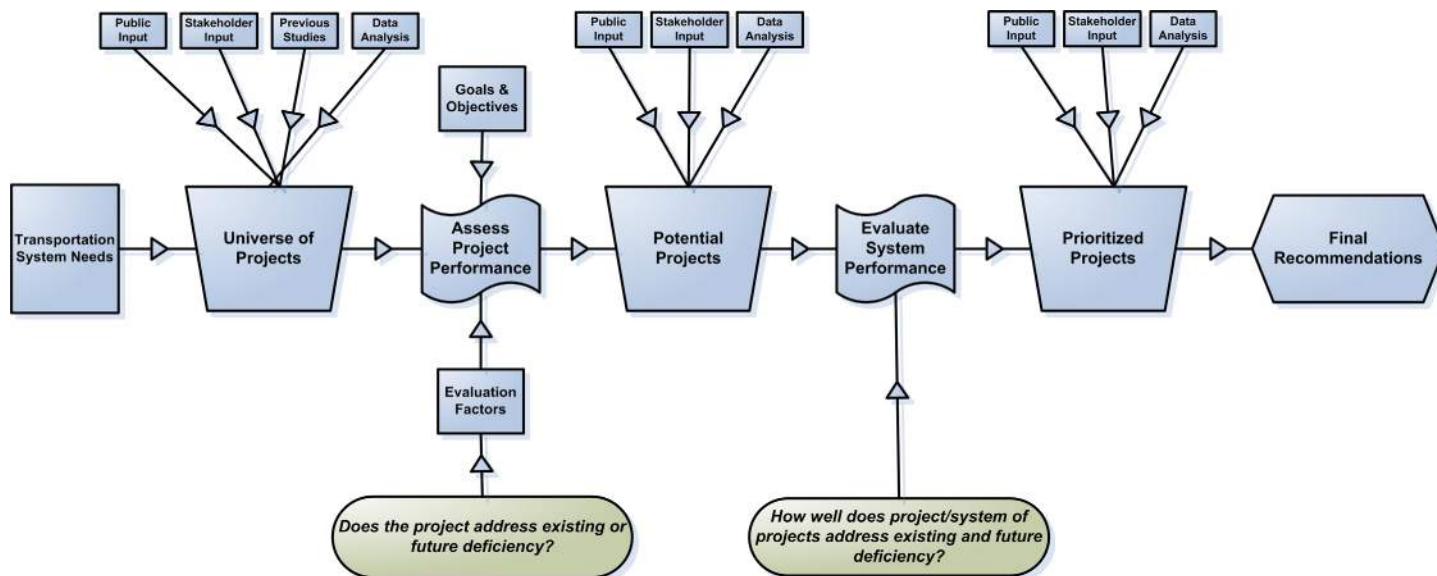
ES-8.0 Improvement Development Process

After the existing and future conditions were evaluated, strategies were developed to address identified deficiencies. Improvements were developed for each element of the transportation system:

- Deficient Roadway Corridors;
- Bicycle and Pedestrian;
- Transit;
- Freight;

- Aviation; and,
- Summary of Citizen and Stakeholder Input.

The figure below illustrates the improvement development process.

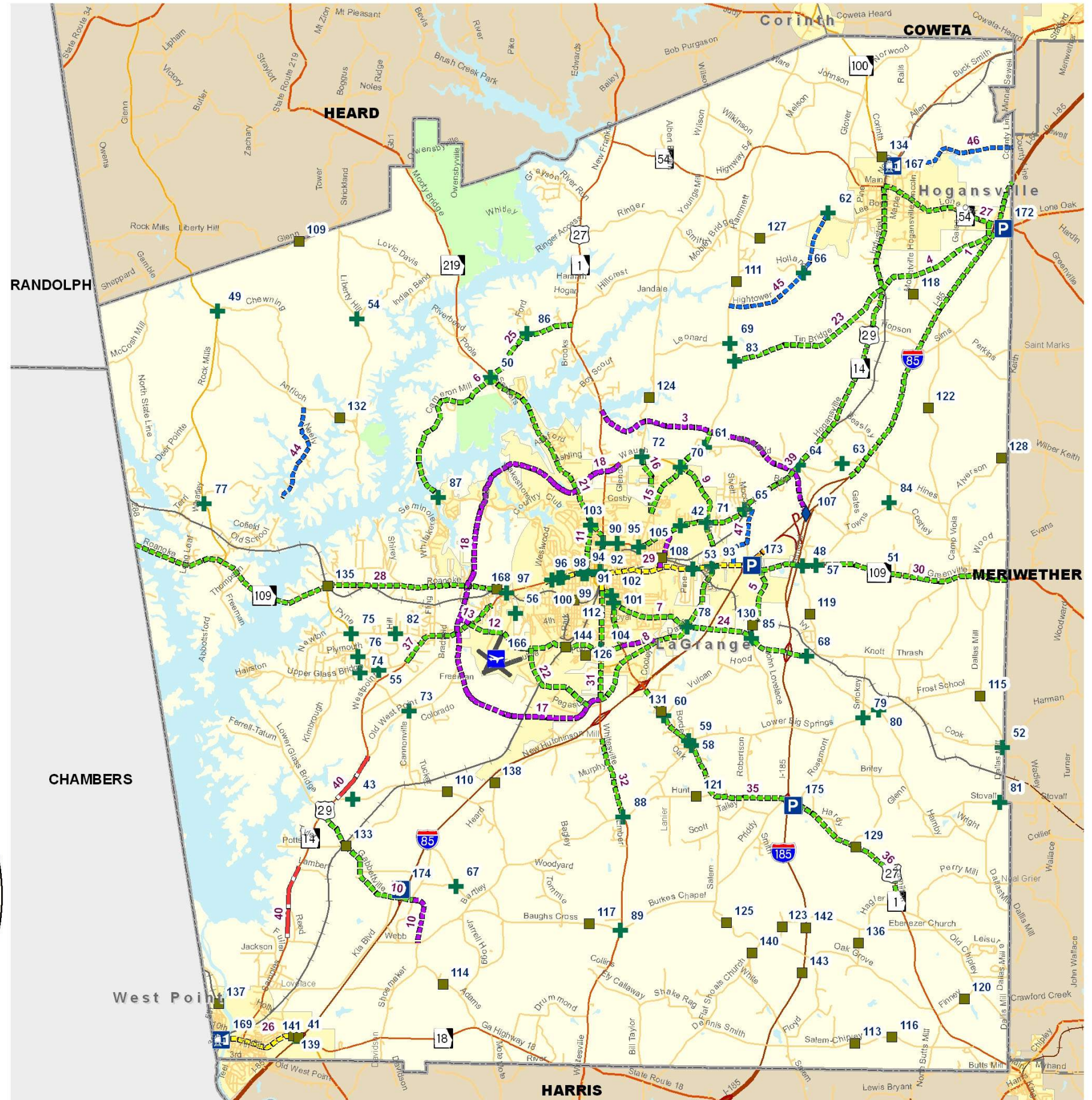
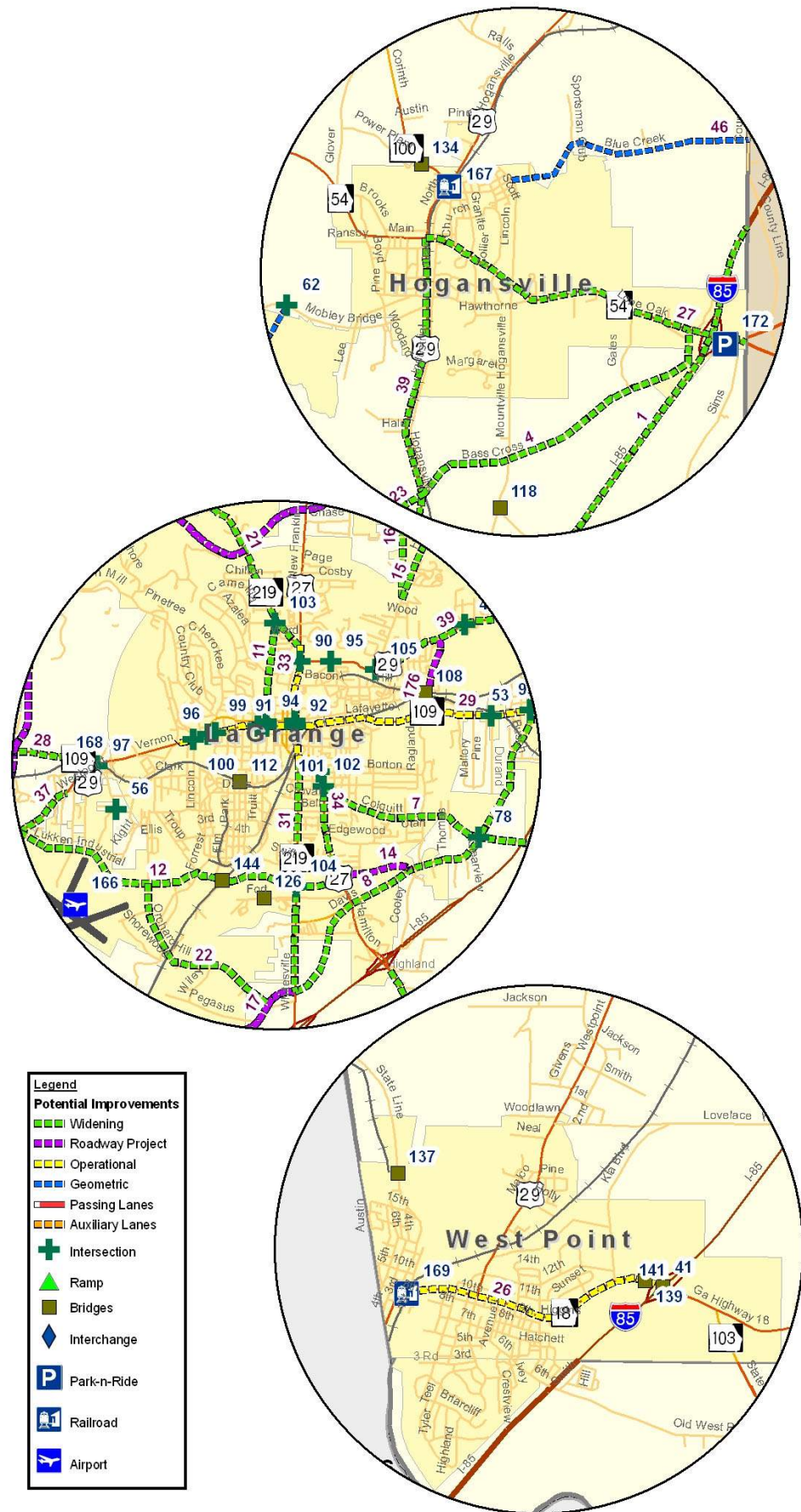


ES-9.0 Improvement Recommendations

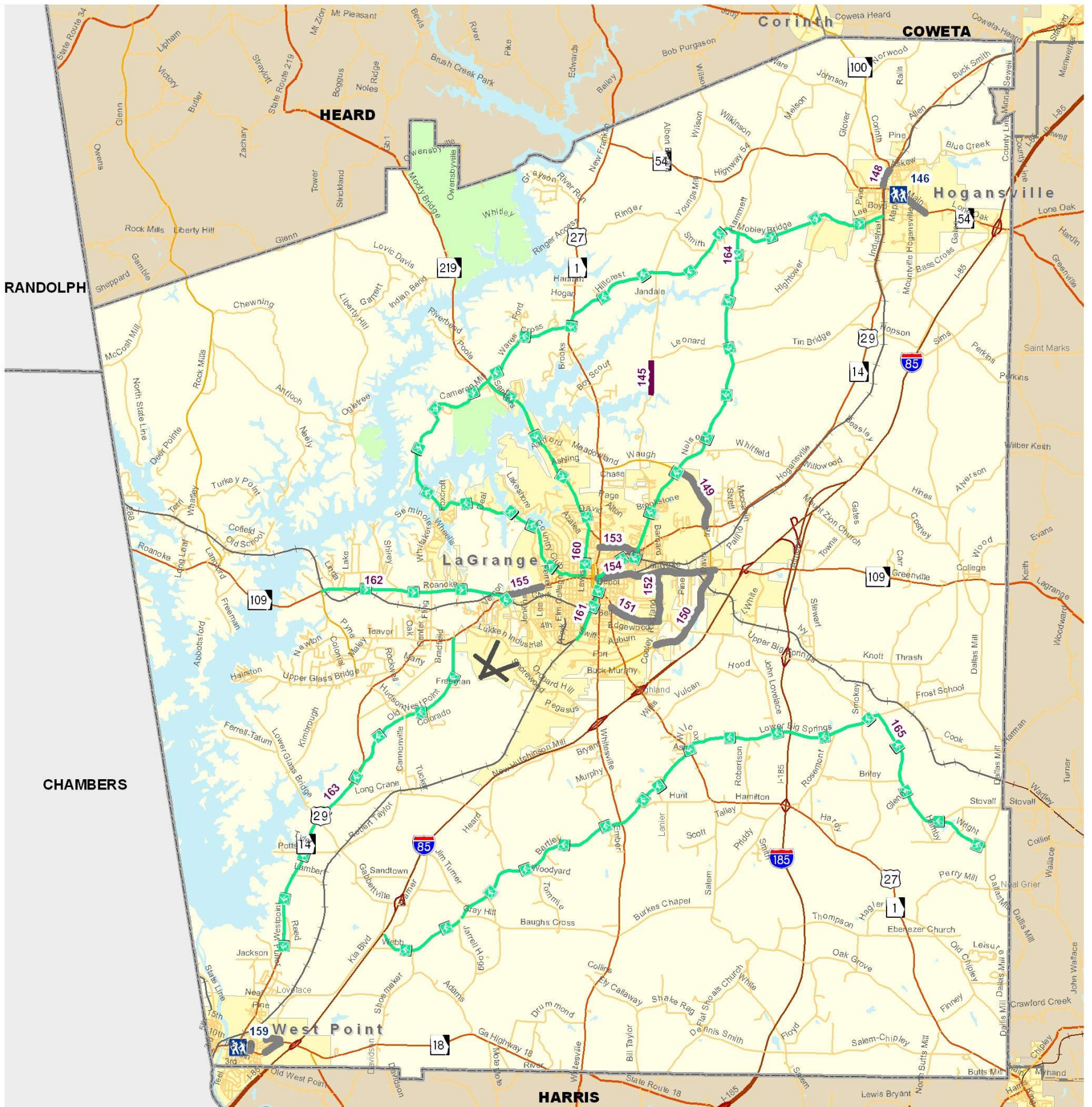
Based on the analysis completed as part of this study, a listing of recommended projects was created for Troup County. This listing includes:

- Capacity Improvements and New Roadways;
- Intersection and Geometric Improvements;
- Bridge Improvements;
- Bicycle and Pedestrian Improvements;
- Airport Improvements;
- Rail Improvements; and,
- Transit Improvements.

This information is presented in Table ES-9.0 and mapped in Figure ES-9.0.



Recommended Improvements - Roadway
Troup County Multi-Modal Transportation Study



Recommended Improvements – Bicycle and Pedestrian
Troup County Multi-Modal Transportation Study

ES-10.0 Funding

Several funding sources will be used to construct as many of the recommended projects as possible. This is usually controlled by the agencies responsible for maintaining and operating the roadway. Most major facilities in Troup County are either operated by GDOT or the County. Should the County desire to accelerate projects on state owned and maintained facilities, it is highly likely that local funds could accelerate the process.

Funding for most transportation projects in the County comes in part through GDOT. To understand the ability of GDOT to continue to provide funds to Troup County it is useful to understand the components of GDOT funding. Key components include:

- Federal Title I Apportionments;
 - State Motor Fuels Taxes;
 - State License Tag Fees;
 - State Title Registrations;
 - State Motor Carrier Fuels Tax;
 - State Personal Property Tax; and,
 - Tax Allocation Districts.
- } Accounts for approximately 98% of the budget

While detailed analysis of these funding sources is beyond the scope of this study, it is useful to point out that all of the revenue streams identified as key components of GDOT funding have positive growth rates historically and it is anticipated that they will continue to grow in the future.

While GDOT funding components have positive growth rates, the Department is experiencing some funding challenges. Construction costs have increased up to 65% over the past two to three years forcing the Department to continually assess which projects it can reasonably fund. It is anticipated that in the future local funding sources will become more significant. A review of project implementation shows that jurisdictions with a SPLOST have been in the best position to leverage funds and ultimately construct projects.

ES-11.0 Conclusions

Growth in Troup County has resulted in increased travel demand. GDOT in conjunction with Troup County and the City of LaGrange initiated a study to develop a LRTP to serve the County through the planning horizon, 2035. Recommended projects were identified and selected according to all applicable rules and regulations with the intent of enhancing the quality of life for County residents and visitors. Efforts were taken to ensure that proposed projects impacted the community as little as possible while providing maximum benefits. Analysis was conducted to ensure that the projects benefited and did not disproportionately impact low-income and minority communities. Ultimately, the study identified multi-modal improvements and prioritized project implementation in the form of a Long Range Transportation Plan.

HNTB coordinated with GDOT, County planning and engineering staff, cities within the County and other partners in the planning, development, review, and approval of study alternatives and the LRTP. Additionally, a comprehensive and interactive public involvement program was conducted to ensure that alternative transportation improvements were not only coordinated with various governments, but afforded individual citizens and interested groups the opportunity to provide their input in developing and evaluating planned improvements to the transportation network.

The end product for this study was a LRTP that provided for the efficient movement of people and goods within and through Troup County through the horizon year of this study, 2035. Interim year analysis was conducted for the year 2015. As part of this effort existing and future operating conditions were documented for the following modes: highways and bridges, bicycle and pedestrian improvements, freight, transit, railways and airports.

This document should be reviewed and updated periodically to ensure that the planning factors and other assumptions are still relevant and effectively address transportation needs. This document should serve as the foundation for Troup County's transportation planning efforts and a starting point for addressing transportation needs.

1.0 Introduction

Growth in Troup County has resulted in increased travel demand. The Georgia Department of Transportation (GDOT), in conjunction with Troup County and the City of LaGrange, initiated a study to develop a Multi-Modal Transportation Plan to serve the County through the planning horizon, 2035. Currently the transportation planning function for the County is provided by GDOT through coordination with Troup County. The Transportation Plan developed as part of this study built upon existing work efforts to date, and provides a mechanism for guiding transportation decision-making as development pressures increase through the County.

The purpose of this technical memorandum was to identify existing and future operating conditions for the multi-modal transportation system within Troup County. Ultimately the study will identify multi-modal improvements and prioritize project implementation in the form of a Long Range Transportation Plan (LRTP).

HNTB coordinated with GDOT, Troup County, local cities and other partners in the planning, development, review, and approval of study recommendations. Additionally, a comprehensive and interactive public involvement program was conducted. This ensured that recommended transportation improvements were not only coordinated with various governments, but afforded individual citizens and interested groups the opportunity to provide their input in developing and evaluating potential improvements to the County's transportation network.

Ultimately, study efforts will produce a LRTP that guides the efficient movement of people and goods within and through the County through the horizon year of this study, 2035. Interim year analysis was conducted for the year 2015. As part of this effort existing and future operating conditions were documented for the following modes: highways, bicycle and pedestrian improvements, freight, transit, railways and airports.

1.1 Study Purpose

The purpose of the LRTP is to identify long-range transportation needs, determine resources to meet those needs, and outline a framework of projects that meet the transportation needs of a community to the extent allowed by existing and future resources. While Troup County is not within a Metropolitan Planning Organization (MPO) service area, the transportation plan development process followed the guidelines established for MPO's. This more rigorous process established a strong framework for transportation planning and decision-making. The format of the LRTP, and the process by which it was developed, is prescribed by federal legislation known as the Transportation Efficiency Act for the 21st Century (TEA-21) and the most recent federal transportation legislation, the Safe, Accountable, Flexible, Efficient, Transportation Equity Act – A Legacy for Users (SAFETEA-LU).

Long range transportation plans are required to have a planning horizon of 20 or more years. This time frame provides a basic structure and overall goal for meeting the long-

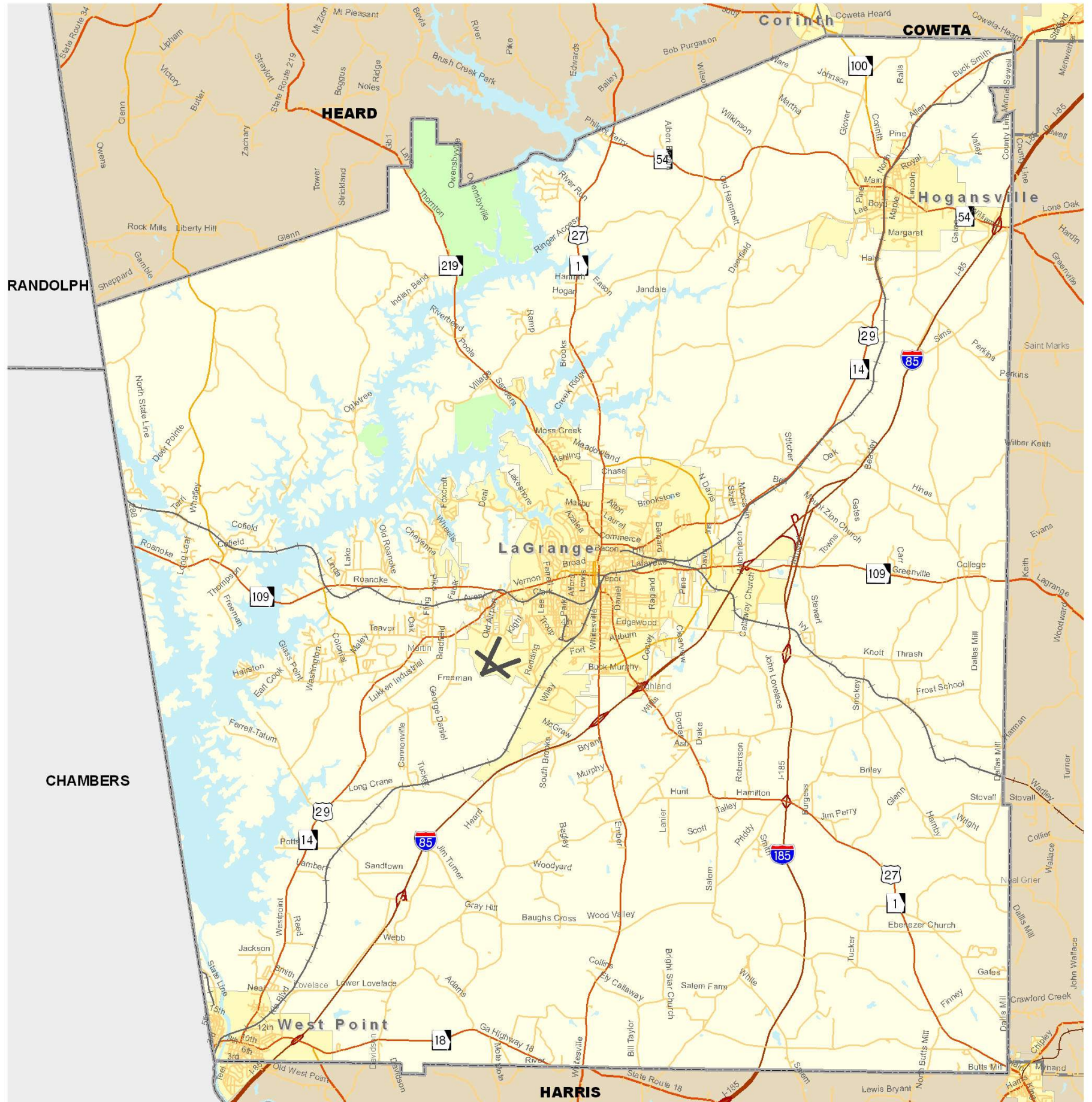
term transportation needs for the community. Since many factors influencing the development of the LRTP, such as demographics, forecast revenue, and project costs, change over time, long range transportation plans are updated at least every five years.

1.2 Study Area Description

Troup County is located in west Georgia on the Alabama border southwest of Atlanta and north of Columbus and covers a land area of approximately 414 square miles. The County was formed in 1825 from lands belonging to the Creek Indians and was named after Governor George M. Troup. LaGrange, the County seat, is named for the ancestral home of Revolutionary War hero Marquis de LaFayette. A major defining feature of the county is the presence of West Point Lake, a 26,900-acre reservoir on the Chattahoochee River built by the U.S. Corps of Engineers, located in the western and northwest reaches of the County. There are three incorporated municipalities within Troup County – LaGrange, West Point, and Hogansville. LaGrange is located in the geographic center of the county. West Point is located in the extreme southwest quadrant of the county on the Alabama state line. Hogansville is located in the northeastern part of the county. All three municipalities lie along I-85 and US 29. The study area is displayed in Figure 1.2.

Several sites in the County are listed on the National Register of Historic Places, including the County Courthouse and the Benjamin Harvey Hill House (Bellevue). Other points of interest are the two higher learning educational institutions located in Troup County, including LaGrange College, the oldest independent college in Georgia - founded in 1831. Additionally, the West Georgia Technical Institute which is a two-year unit of the University System of Georgia located in West Point.

Troup County is traversed by the I-85 corridor, one of the Southeastern US's most dynamic corridors for economic development and business growth. In recent years, communities located in the I-85 corridor from Virginia to Alabama have recognized the economic importance of the corridor in attracting manufacturing, distribution, logistics, and warehousing operations and the associated residential, commercial, and office development that supports these valuable businesses. The significance of the population and commercial growth in this multi-state corridor has even prompted the states to examine the feasibility of introducing new interstate rail service in the I-85 corridor connecting the Middle Atlantic and Southern states from Richmond, Virginia to Birmingham, Alabama. The appeal of this corridor to attract growth is recognized by the decision of KIA Motor Corporation to locate a manufacturing facility in West Point.

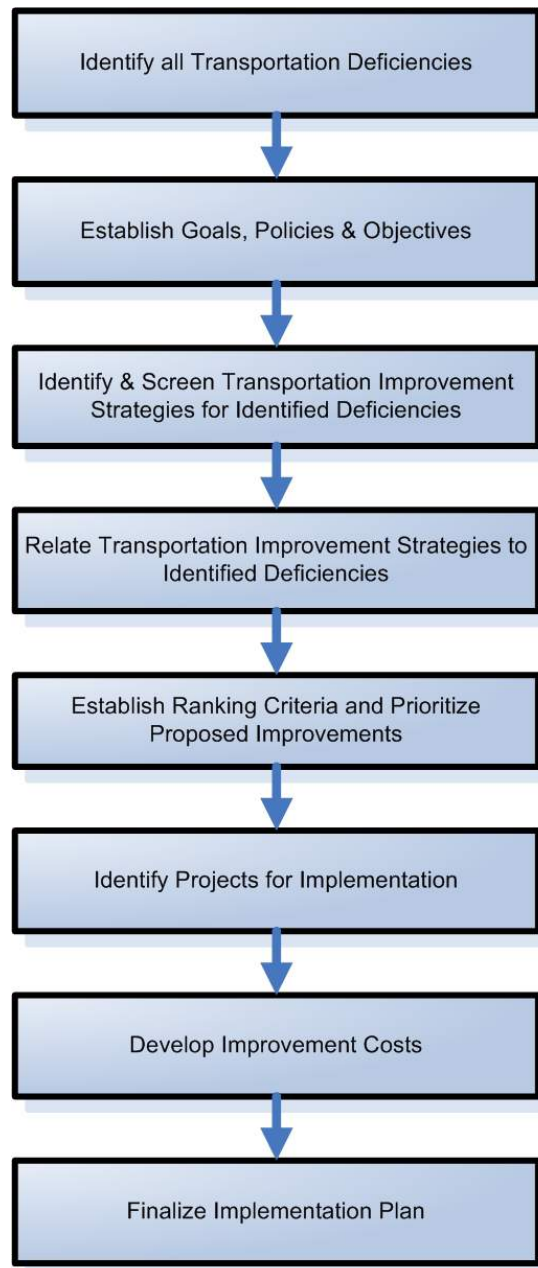


1.3 Study Process

There are several important steps in developing a LRTP. After all of the data has been collected and the model has been validated and calibrated, the deficiencies are identified and the rest of the process is used to address and prioritize improvements for these deficiencies.

Figure 1.3 displays a flow chart depicting the study process.

Figure 1.3
Study Process



2.0 Public and Stakeholder Involvement

The purpose of the public involvement program was to inform the public and include them in the decision-making process. Public concerns were brought to the forefront so that they could be discussed and resolved. This approach engaged the end users (i.e. the residents and business owners of Troup County) in the identification, development, evaluation, and selection of transportation improvements. The ultimate goal of the Public Involvement Plan was to build consensus for the recommended short-term and long-term improvements identified through the long range transportation planning process.

A public involvement program that encourages participation and interaction throughout the process has a good chance of attaining community consensus. An effective, well-planned and organized public involvement program helps anticipate and lessen negative perceptions, and can encourage acceptance of the study results. The Study Team implemented a public involvement program that utilized consensus-building techniques throughout the study process.

Area stakeholders, individual citizens and interested groups were given multiple opportunities to become involved in the planning process. Citizens with an interest in the study were informed of the study's progress and provided various forums for input into the decision-making process, including newsletters and web site updates. Through the public involvement process, the Study Team was able to identify improvements that meet the needs of stakeholders and residents of Troup County. A complete summary of public involvement activities is provided in the Public Involvement Report

2.1 Summary of Activities

Involving the public in the decision-making process was essential for developing consensus or acceptance among the community it is intended to serve. Throughout the process, the public was invited to provide information, offer alternatives, and present their interests and concerns. As stakeholders who live and travel through the study area, citizens were able to provide insightful input to technical and non-technical issues relevant to the project.

Several forums were available for citizens to voice their opinions, concerns, and ideas. Three (3) Open House Workshops were conducted as part of the study. These workshops ensured that public input was reflected accurately for the evaluation and recommendation of the proposed transportation improvements. Each public workshop was used to encourage consensus among citizens, County staff, and area municipalities, as to the planned improvements for the County's transportation network.

The public workshops and other proposed forums available throughout the study are described below.

2.2 Public Information Workshops

A brief presentation was given at each of the public workshops to support facilitation activities and/or informal review of display materials with the public. The Study Team was available for one-on-one discussions at all of the workshops. In addition, public comment forms were available for citizens to officially record their comments. As appropriate HNTB developed responses to all comments and coordinated these responses with GDOT.

Based on input from the project Steering Committee it was determined that three public workshops was appropriate for this study. These Workshops took place from 6:00 PM to 8:00 PM on either a Tuesday or Thursday night to avoid conflicts with recreational activities and church gatherings. The Troup County Government Center was identified for hosting public workshops. This facility is centrally located in the County and provided adequate space for the workshops.

Workshop #1 (Overview of Existing and Future Operating Conditions) — This workshop provided an overview of the study process; document data collection activities; overview existing and future operating conditions; and, identified deficiencies. This workshop included a formal presentation, followed by an open house format to solicit public input, identify issues and concerns, and to aid the Study Team in evaluation of existing and future deficiencies.

Workshop #2 (Present Preliminary Long Range Transportation Plan) — This workshop presented preliminary improvement concepts for major deficiencies, and the findings to date for public review and comment. A formal presentation of the study results was followed by an open house format to solicit public input on the study recommendations.

Workshop #3 (Present Final Long Range Transportation Plan) — This workshop presented preliminary improvement recommendations for major deficiencies, preliminary prioritization criteria, and the findings to date to include a Preliminary Long Range Transportation Plan for public review and comment. An open house format was used to solicit public input on the study recommendations.

2.3 Study Advisory Group Meetings

In addition to the public workshops, Study Advisory Group (SAG) meetings were held to solicit key stakeholder feedback at key junctures throughout the study. Troup County selected its Advisory Group participants typically including representatives from the business community, planning staff, school board, elected officials and emergency management staff. Member of the SAG are listed in Table 2.3.

Table 2.3
Study Advisory Group Members

Mike Dobbs County Manager, Troup County 100 Ridley Avenue LaGrange, GA 30240 m Dobbs@troupcO.org	Randy Jordan City Manager, Hogansville 400 E. Main St Hogansville, GA 30230 rjordan02@bellsouth.net	Tom Hall City Manager, LaGrange PO Box 430 LaGrange, GA 30241 thall@lagrange-ga.org
Jeff Lukken Mayor, LaGrange PO Box 430 LaGrange, GA 30241	Ed Moon City Manager, West Point 730 1st Ave West Point, GA 31833 emoon@cityofwestpointga.com	Billy Head Mayor, West Point 730 1st Ave West Point, GA 31833
Paula Grizzard Emergency Management Agency 100 Ridley Avenue LaGrange, GA 30240 trouP@gema.state.ga.us	Frank Gurley Troup Co. Board of Education 200 Mooty Bridge Rd LaGrange, GA 30240 gurlyf@trouP.org	Tod Tentler Troup County Parks & Rec. Dept 1220 Lafayette Pkwy LaGrange, GA 30241 ttentler@troupcO.org
Glen Boyd LaGrange-Callaway Airport 200 Airport Pkwy LaGrange, GA 30240 airportmanager@troupair.com	David Barr U.S. Army Corps of Engineers 500 Resource Management Dr West Point, GA 31833-9517 David.A.Barr@SAM.USACE.Army.mil	Daryl Gilley West Georgia Technical College 303 Fort Dr LaGrange, GA 30240 dgilley@westgatech.edu
Speer Burdette Callaway Foundation PO Box 790 LaGrange, GA 30241 hsburdette@callaway-foundation.org	Carl Von Epps 100 Black Men of W. GA PO Box 3106 LaGrange, GA 30241-3106 vonepps@charter.net	Doris Jefferson Keep Troup Beautiful, Inc. PO Box 3413 LaGrange, GA 30241-3413 djefferson@asginfo.net
Russell Grizzle Milliken & Co. Design Center 201 Lukken Industrial Dr W LaGrange, GA 30240 russell.grizzle@milliken.com	Ken Smith Commissioner District 3 ksmith@troupcountyga.org	Tim Duffey County Chairman tduffey@troupcountyga.org
Bobby Traylor LaGrange City Council 1006 Malibu Dr LaGrange GA 30240	Billy Golden Golden Bike Shops 101 Harwell Ave LaGrange GA 30240 goldensbikes@mindspring.com	David Johnson West Georgia Flyers 130 Ashling Dr LaGrange, GA 30240 dagolfer@charter.net
O.W. McGowan 310 Lane Circle LaGrange, GA 30240 owmcgowan@bellsouth.net	Joy Maltese District 4 Health Services 201 Moccasin Trail LaGrange, GA 30241 jnmaltese@dhr.state.ga.us	

This group met a total of three times throughout the study excluding project kick-off to discuss issues and opportunities and review study progress to date. Meeting dates and locations are documented below:

- Troup County Government Center – January 19, 2006;
- Troup County Recreation Center – March 21, 2006; and,

- West Point Recreational Complex Gym – July 25, 2006.

The third workshop was held in conjunction with GDOT's I-85 Interchange Project (CSNHS-0008-00(232) at Gabbettville Road.

2.4 Other Meetings

The Study Team coordinated with interested agencies, representatives, organizations, and citizen groups via the distribution of project newsletters to elected officials, citizens, and local governments' engineering and planning staff, and local and state agencies. Additionally, the Study Team was available for presentations to other groups. As part of this effort presentations were made to the residents of Vernon Road, West Georgia Flyers and Troup County Historical Preservation Society.

2.5 Program Evaluation

It was important to document and evaluate the effectiveness of the Multi-Modal Transportation Study Public Involvement Plan. The following data was documented:

- Number of newsletters and fact sheets distributed;
- Number of open house attendees; and,
- Number of public comments received.

Feedback from GDOT, Advisory Group members and Environmental Justice representatives was evaluated to determine the effectiveness of the public involvement plan. Table 1.4.2 displays the public workshop participation information.

Table 2.5
Public Workshop Participation

Meetings	Date	Location	# of Newsletters	# of Attendees	# of Comments
Public Workshop #1	31-Jan-06	Troup County Government Center	350	81	31
Public Workshop #2	30-Mar-06	Troup County Government Center	450	99	15
Public Workshop #3	25-July-06	West Point Recreation Center Gym	500	400	18

3.0 Demographic Information

A review of US Census data shows that Troup County has seen population growth at a modest level during the past 20 years. Table 3.0 presents selected demographic data to more fully illustrate the characteristics of the population living in Troup County, its households, and other socio-economic factors. Dialogue with County Staff revealed that many new residents of the County relocated from the Atlanta metro area to live in a more rural area. However, historically employment has not shifted to Troup County. The ratio of residents (58,779) to jobs (26,339) is approximately two to one based on the 2000 Census information. This places increased demand on the transportation system linking the County to Atlanta, Columbus, Auburn and other employment centers.

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

Table 3.0
Year 2000 General Demographic Characteristics

Demographic	Troup County
Total Population	58,779
Median Age	34.6
Households	21,920
Average Household Size	2.61
Total Housing Units	23,824
Occupied Housing Units	21,920 (92.0% of total)
Owner-Occupied Housing Units	14,131 (64.5% of total)
Renter-Occupied Housing Units	7,789 (35.5% of total)
School Enrollment (Age 3+)	15,898 (27.0% of total)
Percent High School Graduate or Higher	73.0%
Total Disabled Population (Age 5+)	12,498 (21.3 %)
Percent of Population in Same House in 1995	53.1%

Source: 2000 US Census

Over half of the residents (32,154) of Troup County live outside of the cities. The following shows the population of each city for the year 2000:

- Hogansville – 2,774;
- LaGrange – 25,998; and,
- West Point – 3,382.

The population for West Point includes residents of the City located in Harris County, Georgia.

Perhaps the most significant figure identified in the demographic data is the percent of disabled individuals in the County, (21.3%). This figure exceeds the statewide average of (19%). The US Census Bureau defines disability as:

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

Dialogue with County Staff revealed that the County’s population is aging and is attracting an older population. As the County continues to attract retirement residential land uses, the need will increase for a transportation system that accommodates the aging population.

3.1 Historic Population Growth

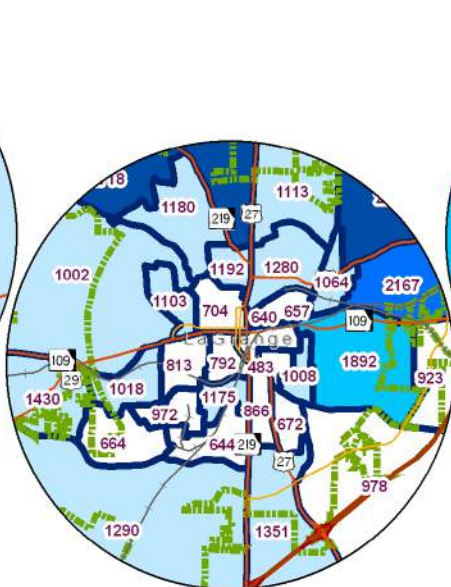
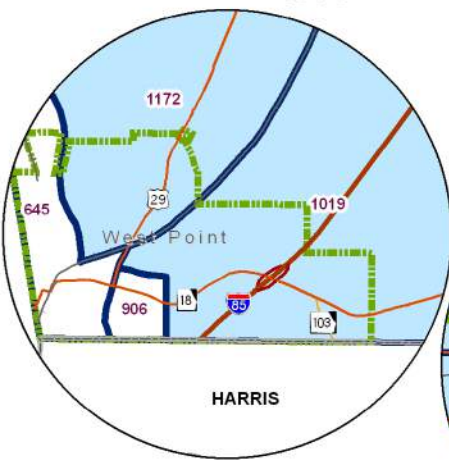
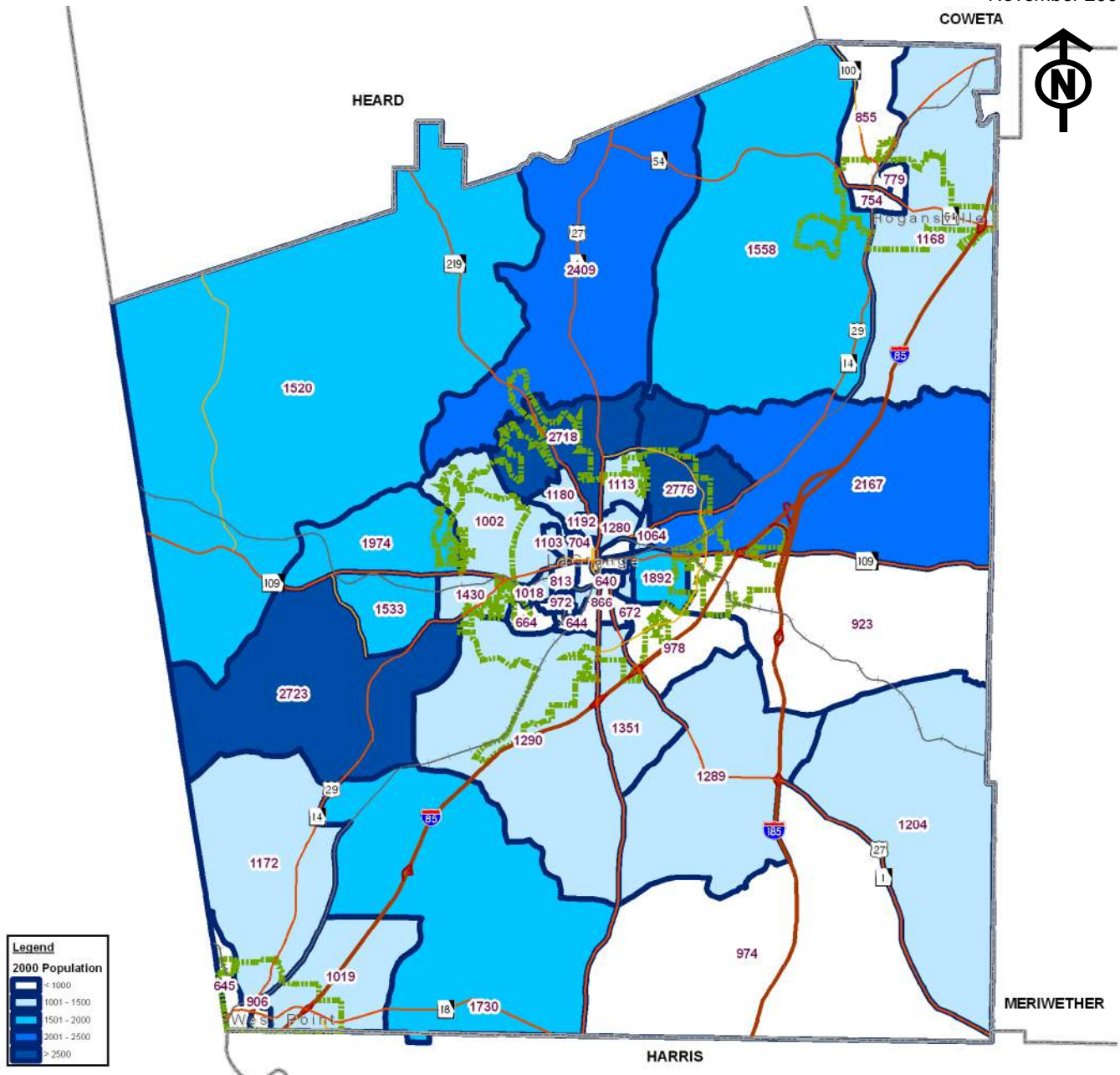
Table 2.1 illustrates the growth trends for Troup County and Georgia from 1900 to 2000. Information in Table 3.1 shows that the area has had low historical growth compared to the growth trend for the State of Georgia. The population for Troup County can be expected to continue to increase throughout most of the County through the study horizon of 2035.

Table 3.1
Historical Population Profile

County	1900	1920	1940	1960	1980	2000	Percent Change 1980 - 2000
Troup	24,002	36,097	43,879	47,189	50,003	58,779	18%
Georgia	2,216,331	2,895,832	3,123,723	3,943,116	5,462,982	8,186,453	50%

Source: 2000 US Census

Figure 3.1 shows the year 2000 population distribution in Troup County for each Census Block Group. The densest population areas are located around the City of LaGrange.



2000 Population

3.2 Future Population

Although Troup County has received a relatively low amount of growth over the past 20 years (18%), this is expected to change. The County has become increasingly attractive to people and business owners who enjoy a rural lifestyle while having good access to nearby amenities in the Atlanta and Columbus urban areas as well as proximity to Auburn, Alabama. Several developments of regional impacts (DRIs) have been proposed as well as the potential growth in the industrial industry. Table 3.2 displays the projected growth, provided by the Troup County Comprehensive Plan, for Troup County through the horizon year of 2035.

Table 3.2
Projected Population

	2000	2005	2010	2015	2020	2025	2030	2035
Projected Population	58,779	62,619	66,458	73,177	79,896	91,655	103,413	113,500

Source: Troup County Comprehensive Plan

Reviewing Troup County's Comprehensive Plan reveals that over the next 30 years the County is projected to double in population. It is important to recognize this growth and the substantial demand for a quality transportation system and transportation services.

3.3 Environmental Justice

Environmental justice (EJ) is intended to acknowledge minority and low-income populations and ensure that these groups are not disproportionately impacted as a result of transportation improvement recommendations. The US DOT Order on Environmental Justice and Executive Order 12898 defines environmental justice populations as persons belonging to any of the following groups:

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

It is important to look at the distribution and concentration of minority and low-income populations to determine potential EJ impacts. The intent of EJ analysis is locating these populations and involving them early and continuously through the decision making process, as well as using data to analytically assess if there would be a disproportionate

impact on traditionally underrepresented communities. The following sections document the location of minority and low-income populations.

Minority Populations

The minority population for Troup County was analyzed using the 2000 Census data. This census data was reviewed by Census Block Group, and shows concentrations of minority populations are located on the southern and eastern portions of LaGrange as well as the I-85 area of West Point. The average minority population figure for the County is 34.2% while the statewide average is 34.9%. The minority Census Block Groups are displayed in Figure 3.3.1.

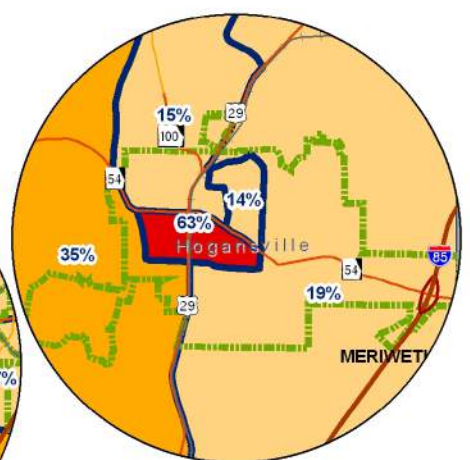
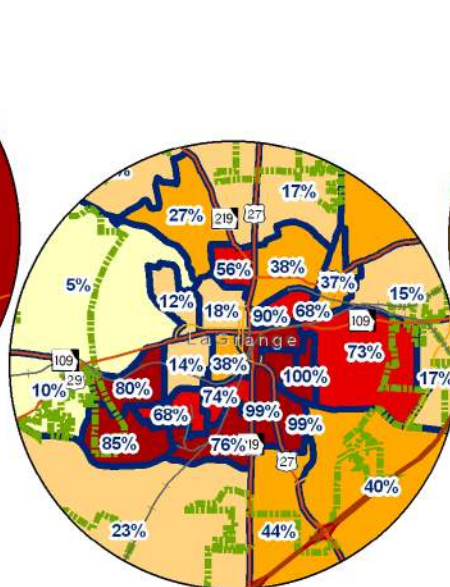
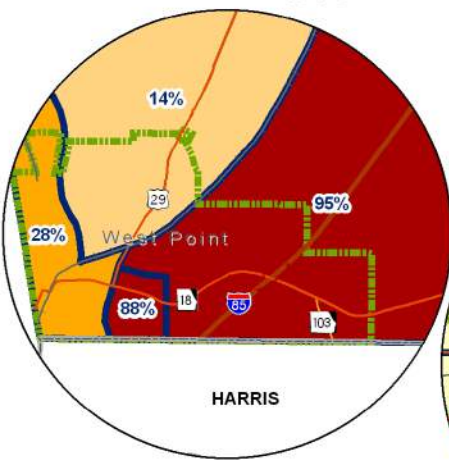
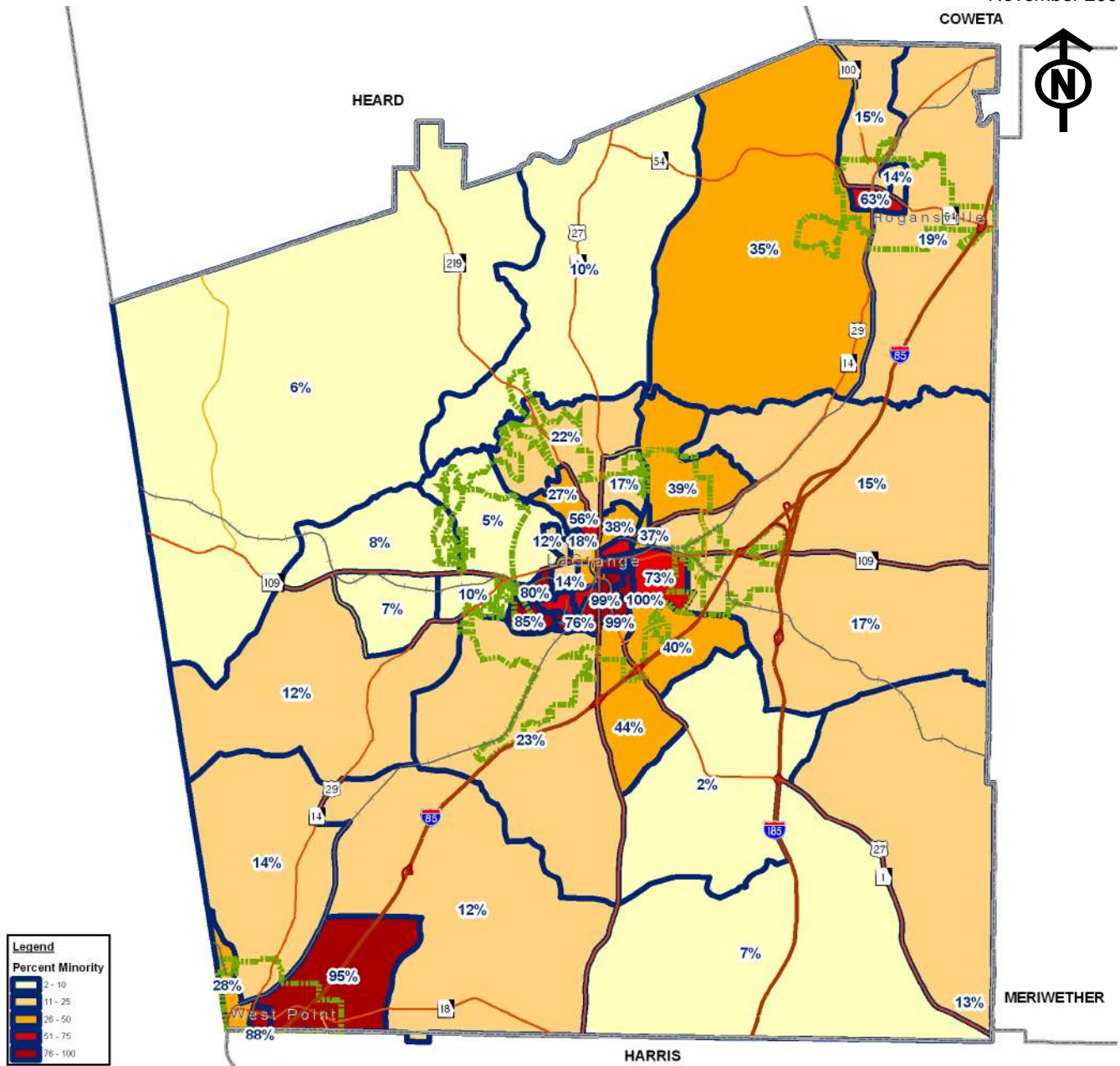
Low-Income Populations

The second component for environmental justice, poverty level, was also analyzed using the 2000 Census data. This census data was reviewed by Census Block Group, and shows concentrations of low-income populations are located in the southern portion of LaGrange as well as the I-85 area of West Point and Hogansville. The study wide average for poverty in the County is 14.8% while the statewide average is 13.0%. The low-income census blocks are displayed in Figure 3.3.2.

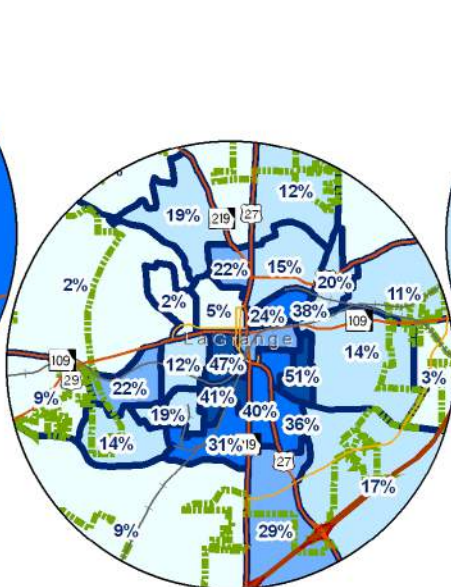
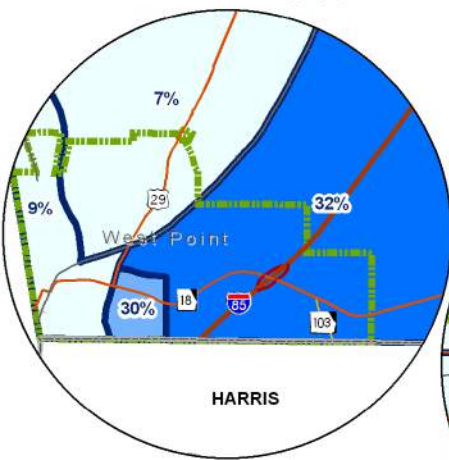
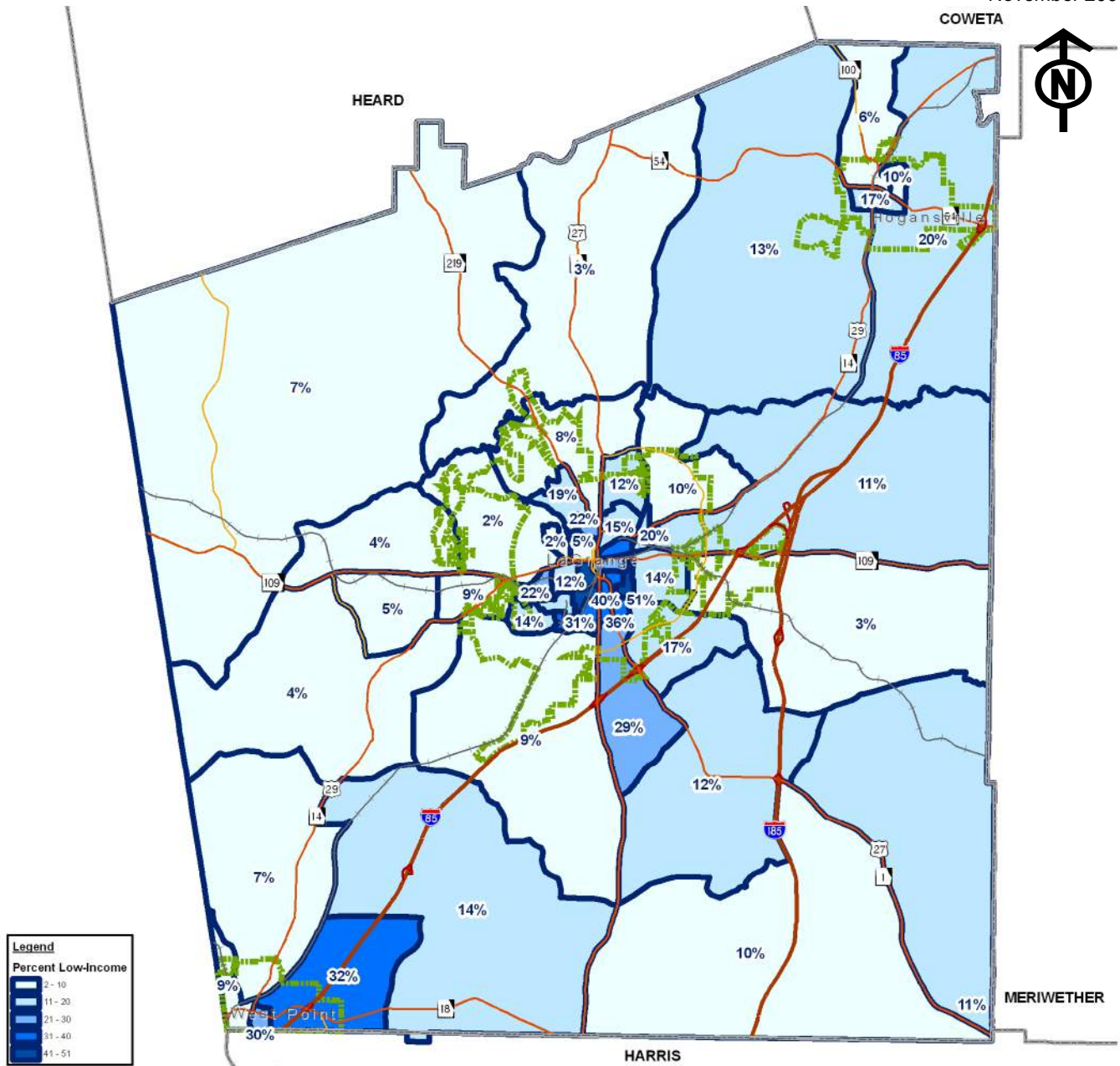
It is helpful to analyze the low-income areas with the location of minority population areas. Interest is drawn to areas with high populations for both of these categories. Figure 3.3.3 combines the minority and low-income population data and presents it in a single graphic.

Disadvantaged populations were identified as part of this analysis and extra efforts were made to include these groups in the planning process. These areas include the downtown areas of LaGrange and West Point. These areas were evaluated to ensure that transportation improvements would benefit and not disproportionately impact these areas in a negative manner. The following tasks were conducted for the identified low-income and minority populations:

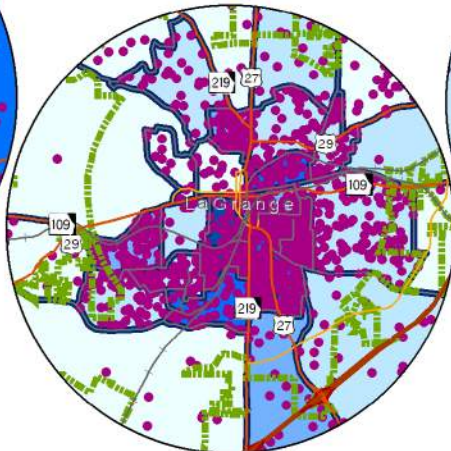
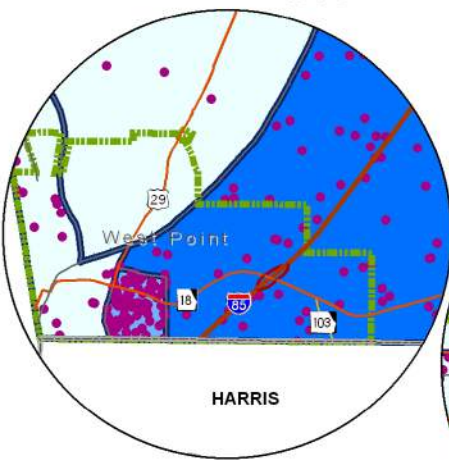
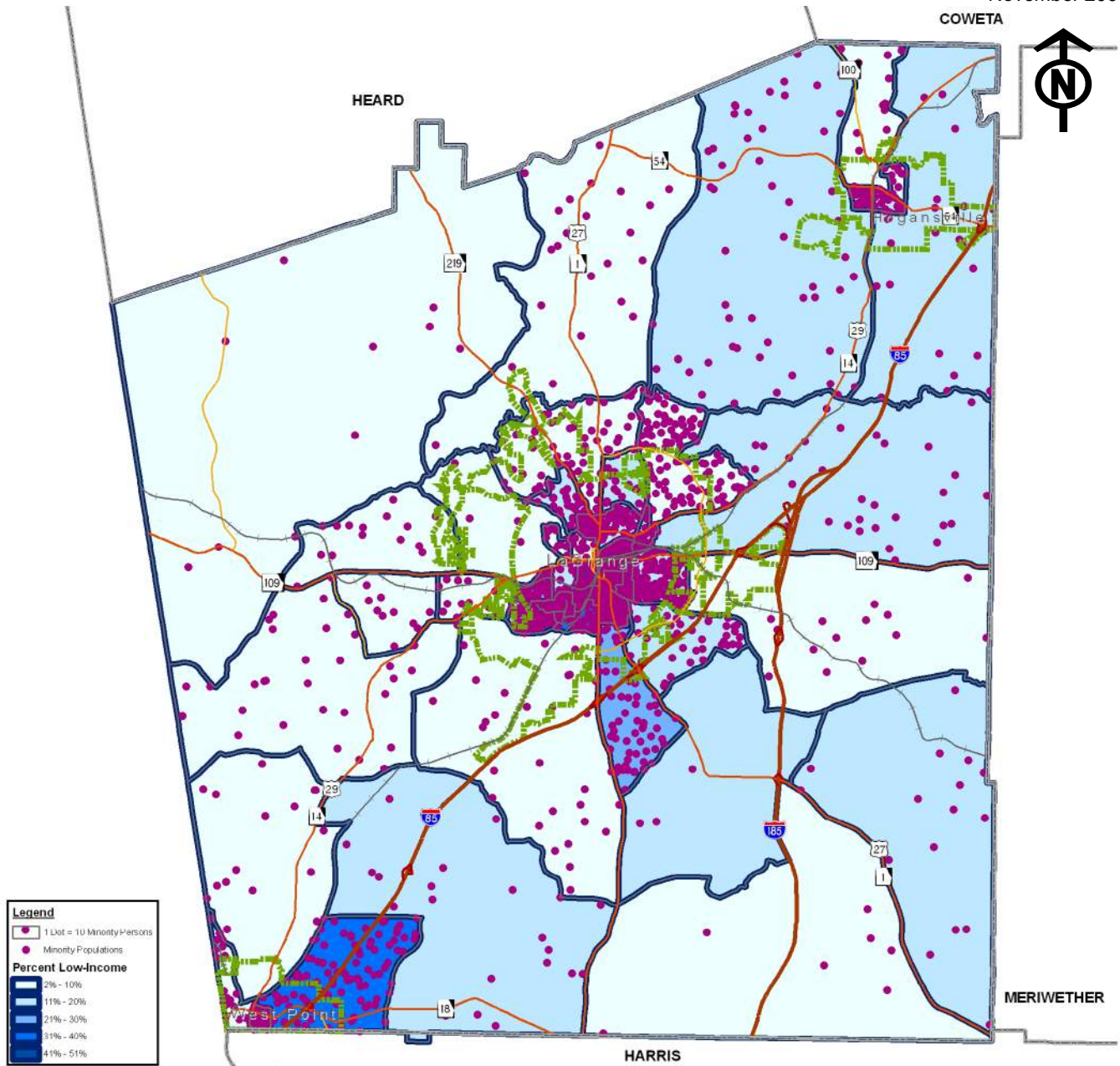
- Coordinated with the Study Advisory Group to identify leaders within these communities;
- Posted notice for workshops in these communities where possible;
- Analyzed recommended projects to ensure that disproportionate impacts did not accrue to these communities; and,
- Analyzed recommended projects to ensure that mobility benefits accrued to these communities – including bicycle and pedestrian amenities.



Minority Population Locations



Low-Income Population Locations



Overlay of Minority & Low-Income Populations

Figure No: 3.3.3

3.4 Employment Data

In Troup County, manufacturing is the largest employment sector providing about one-third of the total jobs. Other important sectors are education, services and retail trade. Among the major employers in the County are Milliken & Co. (1,750 employees), Wal-Mart (1,600 employees), West Georgia Medical Center (1,300 employees), Interface (900 employees), and Duracell (475 employees). Thirty-five companies in Troup County employ 100 or more employees. The number, type, and location of jobs in the County have direct implications to the types of transportation facilities needed by business operators and employees in the area. Table 3.4.1 shows the major categories of jobs and industries located in Troup County.

**Table 3.4.1
Existing Industry Jobs**

Industry Type	Troup County
Agriculture, Forestry, Fishing, Hunting, and Mining	207
Construction	1,992
Manufacturing	7,467
Wholesale Trade	779
Retail Trade	3,140
Transportation, Warehousing, and Utilities	944
Information	524
Finance, Insurance, Real Estate, and Rental and Leasing	993
Professional, Scientific, Management, Administrative, and Waste Management Services	1,463
Education, Health, and Social Services	5,241
Arts, Entertainment, Recreation, Accommodation and Food Services	1,763
Other Services	1,204
Public Administration	952
TOTAL	26,669

Source: 2000 US Census

The County's per capita income (\$17,626) in 1999 was significantly lower than Georgia's statewide average of \$27,324 and the national average of \$28,546.

Transportation mobility for workers in Troup County is an important consideration for the Plan. Not surprisingly, most workers (95%) in the County rely on highway-based transportation for commute trips, either by driving alone or carpooling. About four percent

(4%) of workers in the County walk or commute to work by other means and a little over one percent (1%) work at home. Table 3.4.2 illustrates the breakdowns in commuting modes for Troup County.

Table 3.4.2
Existing Work Commute Patterns

Work Commute	Troup County		Georgia
	Population	Percentage	Percentage
Total Workers (Age 16+)	26,339	100%	100%
Drove Alone	20,728	78.7%	77.5%
Carpooled	4,255	16.2%	14.5%
Transit/Taxi	440	1.7%	2.3%
Biked or Walked	264	1.0%	1.9%
Motorcycle or Other Means	299	1.1%	1.0%
Worked at Home	353	1.3 %	2.8%
Mean Travel Time to Work (mins.)	21.1		27.7

Source: 2000 US Census

The County's journey to work averages corresponds closely to the statewide averages for the various modes of travel. The mean travel time to work is lower than the statewide average (27.7 minutes). This competitive advantage was cited by County Planning Staff as one reason why the County has become increasingly attractive to people and business owners who enjoy a rural lifestyle while having good access to nearby amenities in the Atlanta urban area as well as proximity to Columbus and Alabama.

Table 3.4.3 displays the mileage and vehicle miles traveled for the different roadway classifications in Troup County. Troup County is served by multiple State Roads (20% of the lane miles) which handles a majority of the traffic (70%). This closely matches the statewide averages of 16% State Roads handling 64% of the total traffic. To ensure future mobility, it will be important to evaluate and identify needed improvements to the State Road system through close coordination with GDOT.

Table 3.4.3
Existing Mileage and Vehicle Miles Traveled

County	State Roads		Country Roads		Local Roads		Total	
	Miles	VMT	Miles	VMT	Miles	VMT	Miles	VMT
Troup	175	1,916,455	543	537,839	194	248,017	911	2,702,311
State	18,044	189,513,149	82,887	85,524,538	13,931	21,773,307	114,863	296,810,994

Source: GDOT

4.0 Land Use and Development

Based on Troup County's 1993 Comprehensive Plan, currently being updated, the existing and future land use patterns for the County continue to show a substantial percentage of land devoted to residential and agricultural land uses. Development is projected to occur both north and south of LaGrange – with concentrations in the southeast and southwest quadrants. Additionally, at the time of this study a major employment center (KIA Motors facility) was anticipated just north of West Point. These two factors suggest that transportation enhancements will be required to adequately service future travel demand, particularly employment related demand throughout the County.

4.1 Existing Land Use Characteristics

The Comprehensive Plan is currently being developed for Troup County and no existing land use mapping was available to support this study. To assess the impact of existing land use on the transportation system the following types of areas were identified for the County: major residential areas; key activity centers; key employment centers; and, primary travel corridors.

Major Residential Areas

- City of Hogansville
- City of LaGrange
- City of West Point
- West Point Lake

Key Activity Centers

- Downtown Hogansville
- Downtown LaGrange
- Downtown West Point
- West Point Lake
- LaGrange College
- Lagrange-Callaway Airport

Key Employment Centers

- Downtown Hogansville
- Downtown LaGrange
- Downtown West Point
- Interchange areas along I-85 at SR 54, SR 109, US 27, SR 219, and SR 18

Primary Travel Corridors

- I-85
- I-185
- US 27 / SR 1
- US 29 / SR 14
- SR 18

- SR 54
- SR 109
- SR 219
- CSX

4.2 Future Land Use Characteristics

It is important to document future land use characteristics because this information is essential in the evaluation of future operating conditions through the County. The future land use plan identifies the desired location of population and employment through the horizon year of the study. These two variables are the key inputs into the travel model to forecast future travel volumes and related deficiencies.

For the purposes of this study it was important to work with the Future Land Use Map contained in the County's Comprehensive Plan. This map identifies where growth is likely to occur in the County through the horizon year of the study. By clearly identifying where growth is allowed to occur in the County, it is possible to more accurately represent travel demand on the roadway network and future year travel conditions.

The Future Land Use Map designates most of the County for rural land uses. The County has plans for growth but much of the County is zoned as agricultural or has no zoning designation. Recently, several developments of regional impacts (DRIs) have been proposed throughout the County. Several of these DRIs are located in the southeast portion of LaGrange. The following growth areas were identified:

Residential

- City of Hogansville
- City of LaGrange
- City of West Point
- West Point Lake

Intensive Agricultural

- Northwest Troup County
- South Troup County

Commercial Uses

- City of Hogansville
- City of LaGrange
- City of West Point
- Callaway Property Megasite

Industrial Uses

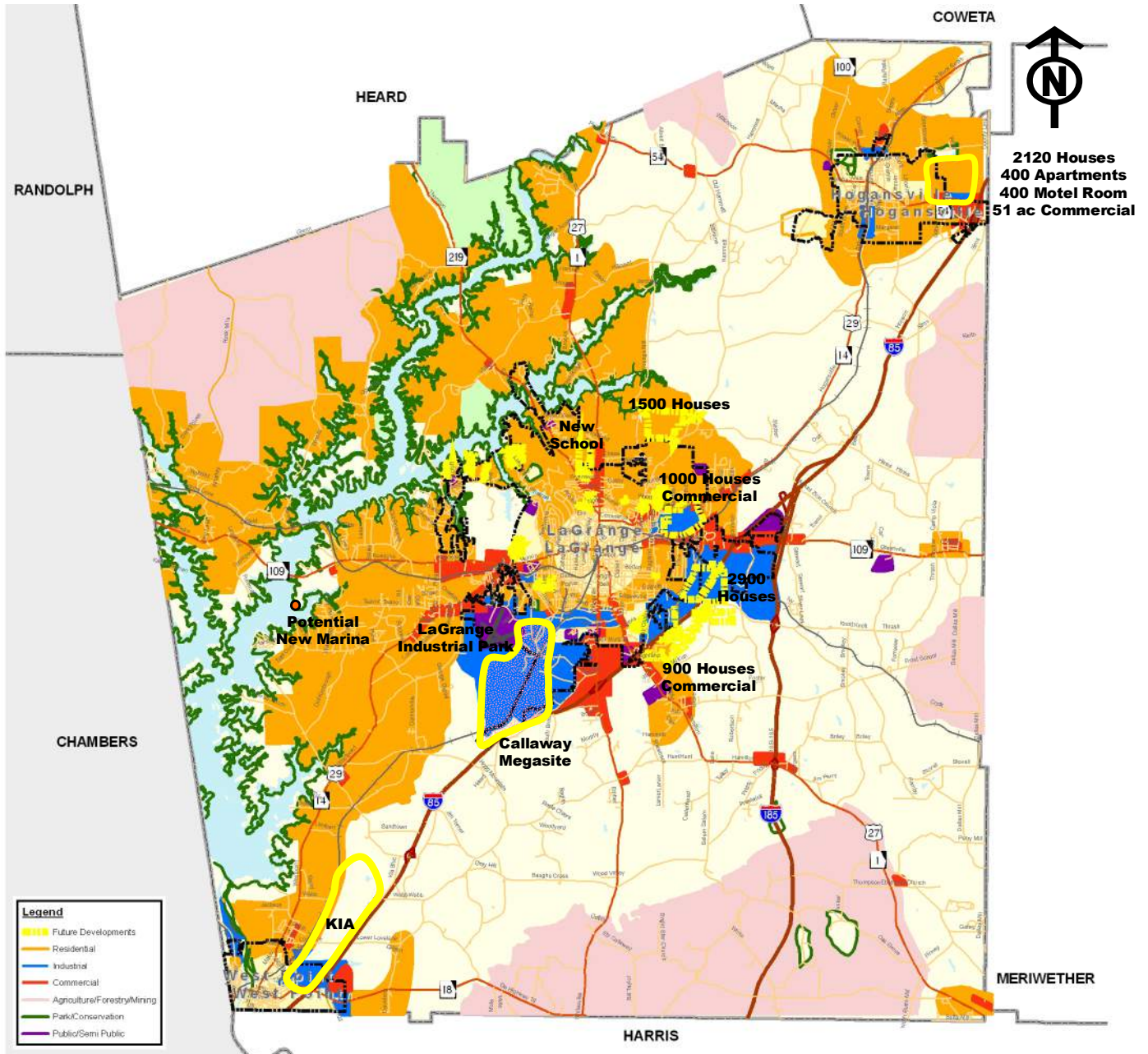
- LaGrange Industrial Park
- Jim Hamilton Industrial Park
- KIA Plant

- 5 Major Suppliers for Kia Plant (Required to locate in Georgia)

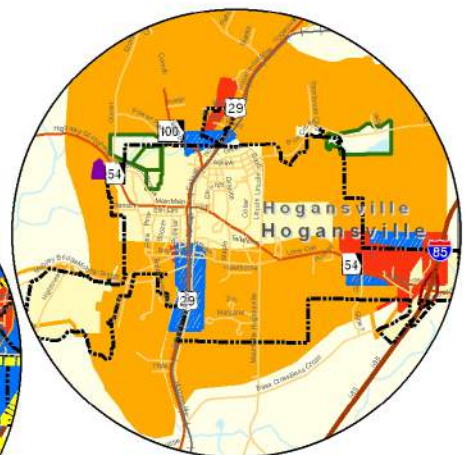
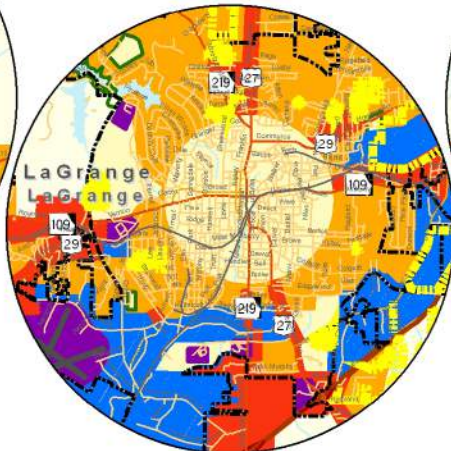
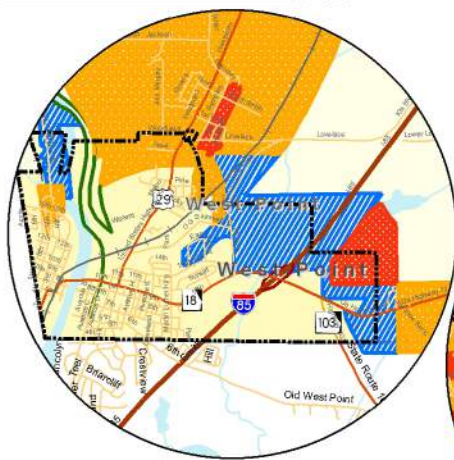
Parks/Recreation/Conservation

- West Point Lake

The future land use map and developments are presented in Figure 4.2.



2120 Houses
400 Apartments
400 Motel Room
51 ac Commercial



Future Land Use

5.0 Previous Studies

An effective Transportation Plan coordinates with other planning efforts to ensure continuity between planning documents and to ensure that goals and related projects for the transportation system are consistent with the established community vision. It is important to recognize that this Plan is not the first transportation planning effort for the County. GDOT continually conducts planning efforts throughout the state – this study will build on these efforts. The following planning studies and programs were reviewed:

- GDOT State Transportation Improvement Program and Six Year Construction Work Program;
- GDOT Statewide Bicycle and Pedestrian Plan (GABPP);
- GDOT Statewide Interstate System Plan;
- Chattahoochee - Flint Regional Development Center (RDC) Bicycle and Pedestrian Plan;
- Troup County Comprehensive Plan; and,
- City of LaGrange Comprehensive Plan.

5.1 GDOT State Transportation Improvement Program & Six Year Construction Work Program

In addition to current studies there are several planned and programmed improvements along roadways in Troup County. Programmed improvements for this review refer to projects with a construction phase included in the State Transportation Improvement Program (STIP) within the first three years of the planning horizon – 2005, 2006, and 2007 with a dedicated funding source identified. Planned projects refer to projects with a construction phase included in the last three years of the Six Year Construction Work Program (CWP). The following list highlights the general types of planned and programmed improvements for the County:

- Bridge Rehabilitation / Replacement;
- Intersection Improvements;
- Railroad Crossing Safety Improvements;
- Bicycle and Pedestrian Enhancements;
- Roadway Widening;
- New Facilities;
- Intersection Improvements; and,
- Roadway Resurfacing and Maintenance.

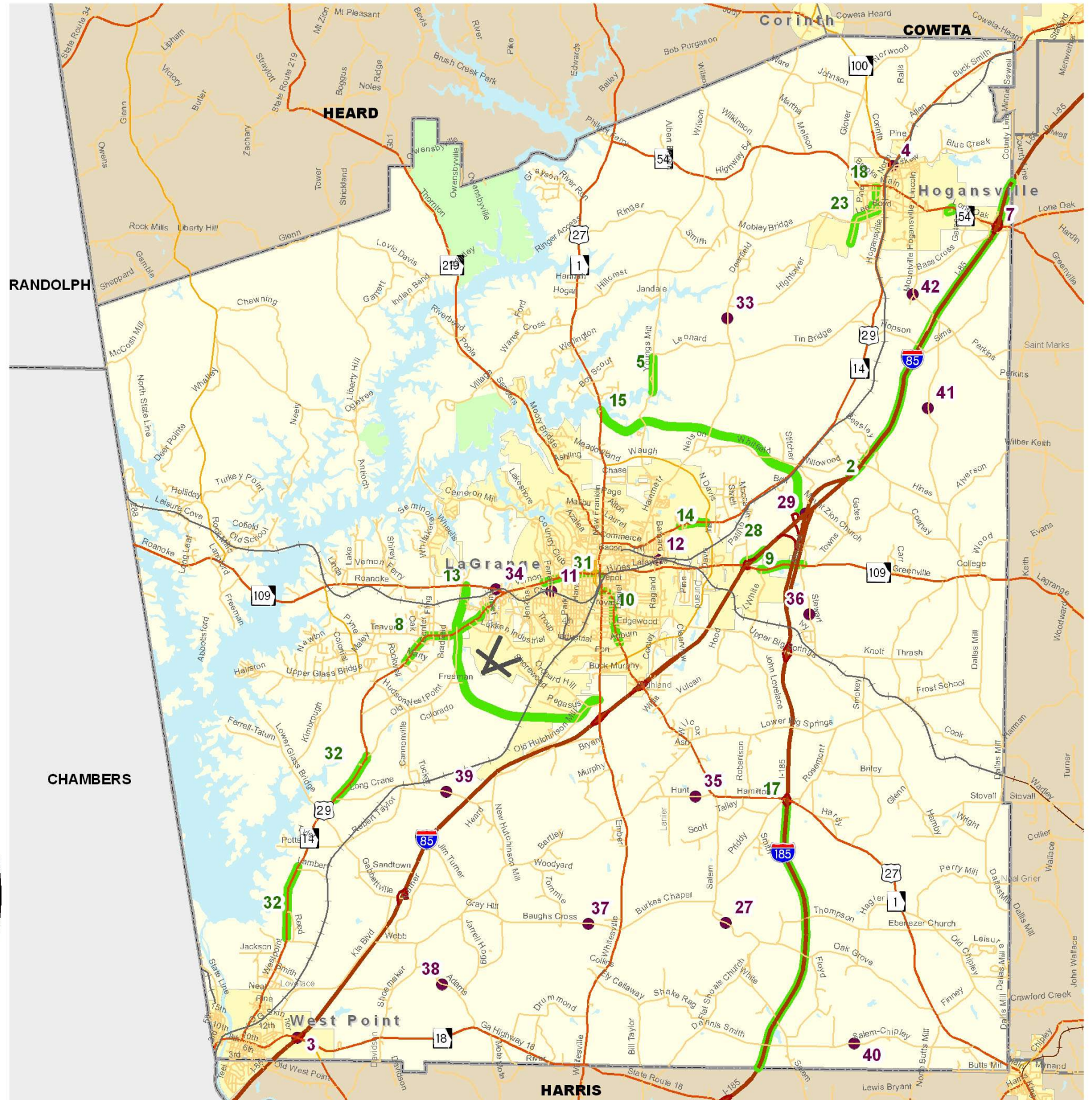
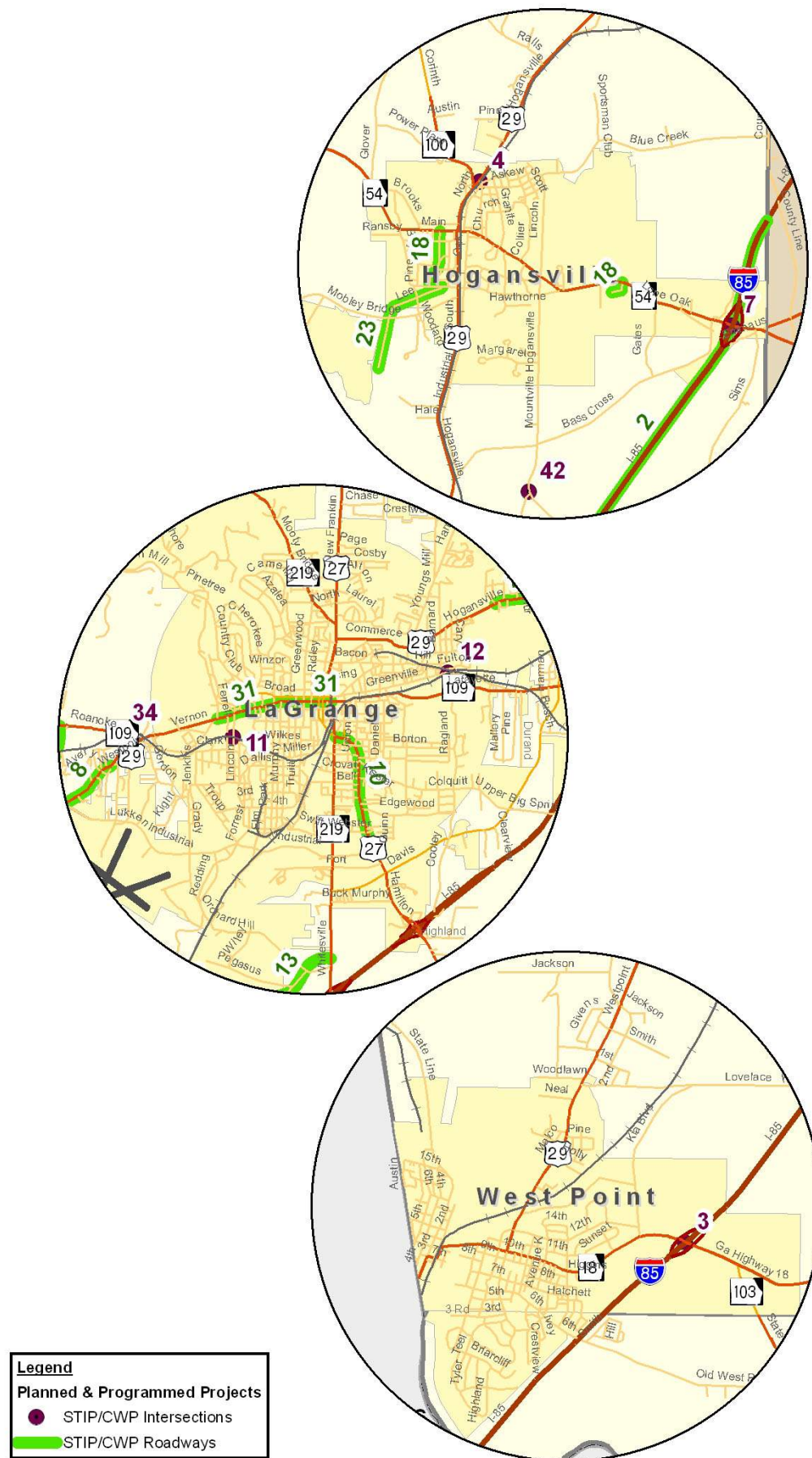
The STIP and CWP were reviewed for projects within and impacting the County and these projects are displayed in Table 5.1. Additionally, these projects are mapped in Figure 5.1. Projects included in the STIP were carried forward and included in the existing conditions network for analysis of future (beyond 2007) transportation scenarios.

Table 5.1
2005 – 2007 STIP &
2005-2010 GDOT Construction Work Program

Map Id	Project Id	Prime Work Type	Description	STIP/CWP	Program Date
1	0002382	Landscaping	Landscaping on I-185 in Harris and Troup Counties	STIP	Underway
2	0003246	Widening	I-85 from I-185 to SR 14 (Coweta)	CWP	Long Range
3	0003787	Ramp	I-85 Exit Ramps @ SR 18	STIP, CWP	Lump
4	0006488	RRX Warning Device	Green St @ CSX (Hogansville)	STIP, CWP	Lump
5	0006628	Multi-Use Trail	Young's Mill Bridge Pedestrian & Bicycle Trail	STIP, CWP	2006
6	0006629	Streetscapes	West Point Pedestrian Enhancement Project	STIP, CWP	Lump
7	0007654	Lighting	I-85 @ SR 54/SR 100 Interchange	CWP	Lump
8	321715	Widening	SR 14/US 29 from Upper Glass Bridge to Old Vernon Rd	STIP, CWP	2010
9	322240	Widening	SR 109 from I-85 to Callaway Church Rd	CWP	Long Range
10	322250	Widening	US 27 from Auburn St to Morgan St	STIP, CWP	2012
11	343190	Bridges	Jefferson St @ CSX Railroad (LaGrange)	STIP	Underway
12	343455	Bridges	Greenville St @ CSX Railroad (LaGrange)	CWP	2010
13	350990	Roadway Project	S LaGrange Loop from SR 109 along Fling & Pegasus to SR 219	CWP	2012
14	351170	Turn Lanes	SR 14/US 29 Left Turn Lane from Meadow Way Dr to Davis Rd	STIP, CWP	2008
15	362910	Roadway Project	I-185 Connector from I-185 to US 27 S of Beech Creek	CWP	Long Range
16	M000890	Miscellaneous Improvements	Drainage Improvements @ several locations in District 3	STIP, CWP	Lump
17	M002969	Resurface & Maintenance	I-185 from Williams Rd (Muscogee) to US 27	STIP, CWP	2007
18	M003131	Resurface & Maintenance	Proposed Joint Sealing & Rehab @ 25 Locations	STIP	Underway
19	S005850	Roadway Project	Boozer St & Russell St (Hogansville)	CWP	2006
20	S006059	Bridge Replacement	Two County Road Bridges	CWP	2004
21	S009103	Resurface & Maintenance	Four Roads	CWP	Long Range
22	S009104	Resurface & Maintenance	Four Roads	CWP	Long Range
23	S009105	Resurface & Maintenance	Lee St (Hogansville)	CWP	Long Range

Map Id	Project Id	Prime Work Type	Description	STIP/CWP	Program Date
24	S009106	Resurface & Maintenance	Two Streets (LaGrange)	CWP	Long Range
25	S009107	Resurface & Maintenance	Two Streets (LaGrange)	CWP	Long Range
26	S009108	Resurface & Maintenance	Three Streets (West Point)	CWP	Long Range
27	0007391	Bridges	Salem Rd @ Flat Shoal Creek	CWP	2014
28	0007904	Auxiliary Lanes	I-85 SB @ SR 109 (Lafayette Pkwy), incl. ramp	CWP	Long Range
29	310730	Interchange	I-185 Connector @ I-85 & I-185	CWP	Long Range
30	311710	Miscellaneous Improvements	Call Boxes on I-85 from Alabama to SR 74 (Fulton)	CWP	Long Range
31	321713	Widening	SR 14 (Vernon Rd) from Ferrell Rd to Morgan St	CWP	Long Range
32	322230	Passing Lanes	SR 14 NB & SB from MP 3.87-5.37, 7.07-8.41	CWP	Long Range
33	342870	Bridges	Hammett Rd @ West Point Lake Tributary(N of LaGrange)	LR	Long Range
34	350920	Bridges	SR 109 @ CSX RR W of SR 14	CWP	Long Range
35	370900	Bridges	Hunt Rd @ Mud Creek	LR	Long Range
36	370904	Bridges	Stewart Rd @ Long Cane Creek	LR	Long Range
37	370905	Bridges	Baugh's Cross Rd @ Mud Creek	LR	Long Range
38	371070	Bridges	Adams Rd @ Big Branch	LR	Long Range
39	371071	Bridges	Cannonville Rd @ Long Cane Creek	LR	Long Range
40	371075	Bridges	Salem Chipley Rd @ Turkey Creek Tributary	LR	Long Range
41	371077	Bridges	Mountville-Hogansville Rd @ Beech Creek	LR	Long Range
42	371079	Bridges	Mountville-Hogansville Rd @ Flat Creek	LR	Long Range

Source: GDOT Department of Planning



GDOT Planned & Programmed Projects
Troup County Multi-Modal Transportation Study

Figure No: 5.1

Some of these planned projects may have a dramatic effect on the movement of traffic in the County, particularly in the vicinity of LaGrange. The South LaGrange Loop and I-185 Connector provide a bypass option to LaGrange in the east-west and north-south directions, respectively. These projects could help traffic through downtown LaGrange by providing additional east-west connectivity.

5.2 GDOT Statewide Bicycle & Pedestrian Plan

The Georgia Department of Transportation Bicycle and Pedestrian Plan (GABPP) was approved in August 1997 and focuses on developing a statewide primary route network. The network contains 14 routes totaling 2,943 miles. A statewide advisory committee consisting of staff from GDOT Districts, the Federal Highway Administration, Metropolitan Planning Organizations, Regional Development Centers, the Association of County Commissioners of Georgia, the Georgia Municipal Associations, local planning departments, bicycle clubs, and other state agencies evaluated each proposed corridor and defined routes. The goals developed as part of this study include:

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

Several factors were used in evaluating routes, including: accident history; total traffic volumes and truck volumes; speeds; shoulder and travel lane width; pavement condition; network connectivity; access to cities and to major points of interest; aesthetics; and the presence of potentially hazardous spot conditions. Bicyclists were considered the primary users of this route network, however pedestrian friendly designs are used in urban areas and paved shoulders are constructed on rural sections.

GDOT's Statewide Bicycle and Pedestrian Plan were reviewed to identify proposed facilities through Troup County. There are currently no routes in the plan which are located in Troup County.

5.3 GDOT Statewide Interstate System Plan

Sponsored by the Georgia Department of Transportation, the Statewide Interstate System Plan identified necessary improvements, and produced a comprehensive and prioritized program of projects to meet increasing traffic demands and ensure future statewide mobility. The plan, completed in the summer of 2004, is organized into three phases and focuses primarily on the interstates outside the Atlanta metro area.

The Interstate System Plan documents three interchanges within Troup County that are expected to operate under congested conditions by 2035; I-85 and SR 54, I-85 with SR 109 and I-185 with Upper Big Springs Road. The Interstate System Plan calls out widening I-85 near LaGrange as part of GDOT's program, but does not provide additional recommendations in the study area for widening.

5.4 Chattahoochee-Flint RDC Bicycle and Pedestrian Plan

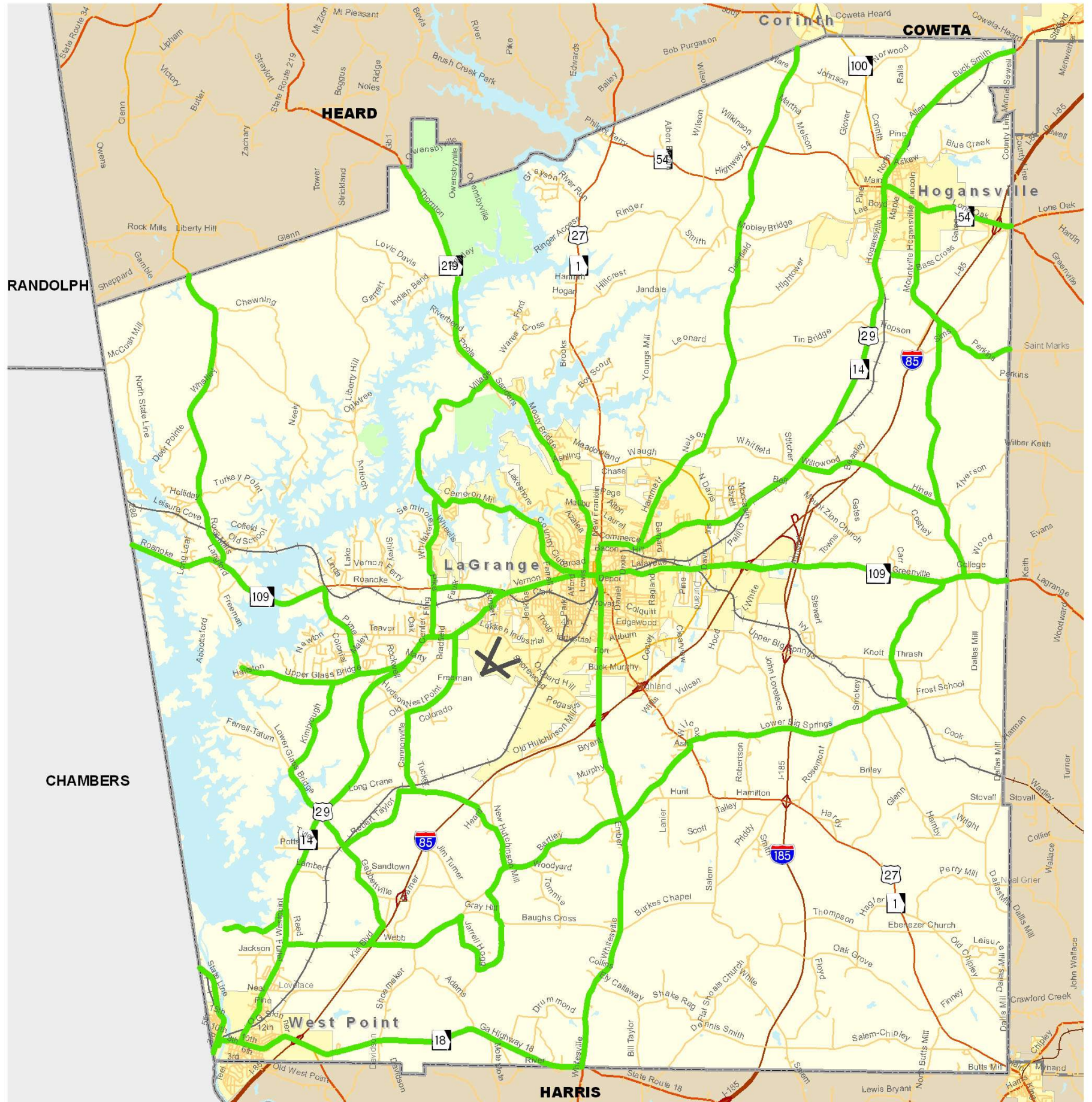
The Chattahoochee-Flint RDC Bicycle and Pedestrian Plan was completed in April 2005 and focuses on developing a bicycle and pedestrian network throughout its region. As part of this effort the following goals were created:

- Increase public awareness of bicycling and pedestrian needs in the region;
- Promote regional inter-connectivity; and,
- Support the development of a regional greenway system.

Additionally, the plan documents the following objectives:

- Incorporate bicycle and pedestrian needs in local transportation and recreation plans;
- Include state and regional network in local government comprehensive plans;
- Map bicycle-friendly routes;
- Promote and establish Bicycle Safety events;
- Encourage the use of helmets;
- Provide better training in the rules of the road;
- Strongly encourage that schools be located in or near residential areas;
- Adopt sidewalk and maintenance programs;
- Adopt better drainage grate design standards; and,
- Enhance the discussion of cyclists in the Georgia Driver's Education Manual.

The RDC's Bicycle and Pedestrian Plan includes several types of routes for Troup County such as, regional, inner city and recreational routes. The routes total 308.5 miles in Troup County. Recommendations from the Chattahoochee-Flint RDC Bicycle and Pedestrian Plan are presented in Figure 5.4.



RDC's Proposed Bicycle & Pedestrian Plan
Troup County Multi-Modal Transportation Study

Figure No: 5.4

5.5 Troup County Comprehensive Plan

The Troup County Comprehensive Plan was completed in 1993 and is currently being updated. The Comprehensive Plan was developed to guide the growth of the County through 2012. To the greatest extent possible the transportation planning effort is being developed with respect to transportation and land use issues and opportunities in Troup County – it is not relying on data developed in 1993. Because of the critical linkage between land use and transportation, it is recommended that the Transportation Plan developed as part of this study be reviewed once the Comprehensive Plan updates are complete.

5.6 City of LaGrange Comprehensive Plan

Similar to the Troup County Comprehensive Plan, the City of LaGrange Comprehensive Master Plan is currently under development. A draft report was completed in December, 2004 and has a horizon year of 2014. This plan was completed because of the anticipated growth in LaGrange. This plan, while not a standard comprehensive plan and not prepared in accordance to the Minimal Standards and Procedures for Local Comprehensive Planning, has information to offer. Table 5.6.1 documents the number of housing units anticipated within the City of LaGrange as well as the forecast population.

Table 5.6.1
Anticipated Development and Forecasted Population in LaGrange

Year	Anticipated Number of Housing Units	Forecasted Population
2005	615	28,406
2006	580	30,511
2007	604	32,673
2008	616	34,864
2009	602	37,141
2010	511	39,201
2011	481	41,189
2012	481	43,296
2013	450	45,329
2014	450	47,362

Source: City of LaGrange Comprehensive Master Plan

A key component of the LaGrange Comprehensive Plan was recommended transportation improvements. Table 5.6.2 documents the recommended transportation projects from this Plan.

**Table 5.6.2
Recommended Transportation Projects**

Prime Work Type	Description
Road Widening / Upgrade	N Davis Rd from Hogansville Rd to Lafayette Pkwy
Road Widening / Upgrade	N Greenwood St from Mooty Bridge Rd to Vernon St
Road Widening / Upgrade	Vernon St from Ferrell Dr to CBD
Intersection Improvement – Realignment & Signal Timing	Young’s Mill Rd at Commerce Rd
Intersection Improvement – Signal Timing	US 27 at Commerce Ave
Intersection Improvement – Signal Timing	Vernon Rd at Forrest St
Intersection Improvement – Signal Timing	Vernon St at Morgan St
Intersection Improvement – Turn Lanes/Widening/Striping	Davis Rd at Lafayette Pkwy
Sidewalks	Broad St from Vernon St to CBD
Sidewalks	Colquitt St from Hamilton Rd to Ragland St
Sidewalks	Commerce Ave from US 27 to Young’s Mill Rd
Sidewalks	Davis Rd from Lafayette Pkwy to Colquitt St
Sidewalks	Forrest Ave from Vernon St to Dallis St
Sidewalks	Greenville St from Ragland St to Lafayette Pkwy
Sidewalks	Hill St from US 27 to Oak Ln
Sidewalks	Lafayette Pkwy from CBD to Davis Rd
Sidewalks	Mooty Bridge Rd from City Limits to US 27
Sidewalks	N Davis Rd from Hogansville Rd to Hammett Rd
Sidewalks	US 27 from N Page St to CBD
Sidewalks	SR 109 from Vernon Rd to City Limits
Sidewalks	Vernon Rd from Lukken Industrial Blvd to Ferrell Dr
Sidewalks	Young’s Mill Rd from Hammett Rd to Commerce Ave
Multi-Use Path	Along conservation areas adjacent to the lakes
Multi-Use Path	Along stream from E Render St to Colquitt St
Multi-Use Path	Along stream from Hogansville Rd to Lafayette Rd
Multi-Use Path	Along stream from US 27 to Hogansville Rd
Bike Lane	Along Lafayette Pkwy to CBD
Bike Lane	Ragland St from Lafayette Pkwy to Colquitt St

Source: City of LaGrange Comprehensive Master Plan

These projects served as input to this study and were incorporated into the planning process as appropriate.

6.0 Assessment of Transportation Facilities

Extensive data was collected for the transportation facilities within Troup County. This data collection effort included inventorying existing roadways, bicycle and pedestrian facilities, transit, freight, bridges, traffic collisions, rail and airport services. The following sections provide an overview of the existing transportation system. This information will form the basis for evaluating its performance and determining future improvements.

Based on the existing conditions inventory and assessment, an analysis of operating conditions was conducted for the following elements:

- Public Transit;
- Freight;
- Aviation Facilities;
- Bicycle and Pedestrian Facilities;
- Bridge Inventory;
- Safety Assessments;
- Roadway Operating Conditions; and,
- Citizen and Stakeholder Input.

This analysis documents the baseline operating conditions for each element of the transportation system and forms the foundation for development of improvement recommendations.

6.1 Public Transportation

Troup County operates a rural paratransit operation through the Georgia Department of Transportation and the Department of Human Resources (DHR) called Troup Transit. The system primarily serves seniors, disabled and low income populations in the County. The services are provided with federal funds from the Federal Transit Administration (FTA Section 5311) and state funds administered through the Georgia Department of Transportation (GDOT). No conventional, fixed route, fixed schedule transit service is provided in Troup County.

The dial-a-ride service is provided to customers who call and request transportation from a specific location to a specific place at a designated time. Requests for service are usually made at least 24 hours in advance. The services for the County are provided in vans. Currently Troup Transit has nine (9) vehicles in use – 4 GDOT vehicles, 4 Troup County vehicles and 1 DHR vehicle. A majority of the riders are senior citizens or low-income people with physical and/or mental disabilities. Linkages are provided to each of the cities with major drop-off locations including:

- Clark Howard Clinic;
- Pathways Service Center;
- Division of Children and Family Services;
- New Ventures Inc;
- Positive Options;

- Senior Centers;
- LaGrange Rehab;
- Grocery Stores;
- LaGrange Mall; and,
- Medical Center.

Troup Transit has had fairly consistent ridership over the past several years. The following data reflects the total yearly trips (2003 – 2005) as reported by Troup Transit:

- 2003 – 56,802 one-way trips
- 2004 – 65,414 one-way trips
- 2005 – 58,334 one-way trips

Troup Transit indicated that they are currently operating near capacity. Troup Transit currently provides service Monday through Friday from 8:00 AM to 4:00 PM with a fee of \$0.25 per one-way trip.

Public comments received through the study process indicated a desire for additional transit service throughout Troup County. In particular, residents desire express transit service to Atlanta and Hartsfield-Jackson International Airport.

6.2 Freight Transport

The identification of freight corridors and preservation of freight mobility is a key component of the Troup County Multi-Modal Transportation Study. There are currently seven roadways in Troup County that are designated as truck routes and three active rail lines. The following sections summarize the existing freight activity and facilities in Troup County.

6.2.1 Railroad Facilities

There are currently several active rail lines within Troup County. There are currently no active rail yards in the County, though some sidings are provided to allow businesses to access the main line railroads. The information presented below comes from the GDOT Office of Intermodal Programs, particularly the 2000 Rail Freight Plan.

There are three railroads in the County, each of which is operated by CSX. One CXS line parallels US 29 and provides access to all the municipalities in the County and also connects to the railroad hub in Atlanta. This line typically carries between 22 and 26 trains a day, of which approximately 10 run between 6:00 AM and 6:00 PM. Currently, this line carries 28 Million Gross Ton Miles/Mile (MGTM/M) north of LaGrange and 22 MGTM/M south of LaGrange.

In LaGrange, a spur line branches off the Atlanta-West Point mainline to travel west over West Point Lake and into Alabama. This line typically carries 19 trains a day, of which approximately 8 run between 6:00 AM and 6:00 PM. Currently, this line carries 23 MGTM/M.

Also, another branch line leaves the mainline in LaGrange and travels southeast from LaGrange to Greenville. This line typically carries 17 trains a day, of which approximately 6

run between 6:00 AM and 6:00 PM. Currently, this line carries 17 Million Gross Ton Miles/Mile.

There are a total of 123 crossings in Troup County. A majority of these crossings are public (105) while a few of them are private (15). Additionally, there are three crossings dedicated to pedestrians. Another factor to consider is the way the railroad crosses roadways – there are 104 at-grade crossing in the County, 16 underpass crossings and 3 overpass crossings. The numerous at-grade crossings can cause delay to the roadway network, particularly at peak travel times.

Between 2001 and 2005, there were nine incidents reported to the Federal Railroad Administration (FRA) on rail facilities located in the County. These incidents resulted in two injuries and one fatality. The fatality occurred in 2001 at the Green Street crossing in Hogansville. This crossing also experienced another incident in 2005 with no injuries. This location is currently programmed in the STIP for safety enhancements.

6.2.2 Freight Activity and Commodities

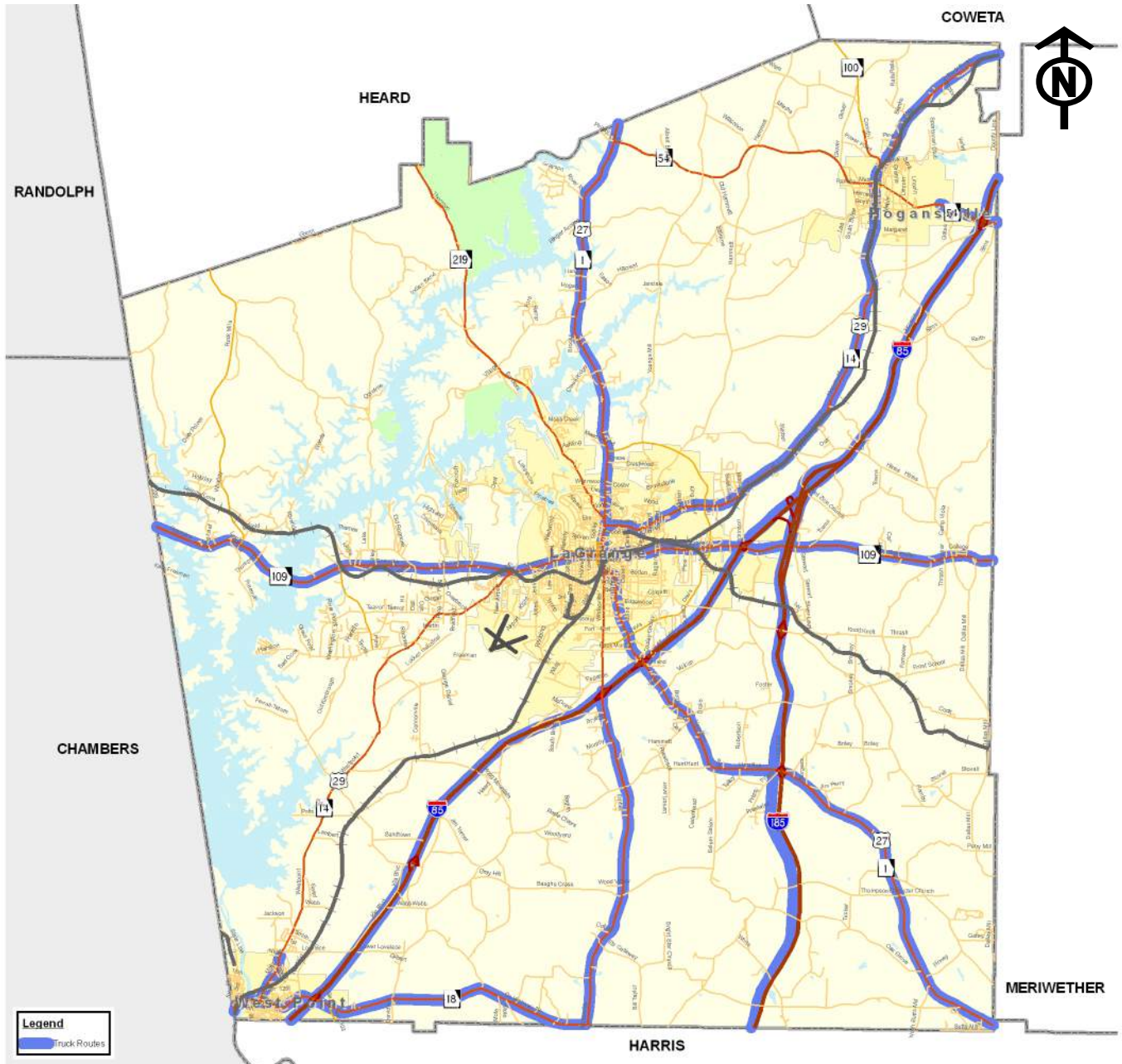
Several companies depend on freight operations in Troup County. A majority of these freight operations involve trucks; however some of the businesses are located along the railroads and utilize trains for the movement of their freight. The facilities designated in Troup County as truck routes include:

- I-85;
- I-185;
- US 27;
- US 29;
- SR 18;
- SR 109; and,
- SR 219.

The major commodities utilizing freight transport that originate or terminate within the County are lumber and wood products. Overall, the 2000 State Freight Plan predicts a 1.3% annual growth rate for lumber and wood products.

Over the next 30 year planning horizon, National Trends, as documented by the Federal Highway Administration (FHWA), indicate that freight traffic, both rail and heavy truck, will increase at a higher rate than automobile traffic. With key distribution hubs in Atlanta and the Ports of Savannah and Brunswick, freight rail and truck traffic growth is likely to exceed national averages. This growth will potentially result in increased volumes of train and truck traffic through Troup County. Further, care should be taken to ensure that adequate grade separations are provided to accommodate local traffic movements and preserve the integrity of emergency vehicle access – particularly in activity centers such as Hogansville, LaGrange and West Point. This issue was further validated by public comment concerning the blockage of vehicular traffic during rail activity.

Figure 6.2 displays the railroad corridors and designated truck routes for Troup County



Freight Transportation Facilities

6.3 Airports

There is currently one airport located in the County. The LaGrange-Callaway Airport (LGC) is located southwest of LaGrange, south of US 29 and north of I-85. The nearest commercial aviation airport is Hartsfield-Jackson Atlanta International Airport in Atlanta, which is approximately 60 miles to the northeast. Troup County Airport Authority manages Troup Air and the LaGrange-Callaway Airport. All of the following information about the airport is taken from the Georgia Department of Transportation's (GDOT) 2002 Aviation Directory or GDOT's General Aviation System Plan

The airport has two runways: a 5,600' x 150' runway with an instrumented approach and a 5,000' x 100' visual flight runway. Both runways feature full parallel taxiways. The LaGrange-Callaway Airport is currently listed by GDOT's General Aviation System Plan as a Level III Airport – a business airport of regional impact. This airport is capable of accommodating commercial aircraft as well as business and corporate jets. GDOT has established an objective of a minimum runway length of 5,500 feet for Level III airports. Currently, the LaGrange-Callaway Airport meets this objective with one of its runways. GDOT does not currently have plans to extend the second runway; however the Airport Authority has expressed an interest in expanding this runway by 900 feet.

This airport primarily serves personal, business, and other travel needs by smaller planes; however it does provide some commercial services. There are 55 aircraft based at the airport with an average of 45 operations per day. Approximately 33% of operations are local general aviation, 65% are transient general aviation, and 2% are military operations.

6.4 Bicycle and Pedestrian

Given the rural nature of the majority of Troup County, the limited bicycle and pedestrian transportation network is not unexpected. However, even in rural areas, there are places where bicycle and pedestrian activity occurs and infrastructure could be provided in these areas. In Troup County, these places include the historic downtown areas, concentrations of retail development, and educational institutions such as schools and colleges. Some areas within the County possessing pedestrian activity include Downtown Hogansville, LaGrange and West Point, LaGrange College, and some subdivisions.

While the demand for bicycle and pedestrian facilities is not present throughout the entire County, there are important locations where this type of travel activity must be accommodated safely and conveniently. The current condition of the existing bicycle and pedestrian facilities are characterized by a partially developed network with varying levels of maintenance. Some areas, notably Downtown LaGrange, Hogansville and West Point, have significant networks of sidewalks that are maintained. However, other areas in the County have limited sidewalk networks or gaps in the network that need improvement. In some more recently developed areas, such as newer retail areas, and in some areas around schools, effective pedestrian networks are not in place.

According to GDOT's crash database, from 2002 to 2004, there were four reported pedestrian fatalities in Troup County. Pedestrian fatalities are defined as a crash between a pedestrian and a vehicle along the highway system. Pedestrian fatalities occurred at the following locations:

- SR 14 and Davis Road;
- SR 18 and Avenue K;
- Shoemaker Road at milepost 2.05; and,
- Towns Road at milepost 1.10.

A review of the information in the crash database did not identify system contributing causes.

Public outreach identified bicycle and pedestrian enhancements as a desired quality of life improvement in selected areas including the Troup County Recreation Center, City of LaGrange and around schools. Field observations were conducted to identify existing deficiencies in the pedestrian and bicycle networks. There are areas where sidewalks have been provided, but in a limited manner that inhibits their usefulness by breaking up the sidewalks with a gap of unfinished surface. Another deficiency common to all areas is the lack of pedestrian accommodation at intersections. Several locations lack pedestrian signals, crosswalk striping, or both.

Priorities for enhancing bicycle and pedestrian facilities are based on proximity to schools, libraries, and activity centers. The goal is to provide a bicycle and pedestrian network to serve the local and regional needs of the communities. It is also the intent of the County to promote these facilities as a safe and healthy transportation option throughout the region for potential users.

Criteria were developed to identify and prioritize potential bicycle and pedestrian enhancements beyond those established in the RDC's Bicycle and Pedestrian Plan. Key bicycle and pedestrian prioritization criteria include:

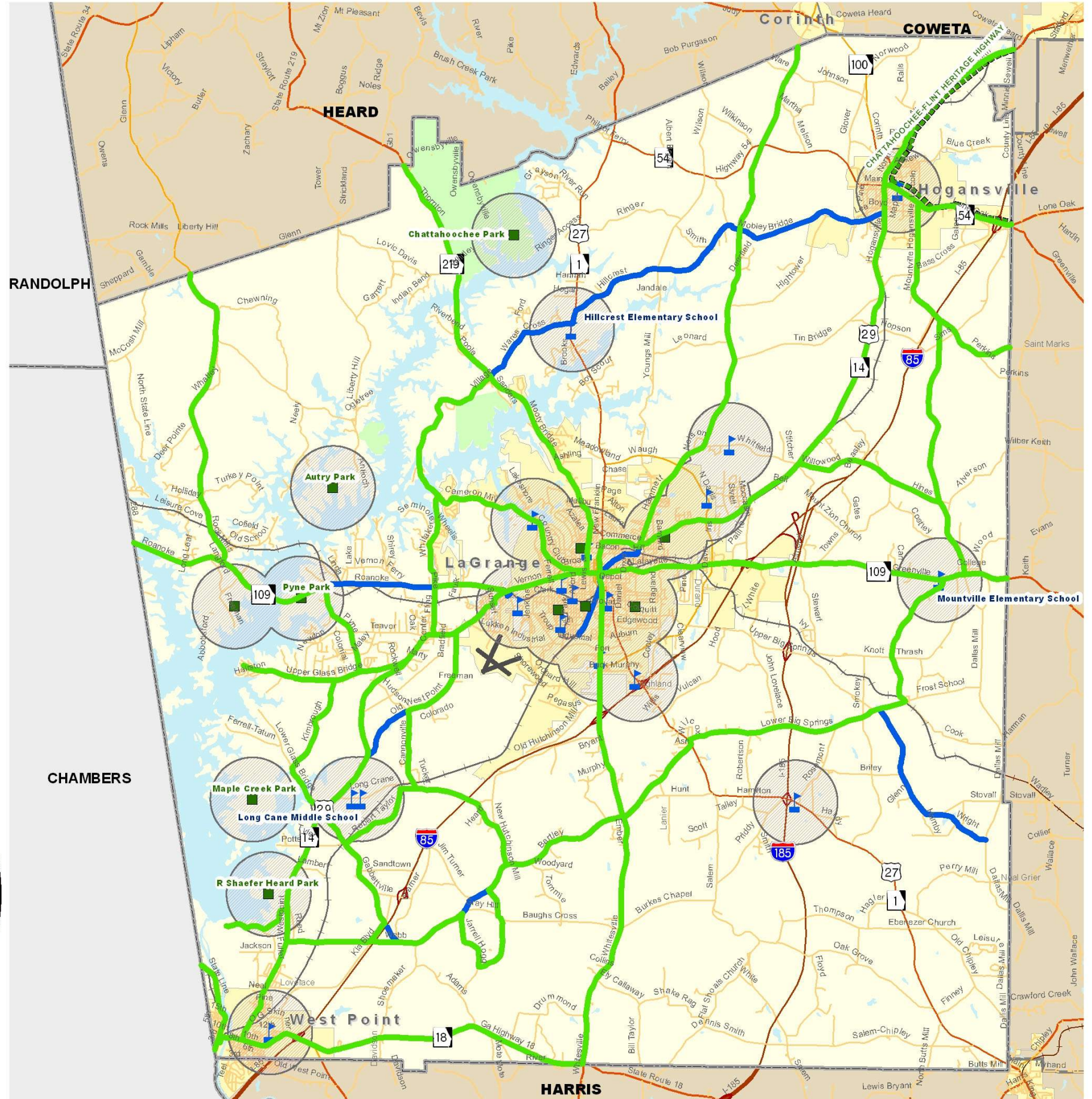
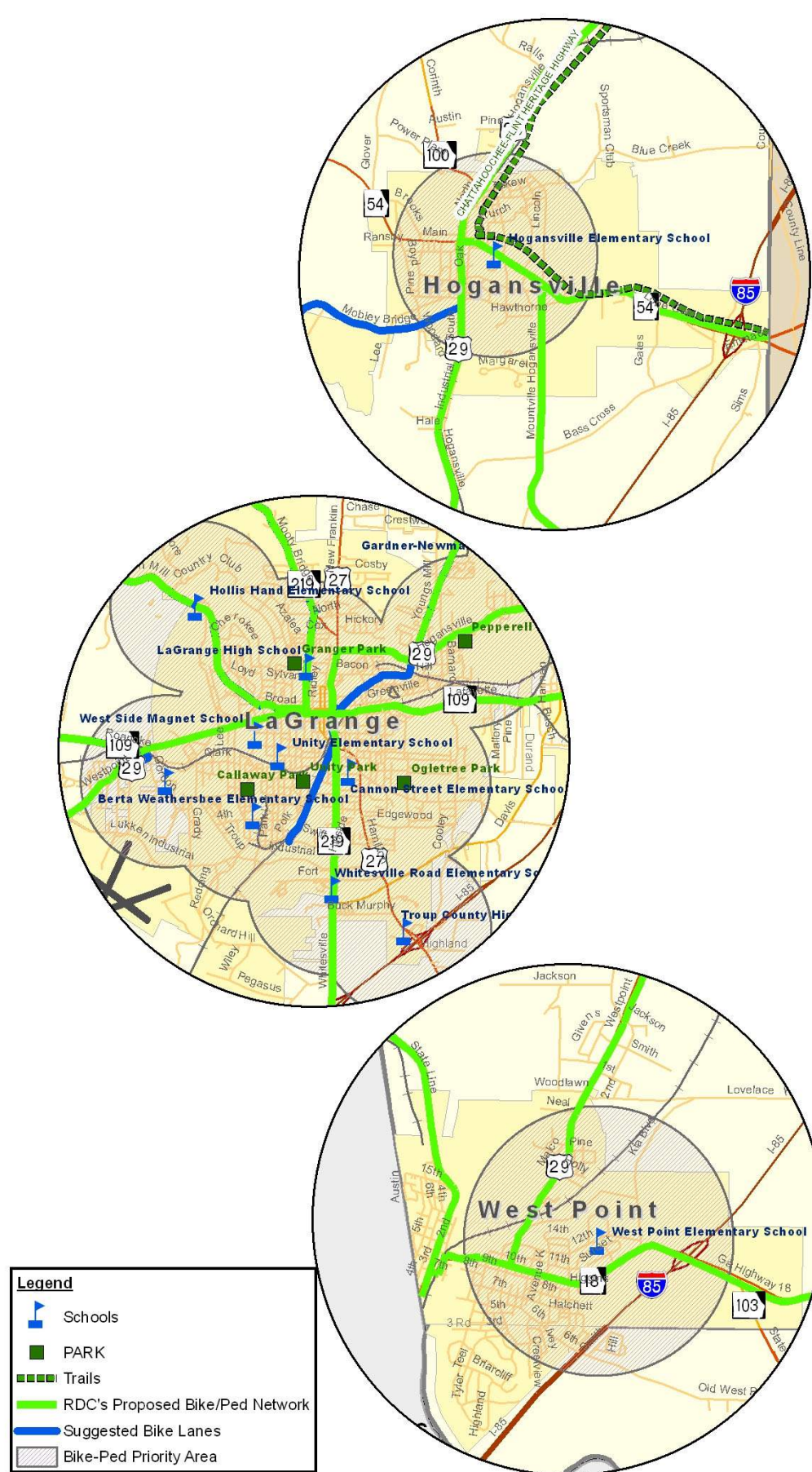
- Proximity to Schools and other public facilities;
- Infill – Connecting existing pieces of the sidewalk network;
- Connectivity – Access between major bicycle and pedestrian origins and destinations;
- Roadway Expansion – Where roads are reconstructed or constructed along new alignments, provide sidewalks as appropriate;
- As new development occurs, encourage development to provide adequate right of way for bicycle and pedestrian facilities; and,
- Consistency with the GDOT Statewide Bicycle and Pedestrian Plan.

Key bicycle and pedestrian trip producers such as schools, libraries and parks were defined with a one-mile buffer to facilitate identification of priority improvement areas. Similarly, activity centers with the potential for bicycle and pedestrian improvements were identified

and mapped. Public involvement, including meetings with the West Georgia Flyers bicycle club, further identified potential bicycle lanes improvements along the following facilities:

1. Country Club Road Loop;
2. Downtown Connector;
3. SR 109;
4. US 29;
5. Hillcrest Road/Hammett Road; and,
6. South Troup (Bartley Road, Lower Big Springs Road and Wright Road).

These suggested projects are mapped along with the bicycle and pedestrian priority areas in Figure 6.4



Bicycle & Pedestrian Improvements Areas
Troup County Multi-Modal Transportation Study

Figure No: 6.4

6.5 Bridges

One of the critical concerns for the County was bridge conditions. The County's bridges were evaluated to determine the need for potential improvement. Deficient bridges pose a major obstacle to a fully functional road network due to load limits or other restrictions. The study area was reviewed to identify all bridges and assess the need for potential improvements.

To facilitate the completion of this effort GDOT provided bridge condition reports for each bridge within the County. A general measure of the condition of each bridge is the sufficiency rating. The sufficiency rating is used to determine the need for maintenance, rehabilitation or reconstruction of a bridge structure. Guidance provided by GDOT shows that a bridge with a sufficiency rating above 75 should maintain an acceptable rating for at least 20 years with adequate maintenance. Structures with a rating between 65 and 75 are less satisfactory and structures with a sufficiency rating of 65 or lower have a useful life of less than twenty years and may require major rehabilitation or reconstruction work during the study horizon. All bridges with a sufficiency rating of fifty (50) or lower are identified by GDOT as deficient and a more detailed assessment of bridge inventory elements was performed in this study to facilitate the ranking of bridges for potential improvement.

The study area was reviewed to identify all bridges within Troup County and document a sufficiency rating. Currently, 165 bridges exist within the County. Table 6.5 displays the collected information.

Table 6.5
Bridge Inventory

Road	Feature	Sufficiency Rating
CSX Railroad	Leman St	0.00**
CSX Railroad	Forrest Ave	0.00**
CSX Railroad	Mulberry St	0.00**
Greenville St*	CSX Railroad	4.00
Glenn Rd	Whitewater Creek	5.00
Cannonville Rd	Long Cane Creek	7.56
Jefferson St*	CSX Railroad	13.81
Hammett Rd	Yellow Jacket Creek Tributary	14.65
Juniper St	CSX Railroad	16.24
Salem-Chipley Rd	Turkey Creek Tributary	16.61
Adams Rd	Big Branch	24.74
Dallas Mill Rd	Big Springs Creek	25.55
Salem-Chipley Rd	Turkey Creek	26.49
Baugh's Cross Rd	Mud Creek	26.98
Mountville-Hogansville Rd	Flat Creek	27.13

Road	Feature	Sufficiency Rating
Stewart Rd	Long Cane Creek	27.55
Finney Rd	Polecat Creek	27.65
Hunt Rd	Mud Creek	28.20
Mountville-Hogansville Rd	Beech Creek	28.58
Thompson Rd	Polecat Creek	31.18
Young's Mill Rd	Beech Creek	39.25
Salem Rd*	Flat Shoals Creek	42.56
Fort Dr	Tanyard Branch	48.59
Mobley Bridge Rd	Yellow Jacket Creek Tributary	51.11
Alverson Rd	Beech Creek	53.99
US 27	Flat Shoals Creek	55.05
Callaway Church Rd	Long Cane Creek	58.73
US 27	Long Cane Creek	59.10
Antioch Rd	Whitewater Creek	59.42
Gabbettville Rd	Long Cane Creek	63.82
SR 100	Yellow Jacket Creek	65.32
SR 109*	CSX Railroad	67.08
Tucker Rd	Polecat Creek	67.38
3rd Ave	Chattahoochee River O/F	68.03
N. Hutchinson Mill	Long Cane Creek	69.75
SR 18 (EB)	Long Cane Creek	70.92
Salem Rd	Turkey Creek	72.46
I-85 (NB)	SR 18	73.18
I-185	Polecat Creek	73.99
I-185	Turkey Creek	73.99
Industrial Dr	CSX Railroad	74.06
US 29	Chattahoochee River	75.75
Whitaker Rd	West Point Lake	75.96
I-85 (SB)	SR 18	76.64
SR 18 (WB)	Long Cane Creek	77.29
I-85 (SB)	SR 109	77.48
US 27 (NB)	I-185	77.94
US 27 (SB)	I-185	77.94
Frost School Rd	Big Springs Creek	78.46
SR 219	Yellow Jacket Creek	78.66
I-185 (SB)	CSX Railroad	79.16
SR 18	Flat Shoals Creek	79.21
Fas 740 Spur	Wilson Creek	79.53

Road	Feature	Sufficiency Rating
US 27	Yellow Jacket Creek	79.71
US 27	Beech Creek	80.41
I-85 (SB)	CSX Railroad	80.70
SR 219	West Point Lake	81.01
SR 219	Mud Creek	81.56
I-85 (NB)	CSX Railroad	81.73
SR 109	Chattahoochee River	81.90
US 27	West Point Lake	82.15
Sims Rd	Flat Creek	82.28
I-85 (SB)	Cannonville Rd	82.40
Oak Grove Rd	I-185	83.26
I-85 (NB)	Cannonville Rd	83.85
Edgewood Ave	Blue John Creek	84.05
I-85 (NB)	Flat Creek	84.22
I-85 (SB)	Flat Creek	84.22
I-85 (NB)	Beech Creek	84.63
I-85 (SB)	Beech Creek	84.63
I-85 (SB)	US 27 / SR 1	84.71
I-85 (NB)	Long Cane Creek	84.88
I-85	Beech Creek Tributary.	85.00
I-85	Shoal Creek	85.00
I-185	Panther Creek	85.00
I-185	Panther Creek Tributary	85.00
I-85	Long Cane Creek Tributary	85.00
SR 219	Wildcat Creek	85.52
Country Club Rd	West Point Lake	85.55
US 27	Dix Branch	85.59
SR 219	Flat Shoals Creek	85.74
Glass Bridge Rd	Maple Creek (West Point Lake)	85.91
I-85 (SB)	Long Cane Creek	86.27
I-185	Long Cane Creek	86.45
Dallas Mill Rd	Crawford Creek	87.72
Pyne Whitley Rd	Wilson Creek	88.43
Cook Rd	Big Springs Creek	88.46
Cameron Mill Rd	Yellow Jacket Creek	88.64
Colquitt St	Blue John Creek	89.16
SR 109	Wehadkee Creek	89.20
Dennis Smith Rd	I-185	89.25

Road	Feature	Sufficiency Rating
US 27	Mud Creek	89.78
SR 54	Yellow Jacket Creek	89.80
Wildwood Rd	I-85	90.00
US 27	Polecat Creek	90.08
US 27	Blue John Creek	90.11
SR 14 Spur	Blue John Creek	90.20
SR 219	Blue John Creek	90.39
I-185 (NB)	CSX Railroad	90.81
SR 109	CSX Railroad	90.84
M.-Hogansville Rd	I-85	91.08
I-85 (NB)	US 27 / SR 1	91.95
Floyd Rd	Turkey Creek	92.01
Vulcan Material Rd	Panther Creek	92.02
Hightower Rd	Flat Creek	92.07
Robertson Rd	Mud Creek	92.20
Bill Taylor Rd	Ingram Creek	92.27
Hood Rd	Long Cane Creek	92.36
Salem Rd	I-185	92.40
Gabbettville Rd	Long Cane Creek Tributary	92.45
I-85 (SB)	Long Cane Creek	92.67
LaGrange Bypass	CSX Railroad	93.06
I-85 (NB)	Long Cane Creek	93.58
SR 109	I-185 (NB)	93.62
SR 109	I-185 (SB)	93.62
I-185 (NB)	Thompson Rd	93.63
I-185 (SB)	Thompson Rd	93.63
SR 219	I-85	94.01
I-185 (SB)	I-85	94.08
SR 219	Dix Branch	94.15
Hammett Rd	Yellow Jacket Creek	94.39
I-85 (NB)	Big Springs Rd	94.65
I-85 (SB)	Big Springs Rd	94.65
SR 109	CSX Railroad	94.70
SR 54	I-85	94.96
US 29	Flat Creek	95.38
Hill St	CSX Railroad (Removed)	95.65
SR 14 Spur	CSX Railroad	95.73
King St	CSX Railroad	95.81

Road	Feature	Sufficiency Rating
I-185 (NB)	Flat Shoals Creek	95.88
SR 219	Long Cane Creek	95.98
I-85 (NB)	SR 109	96.13
Upper Big Springs Rd	I-185	96.14
I-85 (NB)	Webb Rd	96.28
I-85 (SB)	Webb Rd	96.28
Hammett Rd	Beech Creek	96.58
US 29	Beech Creek	96.62
I-185 (SB)	Flat Shoals Creek	96.68
Fling Rd	CSX Railroad	96.82
Handley St	Tanyard Branch	96.94
US 27 (SB)	West Point Lake Tributary	96.94
US 27 (NB)	West Point Lake Tributary	96.94
Orchard Hill Rd	Blue John Creek	97.05
Salem Rd	Polecat Creek	97.19
US 29	Shoal Creek	97.30
Lower Big Springs Rd	I-185 (SB)	97.64
US 27	CS 919 - CSX Railroad	97.69
Stovall Rd	Flat Shoals Creek	97.72
Webb Rd	Long Cane Creek	97.74
Hammett Rd	Shoal Creek	97.77
Rock Mill Rd	CSX Railroad	97.88
US 29 Connector	I-185 (SB)	98.00
Dallas Mill Rd	Sulphur Creek	98.44
Young's Mill Rd	Yellow Jacket Creek	98.61
Upper Big Springs Rd	Long Cane Creek	98.68
US 29	CSX Railroad	98.80
US 29	Yellow Jacket Creek	98.83
Blue Creek Rd	Blue Creek	98.83
US 29 Connector	I-85	99.00
SR 14 Spur	Blue John Creek	99.27
Young's Mill Rd	Shoal Creek	99.50
Lower Big Springs Rd	I-185 (NB)	99.64
Mobley Bridge Rd	Yellow Jacket Creek	99.67
Swift St	Tanyard Branch	99.92
Perrys Mill Rd	Crawford Creek	99.94

Source: GDOT

* These bridges are currently part of the 2005 – 2007 STIP or 2005-2010 CWP

** These bridges are maintained by CSX and information was unavailable.

Based on the sufficiency rating, a majority of the bridges are in good condition and not in need of any major maintenance or upgrade activities. There are twenty-three (23) bridges that have a sufficiency rating below 50 and are potentially in need of maintenance and rehabilitation.

- CSX Railroad at Lemay Street
- CSX Railroad at Forrest Avenue
- CSX Railroad at Mulberry Street
- Greenville Street at CSX Railroad (CWP)
- Glenn Road at Whitewater Creek
- Cannonville Road at Long Cane Creek (Long Range)
- Jefferson Street at CSX Railroad (STIP)
- Hammett Road at Yellow Jacket Creek Tributary (Long Range)
- Juniper Street at CSX Railroad
- Salem-Chipleigh Road at Turkey Creek Tributary (Long Range)
- Adams Road at Big Branch (Long Range)
- Dallas Mill Road at Big Springs Creek
- Salem-Chipleigh Road at Turkey Creek
- Baughs Cross Road at Mud Creek (Long Range)
- Mountville-Hogansville Road at Flat Creek (Long Range)
- Stewart Road at Long Cane Creek (Long Range)
- Finney Road at Polecat Creek
- Hunt Road at Mud Creek (Long Range)
- Mountville-Hogansville Road at Beech Creek (Long Range)
- Thompson Road at Polecat Creek
- Young's Mill Road at Beech Creek
- Salem Road at Flat Shoals Creek (CWP)
- Fort Drive at Tanyard Branch

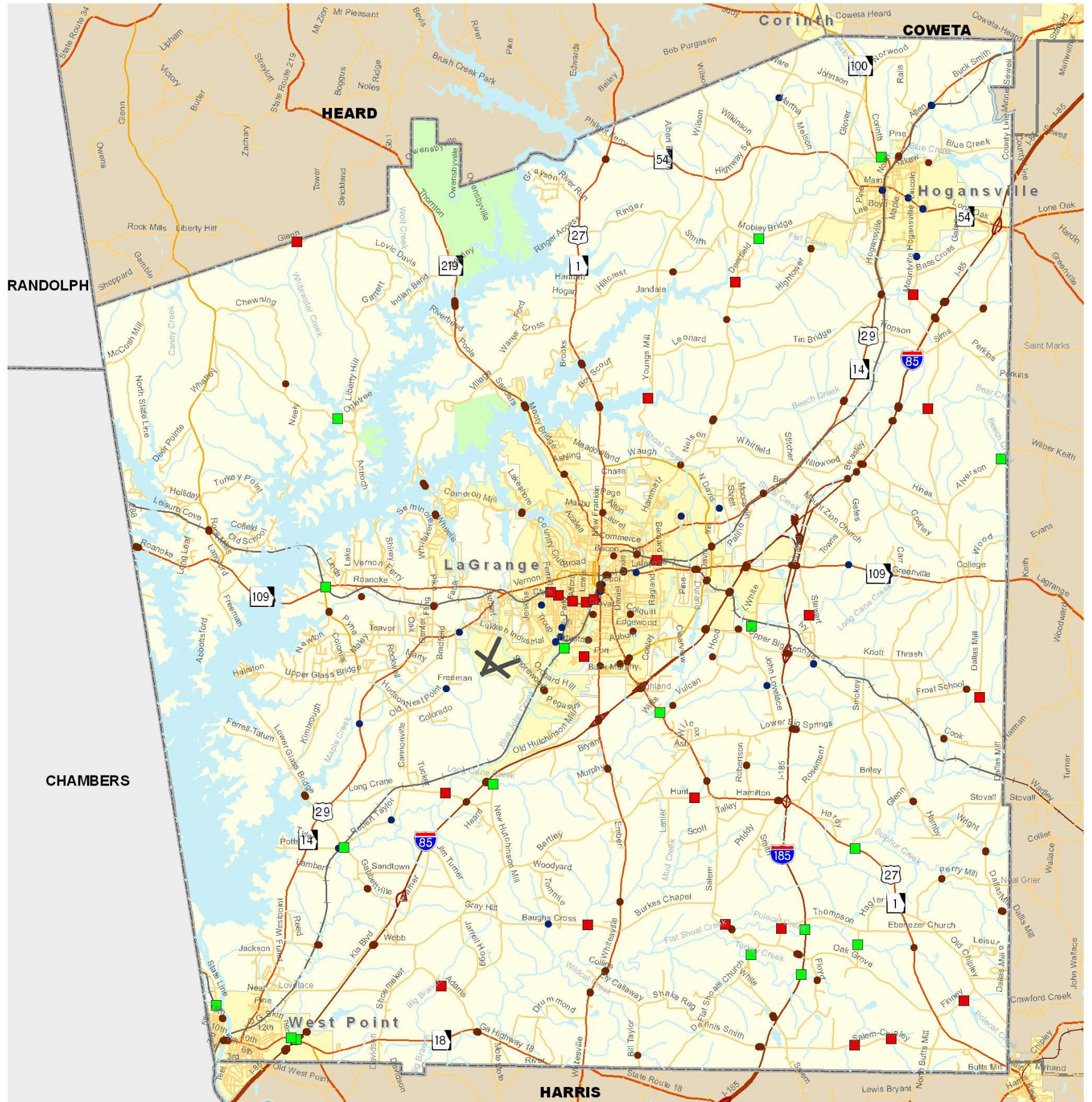
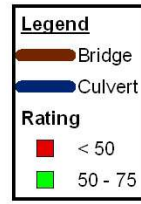
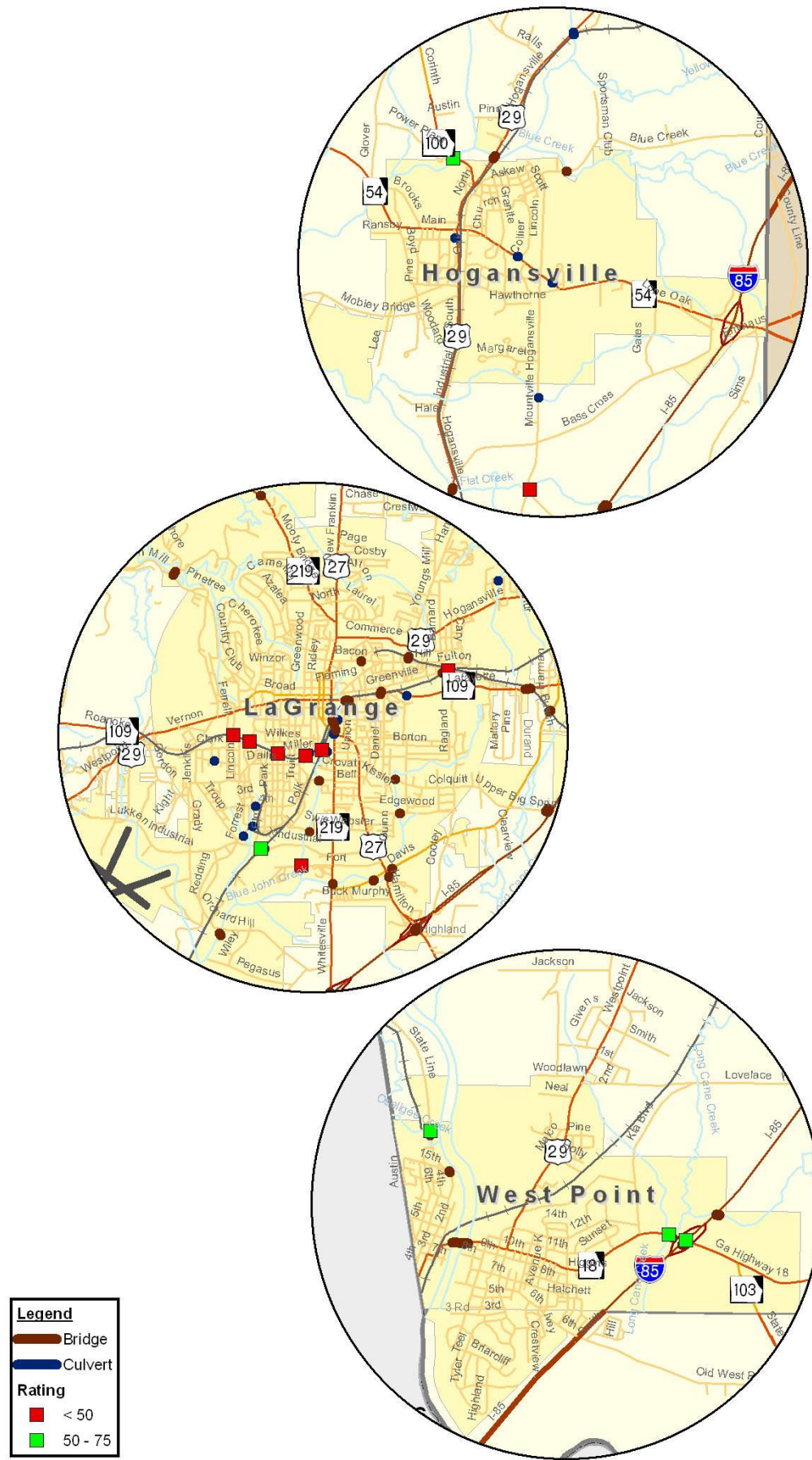
The Jefferson Street bridge over the CSX Railroad is currently under construction. The Greenville Street bridge over the CSX Railroad, Salem Road bridge over Flat Shoals Creek and SR 109 bridge over CSX are part of the 2005-2010 CWP, however the Salem Road and SR 109 bridges are listed as long range.

Additionally, there are eighteen (18) bridges that have a sufficiency rating below 75 and should be evaluated as candidates for maintenance and rehabilitation within the next 20 years. The following bridges have a sufficiency rating below 75.

- Mobleigh Bridge Road at Yellow Jacket Creek Tributary
- Alverson Road at Beech Creek
- US 27 at Flat Shoals Creek
- Callaway Church Road at Long Cane Creek
- US 27 at Long Cane Creek
- Antioch Road at Whitewater Creek
- Gabbettville Road at Long Cane Creek

- SR 100 at Yellow Jacket Creek
- SR 109 at CSX Railroad (CWP)
- Tucker Road at Polecat Creek
- 3rd Avenue at Chattahoochee River O/F
- N. Hutchinson Mill at Long Cane Creek
- SR 18 (EB) at Long Cane Creek
- Salem Road at Turkey Creek
- I-85 (NB) at SR 18
- I-185 at Polecat Creek
- I-185 at Turkey Creek
- Industrial Drive at CSX Railroad

The candidate bridges for maintenance and rehabilitation evaluation are mapped in Figure 6.5.



Bridges for Maintenance or Rehabilitation
Troup County Multi-Modal Transportation Study

Figure No: 6.5

6.6 Safety

The latest three years of available vehicular crash data from the Georgia Department of Transportation (2002, 2003 and 2004) was collected and analyzed for the entire County. The crash data was used to determine roadway locations with potential safety deficiencies through Troup County. The County experienced a total of 6,847 crashes with 2,111 injuries and 45 fatalities during the three-year period. A majority of the fatalities (35%) were concentrated on I-85 and I-185.

When analyzing the crash data, it was determined that a threshold of 30 crashes over the three-year period (10 crashes per year) would serve to identify “high crash” locations for planning purposes. This provided the ability to pinpoint locations that may potentially have safety issues. Table 6.6 displays the intersections with the highest amount of crashes in the County.

Table 6.6
High Crash Segments

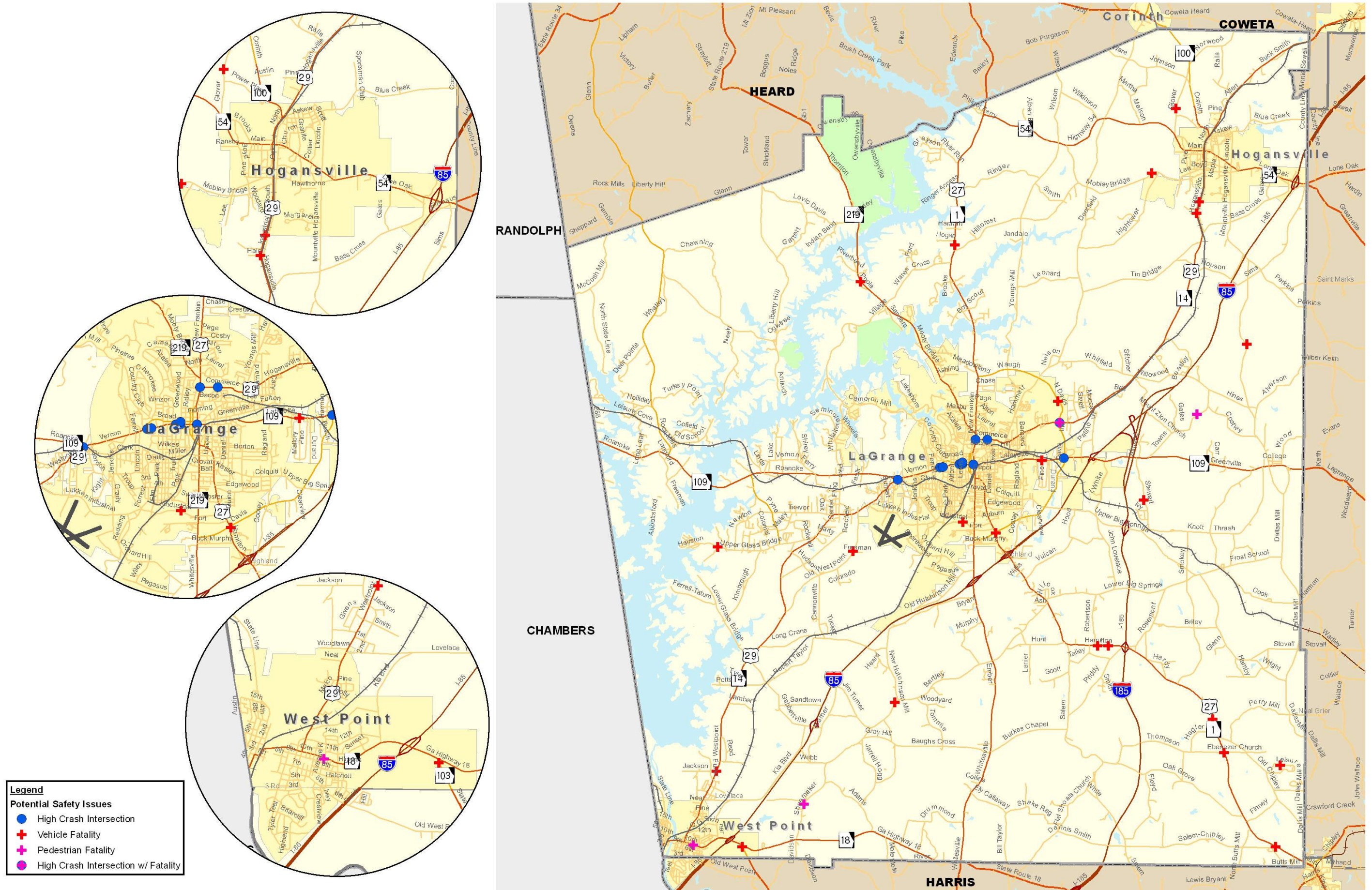
Roadway	Intersection	Crashes	Fatalities	Injuries
US 27	US 29	180	0	39
US 29	Davis Rd	81	1	24
US 29	S Greenwood St	49	0	12
US 27	N Lafayette Sq	50	0	6
Davis Road	SR 109	42	0	9
Broad Street	SR 219	42	0	19
US 29	Horace King St	39	0	11
US 29	Broad St	46	0	12
US 29	SR 109	38	0	1
US 29	Forrest Ave	34	0	5
US 29	Harwell Ave	30	0	2

In addition to the high crash locations, an area of focus and concern was the location of fatal crashes. The locations listed below experienced at least one (1) fatality related crash during the three-year analysis period.

- US 27 at Salem Chipley Road
- US 27 at S Thompson Road
- US 27 north of Hagler Road
- US 27 between Robertson Road & I-185

- US 27 between Robertson Road & I-185
- US 27 at Davis Road
- US 27 at Hillcrest Road
- US 27 at West Point Lake Bridge
- US 29 south of Webb Road
- US 29 at Davis Road (Pedestrian)
- US 29 at Hale Road
- US 29 at Hogansville City Limit
- SR 18 at Ave K (Pedestrian)
- SR 18 at SR 103
- Shoemaker Road south of Gilbert Road (Pedestrian)
- Bartley Road south of New Hutchinson Mill Road
- SR 109 at Mallory Drive
- SR 219 at Poole Rd
- Stewart Road south of SR 109
- Towns Road south of Costley Road (Pedestrian)
- Glover Road north of Power Plant Road
- Upper Glass Bridge Road at Earl Cook Road
- Old West Point Road north of Freeman Road
- Mountville Hogansville Road at Hines Road
- Hillcrest Road west of Hightower Road
- Leisure Circle at Deerwood Drive
- N Davis Rd north of Shannon Drive
- Lukken Industrial Drive west of SR 219

Figure 6.6 shows intersections with more than 30 crashes over the three year analysis period as well as fatality crash locations.



High Crash & Fatality Locations
Troup County Multi-Modal Transportation Study

Figure No: 6.6

6.7 Roadway Operating Conditions

County level sketch planning tool was developed to assist in the evaluation of existing and future travel conditions through the County. The key output from the sketch planning tool is a volume to capacity ratio for each roadway segment. The volume to capacity ratios correspond to a level of service based on accepted methodologies from the 2000 Highway Capacity Manual. Existing (2000) and future (2015 and 2035) operating conditions for the County are summarized in the following sections.

6.7.1 Sketch Planning Tool Development

Since there is no travel demand model existing for Troup County, a simplified process, in the form of a sketch planning tool, was developed based on the available data elements. This simplified process estimates the highway origin-destination (O-D) trip table in the form of a matrix from observed traffic counts instead of using traditional trip generation and trip distribution steps. The assignment is used to relate the estimated trip table to the highway network for existing and future conditions.

Development of the sketch planning tool followed the process presented below.

- Network Development: An existing roadway network (2004) was created as the baseline network. All significant roads with traffic count information in the County were included in this baseline network. HNTB coordinated with stakeholders in Troup County to identify appropriate roads for inclusion in this network. The roadway network within the County was classified by facility type (such as interstates, arterials and collectors) and area type (such as urban and rural). Other roadway attributes such as distance, number of lanes, road names, etc. were added to enhance the sketch planning tool.
- Traffic Analysis Zone (TAZ) Development: The study area was divided into numerous smaller analysis areas referred to as traffic analysis zones or TAZs. The number of TAZs was dependent on the size of the study area, the level of detail required in the study and the availability of land use data and network data. TAZ boundaries follow natural and man-made barriers such as rivers, railroad tracks, major arterial roadways, census tracts, etc. - 168 TAZs were developed for Troup County.
- Traffic Count Database Development: The highway O-D matrix estimation procedure was used to produce an O-D matrix consistent with observed link counts. A traffic count database for the network links was developed using GDOT permanent count station data. Troup County currently does not collect its own traffic count data. The link counts were used to provide directional counts to represent the traffic flow on both sides of the street. For the links with the observed by-direction AADTs, 50/50 split was assumed to achieve the traffic flow for each direction.

- O-D Matrix Estimation: A 2005 vehicle trip table representing weekday travel was developed from the traffic count database using TransCAD to facilitate highway O-D matrix estimation. This was an iterative (or bi-level) process that switches back and forth between a traffic assignment stage and a matrix estimation stage. As a result of this estimation process, a matrix file containing the estimated O-D flows and a table file containing estimated link flow volume and link cost (such as travel time) was generated.
- Traffic assignment process: This process is similar to the highway assignment process used in most travel demand models (equilibrium assignment) to assign the trip table to the highway network.

The development of the future conditions sketch planning tool is as follows:

- Network Development: In order to develop and evaluate future travel conditions (2015 and 2035); an existing plus committed (E+C) network was developed based on the existing network with the new projects identified in GDOT's Construction Work Program (CWP). The CWP was reviewed and it was determined that all capacity related projects in the CWP were considered long range and did not have a direct impact to the sketch planning tool, therefore no additional projects were added to the existing plus committed roadway network.
- Trip Table Forecasting: The trip tables for future years (2015 and 2035) were developed from the base year O-D matrix and adjusted based on the relationship between historical traffic count growth, trip making behaviors, population growth, and future land use. HNTB worked closely with GDOT, Troup County and the Stakeholder Committee to forecast the trend and develop future year socio-economic and land use data.
- Traffic assignment: Given the future network and the future travel demand matrix, the traffic assignment model predicts the network flows that are associated with future planning scenarios (2015 and 2035). The traffic flow patterns and congested links were observed based on the assignment results.

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

- **LOS A** – Drivers perceive little or no delay and easily progress along a corridor.
- **LOS B** – Drivers experience some delay but generally driving conditions are favorable.

- **LOS C** – Travel speeds are slightly lower than the posted speed with noticeable delay in intersection areas.
- **LOS D** – Travel speeds are well below the posted speed with few opportunities to pass and considerable intersection delay.
- **LOS E** – The facility is operating at capacity and there are virtually no useable gaps in the traffic.
- **LOS F** – More traffic desires to use a particular facility than it is designed to handle resulting in extreme delays.

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

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

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

Similarly, the remaining facilities (urban – City of LaGrange) used the following thresholds to assign a level of service to the V/C ratios:

- $V/C < 0.70$ = LOS C or better;
- $0.70 > V/C < 0.85$ = LOS D;
- $0.85 > V/C < 1.00$ = LOS E; and,
- $V/C > 1.00$ = LOS F.

6.7.2 Existing (2004) Operating Conditions

The existing conditions scenario results derived from the Troup County sketch planning tool were used to determine deficient roadway segments. Deficient segments were determined by analyzing the volume of traffic on the roadway segments compared to the capacity of those segments. The corresponding volume to capacity ratios (V/C ratios) were related to level of service (LOS). The minimum acceptable LOS for daily roadway operating conditions is LOS C.

The existing analysis shows that 10 segments can be expected to operate at or below LOS D under daily conditions. Table 6.7.2 displays the deficient roadway segments with the LOS for daily operating conditions. Figure 6.7.2 presents the daily deficient segments.

**Table 6.7.2
Existing Deficient Segments**

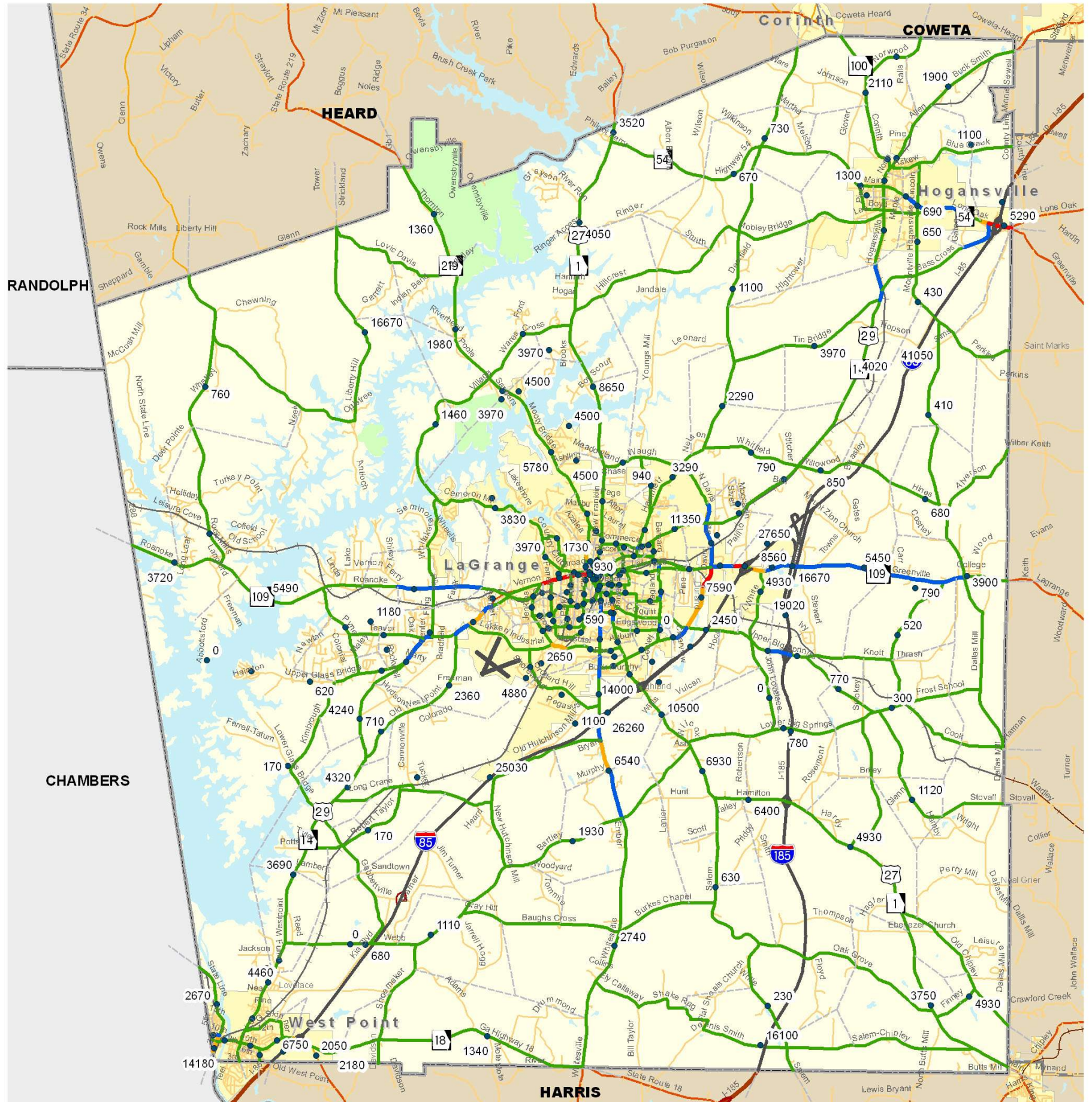
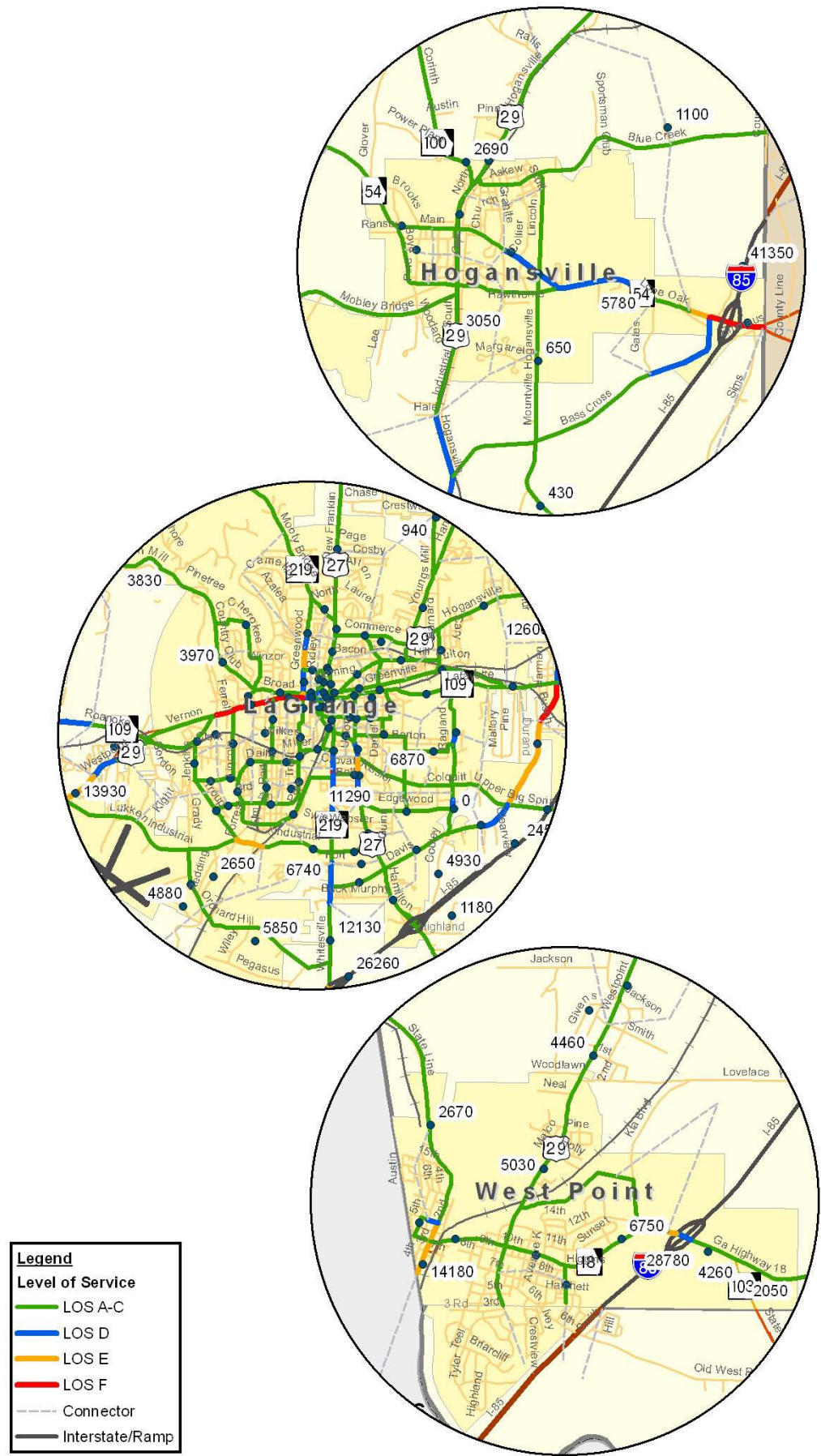
Roadway	From	To	Volume ⁽¹⁾	V/C	LOS
Davis Rd	SR 109	Ragland St	11,038	0.8236	D
SR 54	Maple Dr	Gates Rd	13,027	0.4771	D
SR 109	US 29	Pyne Rd	6,958	0.3842	D
SR 109	Davis Rd	Callaway Church Rd	29,110	0.7842	D
SR 109	Callaway Church Rd	Mountville Hogansville Rd	8,593	0.4777	D
SR 219	US 27	Davis Rd	11,416	0.7063	D
SR 219	I-85	Bartley Rd	11,383	0.5774	E
US 27	SR 219	Auburn Ave	13,592	0.7512	D
US 29	Upper Glass Springs Rd	New Airport Rd	7,785	0.4335	D
US 29	US 27	Vernon Rd	19,998	1.0441	F

(1) - Two-way volumes

Shaded rows represent facilities analyzed under rural LOS thresholds, while unshaded rows represent facilities analyzed under urban LOS thresholds.

Additionally, the following roadway segments are approaching LOS D and/or have smaller links associated with them that are currently operating below LOS C:

- Davis Road from SR 109 to Hammett Road;
- Greenwood Street from US 29 to Mooty Bridge Rd; and,
- Upper Big Springs Road from Callaway Church Road to I-185.



Existing Daily Deficient Segments
Troup County Multi-Modal Transportation Study

Figure No: 6.7.2

6.7.3 Future Operating Conditions

Future operating conditions were evaluated for the years 2015 and 2035, the study interim and horizon year respectively. This extended horizon provides an opportunity to determine how well the existing roadway network will serve 2015 and 2035 population and employment in Troup County. Since the 2015 and 2035 population and employment projection techniques are based on stakeholders, it is important to point out that the projections are the least reliable and it could impact the estimation of the future traffic demand. This in turn impacts estimates of traffic demand. The long term results should be considered preliminary and when the transportation plan the projects should be revised as necessary.

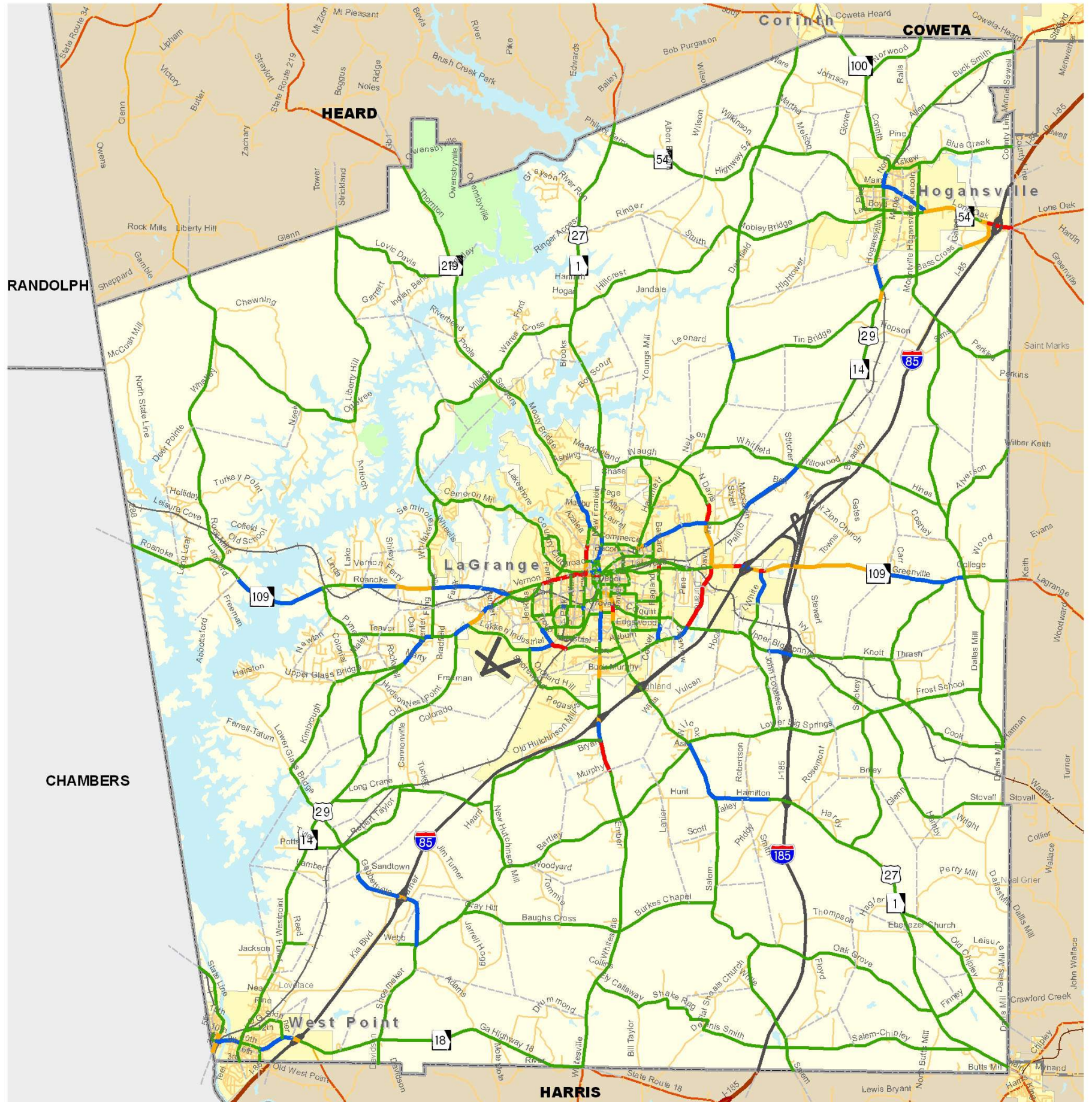
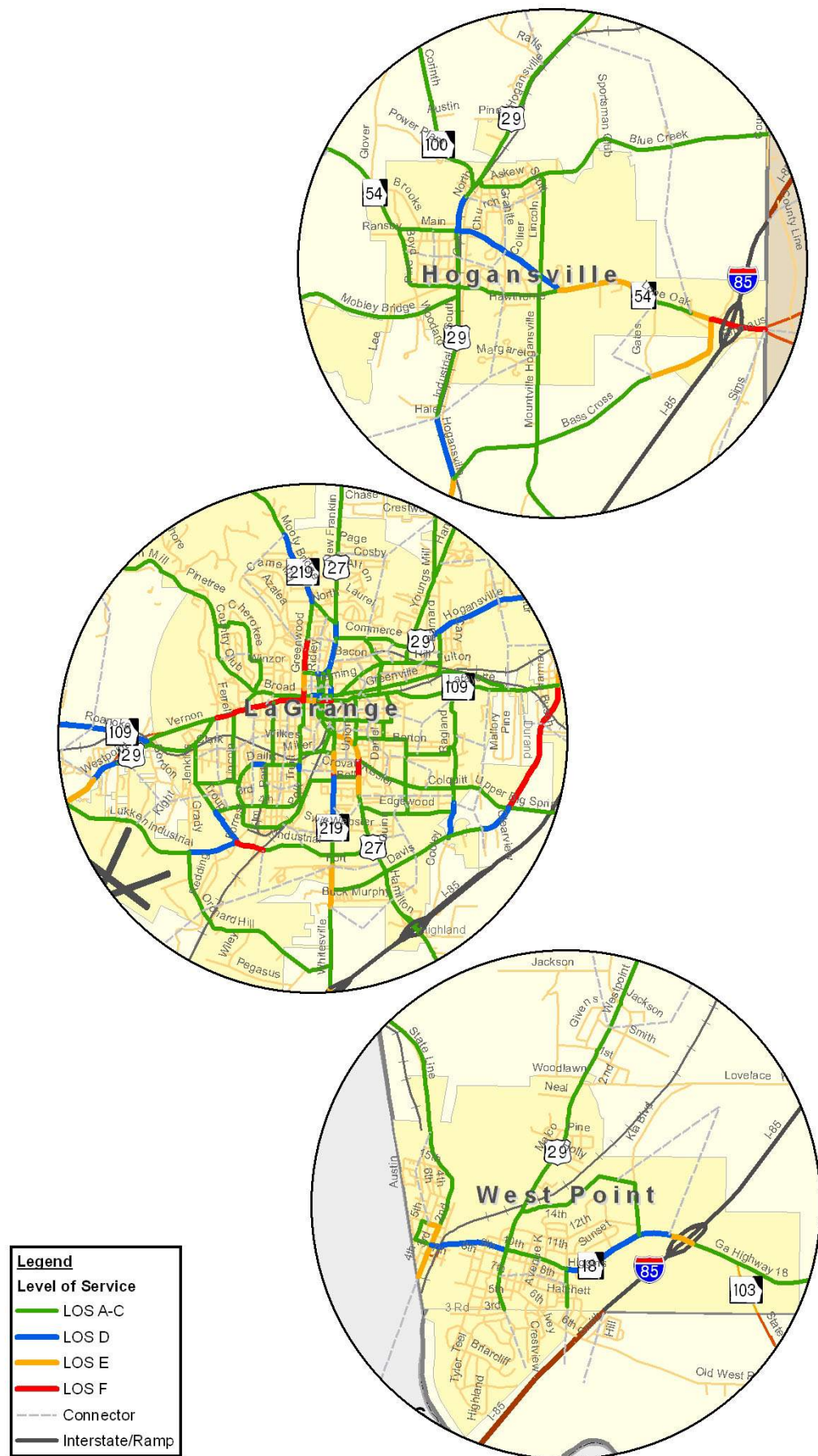
The 2015 analysis shows that 15 segments can be expected to operate at or below LOS D under daily conditions. Table 6.7.3.1 displays the 2015 roadway segments operating at an unacceptable LOS. Figure 6.7.3.1 presents the 2015 daily deficient segments along the existing plus committed roadway network.

Table 6.7.3.1
2015 Deficient Segments

Roadway	From	To	Volume ⁽¹⁾	V/C	LOS
Davis Rd	SR 109	Ragland St	13,823	1.0097	F
Greenwood St	US 29	Mooty Bridge Rd	13,437	0.7980	D
Lukken Industrial Blvd	SR 219	Orchard Hill Rd	12,372	0.7491	D
Upper Big Springs Rd	Callaway Church Rd	I-185	5,594	0.3885	D
SR 18	I-85	3 rd Ave	13,759	0.4005	D
SR 54	US 29	Gates Rd	8,321	0.5114	D
SR 109	Davis Rd	Callaway Church Rd	35,521	0.9505	E
SR 109	Callaway Church Rd	Mountville Hogansville Rd	10,522	0.520	E
SR 219	US 27	Davis Rd	12,369	0.7925	D
SR 219	I-85	Bartley Rd	11,042	0.5925	E
US 27	SR 109	Mooty Bridge Rd	27,803	0.7147	D
US 27	SR 219	Auburn Ave	18,091	0.9495	E
US 27	Lower Big Springs Rd	I-185	7,917	0.3663	D
US 29	Upper Glass Springs Rd	New Airport Rd	8,630	0.4791	D
US 29	US 27	Vernon Rd	24,982	1.2964	F

(1) - Two-way volumes

Shaded rows represent facilities analyzed under rural LOS thresholds, while unshaded rows represent facilities analyzed under urban LOS thresholds.



Additionally, the following roadway segments are approaching LOS D and/or have smaller links associated with them that are currently operating below LOS C:

- Callaway Church Road from SR 109 to Upper Glass Springs Road;
- Davis Road from SR 109 to Hammett Road;
- Gabbettville Road from US 29 to Bartley Road;
- Mooty Bridge Road from US 27 to Wynnwood Drive;
- SR 109 from US 29 to Rock Mill Road; and,
- US 29 from Young's Mill Road to Whitfield Road.

The 2035 analysis shows that 28 segments can be expected to operate below LOS D under daily conditions. Table 6.7.3.2 displays the 2035 roadway segments operating at an unacceptable LOS. Figure 6.7.3.2 presents the 2035 daily deficient segments along the existing plus committed roadway network.

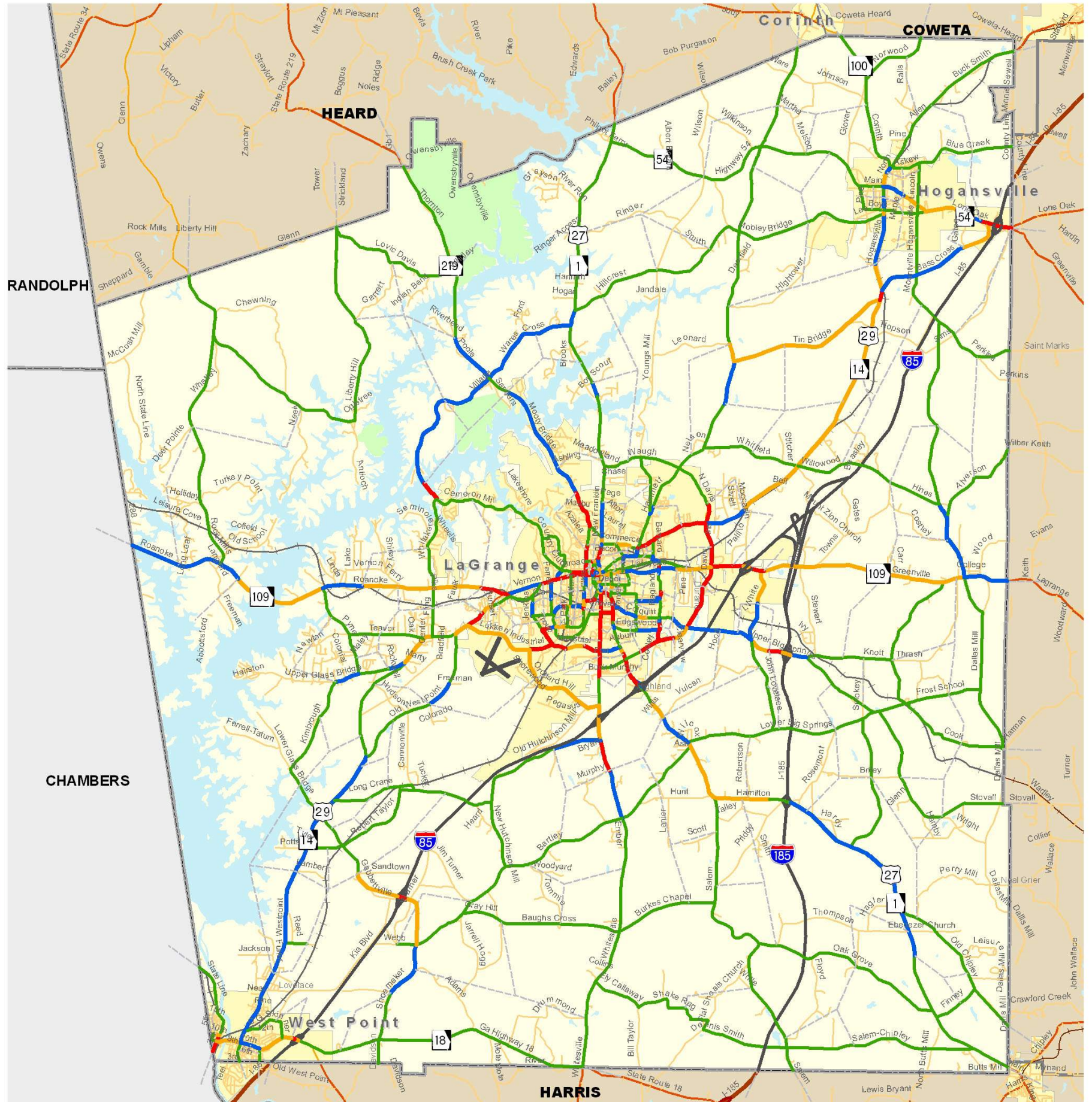
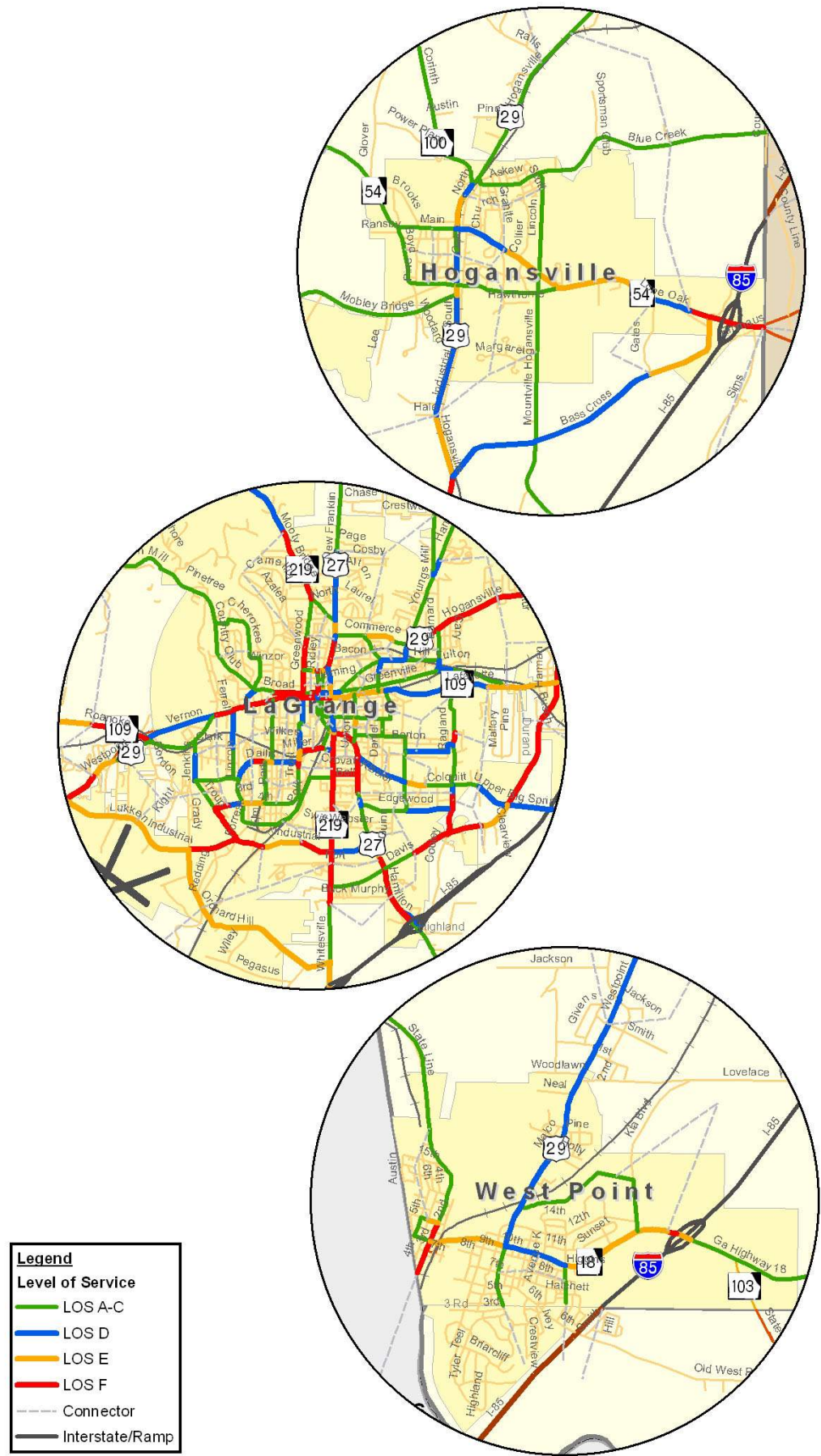
Table 6.7.3.2
2035 Deficient Segments

Roadway	From	To	Volume ⁽¹⁾	V/C	LOS
Bass Cross Rd	US 29	SR 54	6,911	0.5402	D
Callaway Church Rd	SR 109	Upper Glass Springs Rd	8,056	0.5510	E
Cameron Mill Rd	SR 219	Whitaker Rd	7,822	0.4698	D
Colquitt St	US 27	Davis Rd	11,023	0.7093	D
Davis Rd	SR 109	US 27	15,621	0.9962	E
Davis Rd	SR 109	Hammett Rd	15,279	0.9270	E
Gabbettville Rd	US 29	Bartley Rd	6,501	0.4618	D
Greenwood St	US 29	Mooty Bridge Rd	17,201	1.0468	F
Lukken Industrial Blvd	US 29	US 27	16,264	0.9805	E
Mooty Bridge Rd	US 27	Wares Cross Rd	12,574	0.7445	D
Orchard Hill Rd	Lukken Industrial Blvd	SR 219	12,126	0.9337	E
Tin Bridge Rd	Hammett Rd	US 29	7,449	0.600	E
Upper Big Springs Rd	Callaway Church Rd	I-185	11,236	0.7395	E
Wares Cross Rd	SR 219	US 27	7,133	0.4548	D
SR 18	I-85	3 rd Ave	20,267	0.6006	E
SR 54	US 29	Gates Rd	10,502	0.6396	E
SR 109	US 29	Alabama	10,998	0.6128	E
SR 109	US 27	Callaway Church Rd	38,035	1.0101	F

Roadway	From	To	Volume ⁽¹⁾	V/C	LOS
SR 109	Callaway Church Rd	Meriwether County	14,174	0.8293	E
SR 219	US 27	Davis Rd	18,431	1.1586	F
SR 219	I-85	Bartley Rd	16,007	0.8177	E
US 27	SR 219	Mooty Bridge Rd	36,570	0.9356	E
US 27	SR 219	Auburn Ave	25,263	1.2639	F
US 27	I-85	I-185	12,726	0.6242	E
US 27	I-185	Old Chipley Rd	10,541	0.4847	D
US 29	Upper Glass Springs Rd	New Airport Rd	12,619	0.7007	E
US 29	US 27	Vernon Rd	27,958	1.4579	F
US 29	Young's Mill Rd	SR 54	11,337	.8051	E

(1) - Two-way volumes

Shaded rows represent facilities analyzed under rural LOS thresholds, while unshaded rows represent facilities analyzed under urban LOS thresholds.



6.8 Citizen and Stakeholder Input

It was important to understand deficiencies as perceived by citizens and key stakeholders in addition to those identified through technical analysis. In combination, technical analysis, citizen and stakeholder input should clearly define transportation issues and opportunities in Troup County. The Study Team met individually with the County, City and key stakeholders to discuss their issues and concerns. Additionally, comment cards were used to collect the thoughts and ideas from local citizens during the Public Workshops. Table 6.8 summarizes the general themes expressed by citizens and stakeholders relative to transportation issues, opportunities and needs.

Table 6.8
Citizen & Stakeholder Input

Coordination and Cooperation
<ul style="list-style-type: none"> • Working together as a community to bring about change • Educate public on alternative modes of transportation • Create a plan that makes Troup County a great place to live • KIA plant impacts on County
Transportation & Land Use
<ul style="list-style-type: none"> • Additional interchange between LaGrange and Hogansville • Additional interchange between LaGrange and West Point • Need a North Loop Road around LaGrange • Need a South Loop Road around LaGrange • Widen Hamilton Road • Expressway to Macon • Widen Vernon Road to a maximum of 3-lanes • Widen SR 219 from US 27 to I-85 • Growth expected along Davis Road • Lack of zoning and green space • Widen SR 54 from I-85 to Gates Road
Roadway and Operational Improvements
<ul style="list-style-type: none"> • Congestion in Downtown LaGrange • Congestion along Vernon Road and Broad Street • Need free-flow route for emergency vehicles to/from hospital • Several roads need resurfacing • Poor signal coordination in LaGrange • Poor N-S and E-W movement in LaGrange • Provide turn lanes to improve traffic flow • Realign Stewart Road to Almond Road • Convert Vernon and Broad as one-way pairs
Intersection Improvements
<ul style="list-style-type: none"> • Davis Road & US 29 • US 27 & US 29 • SR 109 and US 27 • Long Cane Road at schools – need deceleration lane • US 27 & Waugh Road – needs a signal due to new school

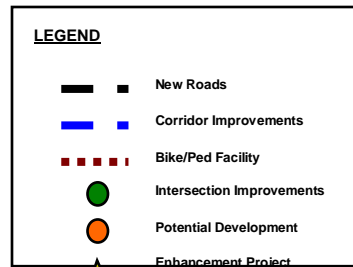
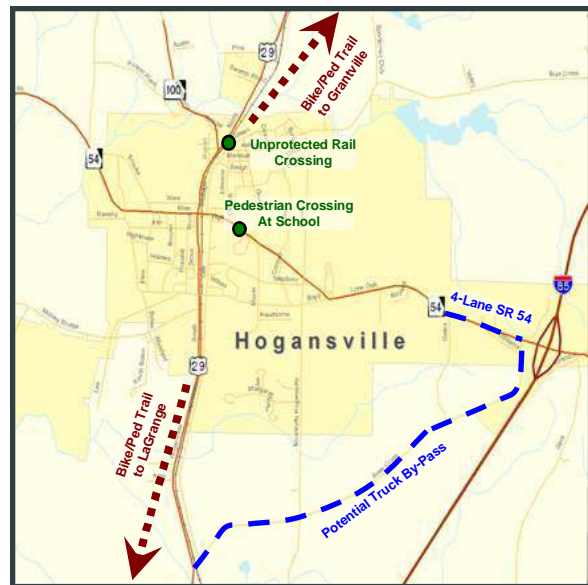
<ul style="list-style-type: none"> • Vernon St & Jefferson St – need westbound left turn lane
Bicycle and Pedestrian
<ul style="list-style-type: none"> • Need more bicycle lanes • Need more sidewalks • Enhance safety around schools • Construct sidewalks as development occurs • Bike path from Long Cane School to Pyne Road Park • Streetscape along 3rd Avenue from 7th Street to 10th Street (West Point) • Streetscape along 4th Avenue from 7th Street to 10th Street (West Point) • Sidewalks along SR 18 (10th Street)
Public Transportation
<ul style="list-style-type: none"> • Train to Atlanta and Hartsfield-Jackson International Airport • Need for regularly scheduled buses • Not enough public transportation
Freight & Rail
<ul style="list-style-type: none"> • Remove truck traffic through Hogansville • Trucks bypassing weight station on I-85 • Problems with trucks in Downtown LaGrange • Problems with trucks in Downtown West Point • At-grade crossing on SR 109 at CSX Tracks • Unprotected crossing at Askew Avenue/Johnson Street & CSX Tracks
Aviation
<ul style="list-style-type: none"> • Extend current 5,000 foot runway 900 additional feet

In addition to these issues, Troup County's Department of Roads and Engineering documented 41 intersections with various potential traffic and safety issues. These intersections and their potential geometric issues are listed below.

- Antioch Road at Rock Mill Road - awkward alignment
- Cameron Mill Road/Wares Cross Road at Moody Bridge Road - capacity
- Carr/Boddie Road at SR 109 - sight distance
- Dallas Mill Road at Cook Road - sight distance, grade, alignment and dirt road
- Durand Road at Lafayette Parkway - sight distance and alignment
- Garrett Road at Liberty Hill Road - sight distance and grade
- Glass Bridge Road at Hudson Road - sight distance, alignment and 3-way stop
- Gordon Commercial Drive at Gordon Road/N Knight Street - alignment, capacity and 3-way stop
- Greenville Road at Towns Road – alignment and capacity
- Hamilton Road at Bartley Road - sight distance and capacity
- Hamilton Road at Lower Big Springs Road - Skew, sight distance and capacity
- Hamilton Road at Vulcan Materials Road/Salem Walker Road - capacity
- Hammett Road at Whitfield Road - capacity
- Hightower Road at Mobley Bridge Road - sight distance and grade
- Hines Road at Willowood Road - sight distance and grade
- Hogansville Road at Whitfield Road - capacity

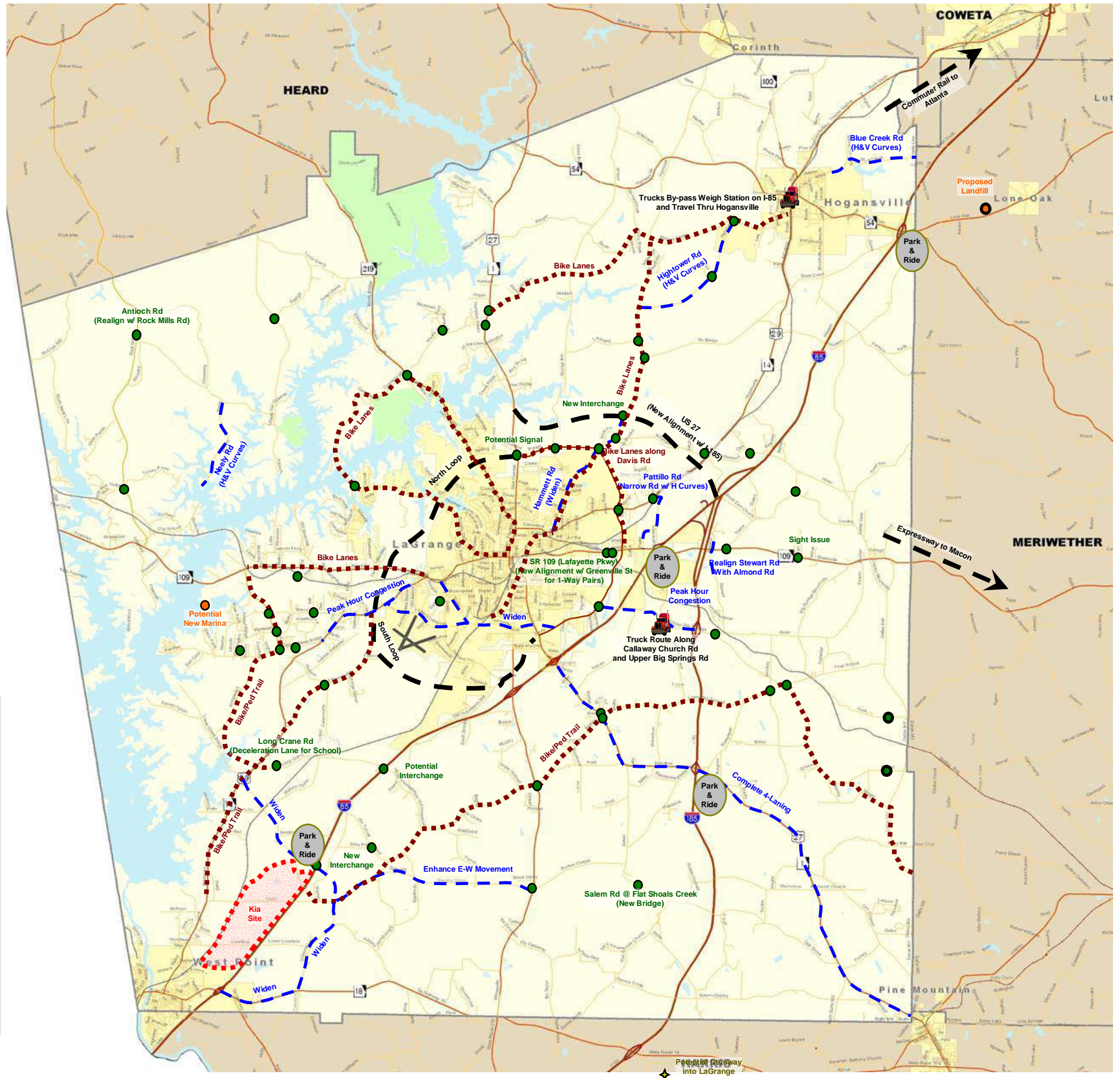
- Hogansville Road at Patillo Road – capacity and lack of deceleration lane
- Holland Road at Hightower Road - sight distance
- Jim Turner Road at Gray Hill Road - sight distance
- Knott Road at Upper Big Springs Road - 2-way stop
- Leonard Road at Hammett Road - sight distance
- N Davis Road at Hammett Road - capacity
- N Davis Road at Hogansville Road - capacity
- N Davis Road at Young's Mill Road - capacity
- Old West Point Road at Cannonville Road/Hudson Road - offset roads
- Pyne Road at Glass Bridge Road - capacity
- Pyne Road at Teaver Road/Newton Road - offset roads
- Pyne Road at Plymouth Dr/Maley Road - sight distance and offset roads
- Rock Mill Road at Holliday Road - sight distance, grade and alignment
- S Davis Road at Upper Big Springs Road - capacity
- Smokey Road at Lower Big Springs Road - sight distance
- Stovall Road at Big Springs Road - grade
- Stovall Road at Dallas Mill Road - sight distance
- Teaver Road at Hill Road - sight distance
- Tin Bridge Road at Hammett Road - capacity
- Towns Road at Costley Road - sight distance and realignment
- Upper Big Springs Road at Callaway Church Road/John Loveless Road - grade, speed and skew
- Wares Cross Road at Ramp Road - curve
- Whitaker Road at Cameron Mill Road - sight distance and curve
- Whitesville Road at Bartley Road - capacity
- Whitesville Road at Baugh's Cross Road/Burkes Chapel Road - sight distance and alignment

Figure 6.8 displays the citizen and stakeholder comments.



Additional Notes:

- Abandoned East-West Rail Line (Thomaston to Greenville) a Possible Bike-Ped Trail
- Prepare for Growth (i.e. Right of Way Acquisition for Corridors and Intersection Improvements)
- No Desirable Alternative to Interstates



Citizen & Stakeholder Input

Troup County Multi-Modal Transportation Study

7.0 Goals and Objectives

Goals and Objectives are the building block components of the long range planning process. They guide the development of the LRTP by providing a basis for evaluating Transportation Plan alternatives by reflecting the intentions that the Plan is meant to achieve. It is necessary to establish long-range goals and objectives to guide the Transportation Plan development process for Troup County. The goals represent the general themes and overall directions that Troup County, GDOT and the local planning authorities envision for the County. The objectives provide additional specificity and focus for each associated goals. Combined they provide the policy framework for development and implementation of the Transportation Plan.

7.1 Background

Goals and Objectives should be consistent with relevant federal, state, and local plans and legislation. With the passage of SAFETEA-LU, eight factors must now be considered when a Metropolitan Planning Organization (MPO) develops the LRTP. **It is understood that Troup County is not within an MPO service area; however, the guidelines for MPO's were followed to provide a strong framework for transportation decisions.** Specifically, the LRTP must be designed to:

- Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency;
- Increase the safety of the transportation system for motorized and non-motorized users;
- Increase the security of the transportation system for motorized and non-motorized users;
- Increase the accessibility and mobility of people and for freight;
- Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns;
- Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight;
- Promote efficient system management and operation; and,
- Emphasize the preservation of the existing transportation system.

7.2 Methodology

The goals and objectives were developed based on a review of relevant planning documents including the Troup County Comprehensive Plan and the GDOT Statewide Transportation Plan. Additionally, through input obtained at various public workshops, development of the goals and objectives was also tailored to reflect the vision of County residents and business owners.

Table 7.2, excerpted from the "SAFETEA-LU Users Guide," shows how LRTP policies and Transportation Improvement Program (TIP) evaluation criteria are related. There can be

different ways of evaluating projects for the same SAFETEA-LU planning factors, depending on whether systems or individual projects are being evaluated.

Table 7.2
Applying the SAFETEA-LU Planning Factors

Factor	Long Range Considerations	Project Selection Criteria	Sample Projects
1. Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency	<ul style="list-style-type: none"> • Intermodal facilities • Rail and port access • Public/private partnerships • Land use policies • Economic development • Energy consumption 	<ul style="list-style-type: none"> • Community integration • Long-term, meaningful employment opportunities • Accessibility • Modal connectivity • Infrastructure impacts 	<ul style="list-style-type: none"> • Demand management • System preservation • Planned community development • Transit-oriented design
2. Increase the safety of the transportation system for motorized and non-motorized users	<ul style="list-style-type: none"> • Community access • Social equity • System upgrades 	<ul style="list-style-type: none"> • Number of crashes • Number of rail grade crashes • Bicycle and pedestrian crashes 	<ul style="list-style-type: none"> • Sidewalks • Rail crossing upgrades • Traffic calming • Dedicated right-of-way for different modes
3. Increase the security of the transportation system for motorized and non-motorized users	<ul style="list-style-type: none"> • Accessibility • Reliability 	<ul style="list-style-type: none"> • Crashes • Potential for security hazard • Access to critical infrastructure • Access to power sources • Access to reservoirs • Access to population centers 	<ul style="list-style-type: none"> • System access and security • Bridge security
4. Increase the accessibility and mobility of people and for freight	<ul style="list-style-type: none"> • Multi-modal considerations • Transit accessibility and level of service 	<ul style="list-style-type: none"> • Prevention of bottlenecks • Segmentation prevented • Intermodal connectivity • Community-based economic development 	<ul style="list-style-type: none"> • System maintenance • Intermodal facilities • Planned Communities • Mixed use zoning • Transit-oriented development • Land use controls
5. Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns	<ul style="list-style-type: none"> • Air and water quality • Energy consumption • Livability of communities --social cohesion, physical connection, urban design, and potential for growth 	<ul style="list-style-type: none"> • Environmental impact • Emissions reductions • Waterway preservation • Preservation and conservation of resources 	<ul style="list-style-type: none"> • Demand management • Scenic and historic preservation • Planned community development • Transit services • Transit-oriented development

Factor	Long Range Considerations	Project Selection Criteria	Sample Projects
6. Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight	<ul style="list-style-type: none"> • Intermodal transfer facilities • Rail access roads • Container policies • Freight policies/needs 	<ul style="list-style-type: none"> • Intermodal connectivity • Accessibility for people and freight • Congestion relief 	<ul style="list-style-type: none"> • Intermodal facilities • Modal coordination with social services
7. Promote efficient system management and operation	<ul style="list-style-type: none"> • Life cycle costs • Development of intermodal congestion strategies • Deferral of capacity increases 	<ul style="list-style-type: none"> • Use of existing system • Congestion impacts • Community and natural impacts • Maintenance of existing facilities 	<ul style="list-style-type: none"> • Traffic, incident and congestion management programs
8. Emphasize the preservation of the existing transportation system	<ul style="list-style-type: none"> • Maintenance priorities • Demand reduction strategies • Reasonable growth assumptions • Alternative modes 	<ul style="list-style-type: none"> • Maintenance vs. new capacity • Reallocates use among modes • Reflects planning strategies 	<ul style="list-style-type: none"> • Management System development • Maintenance of roads, bridges, highways, rail • Traffic calming • Take-a-lane HOV • Enhancement of alternative modes

Source: SAFETEA-LU Users Guide

7.3 Consistency with Other Planning Documents

In addition to SAFETEA-LU, the Goals and Objectives should also be consistent with other state and local plans, such as local comprehensive plans and regional policy plans. In this way, the Goals and Objectives of the Long Range Transportation Plan support the planning efforts of local governments and agencies. In particular, emphasis was placed on the Comprehensive Plan for Troup County. Key transportation related goals, objectives and strategies from Troup County's most recently adopted Comprehensive Plan include:

- Provide a transportation system adequate to meet the needs of existing and future residents
 - Support joint transportation planning efforts established by the Troup County Transportation Authority
 - Implement projects from the existing DOT priority list to improve traffic circulation throughout Troup County
 - Improve the road construction standards for new streets to include the provision of curb and gutter section and the continuation of streets to adjoining properties

7.4 2035 Goals and Objectives

Using existing plans, meetings with County and GDOT staff and input received from the general public, the following Goals and Objectives were established to guide the transportation decision-making process for Troup County.

GOAL 1.0 Strategic Investment to Provide Connectivity and Accessibility throughout the County

- Objective 1.1 Update the Long Range Transportation Plan a minimum of every five years to evaluate and provide for future needed transportation system links within the County.*
- Objective 1.2 Assess connectivity and accessibility as part of new construction, reconstruction of existing facilities, and maintenance activities.*
- Objective 1.3 The Long Range Transportation Plan will consider federal, state and local energy conservation programs, goals, and objectives that may be incorporated into the plan.*
- Objective 1.4 Focus on high accident areas for transportation improvements.*

GOAL 2.0 Optimize Utilization of Existing Infrastructure for the Safe and Efficient Movement of People and Goods

- Objective 2.1 In coordination with the County and municipalities, develop a cooperative program to maintain existing transportation facilities in the County.*
- Objective 2.2 All transportation engineering studies and designs shall consider life cycle costs of capital investments.*
- Objective 2.3 Existing and future roadway deficiencies, based on level of service standards, shall be mitigated through a continuous roadway or transportation system improvement program.*
- Objective 2.4 Maximize the use of existing transportation facilities through the use of Transportation System Management (TSM), Transportation Demand Management (TDM), and Access Management strategies.*
- Objective 2.5 The County shall encourage each member unit of government (with responsibility) to properly maintain the various types of transportation facilities including streets, sidewalks, trails, and other modes.*

Objective 2.6 As development is permitted, review the impact to the transportation system to ensure mobility is protected as parcel level development occurs

GOAL 3.0 Accommodate User Mobility without the Use of Automobiles

Objective 3.1 Develop and review annually the Transit Development Plan (TDP) and Transportation Disadvantaged Service Plan (TDSP) to provide for public transit and Paratransit.

Objective 3.2 Ensure that funding is established for bicycle and pedestrian improvements

GOAL 4.0 Provide a Range of Mobility Options

Objective 4.1 The County shall encourage each local government to implement bicycle and pedestrian improvements in major activity centers, and for accessing schools, parks and libraries.

Objective 4.2 Coordinate transportation and land use decision making to ensure viability of alternative modes.

GOAL 5.0 Provide a Connection Between Land Use and Transportation Decisions

Objective 5.1 The Long Range Transportation Plan shall be reviewed annually in conjunction with the annual project priority listing to evaluate the impact of any changes in the future land use element of the local government comprehensive plans, approved during the previous year, on the overall transportation system.

Objective 5.2 Consider the overall social, land use compatibility, economic, energy, and environmental effects of transportation decisions in the development of the Long Range Transportation Plan.

Objective 5.3 Encourage local governments to develop a Transportation Corridor Management Plan (Right-of-Way or Thoroughfare Plan Map) based on local government comprehensive land use plans and the Long Range Transportation Plan.

Objective 5.4 Identify intermodal roadway linkages between major travel destinations such as airports and population concentrations that are operating, or will operate, below acceptable minimum levels of service and develop transportation and land use strategies to overcome these conditions.

GOAL 6.0 Enhance the Quality of Life for All Residents

Objective 6.1 Landscape transportation rights-of-way with native and/or “low-impact” vegetation on shoulders and medians, in order to conserve water, reduce pesticide use, conserve energy, and reduce costs by minimizing maintenance requirements.

Objective 6.2 Reduce transportation related accidents, injuries, and deaths.

Table 7.4 shows how the 2035 Goals and Objectives address the Federal guidelines as presented in SAFETEA-LU.

Table 7.4
L RTP Goals and Objectives
Compared to SAFETEA-LU Planning Factors

Objective	SAFETEA-LU Planning Factors							
	Economic	Safety	Security	Accessibility	Environment	Intermodalism	Efficiency	Preservation
1.1	✓		✓	✓			✓	
1.2	✓			✓				✓
1.3	✓	✓			✓			
1.4		✓					✓	
2.1	✓	✓	✓				✓	✓
2.2	✓						✓	
2.3		✓	✓	✓			✓	✓
2.4	✓	✓					✓	✓
2.5		✓	✓			✓		✓
2.6	✓			✓			✓	✓
3.1				✓		✓	✓	
3.2	✓	✓		✓		✓		
4.1				✓		✓		
4.2	✓			✓		✓	✓	
5.1	✓						✓	✓
5.2	✓	✓	✓		✓		✓	
5.3	✓		✓				✓	✓
5.4	✓			✓		✓	✓	
6.1					✓		✓	
6.2	✓	✓	✓					

Note: The eight Planning Factors are listed in their entirety on page 66.

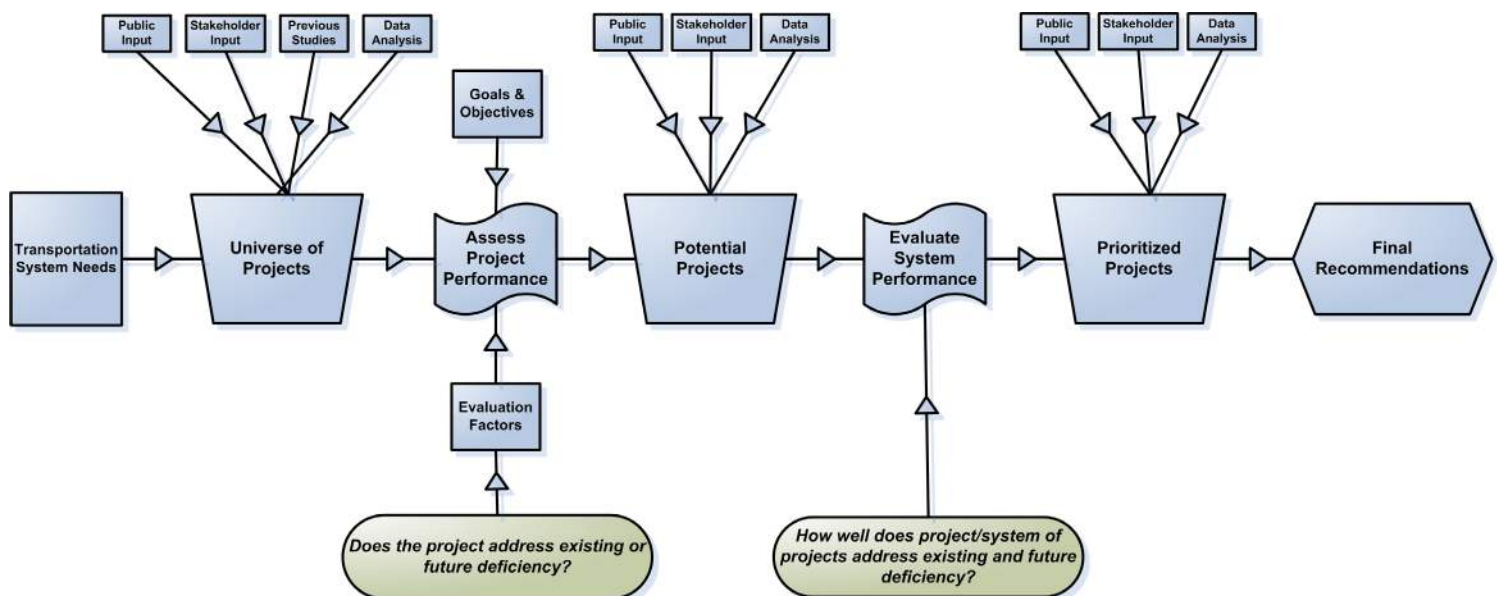
The Goals and Objectives were determined to be consistent with the needs and vision for the County, based on input from GDOT, Troup County and the public. The study's Goals and Objectives adhere to the SAFETEA-LU planning factors and can be used as the foundation for ranking or choosing among individual projects.

8.0 Improvement Development Process

After the existing and future conditions were evaluated, strategies were developed to address identified deficiencies. Improvements were developed for each element of the transportation system:

- Deficient Roadway Corridors;
- Bicycle and Pedestrian;
- Transit;
- Freight;
- Aviation; and,
- Summary of Citizen and Stakeholder Input.

The following sections document the potential improvements in detail, ultimately producing preferred improvements for Troup County's transportation system documented in Section 10. The figure below illustrates the improvement development process.



8.1 Identification of Potential Improvement Strategies for Corridors

The requirements of the Intermodal Surface Transportation Efficiency Act (ISTEA) and TEA-21, the follow up legislation SAFETEA-LU, and the supporting Congestion Management Process (CMP) regulations, guided the identification of potential strategies for deficient corridors in Troup County. These strategies include demand management, operational management and capital-intensive approaches. The CMP regulations require that appropriate consideration be given to all reasonable alternatives and, more specifically, that consideration be given to strategies that reduce single occupant vehicle (SOV) travel. These requirements are consistent with the purpose and intent of the Troup County Multi-Modal Transportation Study. A comprehensive listing of potential strategies is contained in

the CMP regulations. It is not, however, the intent of the regulations that all of these potential strategies be exhaustively studied. The key is to identify those strategies that are reasonable for the particular location or specific deficiency.

The CMP regulations include a comprehensive listing of strategies broken into twelve (12) categories or groups. The boundaries between these groups are not distinct and individual measures may be included in more than one category. For example, park and ride lots both encourage the use of high occupancy vehicles (HOVs) and transit. For the purposes of applying the SAFETEA-LU, and CMP requirements to the LRTP, an attempt was made to separate potential strategies into a hierarchical order that considers first those actions which address the fundamental transportation and land use relationships that cause vehicle trips. If the reason for the trip can be eliminated, so can the trip and its contribution to congestion. In successive rounds, the residual trips not mitigated by previous levels of actions are successively dealt with using techniques aimed at the next higher level of concern. This process is described below:

- **Level One:** Actions that decrease the need for trip making (i.e. growth management, activity centers, congestion pricing, and some transportation demand management measures).
- **Level Two:** Actions that place trips into transit or other non-auto modes (i.e. public transit capital and operating improvements, and parking management).
- **Level Three:** Actions that put as many trips as possible into HOVs.
- **Level Four:** Actions that optimize the highway system's operation for SOV trips and for all other trips using highway facilities/modes (traffic signalization modification, intelligent transportation systems, etc.).
- **Level Five:** Actions that increase the capacity of the highway system for SOVs by adding general-purpose lanes.

While it is not required that this process be followed in order (i.e., Level One then Level Two then Level Three, etc.), this hierarchy responds to the intent of the regulations, as well as the intent of the LRTP. Many of these actions are not applicable to the transportation and land use character of Troup County. It is anticipated that most relevant improvement strategies will come from levels 4 and 5, selected strategies from other levels may be appropriate as well.

The CMP regulations are explained in further detailed in the Appendix of this report. The Appendix also contains documentation concerning the selection of CMP regulations that were considered appropriate for Troup County. The following sections illustrate the use of the appropriate CMP regulations for Troup County.

8.1.1 Applicable Corridor Strategy Screening

Based on this preliminary strategy screening analysis, the extensive list of almost 60 strategies has been narrowed to 22 strategies applicable to Troup County. Further analysis was completed to identify how these strategies could be applied to the transportation system within Troup County and the anticipated benefit to congested or deficient corridors.

Table 8.1.1 documents acceptable strategies and further designates the most appropriate improvement strategies for improving traffic operations along the deficient corridors in the County. These strategies all address one or more of the identified deficiencies. However, many strategies are dependent on operating characteristics; land use patterns and densities; and community perceptions and desires that do not currently exist within Troup County, but are likely to exist when considering long term improvements (15 - 20 years). Mid term improvements for this study, through 2015, force the current analysis to focus on existing operating conditions and problems so that solutions can be implemented in the three to ten year range. Three terms are used to further describe applicable strategies for improving operation within the County:

- **Near Term** - Strategies addressing existing operating deficiencies within the 2008 time frame.
- **Mid Term (2015)** - Strategies based on existing operating deficiencies and existing services but are contingent upon attainment of certain development thresholds that are likely to be reached but currently are not sufficient to warrant this strategy.
- **Long Term (2035)** - Strategies that address some aspect of existing operating deficiencies and make use of some existing services but are contingent upon the development conditions and services that do not currently exist but are likely to exist in the future.

Table 8.1.1
Applicable Strategy Screening

CMP Level (1-5)	Strategy	Screening
1	Land Use Policies / Regulations	Near Term
1	Development Standards	Near Term
1	Locations of Jobs and Housing	Near Term
1	Telecommuting	Near Term
2	Paratransit	Mid Term
2	Service Enhancement / Expansion	Mid Term
2	Transit Marketing	Mid Term
2	Bicycle Facilities	Near Term
2	Pedestrian Facilities	Near Term
3	Park & Ride Lots	Mid Term
3	Guarantee Ride Home Program	Mid Term
3	Ride Share Matching Services	Mid Term
3	Vanpooling	Mid Term
4	Intersection Widening	Near/Mid Term
4	Channelization	Near/Mid Term
4	Intersection Turn Restrictions	Near/Mid Term

CMP Level (1-5)	Strategy	Screening
4	Signalization Improvements	Near/Mid Term
4	Geometric Enhancements	Near/Mid/Long Term
4	Truck Restrictions	Mid/Long Term
4	Driveway Control	Near Term
4	Median Control	Near Term
5	Construct Arterial Lanes	Near/Mid/Long Term

These strategies were carried forward and used to evaluate the deficient corridors in Troup County.

8.1.2 Deficient Corridor Screening

The improvements strategies documented in Table 8.1.2 were used to address deficiencies through the County. Every strategy applicable to Troup County cannot be applied to each congested corridor segment. Consequently, these strategies were screened for each deficient corridor documented in Section 6.7 resulting in more specific strategies at the corridor level.

Additionally, some corridors with existing 4-lane sections were identified as deficient for daily operating conditions. Typically, this would result in identification of strategies for additional capacity. However, field review, public input and input from the County identified that capacity enhancements to these facilities would result in substantial impacts to the community and adjacent land uses. Consequently, strategies were identified to alleviate congestion along these facilities through enhancements to parallel corridors or through alternate modes.

Table 8.1.2 contains the screening results for the deficient corridors in the County.

Table 8.1.2
Capacity Deficient Corridor Screening

Project Ref. No.	Facility	From	To	Level 1				Level 2					Level 3				Level 4					Level 5			
				Land Use	Development Standards	Jobs & Housing	Tele-commuting	Para Transit	Service Enhancement	Transit Marketing	Bicycle Facilities	Pedestrian Facilities	Ride Share Matching	Van-pooling	Park & Ride Lots	Guarantee Ride Home Program	Intersection Widening	Channelization	Turn Restrictions	Signalization Improvements	Geometric Enhancements	Truck Restrictions	Driveway Control	Median Control	Frontage Roads
4	Bass Cross Rd	US 29	SR 54	✓					✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
5	Callaway Church Rd	SR 109	Upper Big Springs Rd	✓	✓	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
6	Cameron Mill Rd	SR 219	Whitaker Rd	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
7	Colquitt St	US 27	Davis Rd	✓	✓	✓			✓	✓	✓	✓				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
8	Davis Rd	SR 109	SR 219	✓	✓			✓	✓	✓	✓	✓				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
9	Davis Rd	SR 109	Hammett Rd	✓	✓			✓	✓	✓	✓	✓				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
10	Gabbettville Rd	US 29	Bartley Rd	✓	✓				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
11	Greenwood St	US 29	Mooty Bridge Rd	✓	✓	✓					✓	✓				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
12	Lukken Industrial Blvd	US 29	US 27	✓	✓	✓			✓	✓	✓	✓				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
13	Mooty Bridge Rd	US 27	Wares Cross Rd	✓	✓		✓				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
14	Orchard Hill Rd	Lukken Industrial Blvd	SR 219	✓	✓	✓			✓	✓					✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
21	Tin Bridge Rd	Hammett Rd	US 29	✓			✓		✓	✓						✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
24	Upper Big Springs Rd	Daivs Rd	Knott Rd	✓		✓			✓	✓						✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
25	Wares Cross Rd	SR 219	US 27	✓			✓				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
26	SR 18	I-85	3 rd Ave	✓	✓			✓	✓	✓	✓	✓				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
27	SR 54	US 29	Meriwether County	✓	✓			✓	✓	✓	✓	✓				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
28	SR 109	US 29	Alabama	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
29	SR 109	US 27	Callaway Church Rd	✓	✓			✓	✓	✓	✓	✓				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
30	SR 109	Callaway Church Rd	Meriwether County	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
31	SR 219	US 27	Davis Rd	✓	✓			✓	✓	✓	✓	✓				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
32	SR 219	I-85	Bartley Rd	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
33	US 27	SR 219	Mooty Bridge Rd	✓	✓			✓	✓	✓	✓	✓				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
34	US 27	SR 219	Auburn Ave	✓	✓			✓	✓	✓	✓	✓				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
35	US 27	I-85	I-185	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
36	US 27	I-185	Old Chipley Rd	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
37	US 29	Upper Glass Springs Rd	Old Vernon Rd	✓	✓	✓	✓	✓	✓	✓						✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
38	US 29	US 27	Vernon Rd	✓	✓			✓	✓	✓	✓	✓				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
39	US 29	Young's Mill Rd	SR 54	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

8.2 Bicycle and Pedestrian Improvements

The analysis of existing bicycle and pedestrian systems in Troup County revealed that sidewalks are generally present only in the traditional town centers in the County, and that even in these locations, there are gaps in the sidewalk system. Discussions with stakeholders revealed that priorities for pedestrian improvements were areas around schools and other public facilities such as libraries and recreation areas. Accordingly, schools and parks in the County were located in order to assess the condition of the pedestrian network around these areas.

Once the locations of these facilities were known, a targeted examination of these facilities was conducted. In particular, schools and libraries located in town centers or near residential areas were examined since these locations were more likely to have existing pedestrian facilities and existing pedestrian demand. Schools in Hogansville, LaGrange and West Point were identified for closer examination because of the need to provide safe pedestrian paths for children and young adults.

Hogansville

The City of Hogansville recently completed a streetscape project which enhanced and increased the availability of sidewalks within the City. Hogansville Elementary is located within the City of Hogansville east of downtown. The school is located in close proximity to several residential neighborhoods. Sidewalks are present in the immediate vicinity of the school, but limited in several areas around the school. The surrounding area is residential, where children attending this school could walk or ride their bicycles to school if proper facilities were constructed. Expansion of the sidewalk network in this area would improve safety for students walking to and from school.

Recommendations:

- Install flashing beacon warning devices at the pedestrian crossing on SR 54 at Hogansville Elementary.
- Construct sidewalks along SR 54 from Maple Drive to Boyd Road.
- Extend sidewalk along the west side of US 29 from Ware Street to SR 100.
- Provide maintenance on existing sidewalks to extend their life and usefulness.

LaGrange

There are several schools within the city limits of Lagrange and are as follows:

- Hollis Hand Elementary;
- Berta Weathersbee Elementary;
- Unity Elementary;
- Whitesville Road Elementary;
- Cannon Street Elementary;
- West Side Magnet School;

- Gardner-Newman Middle School;
- Ethel Knight Magnet School;
- LaGrange High School;
- Troup County High School; and,
- LaGrange College

These schools are distributed throughout the City and not in close proximity to each other. The schools in LaGrange are well served by sidewalks. Gardner-Newman Middle School on N Davis Road is currently in need of sidewalks.

The majority of LaGrange is well served by an extensive sidewalk network; however, there are key locations where sidewalks would be beneficial to the City. These locations include: the Troup County Recreation Center, the LaGrange Mall, the hospital, and commercial areas along US 29. Supporting pedestrian signals and crossings are currently in place, but there are no sidewalks connecting these crossings.

Recommendations

- Construct sidewalks on both sides of N Davis Road from Hogansville Road to Hammett Road.
- Construct sidewalks on both sides of Davis Road from SR 219 to Ragland Street.
- Construct sidewalks on both sides of Colquitt Street from US 27 to Ragland Street.
- Construct sidewalks on the east side of Ragland Street from Colquitt Street to SR 109.
- Construct sidewalks on both sides of US 29 from US 27 to Young's Mill Road.
- Construct sidewalks on both sides of SR 109 from US 27 to Davis Road.
- Construct sidewalks on both sides of Vernon Street from Ferrell Drive to SR 109.
- Provide maintenance on existing sidewalks to extend their life and usefulness.

West Point

West Point Elementary is located within the City of West Point northeast of downtown. The school is located in close proximity to several residential neighborhoods. The school is well served by sidewalks except on the east side.

Several pedestrian crossings in West Point are in need of upgrade. Intersections may have a painted crosswalk or a pedestrian signal, but several crossings do not have both of these features.

Recommendations:

- Construct sidewalks on both sides of SR 18 from Dogwood Circle to OG Skinner Drive.
- Construct a sidewalk on the east side of Avenue K from SR 18 to 12th Street.
- Construct sidewalks on the north side of 12th Street from West Point Elementary to OG Skinner Drive.

- Provide a pedestrian crossing with hardware and pushbuttons at SR 18 and US 29.
- Potential multi-use trail opportunity along abandoned rail line north of West Point.
- Provide maintenance on existing sidewalks to extend their life and usefulness.

Additional Bicycle Needs

While the majority of the County is rural, there are key locations, such as schools and parks outside of the city limits, where bicycle transportation is a desirable alternative mode. Improving bicycle transportation, specifically, the continuity of the bicycle transportation network was a topic discussed by several attendees of the public workshops. An additional small group meeting was conducted with the West Georgia Flyers, where several roadways were suggested as bike routes. Most of these suggested bike facilities are included in the Chattahoochee-Flint RDC's Bicycle and Pedestrian Plan.

Recommendations:

- As new schools are developed in the County, consider the need for bike lanes or bike paths to adjacent neighborhoods, town centers, and parks.
- Country Club Road Loop Bike Lanes (Cameron Mill Road, Country Club Road, Broad Street and SR 219)
- Downtown Connector
- Bike Lanes along SR 109 from US 29 to Pyne Park
- Bike Lanes along Old West Point Road and US 29
- Bike Lanes along Hillcrest Road and Hammett Road
- Bike Lanes in South Troup (Bartley Road, Lower Big Springs Road and Wright Road)

8.3 Transit Improvements

Population in Troup County is expected to continue to increase, including a growing elderly population. Accordingly, there may be a need to enhance the rural transportation services provided by Troup Transit. These service increases could be in the form of expansion of service hours and expansion of fleet size. If demand materializes in the future, some fixed route services may be needed. Troup County should periodically evaluate the need for a vanpool program and/or commuter-oriented express bus services to selected parts of the Metro Atlanta region as well as other nearby urban areas such as Columbus. If services are needed, the County should coordinate with the appropriate transit operators in developing the services. These operators could include the Georgia Regional Transportation Authority (GRTA), the Metropolitan Atlanta Rapid Transit Authority (MARTA) and the METRA transit service in Columbus.

Recommendations:

- The County should consider introducing vanpool programs to address commuter transportation needs where projected bus ridership levels may not be high enough to justify service. A potential vanpool service area could be LaGrange or LaGrange to Atlanta.
- Locations for park and ride lots should be identified and secured to assure they are available in the future as the commuting population in the area grows. Based on qualitative assessment and stakeholder input, potential park and ride lot locations in the I-85 corridor at SR 54, SR 109, and Gabbettville Road are recommended. A park and ride facility at I-185 and US 27 should also be considered. These areas could be used as staging areas for vanpools and carpools early on and later used as parking areas for express bus services to the Metro Atlanta, Columbus and other important regional locations.
- Troup Transit should annually evaluate demand for increased services.

8.4 Freight Improvements

There are three active lines in the study area – the CSX Main Line, a spur line running from LaGrange into Alabama and a branch line running from LaGrange to Greenville. Each of these lines is in operation and provides freight service for the County. Two evaluation criteria were established to evaluate freight movement through the County area: safety and commodity flows. Generally, these two elements are satisfactorily addressed through the County. However several potential projects were identified to ensure high quality and safe rail service through Troup County.

CSX Main Line

- Provide crossing gates and lighted warning signals at the Green Street crossing in Hogansville. This project is currently in GDOT's Construction Work Program.
- Improve pavement condition with 8th Street railroad crossing in West Point.
- Examine traffic counts on Gabbettville Road at regular intervals (i.e., five, ten, and fifteen years) to see if growth from the proposed I-85 interchange and Kia Plant has resulted in enough traffic to warrant consideration of a rail-highway grade separation at this location.
- Maintain existing grade crossings and encourage closing or grade separation of crossings where feasible.

CSX Spur Line – LaGrange to Alabama

- Provide grade separation at SR 109/Roanoke Road crossing west of LaGrange due to current queuing issues and emergency vehicle repose times to the nearby hospital.
- Maintain and/or improve grade crossings in conjunction with CSX as the need arises.

CSX Branch line – LaGrange to Greenville

- Maintain and/or improve grade crossings in conjunction with CSX as the need arises.

Summary

Rail traffic is a key element for maintaining the industrial base of the County. Care should be taken to make sure that any increases in rail traffic do not adversely impact commercial, residential, and historic areas. Special attention should also be paid to managing the impacts of freight traffic on the other travel modes in the County so that the rail lines continue to be a valuable transportation asset for Troup County.

8.5 Aviation Improvements

There is currently one active airfield in Troup County. The LaGrange-Callaway Airport (LGC) located southwest of LaGrange, south of US 29 and north of I-85. The airport entrance is located on Lukken Industrial Drive. LGC is a Level III airport and primarily provides general aviation services; however, some commercial services are also provided. The nearest commercial aviation airport is Hartsfield-Jackson Atlanta International Airport in Atlanta, which is approximately 60 miles to the northeast.

The County is well served by the LaGrange-Callaway Airport. GDOT has established an objective of a minimum runway length of 5,500 feet for Level III airports. Currently, the LaGrange-Callaway Airport meets this objective with one of its runways. GDOT does not currently have plans to extend the second runway; however the Airport Authority has expressed an interest in expanding this runway by 900 feet to allow for landings in variable weather conditions.

8.6 Summary of Public Input

Throughout the course of the study public comment and stakeholder input contributed significantly to the development of projects for improving travel conditions through Troup County. Projects identified by the public and stakeholders are documented in Table 8.6.

All comments received from the public are important and care was taken to evaluate each recommendation for inclusion in the plan. If the recommendation addressed issues beyond the scope of the plan, these were forwarded to the appropriate agency to address. Similarly, some recommendations could not be supported with technical planning or engineering justifications – these instances are noted and these recommendations were flagged for reevaluation as the Plan is periodically updated in the future.

Table 8.6
Suggested Improvements

#	Comment or Concern	Comment Type	Response	Source	Recommended for Inclusion in Plan
1	Shift State Road designation for SR 14 from 10th St to 8th St to 3rd Ave	Miscellaneous	This concern was forwarded to GDOT	West Point	No
2	Make area a great place to live	Miscellaneous	Enhance the Quality of Life for All Residents' is a Goal for this Study	Public	Yes
3	Upgrade multi-modal transportation facilities as development occurs	Miscellaneous	Range of mode types recommended for improvement	Public	Yes
4	Need better zoning and more green space	Miscellaneous	This concern was forwarded to Troup County	Public	No
5	What are the effects of KIA	Miscellaneous	The KIA development and the growth associated with it will be monitored closely	Public	No
6	Cameron Mill Rd/Wares Cross Rd @ Moody Bridge Rd has capacity issues	Intersection	This intersection is recommended for improvement	Troup County	Yes
7	Carr/Boddie Rd @ SR 109 has sight distance issues	Intersection	This intersection is recommended for improvement	Troup County	Yes
8	Dallas Mill Rd @ Cook Rd is a dirt road and has grade and alignment issues	Intersection	This intersection is recommended for improvement	Troup County	Yes
9	Durand Rd @ LaFayette Pkwy has sight distance and alignment issues	Intersection	This intersection is recommended for improvement	Troup County	Yes
10	Garrett Rd at Liberty Hill Rd has sight distance issues due to grade	Intersection	This intersection is recommended for improvement	Troup County	Yes
11	Glass Bridge Rd @ Hudson Rd is a 3-way stop with alignment issues	Intersection	This intersection is recommended for improvement	Troup County	Yes
12	Gordon Commercial Dr @ Gordon Rd/N Kight St is a 3-way stop with capacity issues	Intersection	This intersection is recommended for improvement	Troup County	Yes
13	Greenville Rd @ Towns Rd has alignment and capacity issues	Intersection	This intersection is recommended for improvement	Troup County	Yes
14	Hamilton Rd @ Bartley Rd has sight distance and capacity issues	Intersection	This intersection is recommended for improvement	Troup County	Yes
15	Hamilton Rd @ Lower Big Springs Rd is skewed with sight distance and capacity issues	Intersection	This intersection is recommended for improvement	Troup County	Yes
16	Hamilton Rd @ Vulcan Rd/Sam Walker Rd has capacity issues	Intersection	This intersection is recommended for improvement	Troup County	Yes
17	Hammett Rd @ Whitfield Rd has capacity issues	Intersection	This intersection is recommended for improvement	Troup County	Yes
18	Hightower Rd @ Mobley Bridge Rd has sight distance issues due to grade	Intersection	This intersection is recommended for improvement	Troup County	Yes
19	Hines Rd @ Willowood Rd has sight distance issues due to grade	Intersection	This intersection is recommended for improvement	Troup County	Yes
20	Hogansville Rd @ Whitfield Rd has capacity issues	Intersection	This intersection is recommended for improvement	Troup County	Yes
21	Hogansville Rd @ Patillo Rd has capacity issues and needs a deceleration lane	Intersection	This intersection is recommended for improvement	Troup County	Yes

#	Comment or Concern	Comment Type	Response	Source	Recommended for Inclusion in Plan
22	Holland Rd @ Hightower Rd requires an easement for improvement	Intersection	This intersection is recommended for improvement	Troup County	Yes
23	Jim Turner Rd @ Gray Hill Rd has sight distance issues	Intersection	This intersection is recommended for improvement	Troup County	Yes
24	Knott Rd @ Upper Big Springs Rd is a 2-way stop	Intersection	This intersection is recommended for improvement	Troup County	Yes
25	Leonard Rd @ Hammett Rd has sight distance issues	Intersection	This intersection is recommended for improvement	Troup County	Yes
26	N Davis Rd @ Hammett Rd has capacity issues	Intersection	This intersection is recommended for improvement	Troup County	Yes
27	N Davis Rd @ Young's Mill Rd has capacity issues	Intersection	This intersection is recommended for improvement	Troup County	Yes
28	Old West Point Rd @ Cannonville Rd/Hudson Rd are offset roads	Intersection	This intersection is recommended for improvement	Troup County	Yes
29	Pyne Rd @ Glass Bridge Rd has capacity issues	Intersection	This intersection is recommended for improvement	Troup County	Yes
30	Pyne Rd @ Teaver Rd/Newton Rd are offset roads	Intersection	This intersection is recommended for improvement	Troup County	Yes
31	Pyne Rd @ Plymouth Dr/Maley Rd are offset roads with capacity issues	Intersection	This intersection is recommended for improvement	Troup County	Yes
32	Rock Mill Rd @ Holliday Rd has sight distance issues due to alignment and grade	Intersection	This intersection is recommended for improvement	Troup County	Yes
33	S Davis Rd @ Upper Big Springs Rd has capacity issues	Intersection	This intersection is recommended for improvement	Troup County	Yes
34	Smokey Rd @ Lower Big Springs Rd has sight distance issues	Intersection	This intersection is recommended for improvement	Troup County	Yes
35	Stovall Rd @ Big Springs Rd has grade issues	Intersection	This intersection is recommended for improvement	Troup County	Yes
36	Stovall Rd @ Dallas Mill Rd has sight distance issues	Intersection	This intersection is recommended for improvement	Troup County	Yes
37	Teaver Rd @ Hill Rd has sight distance issues	Intersection	This intersection is recommended for improvement	Troup County	Yes
38	Tin Bridge Rd @ Hammett Rd has capacity issues	Intersection	This intersection is recommended for improvement	Troup County	Yes
39	Towns Rd @ Costley Rd has sight distance issues and needs realignment	Intersection	This intersection is recommended for improvement	Troup County	Yes
40	Upper Big Springs Rd @ Callaway Church Rd/John Loveless Rd is skewed with grade and speed issues	Intersection	This intersection is recommended for improvement	Troup County	Yes
41	Wares Cross Rd @ Ramp Rd has curves	Intersection	This intersection is recommended for improvement	Troup County	Yes
42	Whitaker Rd @ Cameron Mill Rd has sight distance problems due to curve	Intersection	This intersection is recommended for improvement	Troup County	Yes
43	Whitesville Rd @ Bartley Rd has capacity issues	Intersection	This intersection is recommended for improvement	Troup County	Yes
44	Whitesville Rd @ Baugh's Cross Rd/Burkes Chapel Rd has sight distance issues due to alignment	Intersection	This intersection is recommended for improvement	Troup County	Yes

#	Comment or Concern	Comment Type	Response	Source	Recommended for Inclusion in Plan
45	Signalize Waugh Road at US 27 due to new school	Intersection	This intersection is recommended for improvement	LaGrange	Yes
46	Vernon Street & Jefferson St needs westbound left turn lane	Intersection	This intersection is recommended for improvement	LaGrange	Yes
47	US 27 & Colquitt Rd	Intersection	This intersection is recommended for improvement	LaGrange	Yes
48	US 27 & Union St	Intersection	This intersection is recommended for improvement	LaGrange	Yes
49	SR 219 & Mooty Bridge Rd	Intersection	This intersection is recommended for improvement	LaGrange	Yes
50	SR 219 & Lukken Industrial Blvd	Intersection	This intersection is recommended for improvement	LaGrange	Yes
51	US 29 & Young's Mill Rd	Intersection	This intersection is recommended for improvement	LaGrange	Yes
52	US 27 & Greenville St	Intersection	This intersection is recommended for improvement	LaGrange	Yes
53	Need intersection improvements to improve traffic flow	Intersection	Several intersections are recommended for improvement	Public	Yes
54	Reduce number of 4-Way Stops	Intersection	This is beyond the scope of this study; forwarding comment to appropriate agency	Public	No
55	Signal Coordination in LaGrange	Intersection	This comment was forwarded to Troup County and LaGrange	Public	No
56	Change more signals to caution lights at night (12AM to 6AM)	Intersection	This is beyond the scope of this study	Public	No
57	SR 109 (Lafayette Pkwy) & US 27 (Morgan St)	Intersection	This intersection is recommended for improvement due to high crashes	Public	Yes
58	US 27 (New Franklin) & US 29 (Commerce)	Intersection	This intersection is recommended for improvement due to high crashes	Public	Yes
59	Broad St/Greenville St & US 27 (Morgan St)	Intersection	This intersection is recommended for improvement due to high crashes	Public	Yes
60	Davis Rd & US 29 (Hogansville Rd)	Intersection	This intersection is recommended for improvement due to high crashes	Public/ Troup County/ LaGrange	Yes
61	Patillo Rd & SR 109	Intersection	Patillo Rd is recommended for geometric improvements	Public	Yes
62	US 29 (Hogansville Rd) & Whitefield Rd / Willowood Rd	Intersection	This intersection requires further study to determine needs; forwarding comment to appropriate agency	Public	No
63	SR 109 (Lafayette Pkwy) & Mallory Dr	Intersection	This intersection requires further study to determine needs; forwarding comment to appropriate agency	Public	No
64	Vernon Rd & Lee's Crossing	Intersection	This intersection requires further study to determine needs; forwarding comment to appropriate agency	Public	No
65	Signal at West Point Rd & Fling Rd	Intersection	This intersection requires further study to determine needs; forwarding comment to appropriate agency	Public	No
66	Need turn lanes along Vernon Rd	Intersection	Turn lane is recommended at Vernon Rd & Jefferson St	Public	Yes

#	Comment or Concern	Comment Type	Response	Source	Recommended for Inclusion in Plan
67	Interchange - Hammett Road & New US 27	Interchange	This interchange is part of the I-185 Connector improvement	LaGrange	Yes
68	I-85 & Cannonville Rd	Interchange	Interchange is programmed at Gabbettville Rd, eliminating the need for this interchange	Troup County	No
69	I-85 & Webb Rd	Interchange	Interchange is programmed at Gabbettville Rd, eliminating the need for this interchange	West Point	No
70	Additional interchange between LaGrange & West Point	Interchange	Interchange is programmed at Gabbettville Rd	Public	No
71	Additional interchange between LaGrange & Hogansville	Interchange	Interchange is not warranted	Public	No
72	Interchange at I-185 and SR 109 (Greenville Rd)	Interchange	Fails to meet FHWA interchange spacing requirements	Public	No
73	Callaway Church Rd Bridge needs upgrade due to truck use	Bridges	This bridge is recommended for improvement due to truck use and current sufficiency rating	Troup County	Yes
74	Commuter train to Atlanta/Hartsfield Jackson Atlanta International Airport	Transit	This is not recommended due to low anticipated demand, however shuttle buses are recommended	Public	No
75	Regularly scheduled buses	Transit	Expansion of transit service is recommended	Public	Yes
76	Not enough Public Transportation Options	Transit	Expansion of transit service is recommended	Public	Yes
77	3rd Ave from 10th St to Stateline Rd	Resurfacing	This comment was forwarded to Troup County	West Point	No
78	Stateline Road	Resurfacing	This comment was forwarded to Troup County	West Point	No
79	Whitefield Road near Callaway High School	Resurfacing	This comment was forwarded to Troup County	Public	No
80	Roadways need resurfacing	Resurfacing	This comment was forwarded to Troup County	Public	No
81	Blue Creek Rd has several horizontal and vertical curves	Realignment	The realignment of this road is recommended for improvement	Troup County	Yes
82	Antioch Rd at Rock Mill Rd has an awkward alignment	Realignment	The realignment of this road is recommended for improvement	Troup County	Yes
83	Whitaker Rd has horizontal and vertical curves	Realignment	The realignment of this road is recommended for improvement	Troup County	Yes
84	Patillo Rd is narrow and has horizontal curves	Realignment	The realignment of this road is recommended for improvement	Troup County	Yes
85	Hightower Rd has several operational issues	Operations	The realignment of this road is recommended for improvement	Troup County	Yes
86	Neely Rd has several operational issues	Operations	The realignment of this road is recommended for improvement	Troup County	Yes
87	Long Cane Rd needs a deceleration lane at school	Operations	The deceleration lane on this road is recommended	Troup County	Yes
88	Realign Stewart Rd with Almond Rd	Operations	This intersection is recommended for further study to determine needs	Public	Yes

#	Comment or Concern	Comment Type	Response	Source	Recommended for Inclusion in Plan
89	Need free-flow route for emergency vehicles to/from hospital	Operations	This is beyond the scope of this study; forwarding comment to the City of LaGrange and Troup County	Public	No
90	Reduce congestion in Downtown LaGrange	Operations	Several recommended projects address this issue	Public	Yes
91	Use of speed tables on side streets for traffic calming	Operations	This is beyond the scope of this study; forwarding comment to the City of LaGrange and Troup County	Public	No
92	Vernon Rd to 3-lanes and use reversible lanes	Operations	This requires additional study - widening existing E-W roads through LaGrange conflicted with other community goals for the city	Public	No
93	Vernon Rd and Broad St converted to one-way pairs	Operations	This requires additional study - widening existing E-W roads through LaGrange conflicted with other community goals for the city	Public/Troup County/ LaGrange	No
94	Lukken Industrial Blvd Extension from US 29 to S Loop Rd	Roadway Project	This extension is recommended for improvement to enhance travel through LaGrange	LaGrange	Yes
95	Lukken Industrial Blvd Extension from US 27 to Davis Rd	Roadway Project	This extension is recommended for improvement to enhance travel through LaGrange	LaGrange	Yes
96	Expressway to Macon	Roadway Project	SR 109 is recommend for widening due to congestion and provides a potential linkage	Public	Yes
97	Connect Dallis St to Jackson St to US 29	Roadway Project	This is not recommended, however recommended improvements such as Lukken Industrial & South Loop provide similar accessibility	Public	No
98	Upgrade Lukken Industrial Dr and Troup St - from US 27 to US 29	Roadway Project	Lukken Rd is recommended for improvement to enhance travel through LaGrange	Public	Yes
99	E-W Corridor through LaGrange	Roadway Project	Lukken Rd and South/North Loop Rd are recommended improvements to enhance travel through LaGrange	Public	Yes
100	N-S Corridor through LaGrange	Roadway Project	South/North Loop Rd is a recommended improvement to enhance travel through LaGrange	Public	Yes
101	Provide North Bypass Loop around LaGrange	Roadway Project	North Loop Rd is a recommended project to enhance travel through LaGrange	Public/Troup County/ LaGrange	Yes
102	Provide South Bypass Loop around LaGrange	Roadway Project	South Loop Rd is a recommended project	Public/Troup County/ LaGrange	Yes
103	Ragland St Extension	Roadway Project	This project provides additional connectivity for existing and new development. This improvement also includes a new bridge replacing the Greenville St bridge	LaGrange	Yes
104	Hammett Rd from Young's Mill Rd to I-185 Conn.	Widening	Hammett Rd is recommended for improvement	LaGrange/ Public	Yes
105	Young's Mill Rd from Waugh Rd to Hammett Rd	Widening	Young's Mill Rd is recommended for improvement	LaGrange	Yes
106	SR 54 from I-85 to Gates Dr	Widening	This is a congested facility and recommended for improvement	West Point	Yes
107	Widen Vernon Road through LaGrange	Widening	This is not recommended due to ROW and the historical features in the area, however intersection improvements are being recommended along Vernon Rd	Public	No
108	Widen SR 219 (Whitesville Rd) from US 27 to I-85	Widening	SR 219 is a congested facility and recommended for improvement	Public	Yes

#	Comment or Concern	Comment Type	Response	Source	Recommended for Inclusion in Plan
109	Widen Lukken Industrial Dr from Whitesville St to US 29	Widening	Lukken Rd is a congested facility and recommended for improvement	Public	Yes
110	Widen US 27 (Hamilton Rd) from Auburn St to Morgan St	Widening	US 27 is a congested facility and recommended for improvement	Public	Yes
111	Widen or add turn lanes on US 29 south of SR 109	Widening	Two sections of US 29 are in the CWP for the addition of passing lanes	Public	No
112	Widen SR 109 from Greenville to Alabama	Widening	SR 109 is a congested facility and segments are recommended for improvement	Public	Yes
113	Widen US 29 between West Point & LaGrange	Widening	Passing lanes are currently in GDOT's work program	Public	Yes
114	Sidewalks are needed in the CBD and SW portions of LaGrange	Bike/Ped	Several bike/ped projects are recommended in LaGrange as part of this study	LaGrange	Yes
115	Upgrade Pedestrian Crossing at Hogansville Elementary	Bike/Ped	The addition of a flashing beacon is recommended for the Hogansville School crossing	Hogansville	Yes
116	Bike/Ped Trails from Hogansville to LaGrange	Bike/Ped	Low priority improvement due to limited connectivity, however bicycle lanes and sidewalks are recommended as part of the SR 109 improvement.	Hogansville	No
117	Bike/ped Trail from Hogansville to Grantville and tie into Silver Comet Trail	Bike/Ped	Low priority improvement due to limited connectivity	Hogansville	No
118	4th Ave from 7th St to 10th St	Streetscapes	This is an extension to the streetscaping recently completed along 3rd Ave	West Point	Yes
119	Need more Bicycle & Pedestrian Facilities	Bike/Ped	Several bike/ped projects are recommended as part of this study	Public	Yes
120	Need handicap accessible sidewalks/ramps	Bike/Ped	This comment was forwarded to Troup County and the Cities	Public	No
121	Provide safer access to schools	Bike/Ped	Schools were analyzed as high priority areas for bike/ped improvements	Public	Yes
122	Bicycle Lanes along Davis Road	Bike/Ped	Improvements recommended for Davis Rd include bike improvements	Public	Yes
123	Bike Path from Long Cane School to Pyne Road Park	Bike/Ped	Low priority improvement due to limited connectivity	Public	No
124	Bike Lanes along Country Club Dr, Broad St and SR 219	Bike/Ped	Bike improvements for this area are being recommended	Public	Yes
125	Bike Lanes connecting north LaGrange with South LaGrange	Bike/Ped	Bike improvements for this area are being recommended	Public	Yes
126	Bike Lanes along SR 109 from US 29 to Pyne Road Park	Bike/Ped	Bike improvements for this area are being recommended	Public	Yes
127	Bike Lanes along Old West Point Road from US 29 to Webb Rd	Bike/Ped	Bike improvements for this area are being recommended	Public	Yes
128	Bike Lanes along Hillcrest Rd from US 27 to US 29	Bike/Ped	Bike improvements for this area are being recommended	Public	Yes
129	Bike Lanes along Hammett Rd from US 29 to Bridge Rd	Bike/Ped	Bike improvements for this area are being recommended	Public	Yes
130	Bikes Lanes along Bartley Rd to Lower Big Springs Rd to Stovall Rd	Bike/Ped	Bike improvements for this area are being recommended	Public	Yes

#	Comment or Concern	Comment Type	Response	Source	Recommended for Inclusion in Plan
131	Expand runway length by 900 feet at Airport	Aviation	This is recommended to allow the airport enhanced services	Public	Yes
132	Upgrade Bass Rd for truck bypass around Hogansville	Truck Movement	This project is recommended for widening and could be a potential truck bypass for Hogansville	Hogansville	Yes
133	Divert truck traffic through Hogansville	Truck Movement	State truck routes designated through Hogansville are potentially an issue	Public	No
134	8th St & Railroad is a rough crossing	Railroad	The improvement of this crossing is recommended	West Point/Public	Yes
135	Emergency vehicles blocked at SR 109 & CSX Railroad Tracks	Freight/Rail	This crossing is recommended for improvement	Public	Yes
136	Coordination of Train Traffic	Freight/Rail	This is beyond the scope of the study; forwarding comment to appropriate agency	Public	No

9.0 Improvement Recommendations

Troup County has received moderate growth over the last two decades. This growth is expected to accelerate and the transportation infrastructure of the County needs to be maintained and enhanced to accommodate this growth. County needs for transportation improvements are supported by the deficiencies identified in Section 6.0. These deficiencies include:

- Public Transit;
- Freight;
- Aviation Facilities;
- Bicycle and Pedestrian Facilities;
- Bridges;
- Safety; and,
- Roadway Operating Conditions.

Several transportation projects were developed in Section 8.0, which address these deficiencies. This section will identify the recommended improvements and the estimated costs associated with these improvements.

9.1 Estimated Costs

A necessary element of the LRTP is estimating the costs associated with the numerous recommended improvements. An estimated cost needs to be associated with each project to aid the County in planning for, and funding of, the recommended improvements. The estimated costs were generated for planning purposes and may be lower than actual costs. **The cost of right of way was omitted from the cost estimate due to the high variation associated with this cost.** Therefore, the estimated costs can be expected to be considerably less than actual costs. Additional variations in cost could be the result of several factors, such as, design, utility relocation or environmental impacts.

GDOT maintains a cost database, divided into regions, which was useful in estimating the costs for new roadways and roadway widening projects associated with this study. Troup County is in the Central Georgia Region. The cost database was developed in 1999, therefore adjustments were made to reflect inflation and bring the costs to 2006 dollars. An inflation rate of 5% was used for each year (1999 to 2006) resulting in an overall adjustment of 35%. These roadway cost estimates can be found in Table 9.1.1.

Table 9.1.1
Central Georgia Roadway Enhancement Costs
(per mile)

Improvement Type	Grad & Drain Project	Base & Pave Project	Lump Items Project	Misc. Project	E & C 10% Project	Total Cost Per Mile
Rural New Location						
4 Lanes w/ 44' Grass Median	964,908	1,172,853	372,438	323,433	283,363	3,116,996
4 Lanes w/ 102' Grass Median	3,167,847	1,816,452	707,306	434,511	612,612	6,738,727
4 Lanes w/ 20' Raised Median	975,690	1,128,749	426,344	256,460	278,724	3,065,965
4 Lanes w/ 0' Median (48' Pavement)	673,819	1,128,749	207,455	135,581	214,560	2,360,162
4 Lanes w/ 4' Flush Median (52' Pavement)	697,178	1,216,958	207,455	147,015	226,860	2,495,465
4 Lanes w/ 12' Flush Median (60' Pavement)	742,099	1,390,109	207,455	169,884	250,955	2,760,501
4 Lanes w/ 14' Flush Median (62' Pavement)	749,286	1,432,580	207,455	174,785	256,410	2,820,515
3 Lanes w/ 36' Pavement	607,335	869,022	189,486	98,010	176,385	1,940,239
2 Lanes w/ 24' Pavement	539,055	607,662	161,717	122,513	143,095	1,574,041
Urban New Location						
4 Lanes w/ 20' Raised Median	1,083,501	1,210,424	365,904	256,460	291,629	3,207,916
4 Lanes w/ 0' Median (48' Pavement)	813,973	1,210,424	194,387	176,418	239,520	2,634,721
4 Lanes w/ 4' Flush Median (52' Pavement)	855,301	1,314,968	194,387	191,120	255,577	2,811,352
4 Lanes w/ 12' Flush Median (60' Pavement)	939,753	1,514,255	194,387	220,523	286,892	3,155,808
4 Lanes w/ 14' Flush Median (62' Pavement)	961,315	1,566,527	194,387	228,690	295,092	3,246,010
2 Lanes w/ 24' Pavement	711,553	606,029	156,816	96,377	157,077	1,727,851
3 Lanes w/ 36' Pavement	761,864	909,860	156,816	135,581	196,412	2,160,532
Rural Widening						
2 to 4 Lanes w/ 44' Grass Median	433,041	890,258	230,324	106,178	165,980	1,825,779
2 to 4 Lanes w/ 20' Raised Median widen both sides	542,649	1,043,807	333,234	223,790	214,348	2,357,827
2 to 4 Lanes w/ 20' Raised Median widen one side	517,493	820,017	259,727	142,115	173,935	1,913,286
2 to 4 Lanes w/ 0' Median (48' Pavement)	301,871	820,017	213,989	102,911	143,879	1,582,665
2 to 4 Lanes w/ 4' Flush Median (52' Pavement)	312,652	932,729	213,989	111,078	157,045	1,727,492
2 to 4 Lanes w/ 12' Flush Median (60' Pavement)	336,011	1,161,419	213,989	129,047	184,046	2,024,511
2 to 4 Lanes w/ 14' Flush Median (62' Pavement)	341,402	1,216,958	213,989	132,314	190,466	2,095,127
3 to 4 Lanes w/ 14' Flush Median (62' Pavement)	240,778	877,190	213,989	106,178	143,813	1,581,947
Urban Widening						
2 to 4 Lanes w/ 20' Raised Median widen both sides	688,194	953,964	289,130	321,800	225,309	2,478,395
2 to 4 Lanes w/ 20' Raised Median widen one side	494,134	764,478	241,758	191,120	169,149	1,860,638
2 to 4 Lanes w/ 0' Median (48' Pavement)	379,135	764,478	209,088	168,251	152,095	1,673,047
2 to 4 Lanes w/ 4' Flush Median (52' Pavement)	420,463	891,891	209,088	196,020	171,746	1,889,208
2 to 4 Lanes w/ 12' Flush Median (60' Pavement)	488,743	1,146,717	209,088	253,193	209,774	2,307,515
2 to 4 Lanes w/ 14' Flush Median (62' Pavement)	508,509	1,210,424	209,088	266,261	219,428	2,413,709
3 to 4 Lanes w/ 14' Flush Median (62' Pavement)	395,307	828,185	209,088	182,952	161,553	1,777,085

Source: GDOT Planning

A review of recent bridge costs in Troup County revealed that the bridges were constructed for approximately \$140 per square foot. This value was used to estimate the cost for improving the deficient bridges in Troup County.

GDOT is currently updating their cost information, therefore to further supplement the cost estimate data, research of other state DOT's was conducted to determine whether planning level cost estimates were available for various types of improvements. The most detailed planning level cost estimates were available from the Florida Department of Transportation (FDOT). This information was taken by FDOT to develop planning level cost estimates for typical transportation improvements. The following additional costs were used in estimating the total costs for roadway improvements:

- Sidewalk (6' on both sides) - \$434,000 per mile;
- Bikeway (4' on both sides) - \$205,508 per mile; and,
- Landscaping - \$25,000 per mile.

These estimates were used to estimate costs for the recommended improvements found in Table 9.1.2. These costs should be considered preliminary in nature and taken with appropriate care. **Costs do not include right of way.** More detailed engineering studies are required to identify highly accurate cost estimates.

Over the past several years construction material costs have increased dramatically throughout the United States. Some typical GDOT pay items have increased over 60% in the last few years. Much of this cost increase can be attributed to the demand for construction materials in the Gulf Coast area and Iraq. As one of the most variable components of the LRTP, it is important that costs are revisited on a regular basis to ensure accuracy. In recognition of this situation, GDOT is in the process of evaluating all project costs in the Construction Work Program and establishing guidelines for cost updates.

Table 9.1.2
Corridor Project Cost Estimates

Project Ref. No.	Roadway and Limits			Length (C/L mi)	Roadway Costs										Enhancement Features						Additional Engineering			TOTAL (\$'s Millions)		
	Facility	To	From		State or County Facility	Urban or Rural	New or Improved	Existing Configuration ⁽¹⁾	Proposed Configuration ⁽¹⁾	Unit Cost/Mile (\$'s Millions)	# of Intersections	COST of Intersections (\$'s Millions)	# of Bridges	COST of Bridges (\$'s Millions)	Roadway Subtotal (\$'s Millions)	Sidewalk Projects (One or Both Sides)	Sidewalk Costs (\$'s Millions)	Bikeway Projects w/ Shoulder	Bikeway Costs (\$'s Millions)	Landscaping (\$'s Millions)	Enhancement Subtotal (\$'s Millions)	Roadway + Enhancement (\$'s Millions)	Preliminary Engineering (\$'s Millions)		CEI (\$'s Millions)	Additional Engineering Sub Total (\$'s Millions)
3	I-185 Connector	I-185	US 27	6.23	State	Rural	N	None	4D	6.7387	1	0.150	5	6.720	48.852	0	0.000	None	0.000	0.156	0.156	49.008	4.901	1.470	6.371	55.379
4	Bass Cross Rd	US 29	SR 54	3.21	County	Rural	I	2U	4D	1.8258	4	0.600	0	0.000	6.461	0	0.000	None	0.000	0.080	0.080	6.541	0.654	0.196	0.850	7.391
5	Callaway Church Rd	SR 109	Upper Big Springs Rd	1.72	County	Rural	I	2U	4D	1.8258	2	0.300	1	1.344	4.784	0	0.000	None	0.000	0.043	0.043	4.827	0.483	0.145	0.628	5.455
6	Cameron Mill Rd	SR 219	Whitaker Rd	4.09	County	Rural	I	2U	4D	1.8258	2	0.300	1	1.344	9.111	2	1.775	Yes	0.843	0.102	2.720	11.831	1.183	0.355	1.538	13.369
7	Colquitt St	US 27	Davis Rd	1.96	County	Urban	I	2U	4U	1.6730	5	0.750	1	1.344	5.373	2	0.851	None	0.000	0.049	0.900	6.273	0.627	0.188	0.815	7.088
8	Davis Rd	SR 109	SR 219	3.24	State	Urban	I	2U	4D	2.3075	5	0.750	3	4.032	12.258	2	1.406	Yes	0.667	0.081	2.155	14.413	1.441	0.432	1.874	16.287
9	Davis Rd	SR 109	Hammett Rd	2.65	State	Urban	I	2U	4D	2.3075	3	0.450	1	1.344	7.909	2	1.150	Yes	0.546	0.066	1.762	9.671	0.967	0.290	1.257	10.928
10	Gabbettville Rd	US 29	Bartley Rd	4.41	County	Rural	I	2U	4D	1.8258	4	0.600	2	2.688	11.340	0	0.000	Yes	0.908	0.110	1.019	12.358	1.236	0.371	1.607	13.965
11	Greenwood St	US 29	Mooty Bridge Rd	1.15	County	Urban	I	2U	4U	1.6730	5	0.750	0	0.000	2.674	2	0.499	Yes	0.237	0.029	0.765	3.439	0.344	0.103	0.447	3.886
12	Lukken Industrial Blvd	US 29	US 27	3.91	County	Urban	I	2U	4D	2.3075	5	0.750	1	1.344	11.116	2	1.697	Yes	0.805	0.098	2.600	13.717	1.372	0.411	1.783	15.500
13	Lukken Industrial Blvd (West E	US 29	South LaGrange Loop	0.28	County	Urban	N	None	4D	3.1558	2	0.300	1	1.344	2.528	2	0.122	Yes	0.058	0.007	0.186	2.714	0.271	0.081	0.353	3.067
14	Lukken Industrial Blvd (East E	US 27	Davis Rd	0.85	County	Urban	N	None	4D	3.1558	2	0.300	1	1.344	4.326	2	0.369	Yes	0.175	0.021	0.565	4.892	0.489	0.147	0.636	5.528
15	Hammett Rd	I-185 Connector	Young's Mill Rd	2.51	County	Urban	I	2U	4D	2.3075	3	0.450	1	1.344	7.586	2	1.089	Yes	0.517	0.063	1.669	9.255	0.926	0.278	1.203	10.458
16	Young's Mill Rd	Waugh Rd	Hammett Rd	1.44	County	Urban	I	2U	4D	2.3075	2	0.300	0	0.000	3.623	2	0.625	Yes	0.297	0.036	0.958	4.580	0.458	0.137	0.595	5.176
17	South LaGrange Loop	SR 109	SR 219	6.20	County	Urban	N	None	4D	3.1170	4	0.600	3	4.032	23.957	2	2.691	Yes	1.277	0.155	4.123	28.080	2.808	0.842	3.650	31.731
18	North LaGrange Loop	SR 109	US 27	5.88	County	Urban	N	None	4D	3.1170	4	0.600	3	4.032	22.960	2	2.552	Yes	1.211	0.147	3.910	26.870	2.687	0.806	3.493	30.363
19	Davis Rd Realignment	US 27	Davis Rd	1.24	County	Urban	N	None	4D	3.1558	2	0.300	0	0.000	4.213	2	0.538	Yes	0.255	0.031	0.825	5.038	0.504	0.151	0.655	5.693
20	Waugh Rd Realignment	US 27	Waugh Rd	0.40	County	Urban	N	None	4D	3.1558	2	0.300	0	0.000	1.562	2	0.174	Yes	0.082	0.010	0.266	1.828	0.183	0.055	0.238	2.066
21	Mooty Bridge Rd	US 27	Wares Cross Rd	4.77	County	Urban	I	2U	4D	2.3075	5	0.750	2	2.688	14.445	0	0.000	Yes	0.983	0.119	1.102	15.547	1.555	0.466	2.021	17.568
22	Orchard Hill Rd	Lukken Industrial Blvd	SR 219	2.50	County	Urban	I	2U	4D	2.3075	2	0.300	1	1.344	7.413	0	0.000	None	0.000	0.063	0.063	7.475	0.748	0.224	0.972	8.447
23	Tin Bridge Rd	Hammett Rd	US 29	3.91	County	Rural	I	2U	4D	1.8258	2	0.300	0	0.000	7.439	0	0.000	None	0.000	0.098	0.098	7.537	0.754	0.226	0.980	8.516
24	Upper Big Springs Rd	Davis Rd	Knott Rd	3.02	County	Rural	I	2U	4D	1.8258	3	0.450	2	2.688	8.652	0	0.000	None	0.000	0.076	0.076	8.727	0.873	0.262	1.135	9.862
25	Wares Cross Rd	SR 219	US 27	2.52	County	Rural	I	2U	4D	1.8258	2	0.300	0	0.000	4.901	0	0.000	Yes	0.519	0.063	0.582	5.483	0.548	0.164	0.713	6.196
26	SR 18	I-85	3rd Ave	2.06	S	Rural	I	4D	-	-	-	-	-	0.000	0.000	0.000	-	-	0.000	0.052	0.052	0.052	0.005	0.002	0.007	0.058
27	SR 54	US 29	Meriwether County	3.32	State	Rural	I	2U	4D	2.3578	4	0.600	1	1.344	9.772	2	1.441	Yes	0.684	0.083	2.208	11.980	1.198	0.359	1.557	13.537
28	SR 109	US 29	Alabama	9.54	State	Rural	I	2U	4D	1.8258	6	0.900	3	4.032	22.350	0	0.000	Yes	1.965	0.239	2.204	24.554	2.455	0.737	3.192	27.746
29	SR 109	US 27	Callaway Church Rd	3.89	State	Rural	I	4D	-	-	-	-	-	0.000	0.000	0.000	-	-	0.000	0.097	0.097	0.097	0.010	0.003	0.013	0.110
30	SR 109	Callaway Church Rd	Meriwether County	5.95	State	Rural	I	2U	4D	1.8258	5	0.750	1	1.344	12.957	0	0.000	Yes	1.226	0.149	1.374	14.332	1.433	0.430	1.863	16.195
31	SR 219	US 27	Davis Rd	1.81	State	Urban	I	2U	4U	1.6730	5	0.750	1	1.344	5.122	2	0.786	Yes	0.373	0.045	1.204	6.326	0.633	0.190	0.822	7.148
32	SR 219	I-85	Bartley Rd	2.50	State	Rural	I	2U	4D	1.8258	2	0.300	1	1.344	6.208	0	0.000	Yes	0.515	0.063	0.578	6.786	0.679	0.204	0.882	7.668
33	US 27	SR 219	Mooty Bridge Rd	1.32	State	U	I	4D	-	-	-	-	-	0.000	0.000	0.000	-	-	0.000	0.033	0.033	0.033	0.003	0.001	0.004	0.037
34	US 27	SR 219	Auburn Ave	0.89	State	Urban	I	2U	4U	1.6730	4	0.600	0	0.000	2.089	2	0.386	None	0.000	0.022	0.409	2.497	0.250	0.075	0.325	2.822
35	US 27	I-85	I-185	4.56	State	Rural	I	2U	4D	1.8258	4	0.600	2	2.688	11.614	0	0.000	None	0.000	0.114	0.114	11.728	1.173	0.352	1.525	13.252
36	US 27	I-185	Old Chipley Rd	3.84	State	Rural	I	2U	4D	1.8258	3	0.450	1	1.344	8.805	0	0.000	None	0.000	0.096	0.096	8.901	0.890	0.267	1.157	10.058
37	US 29	Upper Glass Springs Rd	Old Vernon Rd	2.66	State	Rural	I	2U	4D	1.8258	5	0.750	1	1.344	6.951	0	0.000	Yes	0.548	0.067	0.614	7.565	0.757	0.227	0.983	8.548
38	US 29	US 27	Vernon Rd	1.35	State	Urban	I	2U	4U	1.6730	8	1.200	0	0.000	3.459	2	0.586	Yes	0.278	0.034	0.898	4.356	0.436	0.131	0.566	4.923
39	US 29	Young's Mill Rd	SR 54	11.64	State	Rural	I	2U	4D	2.3578	8	1.200	4	5.376	34.021	0	0.000	Yes	2.398	0.291	2.689	36.710	3.671	1.101	4.772	41.482
176	Ragland St Extension	SR 109	US 29	0.93	County	Urban	N	None	2U	1.7279	3	0.450	0	0.000	2.057	2	0.404	Yes	0.192	0.023	0.618	2.675	0.268	0.080	0.348	3.023

TOTAL 450.527

Notes

- (1) U - Undivided
- D - Divided
- O - One-Way
- A - Auxiliary

Costs

- Intersections 150,000 per intersection
- Bridges 1,340,000 per bridge (150' x 64' @ \$140/sq ft)
- Sidewalks 217,000 per mile, per side
- Bike Lanes 206,000 per mile, both sides
- Landscaping 25,000 per mile
- These costs DO NOT include Right of Way

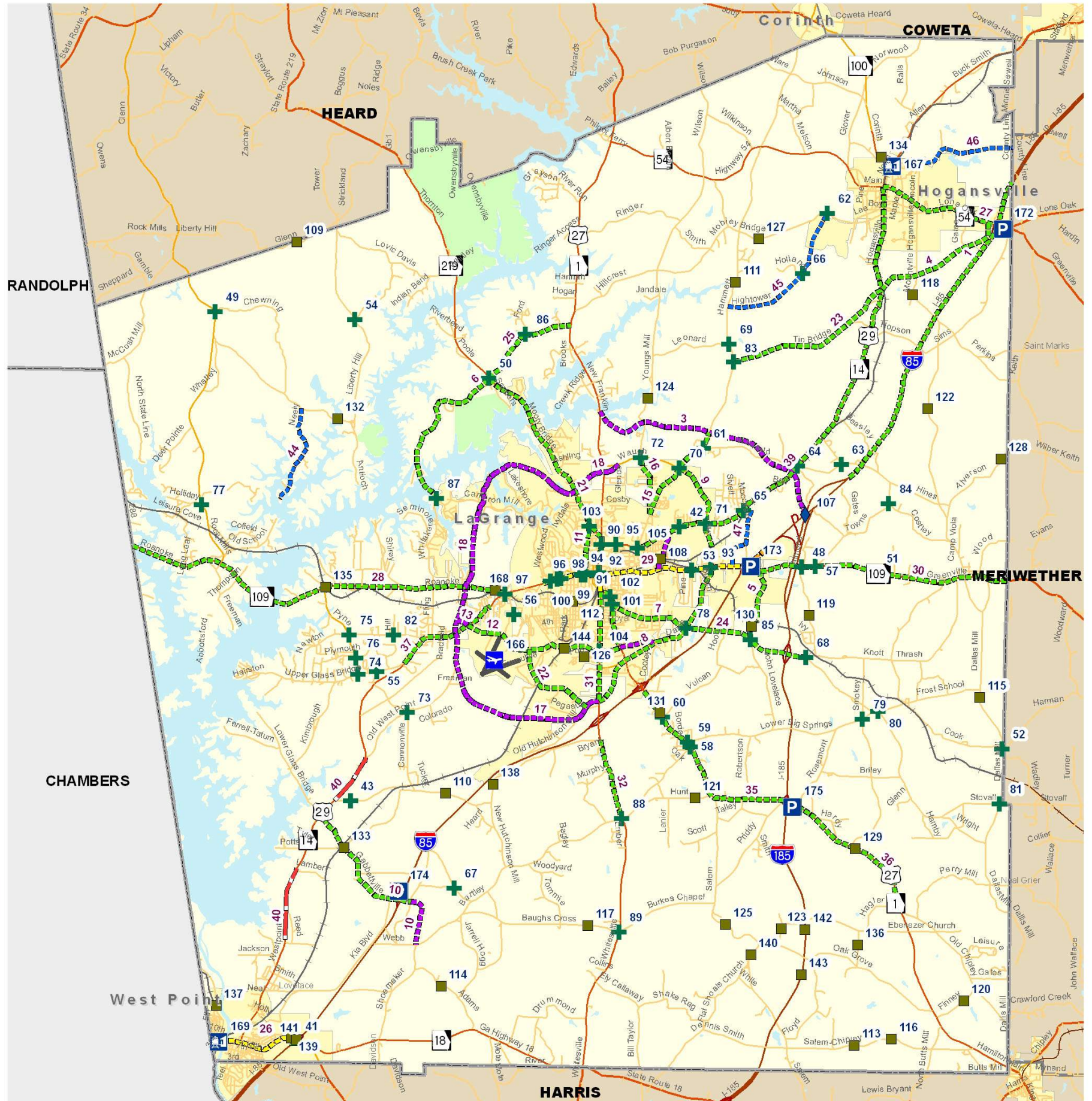
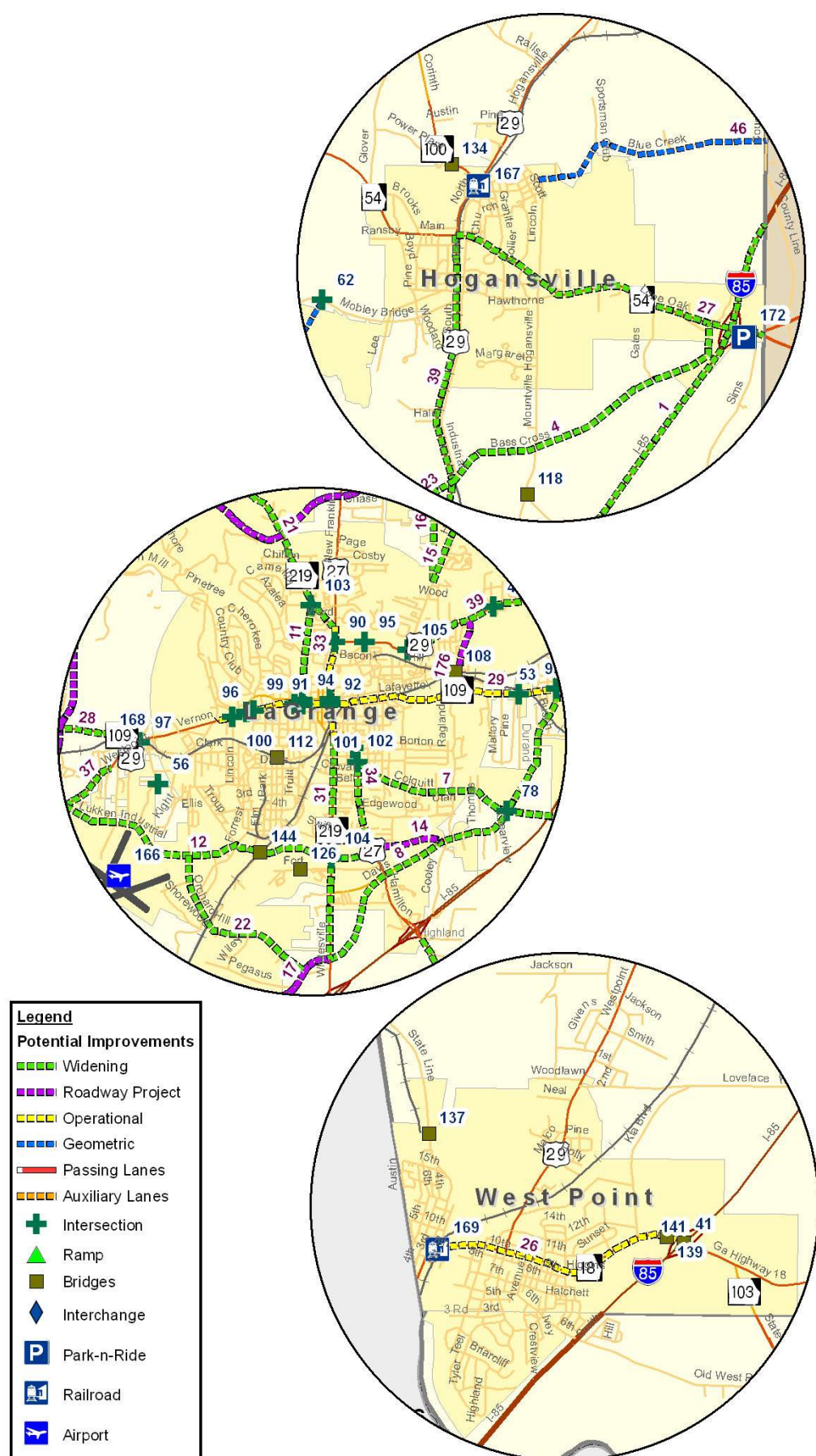
- Preliminary Engineering (PE) 10.00% total cost
- Construction Engineering and Inspection (CEI) 3.00% total cost

9.2 Summary of Recommended Improvements

Based on the analysis completed as part of this study, a listing of recommended projects was created for Troup County. This information is presented in Table 9.2. This listing includes:

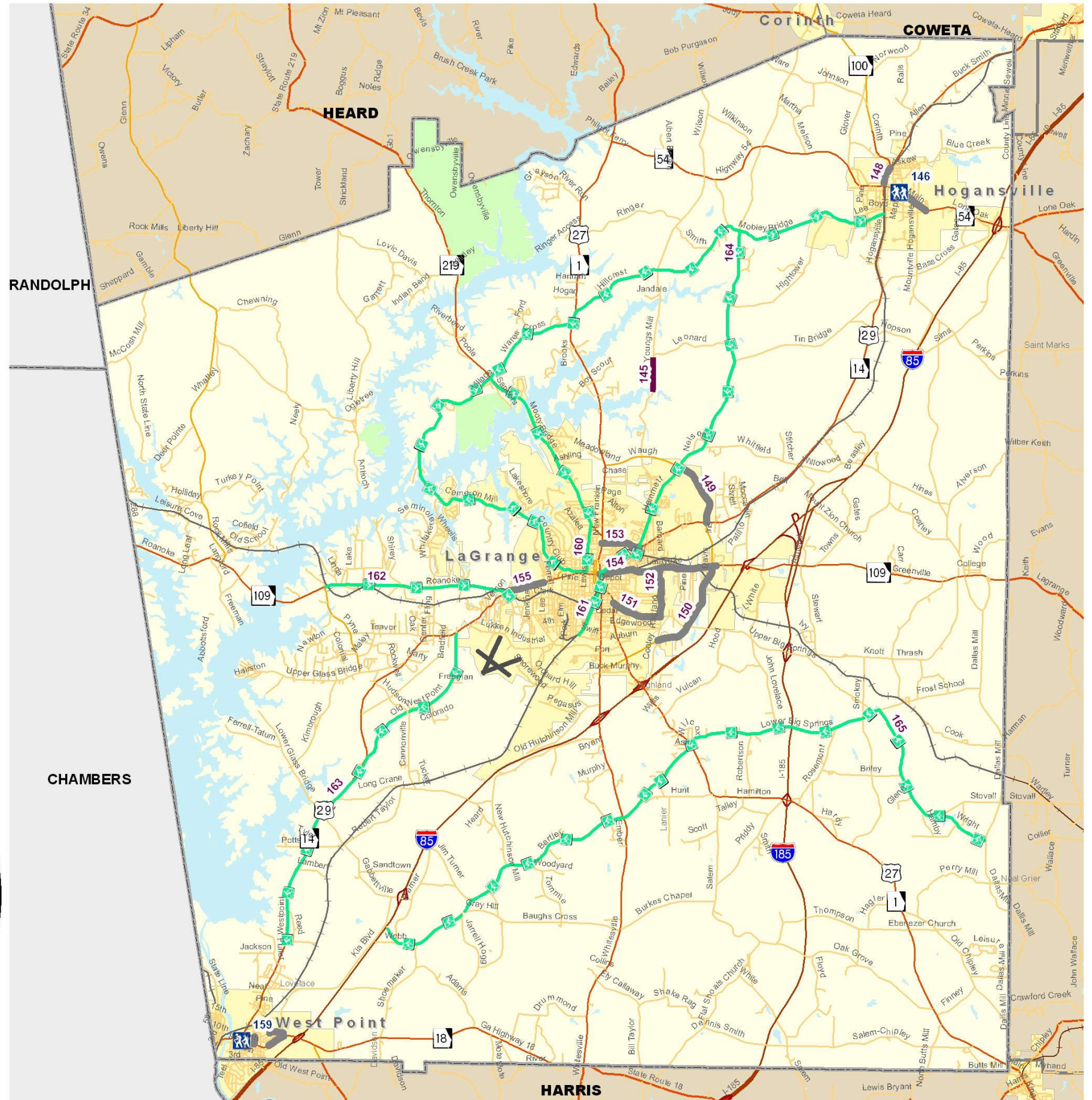
- Capacity Improvements and New Roadways;
- Intersection and Geometric Improvements;
- Bridge Improvements;
- Bicycle and Pedestrian Improvements;
- Airport Improvements;
- Rail Improvements; and,
- Transit Improvements.

For each recommendation several information elements were produced including: facility; limits; existing and improved configuration; comments; source; improvement type; need; anticipated benefit; phasing; cost and potential funding sources. For successful implementation of these projects it is recommended that additional detailed engineering studies be conducted to determine the most appropriate design, cost and phasing of the particular project. Additionally, successful project implementation will require identified funding mechanisms, political support, and public recognition of the project need and benefit.



Recommended Improvements - Roadway
Troup County Multi-Modal Transportation Study

Figure No: 9.2



Recommended Improvements – Bicycle and Pedestrian
Troup County Multi-Modal Transportation Study

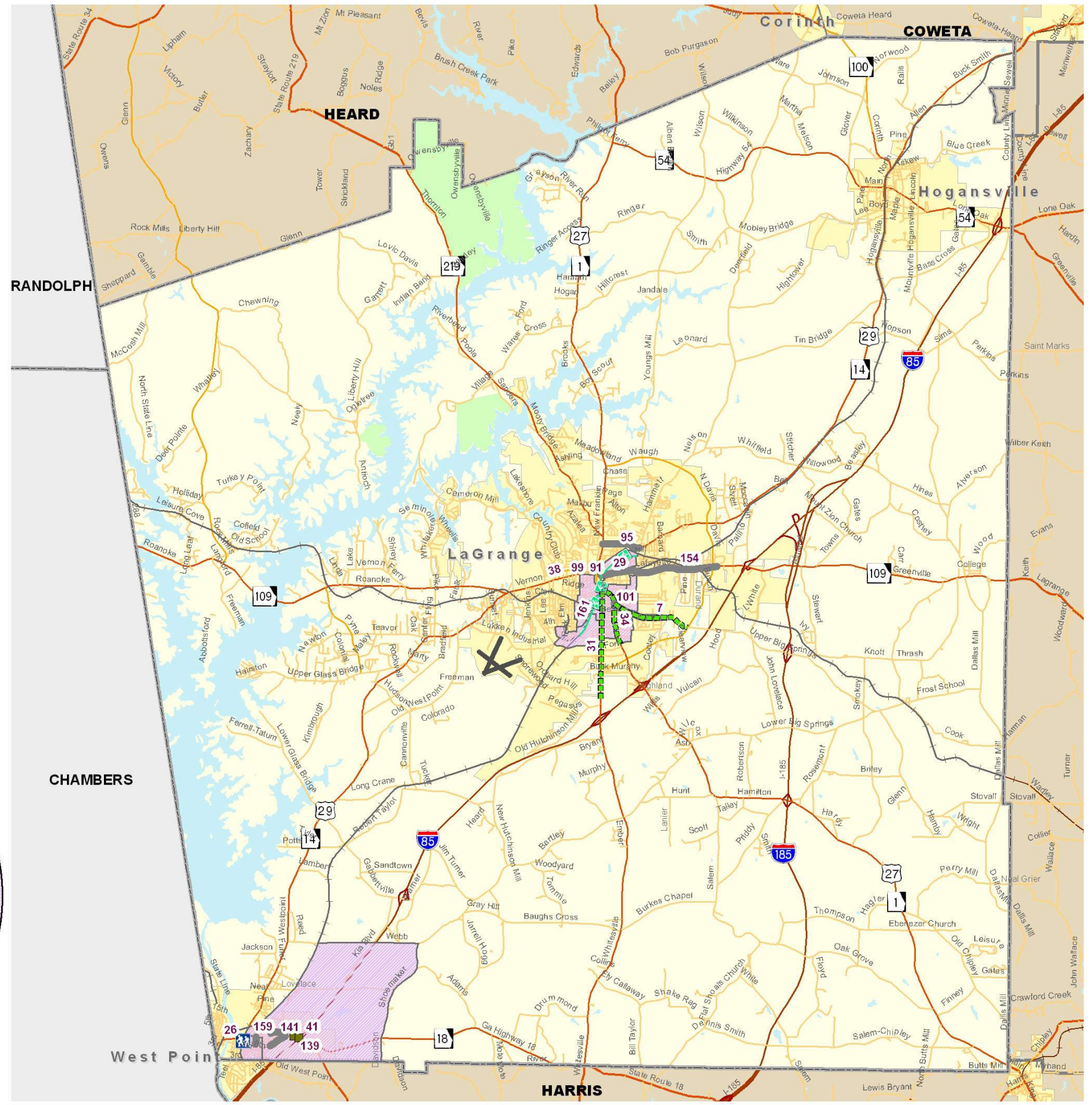
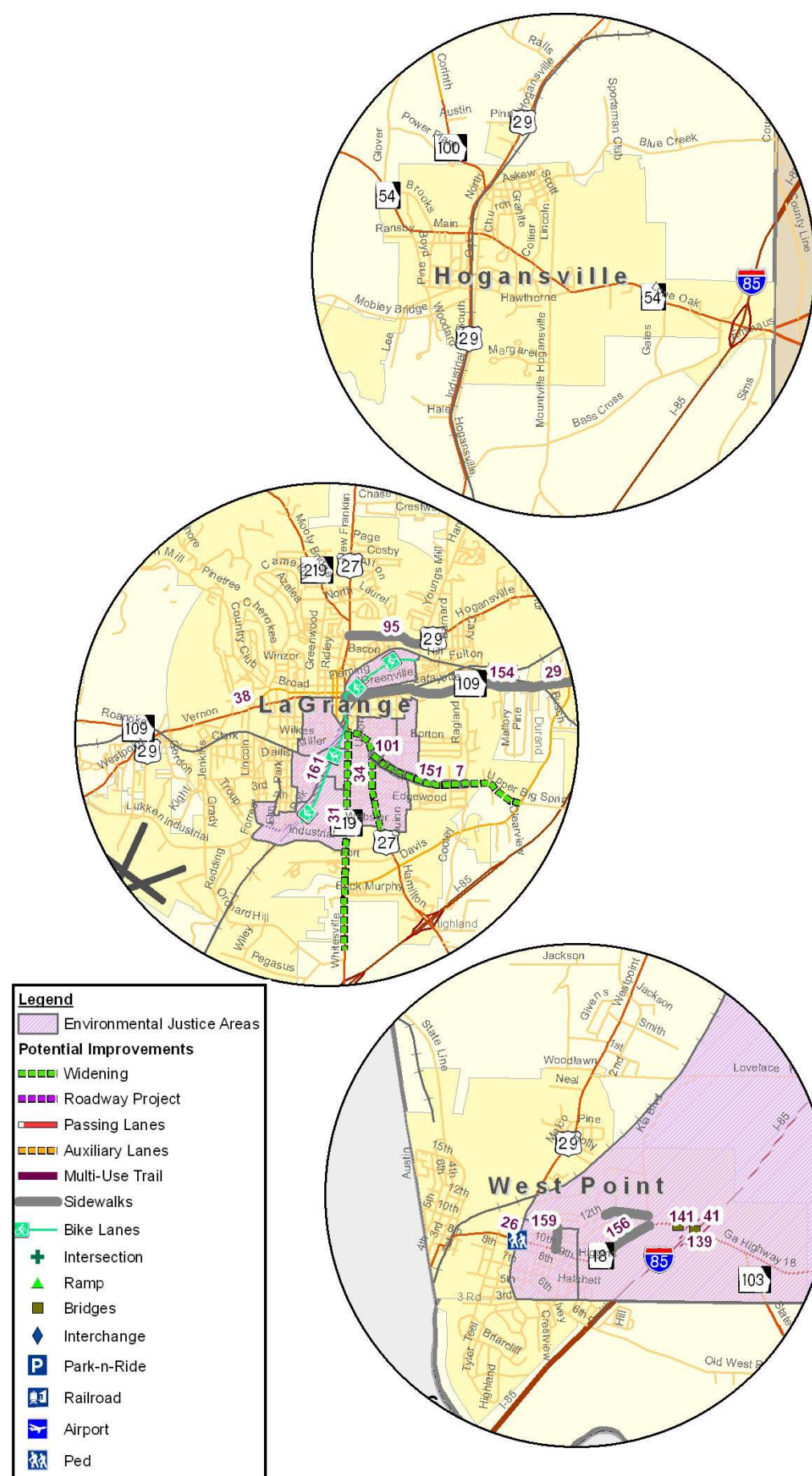
9.3 Environmental Justice Considerations

Another key point of concern in evaluating proposed transportation improvements is environmental justice. This ensures that areas with high concentrations of low-income or minority populations are not adversely impacted by transportation improvements. The following recommended projects are located in EJ areas:

- 7 – Widening Colquitt Street from US 27 to Davis Road
- 26 – Widening SR 18 from I-85 to 3rd Avenue
- 29 – Operational Improvements along SR 109 from US 27 to Callaway Church Road
- 31 – Widening SR 219 from US 27 to Davis Road
- 34 – Widening US 27 from SR 219 to Auburn Avenue
- 38 – Operational Improvements along US 29 from Vernon Road to US 27
- 41 – I-85 Exits Ramps at SR 18
- 91 – Intersection of US 29 & Greenwood Street
- 95 – Intersection of US 29 and Horace King Street
- 99 – Intersection of US 29 and Harwell Avenue
- 101 – Intersection of US 27 and Colquitt Street
- 106 – Intersection of US 27 and Greenville Street
- 139 – Bridge on SR 18 at Long Cane Creek
- 141 – Bridge on I-85 at SR 18
- 151 – Sidewalks on Colquitt Street from US 27 to Ragland Street
- 153 – Sidewalks on US 29 from US 27 to Young's Mill Road
- 154 – Sidewalks on SR 109 from US 27 to Davis Road
- 156 – Sidewalks on SR 18 from Dogwood Circle to OG Skinner Dr
- 157 – Sidewalks on Avenue K from SR 18 to 12th Street
- 159 – West Point Pedestrian Crossing on SR 18 at US 29
- 161 – Downtown LaGrange Bicycle and Pedestrian Connector

The recommended improvements will improve safety, mobility and access for all users on a countywide basis. These projects include the need for roadway widening and the possibility of additional right of way. Additional projects that will benefit the EJ communities include: bicycle and pedestrian improvements; transit park and ride lots along I-85; and, numerous safety and capacity enhancements throughout the study area, as shown in Table 9.2. Figure 9.3 shows the recommended projects in the vicinity of the environmental justice areas.

In addition to the technical analysis documented above, outreach activities were conducted throughout the course of the study to facilitate input and dialogue with EJ communities. In particular, information was distributed in these areas documenting study activities and workshops.



Environmental Justice Evaluation
Troup County Multi-Modal Transportation Study

Figure No: 9.3

10.0 Project Prioritization

In order to aid GDOT and County staff, potential improvements were ranked by mode based on several evaluation factors. The following sections document the prioritization of improvements for Troup County.

10.1 Corridor Prioritization

Qualitative and Quantitative Evaluation Factors were established so that the potential improvements for Troup County could be evaluated objectively by County staff. These factors were developed by HNTB with the assistance of the Study Advisory Group, public comment and GDOT. This evaluation serves as a ranking for potential projects, resulting in a listing of improvement options to meet the County's transportation needs. Prioritization criteria were developed for four types of projects – roadway capacity, bicycle and pedestrian improvements, intersections and bridges.

Qualitative Criteria

Qualitative criteria were established to evaluate the deficient corridors based on various conditions or standards established through the study process. The following list documents the qualitative criteria established for the roadway network improvement evaluation. These correspond to the vision established in the Goals and Objectives documented in Section 7.0.

- Continuation of Existing Road Widening Project
- Governor's Road Improvement Program (GRIP) / National Highway System
- Supports Growth Management Plan
- Right of Way Protection Corridor
- Connectivity
- Construction Designs in Progress
- Parallel Relief
- Development Conditions

By comparing potential projects to these established criteria it was possible to determine which projects scored highest against these critical measures. This information was used as a means of prioritizing projects. Table 10.1.1 displays the qualitative criteria and the associated scoring. The total points established by the Qualitative Criteria range from 0 to 28 points. These points were added to the points received from the Quantitative Criteria, which are documented on the following pages.

**Table 10.1.1
Qualitative Criteria and Scoring**

Corridor Prioritization Criteria	Possible Points
Continuation of Existing Road Widening Project Is the proposed project a continuation of any previously completed or current project providing added lanes to the specific transportation corridor?	No = 0 Yes = 2
Governor's Road Improvement Program/National Highway System Is the project identified as a GRIP Corridor or part of the National Highway System?	No = 0 Yes = 2
Supports Growth Management Plan Does the proposed project support the Comprehensive Plan?	No = 0 Yes = 4
Right of Way Protection Corridor Is the proposed project located along any designated corridor for right way protection?	No = 0 Yes = 3
Connectivity Does the proposed project improve access between activity centers or link existing or proposed projects or provide regional connectivity?	No = 0 Yes = 3
Construction Designs in Progress Are the designs for the proposed project already complete or in the process of being completed?	No = 0 Yes = 2
Parallel Relief Does the proposed project provide relief to parallel corridors?	No = 0 Yes = 4
Development Conditions A - Is the proposed project located within a development area, or, is the specific project part of an approved plan for the redevelopment or revitalization of a developed area, or does the specific project provide access infrastructure to a mixed-use project area? B - Does the proposed project complete or link other projects that have been built by a municipality or County? C - Was the proposed project developed through an organized public participation process (such as Community charrette) that was sponsored by a municipality or County?	No = 0 Yes = 3 No = 0 Yes = 3 No = 0 Yes = 2
Sub-Total Possible Points	28

Quantitative Criteria

Quantitative criteria were set up to evaluate the deficient corridors based on various measurable conditions. The following list documents the quantitative criteria established for the roadway network improvement evaluation.

- Volume to Capacity Ratio
- Ratio of Crash Rate to Statewide Average
- Number of Fatalities

Table 10.1.2 displays the quantitative criteria and the associated scoring. The total points established by the Quantitative Criteria range from 0 to 25 points.

Table 10.1.2
Quantitative Criteria and Scoring

Corridor Prioritization Criteria	Possible Points
Volume to Capacity Ratio	
0.00 - 0.349	0.00
0.350 - 0.399	2.00
0.400 - 0.449	2.50
0.450 - 0.499	3.00
0.500 - 0.549	3.50
0.550 - 0.599	4.00
0.600 - 0.649	4.50
0.650 - 0.699	5.00
0.700 - 0.749	5.50
0.750 - 0.799	6.00
0.800 - 0.849	6.50
0.850 - 0.899	7.00
0.900 - 0.949	7.50
0.950 - 1.049	8.00
1.050 - 1.149	9.00
1.150 - 1.249	10.00
1.250 - 1.349	11.00
1.350 - 1.449	12.00
1.450 - 1.549	14.00
1.550 - 1.649	16.00
1.650 -	18.00
Number of Crashes per 1,000 Vehicle Miles Traveled	
0.01-0.49	0.25
0.50-0.99	0.50
1.00 -1.99	0.75
2.00-2.49	1.00
2.50-2.99	1.25
3.00-3.99	1.50
4.00-5.99	1.75
6.00	2.00
Number of Fatalities	
1	1
2 or more	2
Sub-Total Possible Points	15

The total points that a facility can receive for both the qualitative and quantitative criteria is 53 points. Based upon the identified improvements and the evaluations made during the quantitative and qualitative evaluation, a set of recommended near, mid, and long-term transportation projects was established. The scoring for the deficient corridors is displayed in Table 10.1.3.

Table 10.1.3
Corridor Prioritization

Project Ref. No.	Facility	Segment Limits		Qualitative Criteria											Quantitative Criteria					Total Score for Project
		From	To	Continuation of Existing Road Widening Project	Governor's Road Improvement Program / National Highway System	Supports Comprehensive Plan	Right of Way Protection Corridor	Connectivity	Construction Designs in Progress	Parallel Relief	Development Conditions			Sub-Total Qualitative Criteria	Volume/Capacity Ratio	Ratio of 100 Million VMT to Statewide Average	Number of Fatalities	Sub-Total Quantitative Criteria		
											A	B	C							
3	I-185 Connector	I-185	US 27	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	25.00	0.00	0.00	0	0.00	25.00	
4	Bass Cross Rd	US 29	SR 54					✓					✓	9.00	0.54	0.27	0	3.50	12.50	
5	Callaway Church Rd	SR 109	Upper Big Springs Rd			✓		✓				✓		10.00	0.55	0.77	0	4.00	14.00	
6	Cameron Mill Rd	SR 219	Whitaker Rd					✓						3.00	0.47	1.36	0	3.00	6.00	
7	Colquitt St	US 27	Davis Rd					✓				✓		6.00	0.71	0.21	0	5.50	11.50	
8	Davis Rd	SR 109	SR 219			✓		✓			✓	✓	✓	17.00	1.00	0.91	1	9.00	26.00	
9	Davis Rd	SR 109	Hammett Rd			✓		✓			✓	✓	✓	17.00	0.93	1.42	1	8.50	25.50	
10	Gabbettville Rd	US 29	Bartley Rd	✓		✓	✓	✓				✓	✓	18.00	0.46	3.98	0	3.00	21.00	
11	Greenwood St	US 29	Mooty Bridge Rd			✓		✓				✓	✓	13.00	1.05	1.19	0	8.00	21.00	
12	Lukken Industrial Blvd	US 29	US 27			✓		✓			✓	✓		14.00	0.98	0.31	1	9.00	23.00	
13	Lukken Industrial Blvd (West Extension)	US 29	South LaGrange Loop			✓		✓				✓	✓	13.00	0.00	0.00	0	0.00	13.00	
14	Lukken Industrial Blvd (East Extension)	US 27	Davis Rd			✓		✓				✓	✓	13.00	0.00	0.00	0	0.00	13.00	
15	Hammett Rd	I-185 Connector	Young's Mill Rd			✓		✓			✓	✓		14.00	0.47	1.38	0	3.00	17.00	
16	Young's Mill Rd	Waugh Rd	Hammett Rd			✓		✓			✓	✓		14.00	0.18	0.32	0	0.00	14.00	
17	South LaGrange Loop	SR 109	SR 219			✓	✓	✓	✓		✓	✓	✓	24.00	0.00	0.00	0	0.00	24.00	
18	North LaGrange Loop	SR 109	US 27			✓	✓	✓			✓	✓	✓	22.00	0.00	0.00	0	0.00	22.00	
19	Davis Rd Realignment	US 27	Davis Rd			✓		✓				✓	✓	12.00	0.00	0.00	0	0.00	12.00	
20	Waugh Rd Realignment	US 27	Waugh Rd			✓		✓				✓	✓	12.00	0.00	0.00	0	0.00	12.00	
21	Mooty Bridge Rd	US 27	Wares Cross Rd			✓		✓						7.00	0.74	0.57	0	5.50	12.50	
22	Orchard Hill Rd	Lukken Industrial Blvd	SR 219			✓						✓		7.00	0.93	0.62	0	7.50	14.50	
23	Tin Bridge Rd	Hammett Rd	US 29					✓						3.00	0.60	0.27	0	4.50	7.50	
24	Upper Big Springs Rd	Davis Rd	Knott Rd			✓		✓				✓		10.00	0.74	1.25	0	5.50	15.50	
25	Wares Cross Rd	SR 219	US 27			✓		✓						7.00	0.45	0.50	0	3.00	10.00	
26	SR 18	I-85	3rd Ave											0.00	0.60	0.58	1	5.50	5.50	
27	SR 54	US 29	Meriwether County	✓			✓	✓				✓	✓	15.00	0.64	0.59	0	4.50	19.50	
28	SR 109	US 29	Alabama				✓	✓						6.00	0.61	0.94	0	4.50	10.50	
29	SR 109	US 27	Callaway Church Rd											0.00	1.01	0.56	1	9.00	9.00	
30	SR 109	Callaway Church Rd	Meriwether County	✓		✓	✓	✓	✓			✓		17.00	0.83	0.72	0	6.50	23.50	
31	SR 219	US 27	Davis Rd	✓		✓		✓				✓		14.00	1.16	0.89	0	10.00	24.00	
32	SR 219	I-85	Bartley Rd	✓				✓				✓		8.00	0.82	0.75	0	6.50	14.50	
33	US 27	SR 219	Mooty Bridge Rd											0.00	0.94	2.68	0	7.50	7.50	
34	US 27	SR 219	Auburn Ave	✓	✓	✓		✓	✓		✓	✓		20.00	1.26	1.32	0	11.00	31.00	
35	US 27	I-85	I-185	✓	✓	✓		✓				✓		14.00	0.62	0.72	2	7.50	21.50	
36	US 27	I-185	Old Chipley Rd	✓	✓	✓		✓						11.00	0.48	0.78	1	4.00	15.00	
37	US 29	Upper Glass Springs Rd	Old Vernon Rd	✓		✓	✓	✓	✓			✓	✓	20.00	0.70	1.05	0	5.50	25.50	
38	US 29	US 27	Vernon Rd	✓				✓					✓	8.00	1.46	2.13	0	14.00	22.00	
39	US 29	Young's Mill Rd	SR 54	✓		✓	✓	✓				✓		15.00	0.81	3.69	3	9.50	24.50	
176	Ragland St Extension	SR 109	US 29			✓	✓	✓				✓	✓	18.00	0.00	3.69	0	0.00	18.00	

The prioritization resulted in the following ranking of roadway improvements:

1. US 27 from SR 219 to Auburn Ave;
2. Davis Rd from SR 109 to SR 219;
3. Davis Rd from SR 109 to Hammett Rd;
4. US 29 from Upper Glass Springs Rd to Old Vernon Rd;
5. I-185 Connector from I-185 to US 27;
6. US 29 from Young's Mill Rd to SR 54;
7. South LaGrange Loop Rd from SR 109 to SR 219;
8. SR 219 from US 27 to Davis Rd;
9. SR 109 from Callaway Church Rd to Meriwether County;
10. Lukken Industrial Blvd from US 29 to US 27;
11. North LaGrange Loop Rd from SR 109 to US 27;
12. US 29 from US 27 to Vernon Rd;
13. US 27 from I-85 to I-185;
14. Gabbettville Rd from US 29 to Bartley Rd;
15. Greenwood St from US 29 to Mooty Bridge Rd; and,
16. SR 54 from US 29 to Gates Rd.

These projects represent the highest priority roadway investments. After presentation to the public and stakeholders three additional criteria were employed to rank improvements:

- East-west connectivity;
- New alignments favored over widening existing roads through LaGrange; and,
- Minimize impact to existing development and communities.

These three criteria were developed to address concerns raised by the public and stakeholders that the existing prioritization criteria failed to fully recognize the benefits of new alignment capacity projects. Additionally, strong desire was voiced to remove as much through traffic as possible from LaGrange, while minimizing impacts to existing communities throughout the County. Table 10.1.4 shows the additional prioritization measures used for the refined project rankings.

**Table 10.1.4
Additional Corridor Prioritization Measures**

Recommended Project	E-W Connectivity in LaGrange?	New Alignment?	Minimize Impacts to Existing Communities?
US 27 from SR 219 to Auburn Ave			
Davis Rd from SR 109 to SR 219	✓		✓
Davis Rd from SR 109 to Hammett Rd	✓		✓
US 29 from Upper Glass Springs Rd to Old Vernon Rd			
I-185 Connector from I-185 to US 27		✓	✓
US 29 from Young's Mill Rd to SR 54			
South LaGrange Loop Rd from SR 109 to SR 219	✓	✓	✓
SR 219 from US 27 to Davis Rd			
SR 109 from Callaway Church Rd to Meriwether County			
Lukken Industrial Blvd from US 29 to US 27	✓		✓
North LaGrange Loop Rd from SR 109 to US 27	✓	✓	
US 29 from US 27 to Vernon Rd			
US 27 from I-85 to I-185			
Gabbettville Rd from US 29 to Bartley Rd			
Greenwood St from US 29 to Mooty Bridge Rd			
SR 54 from US 29 to Gates Rd			

Projects that meet additional prioritization criteria received two points for each criteria. Based on the application of the additional prioritization criteria, the following project rankings were developed:

1. US 27 from SR 219 to Auburn Ave;
2. Davis Rd from SR 109 to US 27;
3. South LaGrange Loop Rd from SR 109 to SR 219;
4. Davis Rd from SR 109 to Hammett Rd;
5. I-185 Connector from I-185 to US 27;
6. Lukken Industrial Blvd from US 29 to US 27;
7. North LaGrange Loop Rd from SR 109 to US 27;
8. US 29 from Upper Glass Springs Rd to Old Vernon Rd;
9. US 29 from Young's Mill Rd to SR 54;
10. SR 219 from US 27 to Davis Rd;
11. SR 109 from Callaway Church Rd to Meriwether County;
12. US 29 from US 27 to Vernon Rd;
13. US 27 from I-85 to I-185;
14. Gabbettville Rd from US 29 to Bartley Rd;
15. Greenwood St from US 29 to Mooty Bridge Rd; and,

16. SR 54 from US 29 to Gates Rd.

Corridors with higher points are considered to achieve more of the goals and objectives established for the LRTP. The points are not meant to be the final decision on whether a project should be implemented or not. Instead these rankings should be employed in conjunction with input from key technical staff from the County and GDOT; input from political decision makers; and, public comment. However, the total points, from the Qualitative and Quantitative scoring, could be used to establish a priority ranking.

10.2 Bicycle & Pedestrian Prioritization

Criteria were established to evaluate the potential bicycle and pedestrian improvements based on various conditions or standards established through the study process. The following list documents the criteria established for the bicycle and pedestrian evaluation. These correspond to the established Goals and Objectives documented and project evaluation factors.

- Is the project within a bicycle or pedestrian priority area (1-mile buffer around schools, parks & libraries)?
- Did a bicycle or pedestrian related fatality occur in the proposed project area?
- Does the proposed project improve access between activity centers or link existing or proposed projects or provide regional bicycle and pedestrian connectivity?
- Was the proposed project previously identified (STIP, RDC Bike/Ped Plan, LaGrange Comp Plan, West Georgia Flyers)?
- Does the proposed project link to a major bicycle or pedestrian origin or destination?

By comparing potential projects to these established criteria it was possible to determine which projects scored highest against these critical measures. This information was used as a means for prioritizing projects. Table 10.2 documents the scoring used for the bicycle and pedestrian prioritization.

The prioritization scoring resulted in the following ranking of bicycle and pedestrian improvements:

1. N Davis Rd Sidewalks from US 29 to Hammett Rd;
2. Avenue K Sidewalk from 18th Street to 12th Street;
3. SR 109 Sidewalks from US 27 to LaGrange Mall;
4. Country Club Road Bike Lanes (Cameron Mill/Country Club/Broad/SR 219); and,
5. Hillcrest Rd / Hammett Rd Bike Lanes.

Table 10.2
Bicycle & Pedestrian Prioritization

Corridor Prioritization Criteria	Possible Points
Bike Ped Priority Area Is the project within a bicycle or pedestrian priority area (1-mile buffer around schools, parks & libraries)?	No = 0 Partial = 5 Yes = 10
Fatality Did a bicycle or pedestrian related fatality occur in the proposed project area?	No = 0 Yes = 10
Connectivity Does the proposed project improve access between activity centers or link existing or proposed projects or provide regional bicycle and pedestrian connectivity?	No = 0 Yes = 5
Previously Identified Improvement Was the proposed project previously identified (STIP, RDC Bike/Ped Plan, LaGrange Comp Plan, West Georgia Flyers)?	No = 0 Yes = # * 2
Origin & Destination Does the proposed project link to a major bicycle or pedestrian origin or destination?	No = 0 Yes = # * 2

* 2 – the number of projects or origins/destinations multiplied by 2

10.3 Intersection Prioritization

Criteria were established to evaluate the potential intersection improvements based on various conditions or standards established through the study process. The following list documents the criteria established for the intersection evaluation. These correspond to the established Goals and Objectives documented and project evaluation factors.

- What is the AADT on the facility?
- How many crashes occurred at the intersection between 2002 and 2004?
- Did a fatality occur at the intersection?
- Was the intersection currently identified by the County/City?

By comparing potential projects to these established criteria it was possible to determine which projects scored highest against these critical measures. This information was used as a means of prioritizing projects. Table 10.3 documents the scoring used for the intersection prioritization.

Table 10.3
Intersection Prioritization

Corridor Prioritization Criteria	Possible Points
AADT What is the AADT on the facility?	$> 15,000 = 5$ $15,000 - 10,000 = 4$ $10,000 - 5,000 = 2$ $< 5,000 = 0$
Crashes How many crashes occurred at the intersection between 2002 and 2004?	$> 30 = 10$ $30 - 20 = 5$ $20 - 10 = 2$ $< 10 = 0$
Fatality Did a fatality occur at the intersection?	No = 0 Yes = 10
Previously Identified Improvement Was the intersection currently identified by the County/City?	No = 0 Yes = 5

The prioritization scoring resulted in the following ranking of intersection improvements:

1. N Davis Road & Hogansville Road;
2. US 29 (Vernon Street) & Jefferson Street;
3. US 27 & US 29 (Commerce Avenue);
4. US 29 (Vernon Street) & S Greenwood Street;
5. US 27 & N Lafayette Square;
6. US 29 & Horace King Street;
7. US 29 & Broad Street;
8. US 29 & Forrest Avenue;
9. US 29 & Hartwell Avenue;
10. Davis Road & SR 109;
11. Broad Street & SR 219; and,
12. US 29 & SR 109.

10.4 Bridge Prioritization

Bridges with a sufficiency rating of 75 or lower were recommended for improvements. The sufficiency rating was also used to prioritize the bridges in need of rehabilitation or maintenance. The lower the sufficiency rating, the higher the improvement priority.

The prioritization scoring resulted in the following ranking of bridge improvements:

1. Greenville Street @ CSX Railroad;
2. Glenn Road @ Whitewater Creek;
3. Cannonville Road @ Long Cane Creek;
4. Hammett Road @ Yellow Jacket Creek Tributary;
5. Juniper Street @ CSX Railroad;
6. Salem-Chipleay Road @ Turkey Creek Tributary;
7. Adams Road @ Big Branch;

8. Dallas Mill Road @ Big Springs Creek;
9. Salem-Chipley Road @ Turkey Creek;
10. Baughs Cross Road @ Mud Creek;
11. Mountville-Hogansville Road @ Flat Creek;
12. Stewart Road @ Long Cane Creek;
13. Finney Road @ Polecat Creek;
14. Hunt Road @ Mud Creek;
15. Mountville Hogansville Road @ Beech Creek;
16. Thompson Road @ Polecat Creek;
17. Young's Mill Road @ Beech Creek;
18. Salem Road @ Flat Shoals Creek; and,
19. SR 109 & CSX Railroad.

11.0 Funding

Several funding sources will be used to construct as many of the recommended projects as possible. This is usually controlled by the agencies responsible for maintaining and operating the roadway. Most major facilities in Troup County are either operated by GDOT or the County. Should the County desire to accelerate projects on state owned and maintained facilities, it is highly likely that local funds could accelerate the process.

Funding for most transportation projects in the County comes in part through GDOT. To understand the ability of GDOT to continue to provide funds to Troup County it is useful to understand the components of GDOT funding. Key components include:

- Federal Title I Apportionments;
 - State Motor Fuels Taxes;
 - State License Tag Fees;
 - State Title Registrations;
 - State Motor Carrier Fuels Tax;
 - State Personal Property Tax; and,
 - Tax Allocation Districts.
- } Accounts for approximately 98% of the budget

While detailed analysis of these funding sources is beyond the scope of this study, it is useful to point out that all of the revenue streams identified as key components of GDOT funding have positive growth rates historically and it is anticipated that they will continue to grow in the future.

While GDOT funding components have positive growth rates, the Department is experiencing some funding challenges. Construction costs have increased up to 65% over the past two to three years forcing the Department to continually assess which projects it can reasonable fund. It is anticipated that in the future local funding sources will become more significant. A review of project implementation shows that locations with a SPLOST have been in the best position to leverage funds and ultimately construct projects.

11.1 Federal Funding Sources for Transportation

A substantial portion of GDOT funding comes from the Federal Government through Federal Title I Apportionments. The primary funding source for Title I is the Federal gasoline tax collected at the state level. The U.S. Congress authorizes federal transportation funding to the states and other public entities generally every six years. The previous authorization was known as the "Transportation Efficiency Act for the 21st Century" or TEA 21. The reauthorization of TEA 21 in August 2005 was the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU). SAFETEA-LU authorizes the Federal surface transportation programs for highways, highway safety, and transit for the 5-year period 2005 through 2009

Based on the reauthorization, Table 11.1 illustrates funding levels for major highway transportation programs and apportionments and allocations to Georgia over the five-year time frame (FY 2005, 2006, 2007, 2008, and 2009).

Table 11.1
Estimated Five-Year SAFETEA-LU Highway Apportionments and Allocations*

Area	Georgia	U.S.
Interstate Maintenance	\$922	\$25,202
National Highway System	\$859	\$30,542
Surface Transportation System	\$1,119	\$32,550
Bridge Replacement & Rehabilitation	\$272	\$21,607
Congress Mitigation & Air Quality	\$186	\$8,609
Appalachian Development Highway System	\$90	\$2,350
Recreational Trails	\$10	\$370
Metropolitan Planning	\$37	\$1,481
Safety	\$141	\$5,064
Rail Highway Crossings	\$30	\$880
Safe Route to Schools	\$18	\$612
High Priority Projects	\$350	\$14,832
Equity Bonus	\$2,324	\$40,896
Total	\$6,356	\$183,466

* In millions of dollars (rounded to the nearest million) for FY 2005 through 2009.

Source: U.S. Department of Transportation

Federal funding for the majority of highway system improvements (excluding interstate highways) planned in Troup County is expected to come from the Surface Transportation Program (STP) and Minimum Guarantee Program. Locally-sponsored projects within the County will generally require a 20% local funding commitment to match federal funds. The local government is also generally responsible for completing the planning and design of the projects as well. Federal and state funds are programmed by GDOT for right of way and construction costs. State-sponsored projects generally require a 10%-20% local funding match.

As part of the federal apportionment and allocation, there are opportunities for local governments to collaborate with GDOT on special transportation projects. These programs include:

- **Scenic Byway Program**
GDOT has initiated a Scenic Byways Program to help communities preserve and promote the cultural and historic resources found along the roadways in Georgia. Once a road becomes designated as a Georgia Scenic Byway, it becomes eligible for federal Scenic Byway funds. Funds can be used to develop corridor management plans to protect the natural and cultural assets along the route.

- **Transportation Enhancement Program (TEA Funds)**
Currently, the TEA Grant Program provides federal transportation funds through GDOT to local governments through a competitive process for non-highway projects. Eligible projects include bicycle and pedestrian facilities, multi-use trails, the preservation of historic sites related to transportation, etc. In the past, TEA funds were approved for beautification and sidewalks in the Hogansville.

11.2 Federal Funds for Public Transportation

The need for better mobility and access to transportation extends far beyond city limits. In Troup County, a very limited amount of public transportation services are available for people who cannot or choose not to drive their private autos. As the population grows and demographic trends change with a larger percentage of the population being elderly, the needs for special public transit to serve seniors and disabled people will grow.

In addition, as the study area urbanizes and households with workers are formed, there will be growing demands to serve commuter travel needs. Commuter-oriented public transportation services, such as vanpooling programs and express bus services as well as transit facilities, such as park and ride lots will be needed in the area. All of these programs are eligible for federal funding with the local share ranging from 10 percent for transit vehicle purchases and the construction of park and ride lots up to 50 percent for rural transit operating assistance.

As Troup County evolves, the County should monitor its needs for local and regional public transportation services and identify opportunities to tap into the available federal sources for these programs. Table 11.2 shows the estimated federal funds included in SAFETEA-LU. Generally, for public transit projects proposed in Troup County, the federal funding programs will be the Non-Urbanized Area Program; the Rural Transit Assistance Program; Transit for Elderly and Disabled Persons, Job Access and Reverse Commute; and SAFETEA's New Freedom Program.

Table 11.2
Four-Year Apportionments and Allocations for Public Transportation*

Area	Georgia	U.S.
Urban Areas	\$308	\$12,723
Fixed Guideway Motorization	\$150	\$6,076
Non-Urbanized Areas	\$62	\$1,880
Rural Transit Assistance Program (RTAP)	\$1	\$29
Job Access/Reverse Commute Program	\$13	\$603
Elderly & Persons with Disabilities	\$12	\$490
New Freedoms	\$10	\$339
Metropolitan Planning	\$9	\$343
State Planning	\$2	\$72
Total	\$567	\$22,598

* in millions of dollars (rounded to the nearest million) for the period from FY 2006 – 2009.

Source: U.S. Department of Transportation

11.3 State Funding Sources for Transportation

State funding for transportation projects in Georgia is derived from the following sources:

- State tax on motor fuels (7.5 cents per gallon)(provides majority of revenue);
- State license tag fees;
- State title registrations;
- State motor carrier fuels tax; and,
- State personal property tax.

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

A major element of Georgia's Statewide Transportation Plan is the Governor's Road Improvement Program (GRIP). The program is viewed as a priority funding program for GDOT. The GRIP program was started in 1989 through action by the Georgia Legislature. The program's goal is to connect 95% of the state's cities with a population of 2,500 or more to the Interstate Highway System.

One of the State's most important north-south GRIP corridors is US 27 which traverses the center of Troup County. The widening of US 27 from two lanes to four lanes is proceeding through northern Troup County. The construction of the southern portion for roadway widening is not yet funded.

11.4 Local Funding Sources for Transportation

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

Increasingly, counties in Georgia have enacted Special Purpose Local Option Taxes (SPLOST) to fund specifically identified capital projects. SPLOST taxes require voter approval and are time-limited. SPLOST funds can be used for transportation projects, including matching federal and/or state transportation funds. Cities and counties may also use Local Option Sales Taxes (LOST) for transportation purposes, including providing local matching funds for GDOT projects. Other local sources of transportation funding include impact fees or other exactions paid by developers according to local ordinances and the creation of self-taxing entities, such as Community Improvement Districts. In addition, counties in Georgia may issue general obligation bonds to support transportation capital projects.

County governments use a portion of their own revenues for transportation-related purposes, including capital projects, and operations and maintenance of transportation

facilities within their own jurisdiction. A key determinant of the ability to improve an area's transportation facilities is the availability of local funds to match state and/or federal transportation funds. Data on the County's expenditures for transportation were not available.

According to the Georgia Department of Community Affairs (DCA), the County's "own source" revenues, including revenues from property taxes, sales taxes, excise and special use taxes and service charges and fees were estimated. Own source revenues are relevant because a portion of these funds could be provided as local matching funds for federally and state-funded transportation improvements or for locally-funded projects, depending on the County's other funding priorities. Table 11.4 illustrates this data. In 2000, Troup County had per capita own source amounts less than the statewide average of \$611.

Table 11.4
Own Source Revenues

County	1996 Own Source Revenues	2000 Own Source Revenues	% Change from 1996 to 2000	Per Capita Amount*
Troup County	\$21.0 million	\$22.6 million	7.6%	\$384

* Statewide per capita amount equals \$ 611.

Source: Georgia Department of Community Affairs

11.5 GDOT State Transportation Improvement Program (STIP)

Each year, GDOT develops its State Transportation Improvement Program (STIP), a listing of all projects and project phases anticipated to be funded with federal and state funds within the current three-year period. The STIP also contains "lump sum" projects for transportation activities that benefit more than one county jurisdiction, for example, roadway beautification projects.

In its 2005-2007 STIP, GDOT estimated that nearly \$8 billion were allocated for various transportation functions throughout Georgia. Table 11.5.1 shows the allocation of these funds across major functional areas.

Table 11.5.1
STIP Fund Allocations (2005 – 2007)

Transportation Function	Amount Allocated	Percent of Total
New Construction	\$520,959,000	6.5%
Reconstruction and Rehabilitation	\$2,590,212,000	32.5%
Bridges	\$1,412,651,000	17.7%
Safety	\$755,482,000	9.5%
Maintenance	\$614,824,000	7.7%
Transportation Enhancement	\$400,721,000	5.0%
Transit	\$819,138,000	10.3%
Other	\$854,522,000	10.7%
Total	\$7,968,509,000	100.0%

Additionally, GDOT develops its Construction Work Program (CWP), a listing of projects expected to be funded within a six-year period (current year plus five subsequent years). The fourth, fifth, and sixth years of the CWP are viewed as an expression of GDOT's intention to proceed with the projects as funding becomes available to develop the projects (complete engineering design, acquire right-of-way, if needed, and construct the improvement). These projects are documented in this Plan.

According to GDOT's latest STIP for Troup County, a total of 6 major projects have been programmed utilizing over \$62 million in federal and state funds. Table 11.5.2 summarizes these programmed amounts.

Table 11.5.2
GDOT State Transportation Improvement Program (STIP)

Project/Phase	Total Funds Programmed
I-85 Exit Ramps @ SR 18	\$2,196,000
West Point Pedestrian Enhancement Project	\$1,125,000
SR 14/US 29 from Upper Glass Bridge to Old Vernon Rd	\$13,415,000
US 27 from Auburn St to Morgan St	\$41,428,598
Jefferson St @ CSX Railroad (LaGrange)	\$2,206,227
SR 14/US 29 Left Turn Lane from Meadow Way Dr to Davis Rd	\$2,525,250
TOTAL PROGRAMMED FUNDS	\$62,896,075

11.6 Future Transportation Funding Needs

A combination of federal, state, local, and private funding sources should be pursued for individual projects to improve transportation facilities in the study area. These sources should be pursued depending on GDOT (state), regional and local investment priorities considering the safety, convenience, and economic benefits of the projects throughout the planning period.

12.0 Conclusions

Growth in Troup County has resulted in increased travel demand. GDOT in conjunction with Troup County and the City of LaGrange initiated a study to develop a LRTP to serve the County through the planning horizon, 2035. Recommended projects were identified and selected according to all applicable rules and regulations with the intent of enhancing the quality of life for County residents and visitors. Efforts were taken to ensure that proposed projects impacted the community as little as possible while providing maximum benefits. Analysis was conducted to ensure that the projects benefited and did not disproportionately impact low-income and minority communities. Ultimately, the study identified multi-modal improvements and prioritized project implementation in the form of a Long Range Transportation Plan.

HNTB coordinated with GDOT, County planning and engineering staff, cities within the County and other partners in the planning, development, review, and approval of study alternatives and the LRTP. Additionally, a comprehensive and interactive public involvement program was conducted to ensure that alternative transportation improvements were not only coordinated with various governments, but afforded individual citizens and interested groups the opportunity to provide their input in developing and evaluating planned improvements to the transportation network.

The end product for this study was a LRTP that provided for the efficient movement of people and goods within and through Troup County through the horizon year of this study, 2035. Interim year analysis was conducted for the year 2015. As part of this effort existing and future operating conditions were documented for the following modes: highways and bridges, bicycle and pedestrian improvements, freight, transit, railways and airports.

This document should be reviewed and updated periodically to ensure that the planning factors and other assumptions are still relevant and effectively address transportation needs. This document should serve as the foundation for Troup County's transportation planning efforts and a starting point for addressing transportation needs.

APPENDIX

A - CMP Regulations

A-1 Level One Strategies

The first level includes actions that decrease the need for making the trip by vehicle. This can be accomplished through growth management and the development of activity centers, congestion pricing and also certain types of transportation demand management.

Growth Management / Activity Centers

Land use strategies seek to achieve concurrence between transportation infrastructure and land development. These strategies are often viewed as key to the success of any regional transportation plan, and should be analyzed at the regional scale. Land use strategies that can reduce the demand for SOV travel include locating residential or commercial development along transit corridors and mixed-use development. Mixed-use can be at a micro scale (i.e. individual building or parcel level), or at a macro scale. In addition, growth management practices and activity centers can even eliminate vehicular trips by matching trip productions with attractions at the same site, or by providing good pedestrian, transit and bicycle accessibility. Components of the Growth Management Plan could include:

- Land use policies/regulations, including growth boundaries;
- Stricter design/zoning standards which promote this strategy (such as density bonuses);
- Maintenance/development of a jobs/housing balance; and,
- Mixed-use developments, to include zoning classifications which allow and promote mixed-use developments.

Typical keys to success include strong political support for growth management and the promotion of activity centers; good public information and outreach regarding the benefits of this strategy; an emphasis on providing good pedestrian and bicycle accessibility, internal transit circulation, and permitting mixed use/compact development.

Congestion Pricing

There has been limited practice of congestion pricing in the United States, but this strategy may be implemented more often pending the outcome of several demonstration projects that are underway. Congestion pricing is generally used to charge roadway users at a time-differentiated rate to discourage trips during congested periods. Elements of a congestion pricing scheme could include:

- Road user fees;
- Parking fees;
- Graduated fares;
- Automated collection/billing systems; and,
- Subsidies for low-income commuters.

This strategy can be very controversial and requires an extensive public education and outreach effort, as well as strong political support to follow through on implementation and enforcement. If parking fees are used to implement the road pricing, cooperation and coordination with parking agencies and private sector providers will be necessary.

Transportation Demand Management

Some transportation demand management strategies are effective at eliminating vehicle trips, including telecommuting and trip reduction ordinances. With improvements in communications and reasonably low costs, telecommuting is becoming more acceptable to both employers and employees. This trend is expected to continue, with such recent technological capabilities as computer-to-computer teleconferencing becoming more common and high speed internet connections available for residential properties. Trip reduction ordinances can be used to eliminate trips, especially through telecommuting.

Keys to success include, understanding private sector operations, getting employers to recognize benefits of telecommuting, quantifying lower operating costs for employers. Employee support is typically high, given the opportunity to work at home and reduce travel time and costs. Transportation Management Organizations can be effective in promoting telecommuting and other transportation demand management strategies.

A-2 Level Two Strategies

The second level includes actions which attempt to place the trips not addressed in Level One into transit or other non-auto modes. This can be accomplished through capital investments in public transit, public transit operational improvements, intelligent transportation systems, methods to encourage the use of non-traditional modes and certain types of transportation demand management.

Public Transit Capital Improvements

Transit capital improvements are designed to increase ridership on transit lines by improving transit infrastructure or vehicles. These strategies are generally implemented to address regional or corridor transportation system deficiencies. Potential improvements could include:

- New rail lines, busways, or bus lanes (on exclusive right of way);
- Bus bypass ramps for preferential treatment of buses;
- Fleet expansion;
- Vehicle replacement/upgrades;
- Park-and-ride lots;
- New, expanded, or improved transit stations (intermodal facilities);
- Paratransit services; and,
- Increased transit security.

The main key to success in implementing any of these strategies is a thorough study and understanding of the complicated issues which affect the use of non-automobile modes. It is also important to evaluate the entire trip, from origin to destination, when determining the appropriate strategy for shifting trips away from the personal vehicle. For example, land use densities affect the ability to provide competitive transit travel times at attractive costs. In turn, outside factors, such as parking costs, can determine what is considered an attractive cost for transit service. Good intermodal connections are crucial to providing competitive travel times. These transfers should be efficient and often require coordination between the various modes accessing intermodal facilities to minimize transfer times. It is also important to consider the pedestrian element of any trip to achieve the complete evaluation of the entire trip, from origin to destination. The convenience of alternatives is important, such as the proximity / access of transfer points and the reliability of the system. Finally, transit security should not be overlooked (as required originally by ISTEA) as an important factor which has a direct impact on travelers' decisions to use alternative modes of travel.

Public Transit Operational Improvements

Like capital improvements, operational improvements to the transit system can increase the demand for transit, which reduces the number of vehicles on the road. Operational improvements can be implemented on specific routes or within transit corridors, although regional operational improvements are commonly developed. Some strategies are:

- Increases in service frequency;
- Longer operating hours and or/ more operating days;
- Improvements in service quality;
- Additional bus routes;
- Restructured or extended bus lines;
- Traffic signal preemption;
- Fare reductions;
- Improvement of coordination and transfers between systems and routes;
- Improved marketing of transit; and,
- Transit passenger information systems.

Several of the operational improvements may require a reallocation of resources to allow for increased service frequencies, hours of operation, additional routes, extensions of current routes, or even farebox reductions on routes. To ensure that the reallocation is justified, it is important to conduct studies to determine the impact on ridership and the financial implications of the changes. These studies should include the consideration and potential implementation of the keys to success identified for the various strategies.

As identified above, it is important for alternative modes to provide competitive travel times. One way to accomplish this is by providing preferential treatment to transit vehicles using traffic signal preemption. This strategy requires multi-agency coordination and support, as well as planning and impact studies required to build this support.

One of the biggest keys to success for any of the improvement strategies is effectively communicating the benefits to the public. This can take place through marketing, using public and media education and outreach. Another tool is the use of transit information systems to better communicate the services provided and increase the convenience to the user.

Advanced Public Transportation Systems

Advanced Public Transportation Systems (APTS) are a type of Intelligent Transportation System (ITS), and include coordinated operational strategies implemented through technology. Intelligent bus stops and advanced mode choice systems can be used to provide up-to-date travel information to transit patrons.

As with any new technology, its effectiveness often hinges on public education and outreach to create user-friendly systems. To be effective, these information systems should provide data on multiple factors which affect the trip making decision. This typically requires multi-agency coordination to identify traffic conditions created by incidents, or just the current extent of congestion. Elements may include:

- *Travel Planning* - Pre-trip multi-modal travel information and ride-matching services can help travelers determine their optimal mode choice, departure time, and route before their trips.
- *Traveler Information* - Real-time information to guide travelers during trips includes advisory services (to warn of traffic or transit congestion or delays), route guidance systems, and traveler services information.

Non-Motorized Modes

In many areas, walking and bicycling are a viable alternative to vehicle use. In some cases, demand for these non-traditional modes can be increased by improving the transportation system to better accommodate pedestrians and bicyclists. The scale of these measures ranges from a regional approach (i.e., land use strategies) to facility-specific improvements (i.e., bicycle paths). Strategies that can be used include:

- New pedestrian and bicycle facilities;
- Improved facilities (safety, aesthetic, or travel time improvements); and,
- Bicycle storage systems can be installed at transit terminals, on transit vehicles and at work sites.

The keys to these types of improvements include adequate planning to ensure the facilities are effectively implemented within the overall land use plan and transportation system, and public education and outreach to ensure the implemented improvements are consistent with public desires. Often, multi-agency coordination is required to achieve the level of planning needed to fully integrate these strategies within the highway and transit systems.

Parking Management

One aspect of transportation demand management which is effective in shifting automobile travel to other modes is parking management. These strategies can include establishing maximum limits on the total number of spaces in a given area or for each employer, and increased parking charges (which may be reduced or eliminated for carpool/vanpool users).

This can be a very controversial subject and requires a thorough study of the full impacts and implications of alternative strategies. Public education and outreach are important to build consensus between property owners, businesses and employees. Multi-agency coordination is also required to implement, monitor and enforce the management strategies.

A-3 Level Three Strategies

The third level includes actions which attempt to place the trips not addressed in Levels One and Two into high occupancy vehicles (HOVs). This can be accomplished through various strategies which encourage HOV use and certain types of transportation demand management.

The key to success with HOV strategies is a holistic approach which considers how to aggregate HOV riders at the residential trip end, how to provide preferential treatment of the line-haul portion of the trip (in terms of time and/or cost savings), preferential treatment on the work trip end (i.e. parking availability, location and costs), as well as flexibility (i.e. guaranteed rides home). Thus, strategies in this level, if constructed into packages, will be more successful than if independently evaluated and implemented.

High Occupancy Vehicle (HOV)

High occupancy vehicle (HOV) facilities are designed to increase person throughput by increasing vehicle occupancies on a facility or in a corridor. Even though most HOV measures are applied to specific facilities, strategies to support HOV use must occur throughout a transportation corridor to be effective. Measures to encourage HOV use include:

- HOV lanes (lanes on a mixed flow roadway or a dedicated facility);
- HOV signal priority;
- HOV access priority (including queue bypasses at ramp meters, queue jump lanes at arterial signals);
- HOV toll savings;
- Park-and-ride lots;
- Guaranteed ride home programs; and,
- Employer trip reduction ordinances.

The implementation of HOV lanes requires extensive planning on a regional level and at the corridor level. Multi-agency cooperation (i.e. local governments, the Department of Transportation) is typically beneficial. This helps to maximize the effectiveness of the

system, by coordinating with transit service and incorporating transit within the HOV system. Public education and marketing campaigns are also effective in building public acceptance and support for HOV travel.

Technical strategies to complement and support HOV travel, such as priority treatments and park-and-ride lots, should be based on sound engineering criteria, and should incorporate multi-agency cooperation.

Guaranteed ride home programs are effective at eliminating barriers to carpooling and can be very effective in the public's acceptance of ridesharing. An effective program needs public education and marketing of the services. As with any strategy that affects employees, high level employer support is very beneficial. Efficient and reliable administration of the program is also critical.

Employer trip reduction ordinances can be used to shift trips from SOVs to higher occupancy vehicles. It is important that the appropriate areas are covered by the ordinances and that flexibility is provided in the ordinance to accomplish the intended purposes. This strategy also requires ongoing oversight and enforcement.

Rideshare Matching Services

A transportation demand management strategy which is effective at shifting trips to higher occupancy vehicles includes providing ride share matching services. This strategy needs effective public education and marketing campaigns to stir interest. Rideshare matching services can be provided by existing agencies, or a new agency, such as a Transportation Management Organization. In addition, a common characteristic of successful ride sharing programs is high level employer support. This typically includes effective communication of the programs to employees as well as preferential treatment for ridesharers, such as special parking spaces and/or rates.

Vanpooling Programs

Another transportation demand management strategy which can be effective at shifting trips to higher occupancy vehicles is the provision of vanpooling programs. These programs are often linked to rideshare matching services, as they both require the same types of information, public education and marketing. As with rideshare matching, high level employer support is important for the program to be successful. This includes preferential treatment for vanpools, such as special parking spaces and/or rates. Vanpool programs typically require a seed agency to provide the initial financial support for the van purchase; however, they can be self supporting. One potential fatal flaw to avoid is to ensure there is adequate parking clearance for the vans -- many parking structures cannot accommodate larger vans.

A-4 Level Four Strategies

Despite the best possible results from strategies in the first three levels, a significant portion of trips in the study area will likely remain via the automobile. Thus, the fourth level includes actions to optimize the existing highway system's operation for these residual automobile trips, whether HOV or SOV. This can be accomplished through traffic operational improvements and management, access management and intelligent transportation systems (ITS).

Traffic Operational Improvements

Improvements in traffic operations are designed to allow more effective management of the supply and use of existing roadway facilities. These improvements can increase effective capacity by optimizing traffic operations, especially in recurring congestion conditions. Although some of these strategies may involve the construction of additional lanes, this category encompasses improvements intended to help "optimize" existing capacity on the road system, as opposed to "adding" new capacity. Depending on the specific strategy, traffic operations improvements can be appropriate for a region, corridor, or specific facility. Some strategies can include:

- Intersection geometric improvements, such as the construction of turning lanes to increase turning movement capacity, restriping, and channelization;
- Intersection turn restrictions to eliminate conflicting movements;
- Traffic signal improvements, such as adjustments to signal timing and phasing, and the installation and maintenance of actuated system components (i.e., loops and controllers);
- Traffic control centers, including coordinated signal systems on arterials, and regional control centers with communication systems to interconnected signal systems;
- Advanced traffic surveillance and control centers allow monitoring, dynamic updates to signal systems, and coordinated traffic signal control and can be used to support incident management and traveler information activities;
- Roadway widening, including auxiliary lanes, passing lanes, widened shoulders, and reversible lanes; and,
- Truck restrictions to increase roadway capacity.

The main key to success for each of these strategies is through engineering studies to identify the appropriate strategy, and the application of appropriate engineering criteria in the design of the improvements. Another important factor is adequate maintenance of traffic signals and loops to ensure the system operates efficiently. Some of these strategies, such as turn and truck restrictions, require public education and outreach.

Access Management

These strategies are designed to improve arterial flow by controlling access to and from arterial roadways. The Georgia Department of Transportation (GDOT) has developed standards which govern road design and driveway connections. In general, these measures are appropriate for application in the study area. However, local governments

may wish to enforce more strict access management criteria through the site plan review process. Access management strategies can be used to plan for:

- Driveway control (residential and business);
- Median control; and,
- Frontage roads.

According to GDOT, raised medians increase the capacity of the roadway, reduce accidents, lower congestion, provide pedestrian refuge and often save lives. They may also be landscaped to beautify corridors and may become focal points for community landscaping efforts.

Each of these strategies requires the appropriate application of accepted engineering criteria. For new developments, this access control can be implemented during the permitting process. Retrofitting existing roadways typically requires studies to identify the impact of proposed changes and the identification of alternate access opportunities. Public outreach and education can be beneficial when implementing access control, with special attention placed on property directly impacted.

Intelligent Transportation Systems (ITS)

Intelligent Transportation Systems (ITS) include coordinated operational strategies implemented through technology. These systems can be applied to many of the strategies described above, especially in the areas of traffic operations, transit operations, and incident management. In addition, ITS can be applied throughout a region, along a transportation corridor, or on a specific facility. Samples of ITS effectiveness in improving highway operations include:

- Automated toll collection systems to eliminate congestion and delays at toll booths;
- Advanced Traveler Information Systems (ATIS), which may include:
 - *Travel Planning* - Pre-trip multi-modal travel information and ride matching services can help travelers determine their optimal mode choice, departure time, and route before their trips;
 - *Traveler Information* - Real-time information to guide travelers during trips includes advisory services (to warn of traffic or transit congestion or delays), route guidance systems, and traveler services information;
- Commercial Vehicle Operations (CVO) include weigh station pre-clearance, automated safety inspections, on-board safety monitoring, and commercial fleet management; and,
- Advanced Vehicle Control Systems (AVCS) are being researched to assess the viability of technology that could greatly enhance roadway capacity and safety, including systems for longitudinal collision avoidance, lateral collision avoidance, intersection crash warning and control, vision enhancement, impairment alert, and fully automated vehicles.

One of the keys to success for implementing ITS strategies is the availability of affordable, proven technology. Public outreach and education are also important when implementing new technologies. Some ITS strategies, such as advanced traveler information systems and commercial vehicle operations require multi-agency coordination. GDOT has existing ITS infrastructure through Georgia Navigator that when ready, locals can interconnect to become part of the statewide system.

A-5 Level Five Strategies

The fifth level includes strategies to increase the capacity of the highway system by providing additional general purpose lanes.

Addition of General Purpose Lanes

General purpose lanes may be used by all vehicular traffic modes (i.e., SOVs, HOVs, transit, and trucks). The addition of general purpose lanes may include the addition of lanes to an existing facility or the construction of a new facility. These infrastructure improvements may be the best approach to congestion management in some cases, as long as appropriate elements of the other strategies are incorporated into the design and operation of the new or expanded facility. It should also be noted that several measures that would increase the number of general purpose lane miles are also identified under traffic operational improvements (Level Four). The improvements in that section generally refer to smaller scale additions (i.e., turn lanes) or those for specific purposes (i.e., passing lanes).

B - Corridor Improvement Strategy Screening

With such an extensive list of potential strategies identified and documented in Section A, it is desirable to perform an initial screening to determine which strategies are applicable for deficient corridors in Troup County. This screening analysis will be followed by a more detailed corridor evaluation of strategies.

This section presents a list of questions that have been identified for each strategy to determine which strategies could possibly be appropriate for a given application in Troup County. Generally, each question does not require an affirmative answer to justify additional analysis; however, the more affirmative answers to multiple questions usually indicate a higher likelihood of application.

The screening questions are presented in the same five tiered hierarchy presented in the previous section. Unless otherwise noted, affirmative answers to the screening questions imply the strategy is potentially applicable. While it is not required to consider the strategies in order (i.e. beginning with Level One, then Two, Three, Four and finally Five), this progression will ensure all reasonable strategies are considered. Specific answers to each of the screening questions are not required. They are to serve only as a guide to assist in the identification of potentially effective strategies.

B-1 Level One Strategies

The first level includes actions that decrease the need for making the trip, such as growth management, the development of activity centers, congestion pricing and also certain types of transportation demand management. Table B-1 summarizes the screening questions for this first tier of strategies. Many questions are related to existing and future development levels, as well as existing travel characteristics. Level One Strategies which may be appropriate for Troup County include various growth management / activity center strategies and telecommuting.

**Table B-1
Level One Strategy Screen**

Screening Questions	Result
GROWTH MANAGEMENT/ACTIVITY CENTERS	
<p>Land Use Policies/ Regulations</p> <ol style="list-style-type: none"> 1. Is significant land available for development? 2. Is projected population and/or employment growth high? 3. Are there areas designated for redevelopment or growth? 4. Is the SOV share for work trips high? 5. Is the transit share for work trips low? 6. Does the area pass the transit enhancement / expansion criteria? 7. Will alternative travel modes be available within the area? 	<p>Strategy is applicable Much of the County is currently undeveloped. It is anticipated that significant commercial, industrial and residential development will occur through the horizon year of the study.</p>
<p>Development Standards</p> <ol style="list-style-type: none"> 1. Is commercial office space being developed? 2. Are there pending building permits? 	<p>Strategy is applicable Development efforts should include design standards to maintain the character of the County.</p>
<p>Locations of Jobs and Housing</p> <ol style="list-style-type: none"> 1. Is there a large imbalance between jobs and housing? 2. Are there areas designated for redevelopment or growth? 	<p>Strategy is applicable New residential and commercial development is anticipated.</p>
CONGESTION PRICING	
<p>Road User Fees</p> <ol style="list-style-type: none"> 1. Are there corridors with a V/C ratio with at least 70% lane miles > 1.1? 2. Is answer to question 1 still affirmative if congestion pricing is excluded on the corridor? 3. Is a limited access facility available? 4. Are alternative travel modes available? 5. Will revenues be used for transportation improvement projects? 6. Are tolls in the area politically acceptable? 	<p>Strategy is not applicable Road user fees cannot be implemented</p>
<p>Parking Fees</p> <ol style="list-style-type: none"> 1. Are there primarily commercial or retail land uses in congested areas? 2. Are alternative travel modes available? 	<p>Strategy is not applicable Development densities will not support parking costs.</p>
TRANSPORTATION DEMAND MANAGEMENT	
<p>Telecommuting</p> <ol style="list-style-type: none"> 1. Is the type of employment at activity center/downtown suitable for telecommuting? 2. Is public agency participation likely? 	<p>Strategy is applicable</p>

Screening Questions	Result
<p>Trip Reduction Ordinances 1. See Employee Trip Reduction Ordinances strategies in Level</p>	<p>Strategy is not applicable Employment densities are not high enough to support trip reduction ordinances</p>

B-2 Level Two Strategies

The second level includes actions which attempt to place the trips not addressed in Level One into transit or other non-auto modes. This level of strategies includes capital investments in public transit, public transit operational improvements, intelligent transportation systems, methods to encourage the use of non-traditional modes and certain types of transportation demand management. Table B-2 summarizes the screening questions for this second tier of strategies. Many of these questions relate to development densities, existing transit service and use, travel times and the availability of modal choices.

Level Two Strategies which may be appropriate for Troup County include: further development of transit services, park and ride facilities, and bicycle and pedestrian facilities.

**Table B-2
Level Two Strategy Screen**

Screening Questions	Result
<p>PUBLIC TRANSIT CAPITAL IMPROVEMENTS</p>	
<p>Exclusive Right of Way (Rapid Rail) 1. Are there areas with net residential density ≥ 12 dwelling units (d.u.)/acre, or alternatively, is the gross population density $\geq 8,600$/square mile? 2. Do the major employment areas (downtown, activity center) have ≥ 50 million square feet of non-residential floor space? 3. Do the major employment areas (downtown, activity center) have $\geq 70,000$ employees? 4. Does the major employment area (downtown, activity center) have an employment density $\geq 15,000$/square mile?</p>	<p>Strategy is not applicable Population and employment density is not sufficient for this strategy.</p>
<p>Exclusive Right Of Way (Commuter Rail) 1. Are there areas with net residential density ≥ 1 d.u./acre, or alternatively, is the gross population density ≥ 350/square mile? 2. Do the major employment areas (downtown, activity center) have ≥ 75 million square feet of non-residential floor space? 3. Do the major employment areas (downtown, activity center) have $\geq 150,000$ employees? 4. Do the major employment areas (downtown, activity center) have an employment density $\geq 15,000$/square mile?</p>	<p>Strategy is not applicable The population and employment density is not sufficient for this strategy.</p>

Screening Questions	Result
<p>Exclusive Right Of Way (Busways)</p> <ol style="list-style-type: none"> Are there areas with net residential density ≥ 3 d.u./acre, or alternatively, is the gross population density $\geq 1,900$/square mile? Do the major employment areas (downtown, activity center) have ≥ 20 million square feet of non-residential floor space? Do the major employment areas (downtown, activity center) have $\geq 42,000$ employees? Do the major employment areas (downtown, activity center) have an employment density $\geq 10,000$/square mile? Are there corridors with a V/C ≥ 0.80 with headways of 4 minutes or less in the peak hour? 	<p>Strategy is not applicable</p> <p>The population and employment density is not sufficient for this strategy.</p>
<p>Exclusive Right Of Way (Bus Lanes)</p> <ol style="list-style-type: none"> Are there corridors containing ≥ 8 scheduled buses in the peak hour? If the answer to question 1 is yes, then do any of these corridors have peak hour auto volumes $\geq 2,000$ vehicles per lane? If the answer to question 2 is yes, then do any of these corridors meet the following threshold: $q_b \geq \frac{q_a}{N-1} X$ <p>where q_A and q_B are hourly volumes of autos and buses, respectively; N is the total number of lanes per direction; and X is the ratio of average auto to bus occupancies?</p>	<p>Strategy is not applicable</p> <p>Fixed route bus service is not currently provided in the County nor are future services anticipated.</p>
<p>Bus Bypass Ramps</p> <ol style="list-style-type: none"> Do corridors pass the exclusive ROW busway screen? Do corridors have any exclusive busway sections? If yes, then go to question 5. Do corridors have any HOV lane sections? If yes, are there 15 or more buses scheduled on any of these sections in the peak hour? Do corridors pass the HOV lane screen? Do corridors have any freeway sections with V/C ≥ 0.80 and 15 or more buses scheduled in the peak hour? 	<p>Strategy is not applicable.</p>
<p>Fleet Expansion</p> <ol style="list-style-type: none"> Does the area pass the service enhancement/expansion screen identified later in this table? 	<p>Strategy is not applicable</p> <p>Fixed route transit service is not currently provided through the County.</p>
<p>Transit Park and Ride Facilities</p> <ol style="list-style-type: none"> Does transit service exist? Is there at least one express bus with a one-way trip length ≥ 8 miles? Is the HOV mode share $> 15\%$ for work trips? Is there rapid rail, light rail or commuter rail service? Do any corridors pass the HOV lane, rapid rail, light rail, commuter rail or exclusive ROW busway screens? 	<p>Strategy is applicable</p> <p>Moderate number of trips to employment centers outside of County – strategy must be supported with implementation of van pools or express transit.</p>
<p>Other Intermodal Facilities</p> <ol style="list-style-type: none"> Is there any location where there is not an existing intermodal facility and at least two of the following modes converge: rapid rail, light rail, commuter rail, express bus, intercity bus, intercity rail or local bus? 	<p>Strategy is not applicable</p> <p>No intermodal facilities</p>

Screening Questions	Result
<p>Paratransit Services</p> <ol style="list-style-type: none"> 1. Are there any areas not currently served by paratransit? 2. Are requests for paratransit being denied because of capacity restrictions? 	<p>Strategy is applicable</p> <p>As development continues to occur within the County this strategy could become a stronger option and public comment suggests that on demand transit is currently insufficient.</p>
<p>Increased Transit Security</p> <ol style="list-style-type: none"> 1. Has the number of crimes related to transit service, or security-related complaints received by the transit agency increased in each of the last two years? 	<p>Strategy is not applicable</p>
<p>PUBLIC TRANSIT OPERATIONAL IMPROVEMENTS</p>	
<p>Service Enhancement/Service Expansion</p> <ol style="list-style-type: none"> 1. Are there any routes for which the peak hour load factor > 0.8? 2. Is the population density of any zone or census tract > 3,150/square mile or the percentage of low income residents > 20%? 	<p>Strategy is applicable</p> <p>Should focus on provision of vanpools or express transit to select locations.</p>
<p>Traffic Signal Preemption</p> <ol style="list-style-type: none"> 1. Does the area have transit service? 2. Are there any routes for which the peak hour load factor > 0.8? 3. Is the frequency of service for any of those routes > 6/hr? 	<p>Strategy is not applicable</p>
<p>Fare Reductions</p> <ol style="list-style-type: none"> 1. Is transit mode split for work trips > 2%? 2. Is the average population density in zones adjacent to these routes > 1,575/square mile or the percentage of poor in these zones > 10%? 	<p>Strategy is not applicable</p>
<p>Transit Coordination</p> <ol style="list-style-type: none"> 1. Are there ≥ 2 transit agencies/operators providing service? 2. If yes, are fare payment methods or the transit schedules coordinated? <i>(Negative answer implies potential application.)</i> 3. Are there ≥ 4 possible transfers within the area? 	<p>Strategy is not applicable</p> <p>Multiple transit service providers do not exist.</p>
<p>Transit Marketing</p> <ol style="list-style-type: none"> 1. Is there at least one activity center with > 500 employees accessible by transit? 2. Is difference in travel time between competing modes < 30%? 3. Can the transit system handle more patrons? 	<p>Strategy is applicable</p> <p>This effort would focus on park and ride lots and vanpooling.</p>
<p>ADVANCED PUBLIC TRANSPORTATION SYSTEMS</p>	
<p>Intelligent Bus Stops</p> <ol style="list-style-type: none"> 1. Is the average population density in any of the zones within 0.25 miles of the route > 1,575/square mile or percentage of poor in these zones > 10%? 2. If yes, is the load factor on any route < 0.8? 	<p>Strategy is not applicable</p> <p>Currently no fixed route transit service.</p>
<p>Advanced Mode Choice System</p> <ol style="list-style-type: none"> 1. Is the difference in travel time between transit & other competing modes < 30%? 2. If yes, do more than 40% of the links on any route have peak hour V/C ≥ 0.8? 	<p>Strategy is not applicable</p>
<p>ENCOURAGE THE USE OF NON-MOTORIZED MODES</p>	

Screening Questions	Result
Bicycle Facilities <ol style="list-style-type: none"> 1. Are there any jurisdictions with a bicycle plan? 2. Are at least 15% of the work trips < 5 miles or 10 minutes in length? 3. Is there any rail or express bus service? 4. Are there areas with net residential density ≥ 4.5 d.u./acre, or alternatively, is the gross population density $\geq 3,150$/square mile? 5. Are there areas with employment density $\geq 4,000$/square mile? 6. Does the area have a college campus? 	Strategy is applicable Planning documents and public comment indicate that non-motorized transportation is a key issue for residents throughout the County. Priority should be placed on areas within one mile of pedestrian activity centers.
Bicycle Storage Systems <ol style="list-style-type: none"> 1. Are there any exclusive ROW bicycle facilities? 2. Does the area pass the bicycle facilities screen? 3. Is the bicycle mode share $\geq 0.5\%$ for work trips? 	Strategy is not applicable
Pedestrian Facilities <ol style="list-style-type: none"> 1. Are there any rail or fixed-route bus services? 2. Are there areas with net residential density ≥ 4.5 d.u./acre, or alternatively, is the gross population density $\geq 3,150$/square mile? 3. Are there areas with employment density $\geq 4,000$/square mile? 	Strategy is applicable Adequate pedestrian facilities should be provided linking neighborhoods and other key origins and destinations. Priority should be placed on areas within the one-mile buffers of pedestrian activity centers.
TRANSPORTATION DEMAND MANAGEMENT	
Parking Management <ol style="list-style-type: none"> 1. Is there any kind of transit service? 2. Are there any HOV lanes or does the area pass the HOV lane screen? 3. Are there any park-and-ride lots or does the area pass either the HOV or transit park-and-ride lot screen? 	Strategy is not applicable

B-3 Level Three Strategies

The third level includes actions which attempt to place the trips into high occupancy vehicles (HOV) and includes various strategies which encourage HOV use and certain types of transportation demand management. Table B-3 summarizes the screening questions for this third tier of strategies. Most of these questions relate to existing travel characteristics.

Level Three Strategies which may be appropriate for Troup County include: transportation demand management strategies.

**Table B-3
Level Three Strategy Screen**

Screening Questions	Result
ENCOURAGE HIGH OCCUPANCY VEHICLE USE	
HOV Lanes 1. Are lane additions planned or under consideration for any freeway segments that already have three or more mixed-flow lanes in one direction? 2. Are there any freeway segments of at least three miles with $\geq 70\%$ of lane miles congested ($V/C > 0.9$)? 3. Are there any arterial segments of at least two miles with $\geq 70\%$ of lane miles congested ($V/C > 0.9$)? 4. Are there 10 or more buses scheduled in the peak hour for a single facility? 5. Is there employment of 20,000 or more in the chief activity center? 6. Is the HOV mode share $> 15\%$ for work trips? 7. Does the area contain freeway, expressway, or rural principal arterial facilities that connect a residential area to an employment center?	Strategy is not applicable Existing and planned roadway system does not support HOV operations.
HOV Ramp Bypass Lanes 1. Does the area pass the HOV lane screen? 2. Does the area contain other HOV incentives, such as HOV lanes or HOV toll discounts? 3. Is there ramp-metering?	Strategy is not applicable No HOV facilities available in the County.
HOV Toll Savings 1. Does the area have a toll facility? 2. Is the HOV mode share $> 15\%$ for work trips?	Strategy is not applicable No toll facilities in the County.
HOV Park and Ride Lots 1. Does the area pass the HOV lane screen? 2. Does the area contain other HOV incentives, such as HOV lanes or HOV toll discounts? 3. If park and ride lots exist, is utilization $> 50\%$?	Strategy is applicable While the County is not currently conducive for HOV facilities, park and ride lots could benefit users traveling to and from employment centers and making use of carpools and vanpools.
Guaranteed Ride Home Programs 1. Does the area pass the HOV lane screen? 2. Does the area contain other HOV incentives, such as HOV lanes or HOV toll discounts? 3. Are rideshare matching services available or recommended below?	Strategy is applicable With the recommendations for vanpooling and ride matching services, this strategy becomes necessary.
Employer Trip Reduction Ordinances 1. Are there areas already subject to an employer trip reduction ordinance? 2. Do 20% or more of employees work for employers of 100 or more on-site employees? 3. Is the drive alone mode share $\geq 60\%$ for work trips? 4. Is the transit mode share $\geq 2\%$ for work trips?	Strategy is not applicable Existing employment characteristics do not support this strategy.
TRANSPORTATION DEMAND MANAGEMENT	
Ride Share Matching Services 1. Does the area pass the parking management screen? 2. Are at least 60% of the work trips ≥ 9 miles?	Strategy is applicable Long work commutes to Atlanta and Columbus could benefit from ride matching.

Screening Questions	Result
<p>Vanpooling Programs</p> <ol style="list-style-type: none"> 1. Does the area pass the parking management screen? 2. Do 20% or more of employees work for employers of 100 or more on-site employees? 3. Are at least 60% of the work trips \geq 9 miles? 	<p>Strategy is applicable</p> <p>Long work commutes and a growing older driver population makes vanpooling a strong strategy to address transportation needs.</p>

B-4 Level Four Strategies

The fourth level includes actions to optimize the existing highway system's operation for automobile trips, whether HOV or SOV, and includes traffic operational improvements and management, access management and intelligent transportation systems. Table B-4 summarizes the screening questions for this fourth tier of strategies. Many of these questions relate to existing traffic characteristics.

Level Four Strategies which may be appropriate for Troup County include: various traffic operational improvements, truck restrictions, access management and ITS applications.

**Table B-4
Level Four Strategy Screen**

Screening Questions	Result
TRAFFIC OPERATIONAL IMPROVEMENTS	
<p>Intersection Improvements</p> <ol style="list-style-type: none"> 1. Are deficiencies isolated on specific facilities? 2. Is the left turn volume on any shared left/through lane > 100 vehicles per hour? 3. Is the left turn volume on any single left turn lane > 300 vehicles per hour? 4. Is the right turn volume on any shared right/through lane > 300 vehicles per hour? 	<p>Strategy is applicable</p> <p>Several intersections were identified as needing enhancements through both the public involvement process and study working groups.</p>
<p>Channelization</p> <ol style="list-style-type: none"> 1. Is right turn volumes at intersections > 500 vehicles per hour? 2. Is there adjacent signalized intersection within 300 feet? 3. Is the intersection skewed by < 75 degrees? 4. Does a designated truck route turn at the intersection? 5. Is there a history of accidents due to wrong-way movements? 	<p>Strategy is applicable</p> <p>Channelization could improve intersection operations and safety.</p>
<p>Intersection Turn Restrictions</p> <ol style="list-style-type: none"> 1. Are deficiencies isolated on specific facilities? 2. Can intersections be widened? 3. Can restricted movements (usually a left turn) be accomplished using other routes? 4. Is there significant conflicts between pedestrians and turning vehicles? 	<p>Strategy is applicable</p> <p>Some land uses along key corridors have multiple access/egress points – turn restrictions would reduce conflict points.</p>

Screening Questions	Result
<p>One-Way Pairs</p> <ol style="list-style-type: none"> 1. Is parallel facility available within one or two blocks? 2. Are sufficient number of cross streets available to permit traffic circulation? 	<p>Strategy is not applicable</p> <p>Implementation would increase travel speeds in areas with significant pedestrian activity.</p>
<p>Signalization Improvements (including maintenance)</p> <ol style="list-style-type: none"> 1. Are deficiencies isolated on specific facilities? 2. Have the signal timings been updated within the last five years? <i>(Negative answer implies potential application.)</i> 3. Is the signal inspected regularly? <i>(Negative answer implies potential application.)</i> 4. Is the left turn volume on any single left turn lane without signal protection > 100 vehicles per hour? 5. Does a field inspection, or capacity analysis, identify a need for re-timing? 	<p>Strategy is applicable</p> <p>Signal operations were a major concern identified through the public involvement process.</p>
<p>Traffic Control Centers</p> <ol style="list-style-type: none"> 1. Is the geographic scale of the deficiency either regional or corridor? 2. Are incidents a major cause of congestion? 3. Are alternate routes available within deficient corridors? 4. Do "special events" (i.e. sports events, concerts, etc.) regularly create congestion? 	<p>Strategy is not applicable</p> <p>No ATMS/ITS system in place or recommended.</p>
<p>Computerized Signal Systems</p> <ol style="list-style-type: none"> 1. On major arterials, are all signals within one half mile of adjacent signals interconnected? <i>(Negative answer implies potential application.)</i> 2. Have the timing patterns for existing system been reevaluated within the last five years? <i>(Negative answer implies potential application.)</i> 	<p>Strategy is applicable</p> <p>Signal coordination would greatly enhance the performance of the corridors.</p>
<p>Traffic Surveillance & Control Systems</p> <ol style="list-style-type: none"> 1. Does one or more facilities experience significant congestion due to incidents, such as accidents? 2. Is ramp metering used, or is planned to be implemented? 3. Are congestion patterns irregular? 	<p>Strategy is not applicable</p>
<p>Geometric Enhancements</p> <ol style="list-style-type: none"> 1. Are through lane widths < 12 feet? 2. Does the area have multiple driveway connections on sections where the speed limit is > 45 mph? 3. Does a capacity analysis show a need for additional through lanes? 4. Is the congestion localized between two or three adjacent intersections? 	<p>Strategy is applicable</p> <p>Future capacity deficiencies show the need for additional travel lanes.</p>
<p>Truck Restrictions</p> <ol style="list-style-type: none"> 1. Are through lane widths < 12 feet? 2. Is the percentage of trucks during the peak hours > 10%? 3. Is there an acceptable alternate truck route available? 4. Do trucks block travel lanes when they load/unload? 	<p>Strategy is applicable</p> <p>Several heavy vehicle trip generators exist in the County. Future development will dictate the need to consider limiting truck travel within the County.</p>
<p>ACCESS MANAGEMENT</p>	
<p>Driveway Control</p> <ol style="list-style-type: none"> 1. Does the facility have multiple driveway connections on sections where the speed limit is > 45 mph? 2. Do accident reports reflect a high incidence of rear end and/or right angle collisions near driveways? 	<p>Strategy is applicable</p> <p>The roadways should generally conform to GDOT access management standards.</p>

Screening Questions	Result
<p>Median Control</p> <ol style="list-style-type: none"> Does the area have facilities with more than two lanes, with a speed limit > 45 mph, and no median? Are existing median openings spaced < ¼ mile apart? Do accident reports reflect a high incidence of right angle collisions near driveways? 	<p>Strategy is applicable</p> <p>The roadway should generally conform to GDOT access management standards. This strategy is strongly recommended for facilities with limited right of way, insufficient capacity and high numbers of mid-block turning crashes.</p>
<p>Frontage Roads</p> <ol style="list-style-type: none"> Does the facility have multiple driveway connections on sections where the speed limit is > 45 mph? Do accident reports reflect a high incidence of rear end and/or right angle collisions near driveways? Is it desirable to convert an existing facility from no, or limited, access control to full access control? Is adequate right of way available for constructing the frontage roads? 	<p>Strategy is applicable</p> <p>County and GDOT looking for alternatives to I-85 during incident travel periods.</p>
INTELLIGENT TRANSPORTATION SYSTEMS	
<p>Automated Toll Collection</p> <ol style="list-style-type: none"> Are deficient facilities currently tolled? Is the number of tollbooths sufficient to service the demand without creating long queues? <i>(Negative answer implies potential application.)</i> Is the percentage of trucks during the peak hours > 10%? 	<p>Strategy is not applicable</p> <p>No toll facilities in the County.</p>
<p>Advanced Traveler Information Systems</p> <ol style="list-style-type: none"> Are there alternative modes of travel available in the region? Does the region experience a high level of congestion? Are there alternative routes available? 	<p>Strategy is not applicable</p> <p>No ITS capabilities</p>
<p>Commercial Vehicle Operations</p> <ol style="list-style-type: none"> Does the area include a truck weigh station? Are hazardous materials prohibited on congested facilities? 	<p>Strategy is not applicable</p>
<p>Advanced Vehicle Control Systems</p> <ol style="list-style-type: none"> This strategy is currently unavailable for implementation. 	<p>Strategy is not applicable</p>

B-5 Level Five Strategies

The fifth level includes strategies to increase the capacity of the highway system by providing additional general purpose lanes. Table B-5 summarizes the screening questions for this tier of strategies. These questions are largely based on volume to capacity ratios, with a check for other planned improvements that may address the deficiency. Based on this screen, adding general purpose lanes to a corridor is an appropriate strategy.

Table B-5
Level Five Strategy Screen

Screening Questions	Results
ADDITION OF GENERAL PURPOSE LANES	
<p>Freeway lanes</p> <ol style="list-style-type: none"> 1. Are there any freeway segments ≥ 3 miles with at least 70% of lane miles congested ($V/C > 0.9$)? 2. Are there are any new freeways or freeway lane additions in approved regional transportation plans? 	<p>Strategy is not applicable</p> <p>The interstate system is not included as part of this study.</p>
<p>Arterial lanes</p> <ol style="list-style-type: none"> 1. Are there any arterial segments ≥ 2 miles with at least 70% of lane miles congested ($V/C > 0.9$)? 2. Are there are any new arterials or arterial lane additions in approved regional transportation plans? 	<p>Strategy is applicable</p> <p>Existing and future capacity deficiencies show the need for additional lanes.</p>