

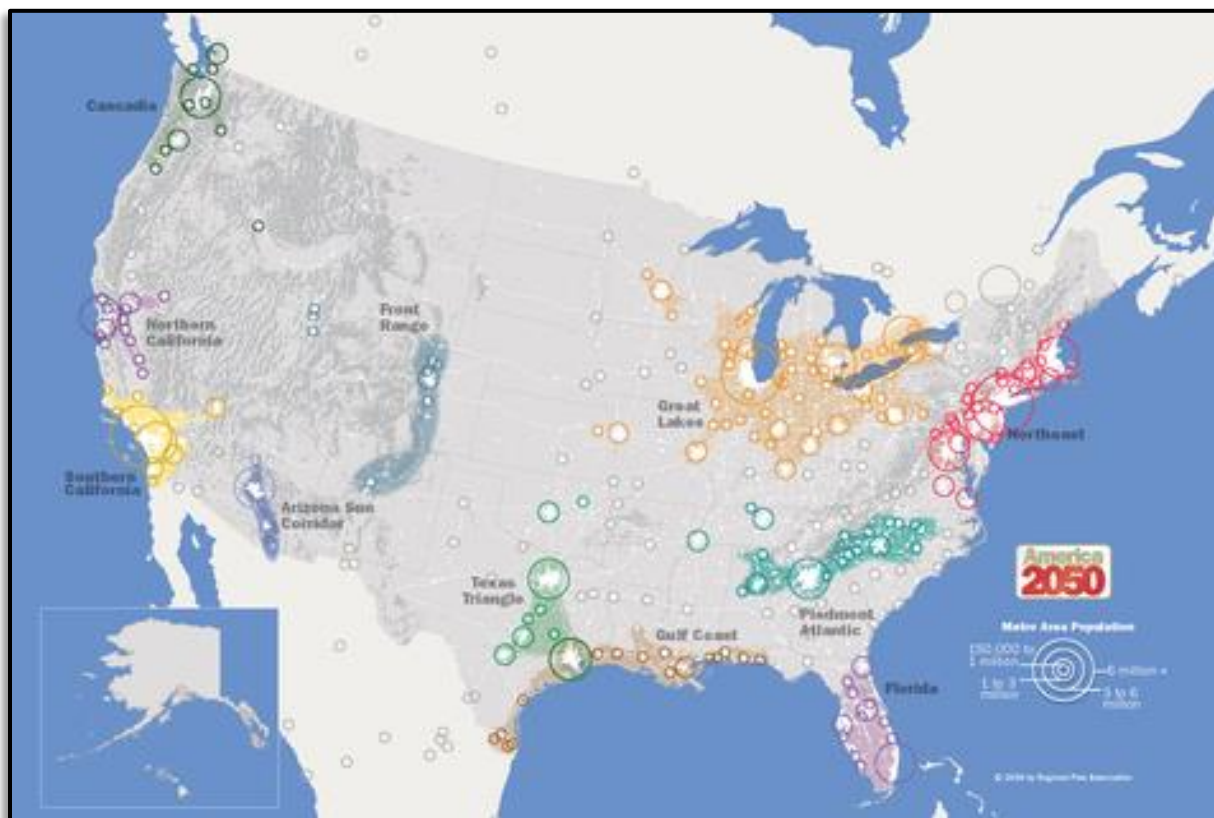
CHAPTER FIVE: TRANSPORTATION

5.0 Overview of Transportation Planning

Transportation planning deals with the movement of people and goods throughout a city or a region and is not limited to automobiles and streets only. In fact, it is multi-faceted and includes several systems; a road network for motorized vehicles; pedestrian and bicycle networks; transit; and networks for rail, freight and aviation. CompPlan 2030 recognizes that all of these networks are vital to maintaining a healthy, well-connected, mobile region in the future.

While CompPlan 2030 focuses on transportation systems for the City of Auburn, it acknowledges that the transportation systems locally are part of a larger system of transportation networks in the region. The figure below shows how Auburn is situated on the edge of an emerging megaregion known as the Piedmont Atlantic Region. This megaregion is anchored by Atlanta, Georgia, but extends east to west from Raleigh, North Carolina to Birmingham, Alabama. The estimated population of the region, 17.6 million (2010), is anticipated to grow to 21.7 million by 2025.¹

Figure 5.1



Source: <http://www.america2050.org/megaregions.html>

¹ http://www.america2050.org/piedmont_atlantic.html

Auburn is connected to the heart of this region by highways that include Interstate 85, US Highway 29, US Highway 280 and other state and local highways.

Auburn has access to air travel through Hartsfield-Jackson Atlanta International Airport, Birmingham-Shuttlesworth International Airport, Columbus Metropolitan Airport, and Montgomery Regional Airport. Locally, flights come to Auburn directly by way of the Auburn University Regional Airport.

Passenger rail service is provided by Amtrak via the Crescent line connecting New Orleans, and New York. The closest stations to Auburn are in Birmingham and Anniston, Alabama as well as Atlanta. The Federal Government continues to consider high speed rail service² that would follow the basic route currently used by the existing Amtrak line. Alabama is a member of the Southern Rail Commission (SRC) established in 1982 with a mission to support the establishment and advancement of high speed and other passenger rail service in Alabama, Louisiana and Mississippi.

Long distance bus service is available along the I-85 corridor with a station in Opelika. Shuttle service to the Hartsfield –Jackson Airport can be accessed directly in Auburn.

5.1 Transportation Planning in the Region

Transportation facilities within the City of Auburn are built, owned or maintained by federal, state and local governments as well as private sector organizations with transportation planning at all levels.

5.1.1 Federal

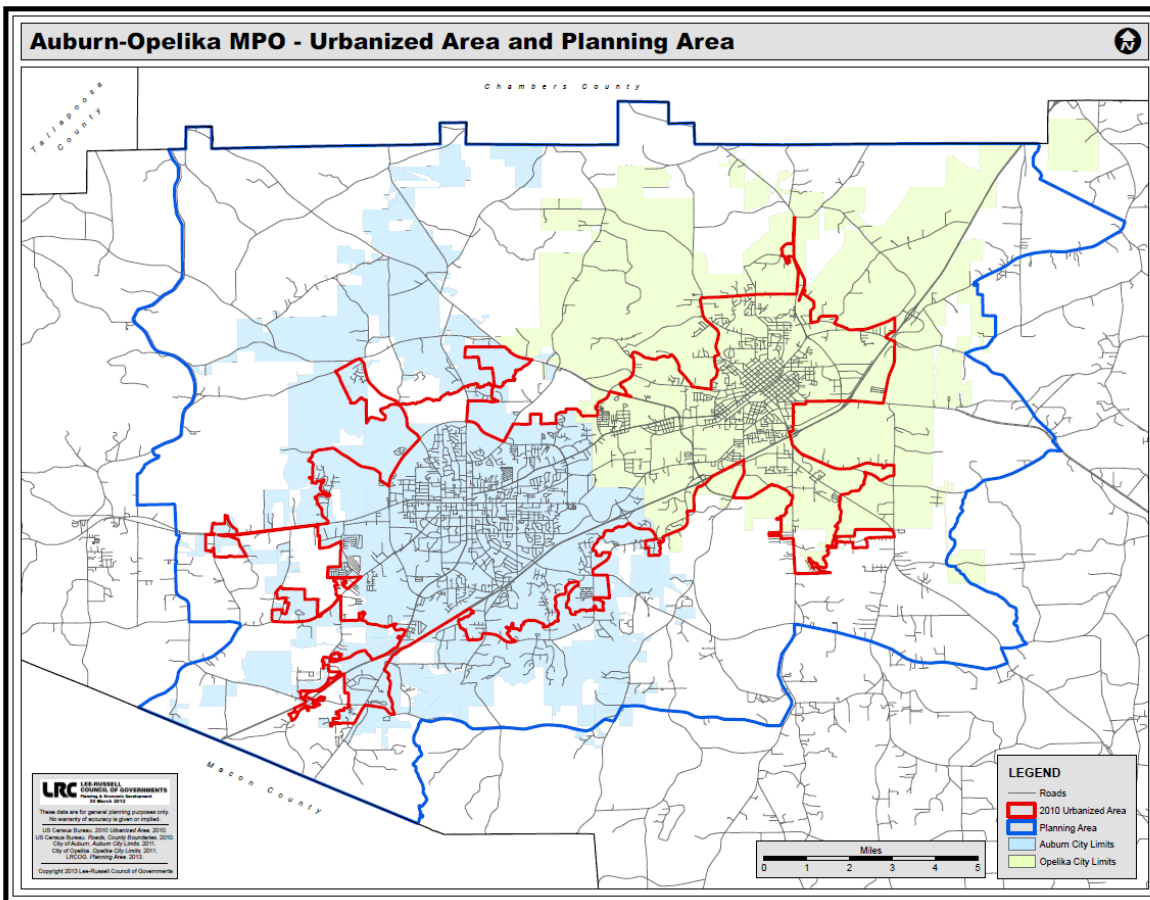
Legislation has focused on engaging all levels of government for the funding, planning, construction and maintenance of transportation systems. This legislation has generally involved authorization bills that program transportation funding and policies for a limited future timeframe. Prior to the sunset date of each bill, Congress must reauthorize the funding through passage of a new bill.

In December 2015, the Fixing America’s Surface Transportation Act, or FAST Act, was signed into law. FAST Act is a replacement to the 2012 MAP-21, or Moving Ahead for Progress in the 21st Century legislation of 2012. The Fast Act will provide over \$61 billion dollars through FY 2020.

In order to allocate transportation resources locally, the focus of FAST Act, and prior transportation reauthorization bills, has been on Metropolitan Planning Organizations (MPO). Created in the 1970’s, a MPO is a transportation policy-making body made up of representatives from local government and transportation agencies. The MPO is required in all urbanized areas with a population of 50,000 people or more. The Auburn-Opelika Urbanized Area reached this population threshold in the 1980 Census, with the creation of the Auburn-Opelika MPO (AOMPO) in 1982. The MPO is administered through the Lee–Russell Council of Governments and has transportation planning authority and responsibility over federal transportation funds that are channeled to the urbanized area. The map below shows the Auburn-Opelika Urbanized Area in red. The study area, shown in blue, represents the area that the MPO has predicted to be urbanized by the forecast year of their long-range transportation plan. All MPO plans, programs, and projects are limited to the study area.

² <http://www.fra.dot.gov/eLib/Details/L02833>

Figure 5.2



Source: Lee-Russell Council of Governments
<http://lrcog.com/2010%20Urbanized%20Area%20and%202013%20Metropolitan%20Planning%20Area.pdf>

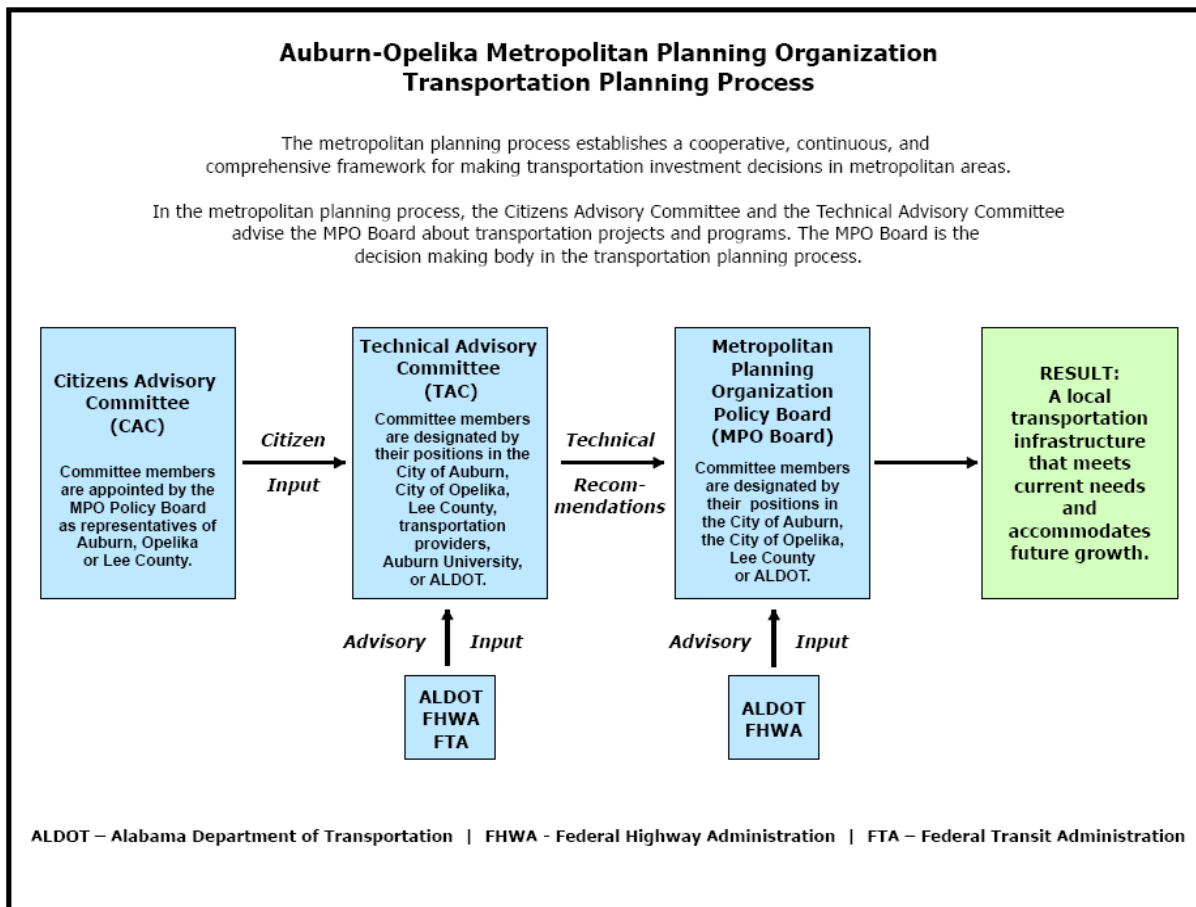
The voting members of the MPO include elected and appointed officials from Auburn, Opelika and Lee County, as well as a representative from the Southeast Region of the Alabama Department of Transportation (ALDOT). There are also two non-voting members; another ALDOT representative and a member of the Federal Highway Administration.

The MPO is supported by two advisory committees, the Technical Advisory Committee (TAC) and the Citizens Advisory Committee (CAC). The TAC provides technical guidance for the planning process. It is composed of planners, project engineers, transit managers and various other professionals who can determine if developed plans will be feasible for the MPO study area. The CAC provides advisory input from a citizen’s perspective on plans, programs and projects in the MPO study area.

Figure 5.3 on the following page is a chart showing the organization of the AOMPO within the transportation planning process.

The primary work products of the MPO are the Unified Planning Work Program, the Long Range Transportation Plan, and the Transportation Improvement Program.

Figure 5.3



Unified Planning Work Program

The Unified Planning Work Program (UPWP) is the instrument for coordinating metropolitan transportation planning activities in the cities of Auburn and Opelika, and in Lee County, Alabama. The Program contains transportation budgets and work tasks for the fiscal year. Topics and activities addressed by the Program include administration of the MPO, data collection and analysis, mapping, traffic analysis, public involvement, environmental mitigation and streamlining, air quality planning, greenhouse gas reductions, long range transportation planning, transportation improvements programming, public transportation, bicycle/pedestrian planning, freight planning, transportation management and operations planning, education and training and safety/security planning.

Long Range Transportation Plan

The Long Range Transportation Plan (LRTP) is one of the key documents of the MPO and looks well into the future. The most recent plan approved by the MPO looks forward to 2040. According to federal law, the LRTP must meet the following criteria:

- Address a 20-year planning horizon
- Include long-range and short-range multimodal strategies that facilitate efficient movement of people and goods
- Be updated at least every five years

- Identify transportation demand over the plan horizon
- Include citizen and public official involvement and participation in the plan development process
- Consider local comprehensive and land use plans
- Include a financial plan

The LRTP sets the goals and policies for transportation in the MPO planning area to meet future transportation demands in the planning area. This document is then used as the foundation for creating the Transportation Improvement Program (TIP) that lists actual transportation projects to be completed in the MPO study area and allocates associated funding for each project.

Within the 20 year planning horizon, the LRTP includes the following:

- Goals
- Data collection
- Identification of transportation needs and strategies for :
 - Roadways
 - Bicycle facilities
 - Pedestrian facilities
 - Rail facilities
 - Transit facilities
 - Freight movement
 - Aviation
- Programming of projects
- Financial plan

Transportation Improvement Program

The current Transportation Improvement Program (TIP), adopted in 2013, is a prioritized list of funded transportation projects for the MPO planning area and the associated funding to be programmed for each project. Projects in the TIP are taken from the list of projects in the Long Range Transportation Plan; however, where the LRTP looks 20 years ahead, the TIP looks at projects to be programmed within a four-year horizon. The MPO revises the TIP every fiscal year. It is a “financially constrained” plan, meaning that projects are only listed where funding is actually available. The sum of all project costs cannot exceed the available federal allocation for the MPO plus a local match. In the most recent TIP, the MPO reported anticipated federal funds in the sum of \$1,573,180 for each fiscal year 2016 through 2019. Federal funds are then combined with a 20% match from local funds for an annual total of \$1,965,475 for each fiscal year 2016 through 2019.

On September 9, 2015 the MPO Policy Board approved the FY2016-2019 Transportation Improvement Program (TIP). Projects in the TIP are submitted to the State Department of Transportation where they are incorporated in the Statewide Transportation Improvement Program (STIP).

Federal legislation specifies that Metropolitan Planning Organizations (MPO) must provide for consideration of projects and tasks that meet the objectives of the eight planning factors:

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

5.1.2 State

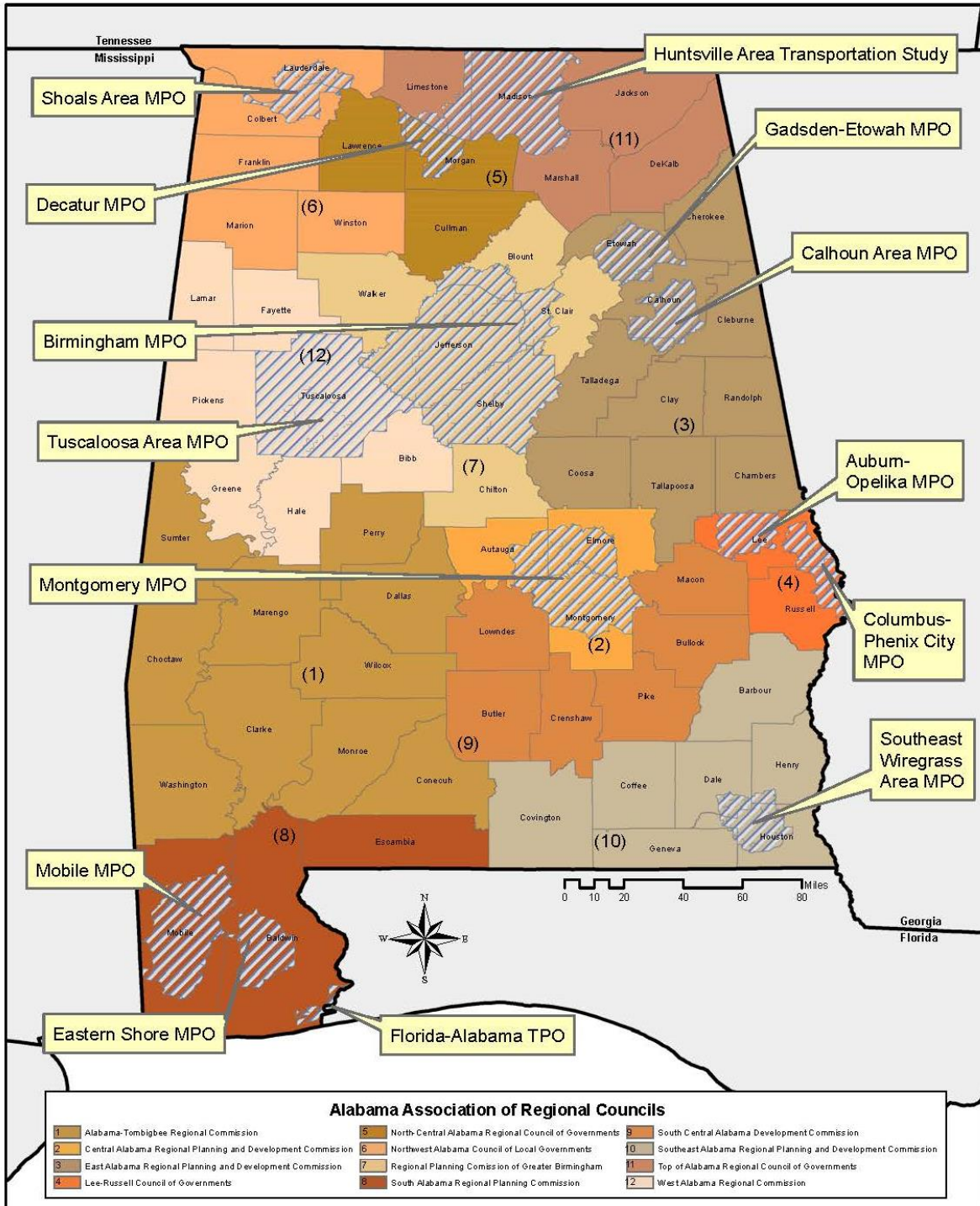
The State of Alabama also has a statewide transportation planning program, much of which follows a similar organization set up by Federal legislation. Two key documents are the Alabama Statewide Transportation Plan, whose MPO counterpart is the Long Range Transportation Plan mentioned above; and the Statewide Transportation Program, whose MPO counterpart is the Transportation Improvement Plan. These two guiding documents rely heavily on input from the LRTP and TIP respective to each MPO.

Alabama Statewide Transportation Plan (SWTP)

The Alabama Statewide Transportation Plan presents long range multimodal assessments of the State's transportation program. Federal regulations guide development of the SWTP and require that it address transportation needs for a minimum of 20 years into the future. The most recently adopted plan looks forward through the year 2040. The plan was developed in cooperation and coordination with regional and metropolitan transportation planning efforts, including that of the Metropolitan Planning Organization mentioned earlier. The SWTP does not identify projects; rather, it contains recommendations that focus on transportation programs and policies. The State also relies on Regional Planning Councils and Rural Planning Organizations in areas outside of an MPO. The figure on the next page is from the SWTP and shows how the State is divided into different planning areas with MPOs identified in each area.

MPO Study Areas

Figure 5.4 MPO Map



Source: <http://alarc.org/>

Regional Councils represent Rural Planning Organizations by serving as staff to local officials. More information can be found at: <http://alarc.org/the-councils/>

Statewide Transportation Improvement Program (STIP)

The SWTP provides long-range policy guidance for improvements that are identified in the Statewide Transportation Improvement Program (STIP). The STIP looks ahead on a four-year horizon and programs federal funding and state funds for transportation projects.

The STIP generally consists of projects from the various TIPs from each respective MPO as well as projects programmed for rural and small urban areas. Similar to the MPO's TIP discussed earlier, the STIP is financially constrained, meaning that there are sufficient funds available to complete the four-year program of projects. Projects in urbanized areas that do not have an identified funding source can be included in the program as "illustrative" projects.

5.13 Local

In addition to the planning efforts of the MPO and State of Alabama, the City of Auburn maintains long-range and short-range transportation plans that are administered by the Public Works Department. Programming of funds takes place through the City's Capital Improvements Program, part of the City's Biennial Budget.

Transportation planning documents produced or commissioned locally by the Public Works Department include:

Comprehensive Transportation Plan FY 2010:

This document looks locally at the various transportation networks in the city including, streets, pedestrians, bicycles and parking. It also discusses the pavement management plan.

Auburn Comprehensive Traffic Study

The City has been closely reviewing the transportation system through a consultant commissioned study to understand the long-term needs of the city. The City Council approved the study in 2005. The final version of the study was presented to the Council in January of 2008. It has multiple parts and extends through the year 2025. The results of the study yielded a list of intersections and roadways where improvements are needed. The projected improvements have been prioritized to guide budgeting decisions. The traffic study has included the following components:

- School Traffic Study (February 2006)
- Citywide crash study (April 2006)
- Isolate intersection (June 2006)
 - Opelika Road and East University Drive
 - Opelika Road and Ross Street
 - Shelton Mill Road and East University Drive
- Focused corridor studies: (January 2007)
 - College Street
 - Gay Street
 - North Donahue Drive
 - Samford Avenue
- Traffic circulation and Traffic Impact Study Requirements (January 2008)

Revised Long Range Transportation Plan

This commissioned plan was completed in June 2006. The goal of this plan was to look at the transportation modeling and outcomes of the MPO and to refine the Auburn-specific portions of the MPO's Long Range Transportation Plan so that the Auburn plan might alleviate all roadway capacity deficiencies for the year 2030. The result was a list of proposed improvements on twelve of the city's major roadways that the City could use to advocate for in the MPO's Long-Range Transportation Plan.

Bicycle Plan

This plan became a significant portion of *Auburn 2020*, the strategic plan for the City adopted in 1998. This plan discussed:

- Bicycling history
- Existing conditions of the bicycle network
- Benefits of bicycling
- Legislative issues
- Goals and objectives to expand and improve the bicycle network
- Implementation strategies to realize the goals and objectives of the plan

In addition to the Auburn Bicycle Plan, the Lee-Russell Council of Governments adopted its first Bike-Ped Plan in 2017.

Major Street Plan

This is a map of the street network produced in 2007 that shows existing and proposed streets in their respective classifications: arterial, collector, and residential collector.

Outer Loop Feasibility Study 2002

Completed in August 2002, the goal of this study was to identify a preliminary corridor for an outer loop transportation facility around Auburn. The study considered existing conditions, traffic projections, design criteria, typical road sections and corridor alignments to identify issues and guide further development of the facility. As part of the Transportation Improvement Plan, the City is in the process of developing a scope of services for consultant selection to determine which segment of the outer loop should be constructed first.

Sidewalk Master Plan

This is a map of the sidewalk network produced in 2007 that shows streets where there are existing sidewalks and where sidewalks are proposed. The map is reviewed and updated annually and included in the Public Works Design and Construction Manual.

5.2 City of Auburn Public Works Design and Construction Manual

In January 2011, the City adopted the Public Works Design and Construction Manual. This document combined all design and construction standards previously published in various other City codes and regulations into one document. The document included sections for general topics, traffic signal design, traffic calming, street sign policies, and traffic impact studies.

Because the effects of transportation systems transcend many other areas such as land use, parks and recreations and the environment, there are a number of plans produced or commissioned by the City

Administration or other departments. These also shape transportation policy implementation. These documents include:

Auburn 2000 Comprehensive Plan

Adopted in 1983, this plan was specifically billed as a comprehensive plan to involve long range planning for Auburn and addresses the fundamental questions about the kind of community Auburn citizens wish to build and the goals they wish to attain.

As part of this process, a Transportation and Utilities Subcommittee studied the condition of the network of streets, water, and sewer systems serving Auburn and used growth projections for the City to the year 2000. The subcommittee identified needs for capital improvements in these systems as well considering the cost-efficient maintenance and delivery of service to the people of Auburn.

Improvements proposed in the plan included:

1. Completion of the “outer loop” system that consisted of Shug Jordan Parkway and East University Drive. This loop has been completed and as previously noted, a feasibility study will be undertaken to determine where a new outer loop should be constructed and which segment will be constructed first.
2. Extension and/or widening of east-west arterials.
 - a. Opelika Road/Martin Luther King Drive.
 - b. Glenn Avenue from Hemlock Drive to the west city limits and to I-85 to the East. Glenn Avenue from Hemlock to Byrd has been resurfaced, restriped, and had sidewalks added. The eastern portion of Glenn Avenue have been resurfaced and restriped.
 - c. Magnolia Avenue from Hemlock Drive on the west to Ross Street on the east.
3. Extension and widening of north-south arterials.
 - a. Dean Road from East University Drive on the south to Opelika Road on the north. Improvements to Dean Road from Annalue Drive to Opelika Road are in the CIP. Other portions of Dean Road have been resurfaced and restriped, including the addition of a left turn lane at Harper Avenue.
 - b. Gay Street from Samford Avenue on the south to Drake Avenue on the north. Improvement will be made to the section from East Glenn and Mitchum Avenue beginning in 2017 as part of a new mixed use development at the corner of North Gay Street and East Glenn Avenue.
 - c. College Street through the entire city.
 - d. Donahue Drive from East University Drive on the south to Shug Jordan Parkway on the north. The portion between Cary Drive and Bedell Avenue has been widened to accommodate three lanes and complete extensions of sidewalk. The widening between Martin Luther King Drive and Cary Drive is in the CIP.
 - e. Foster Street north from Martin Luther King Drive to Donahue Drive.
4. Enhancement of the “inner loop” system: Foster Street (with extension to Donahue Dr.), Hemlock Drive, Samford Avenue, Dean Road.
5. Bicycle/Pedestrian System that would provide an alternative transportation mode and connect the university campus to other points in town. It also envisioned the formation of an advisory committee that would represent a range of constituencies.

Auburn Land Use Plan 2004

Comp Plan 2030 has replaced this document, but the plan outlined a number of transportation policies and directions that became part of CompPlan 2030, such as:

- Protecting natural lands, open space and ecosystems
- Guiding development of the city to create a collection of connected villages
- Maintaining and enhancing community character
- Expanding transportation and accessibility opportunities
 - Reducing dominance and impact of automobiles
 - Integrating and mixing land uses to encourage pedestrian activity, bicycle usage and transit.
- Protecting and reinvesting in neighborhoods and commercial corridors

Auburn 2020 – Auburn 2020 is a long-range plan established to help guide the future of the City by setting goals, policies, and programs for positive change. The plan focused on the areas of Education, Growth and Development, Intergovernmental Relations, Transportation, Utilities and Technology, Family and Community and Public Safety and created 22 goals for 2020, designed to be as a blueprint for Auburn's future. The plan listed a number of transportation recommendations that focused on:

- Access
- Connectivity to regional systems
- Safe and efficient movement
- Funding
- Creating an aesthetic environment along transportation corridors
- Maintaining a viable downtown
- Inter-jurisdictional coordination (Auburn, the University, Opelika, Lee-Russell Council of Governments)
- Creation of an advisory organization

City of Auburn Biennial budget – The two-year budget, reviewed annually, includes the operating budget and the capital improvements program, both of which provide funding for the maintenance of the existing transportation system and programming of funds for projects that will enhance and expand the transportation system.

City of Auburn Citizens Survey – For more than twenty-five years, the City of Auburn has conducted an annual survey of its citizens. A portion of the survey focuses on transportation systems with the results serving as a tool to measure the quality of City services and gauge budget priorities for the future. The survey also helps further the City's efforts to involve citizens in their local government. Results of the Citizen Survey revealed an overall high level of citizen satisfaction with the quality of life in Auburn and City services. The 2016 Citizen Survey revealed the overall satisfaction with ease of travel by car fell from 76% in 2015 to 66% in 2016. Satisfaction with ease of pedestrian travel dropped by 1% to 65% and satisfaction with ease of bicycle travel fell from 41% to 35%.

The following categories have been identified as the top two city services that should be emphasized the most over the next two year period.

1. Flow of traffic and congestion management, ranked number one since 2011, except for 2014 where it ranked number two.
2. Maintenance of city infrastructure ranked number two in 2011, 2012, and 2016. It ranked number three in 2013, 2014, and 2015.

City of Auburn US 29 Corridor Planning and Supplemental Guidelines

The intent of this plan was to establish a framework that would give direction to long range development along the South College Street corridor (formerly US 29). The corridor was assessed for strengths and opportunities as well as constraints or threats. The plan encouraged mixed use in the corridor, establishing the I-85 interchange as a gateway into the city, preserving traffic capacity, focusing on consistent land use along the corridor, and making business development feasible. Included in this was a supplemental set of Development Guidelines. The guidelines direct development along the corridor with regard to site access, site layout, placement of buildings, parking, pedestrian circulation, fencing, screening and lighting.

5.3 Transportation and Land Use

Transportation and land use are inextricably linked and are so closely related that it is impossible to make changes to one without affecting the other. For transportation systems to be feasible, they require users who pay to either recoup construction and maintenance costs or to justify their existence. Transportation systems also rely on land uses at points of departure or arrival that allow enough users in a high enough concentration to support the necessary demand to keep a transportation system running or justify its creation and maintenance.

Access to land determines whether or not a parcel of land is feasible for development. The ability to get people, goods and services to and from a site can turn an inexpensive piece of land with few development options to one with many options and high value. At the same time, land use regulations affect the ability to develop a property, which, in turn, can affect the supply of transit users to a transportation system.

Generally, roads, transit, and other transportation elements shape land development, while the distribution and types of land uses affect travel patterns and transportation facilities.

Low-density development relies heavily on cars as the primary mode for transportation, while denser development can combine different land uses in closer proximity, encouraging pedestrian activity, biking, transit and other non-motorized forms of travel.

5.3.1 Transportation and the Auburn Interactive Growth Model

Between 1970 and 2015, the City of Auburn tripled in both area and population. The development pattern has been dispersed outward creating a challenge to provide infrastructure to the increased population and area while maintaining the existing infrastructure. Understanding the needs of an ever-growing population and city boundary is absolutely vital to planning for future growth. In order to more accurately forecast population growth and distribution, the City created a growth model that considers current growth trends and can be adjusted as growth takes place. The dynamic nature of the model allows the consideration of different scenarios of “build-out” based on changing assumptions of zoning and land use.

Better understanding population and dispersion will allow the City to optimize the greatest return on public investments to serve future development and to set priorities. This will be a key to

understanding how growth affects existing transportation systems and where the City should allocate resources to address transportation demands. Both the Metropolitan Planning Organization and the City have been using the data in their latest long range planning efforts.

5.3.2 Transportation and the Environment

The convenience and economic value of transportation systems come with environmental trade-offs. Construction and maintenance of transportation systems often affect: air and water quality, noise, wildlife, natural resources, cultural and historic resources, wetlands, floodplains, agricultural land, parks and open space. Additionally, because the location of transportation systems is so closely linked to economic development and land use, there has been growing attention paid to environmental justice in the field of transportation planning. Environmental justice seeks to avoid, minimize or mitigate disproportionately higher negative impacts on minorities, and low-income populations. Alabama’s Statewide Transportation Plan (June 2008) describes environmental issues as follows:

Table 5.1

RESOURCE / ISSUE	SIGNIFICANCE	REGULATORY BASIS
Air Quality	Public health, welfare productivity, and the environment are degraded by air pollution	Clean Air Act of 1970; 40 CFR Parts 51 & 93; State Implementation Plan
Noise	Noise can irritate, interrupt, and disrupt, as well as generally diminish the quality of life	Noise Control Act of 1972; ALDOT’s highway Traffic Noise Analysis Policy and Guidance
Wetlands	Flood control, wildlife habitat, water purification; applies to both State and federally funded projects	Clean Water Act of 1977; Executive Order 11990; 23 CFR 777
Threatened and Endangered Species	Loss of species can damage or destroy ecosystems, to include the human food chain	Endangered Species Act of 1973; 7 CFR 355
Floodplains	Encroaching on or changing the natural floodplain of a water course can result in catastrophic flooding of developed areas	Executive Order 11988; 23 CFR 650; 23 CFR 771
Farmlands	Insure conversion compatibility with State and local farmland programs and policies	Farmland Protection Policy Act of 1981; 7 CFR 658
Recreation Areas	Quality of life; neighborhood cohesion	Section 6(f) of the Land and Water Conservation Fund Act; Section 4(f) of the DOT Act of 1966 (when applicable); 23 CFR 771
Historic Structures	Quality of life; preservation of the national heritage	National Historic Preservation Act of 1966 (Section 106); the DOT Act of 1966 [Section 4(f)]; 23 CFR 771; 36 CFR 800

Archaeological Sites	Quality of life; preservation of national and Native American heritage	National Historic Preservation Act of 1966 (Section 106); the DOT Act of 1966 [Section 4(f)]; 23 CFR 771; Executive Order 13175
Environmental Justice	To avoid, minimize, or mitigate disproportionately high impacts on minorities and low-income populations; basic American fairness	Title VI, Civil Rights Act of 1964; Executive Order 12898

The Federal Highway Administration (FHWA) has determined that climate change should be integrated into transportation planning at the state, regional, and local levels, and that consideration of potential long range effects by and to the transportation network be addressed. To that end, FHWA requires the following excerpt be present in the TIP, LRTP, and other selected documents:

According to the FHWA report *Integrating Climate Change into the Transportation Planning Process*, there is general scientific consensus that the earth is experiencing a long-term warming trend and that human-induced increases in atmospheric greenhouse gases (GHGs) may be the predominant cause. The combustion of fossil fuels is by far the biggest source of GHG emissions. In the United States, transportation is the largest source of GHG emissions, after electricity generation. Within the transportation sector, cars and trucks account for a majority of emissions.

Opportunities to reduce GHG emissions from transportation include switching to alternative fuels, using more fuel efficient vehicles, and reducing the total number of miles driven. Each of these options requires a mixture of public and private sector involvement. Transportation planning activities, which influence how transportation systems are built and operated, can contribute to these strategies.

In addition to contributing to climate change, transportation will likely also be affected by climate change. Transportation infrastructure is vulnerable to a predicted rise in sea levels and increases in severe weather and extreme high temperatures. Long-term transportation planning will need to respond to these threats.³

5.4 Road Network

The City of Auburn is located within a large web of regional highways that make up the National Highway System (NHS). The NHS consists of over 162,140 miles of interconnected principal arterials and highways that serve major population centers, international border crossings, ports, airports, public transportation facilities, other intermodal facilities and major destinations. Alabama contains 3,956 miles of NHS roadways comprises of the following elements:

- **Interstate Highways** – The Dwight D. Eisenhower National System of Interstate and Defense Highways consists of limited access facilities of the highest importance to the nation

³ Introduction to Integrating Climate Change into the Transportation Planning Process - Federal Highway Administration, Final Report, July 2008

built to uniform geometric standards and connecting metropolitan areas, cities and industrial centers.

- **Strategic Highway Network (STRAHNET)** – STRAHNET roadways are those which would be used for the rapid mobilization and deployment of armed forces. According to the US Military’s Transportation Engineering Agency, these routes connect military bases to the Interstate highway network and include over 61,000 miles of roadway, including 1,074 miles within Alabama.
- **Congressional High Priority Corridors** – Corridors designated by Congress to address travel and economic development needs in regions which are not adequately served by the Interstate highway system. High Priority Corridors receive preferential treatment for funds related to planning and construction projects designed to improve long distance personal travel and freight movement. There are six such corridors in Alabama, one of which is US 80.
- **Other Federal and State Highways** – Several other highways on the federal and/or state system are designated for inclusion in the NHS network. These connect communities not located along an Interstate highway, STRAHNET route or Congressional High Priority Corridor.
- **Key Intermodal Connectors** – Several short roadway segments around the state link airports and docking facilities with one of the four previously defined classes of roadway and are also defined as part of the NHS network.

In addition to providing Auburn a connection to the entire country, the highway system also serves a safety function. US 431 is a hurricane evacuation route that starts in the Florida Panhandle and terminates in the Auburn-Opelika area.

5.4.1 Local Street Network

The existing system of roads in the City of Auburn continues to grow. Currently, the City’s road network consists of 322.9 miles of roadway. This network is composed of streets of varying classifications. The City’s Traffic Circulation Standards are included in the Public Works Design and Construction Manual and include the following types:

- Arterial Street
- Collector Street
- Residential Collector Street
- Local Commercial Street
- Local Residential Streets
- Cul-de-sac
- Alley

Table 5.2: Miles of roadway by classification type

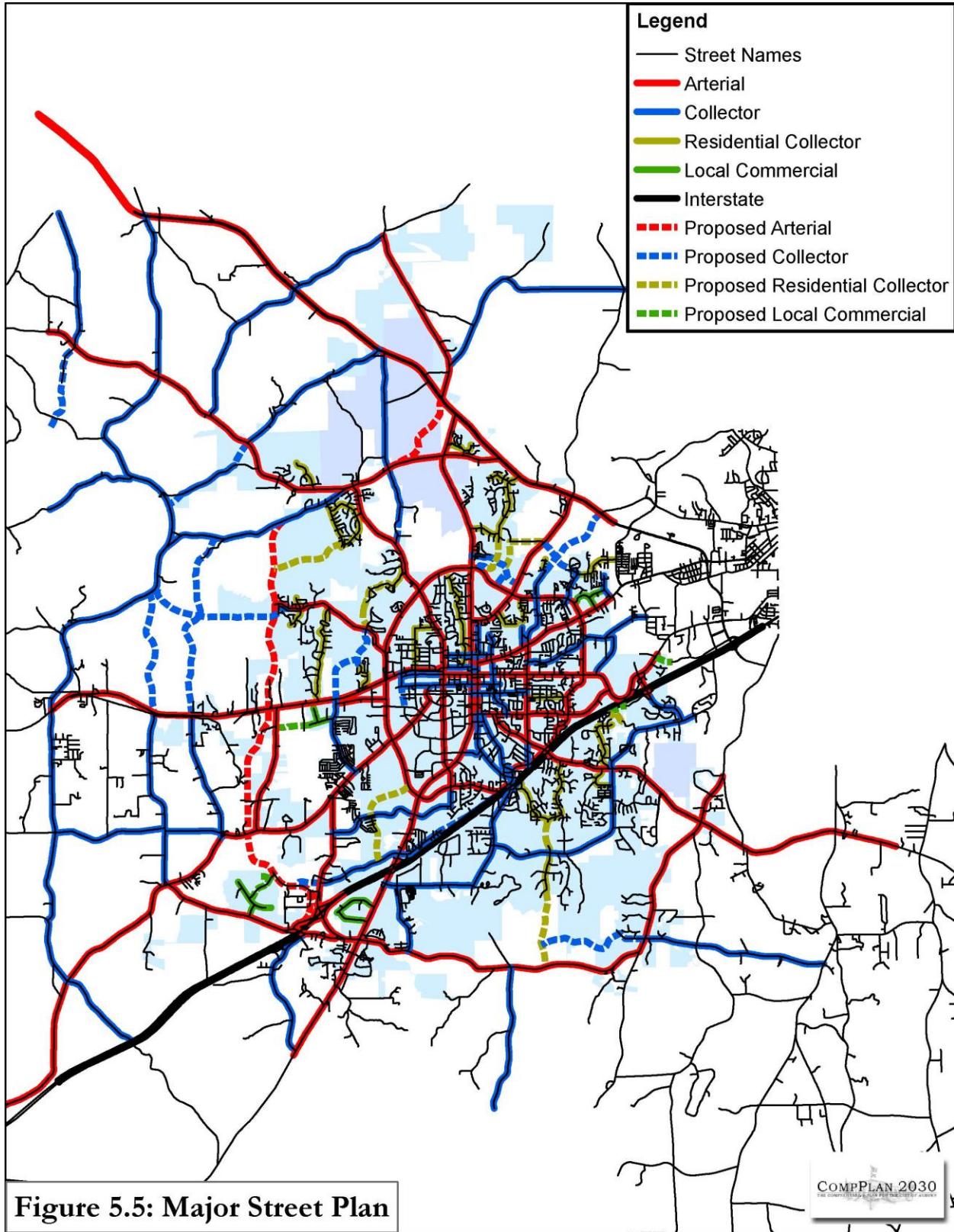
Road Type	Miles
Arterial roadways	80.6
Collector roadways	58.3
Local roadways (paved)	182.5
Local roadways (unpaved)	1.5
Total	322.9

In addition to the miles of roads listed above, the Major Street Plan includes 32.5 miles of planned roadways, 63 signalized intersections, and six railroad crossings. The Major Street Plan (Figure 5.5) is on the next page.

The primary planning for the road network that the Public Works Department has accomplished through their planning efforts includes the Comprehensive Transportation Plan FY 2010, the Auburn Comprehensive Traffic Study, and the Revised Long Range Transportation Plan. In their research, the Department has provided additional information summarizing the existing street network.

Table 5.3: Busiest Roadway Segments

Opelika Road near City limits	25,000+ ADT
South College St south of Longleaf Drive	23,000+ ADT
Opelika Road between Dean Road and Gentry Drive	25,000+ ADT
East University Drive south of Opelika Road	22,000+ ADT



5.4.2 Future Roadway Network

The Revised Long Range Transportation Plan that the City of Auburn commissioned in 2006 took a closer look at the regional long range planning that the Auburn Opelika Metropolitan Planning Organization had done. The goal of this work was to look at the transportation modeling and outcomes of the MPO and to refine the Auburn-specific portions of the MPO's Long Range Transportation Plan to address roadway capacity deficiencies by the year 2030. The result was a list of proposed improvements on twelve of the city's major roadways for which the City could advocate funding. These include:

Shug Jordan Parkway/East University Drive – from Donahue Drive to Opelika Road the current cross-section is inadequate. Require the construction of left and right turn lanes at all access points. Additionally, at public streets within the section, construct left turn and right turn lanes. Construct lanes at those locations, where required, to ensure two through lanes in both directions. The intersection of East University Drive and Shelton Mill Road has been completed.

Shelton Mill Road – reconstruct as three lanes from East University Drive to U.S. Highway 280. Require right turn lanes at all access points and public streets and exercise access management.

East University Drive

1. Opelika Road to Glenn Avenue – five lane cross section with access management.
2. Glenn Avenue to South College Street – three lane cross section with access management.

Opelika Road

1. Auburn city limits to East University Drive – six lane cross section with median.
2. East University Drive to Dean Road – construct or require right turn lanes at all access points and public streets and exercise access management.
3. Dean Road to Gay Street – three lane cross section required with access management.

Glenn Avenue

1. Donahue Drive to College Street – three lane cross section with application of access management (completed).
2. Gay Street to Dean Road – construct left turn lanes required to ensure two through lanes are continuous through this section. Employ access management.

Magnolia Avenue – Donahue Drive to College Street – three lane cross section with access management (completed).

Alabama Highway 14 – from Donahue west to Shug Jordan Parkway – three lane cross section (completed).

Donahue from Alabama Highway 14 north to Bedell Avenue – three lane cross section.

College Street – Bragg Avenue to Glenn Avenue – three lane cross section.

Gay Street – Opelika Road to Samford Avenue – three lane cross section.

Dean Road

1. Annalue Drive to Glenn Avenue – current cross section acceptable. Add a northbound right turn lane on Dean Road at Annalue Drive.
2. North of Dean Road Elementary School to South of Auburn Junior High School – reconstruct as five lane cross section with reconfiguration of high school access points. This project may not be necessary with the construction of the new high school on East Samford Avenue.

Moore’s Mill Road

1. Dean Road to East University Drive – five lane cross section recommended with access management.
2. East University Drive to Hamilton Road/Ogletree Road - five lane cross section recommended. A portion of Moore’s Mill Road has been constructed with a five lane cross section as part of the Moore’s Mill Road/I-85 bridge replacement.

Projects already listed in the Long Range Transportation Plan of the Metropolitan Planning Organization include:

- Construct an interchange at Interstate 85 and Bee Hive Road (completed 2014.)
- Widen U.S. Highway 29 from County Road 10 (Sand Hill Road) to Shell Toomer Parkway (completed).
- Widen the Moore’s Mill Road Bridge at Interstate 85 (to be completed 2017).
- Widen Donahue Drive from 300 feet north of Bragg Avenue to Bedell Avenue.
- Widen Samford Avenue from College Street to Moore’s Mill Road.
- Improve traffic operations⁴ along Shelton Mill Road from U.S. Highway 280 to East University Drive.
- Improve traffic operations along Hamilton Road from Bent Creek Road to Moore’s Mill Road.
- Improve traffic operations along Moore’s Mill Road from Dean Road to Grove Hill Development entrance (included as part of bridge project to be completed in 2017).

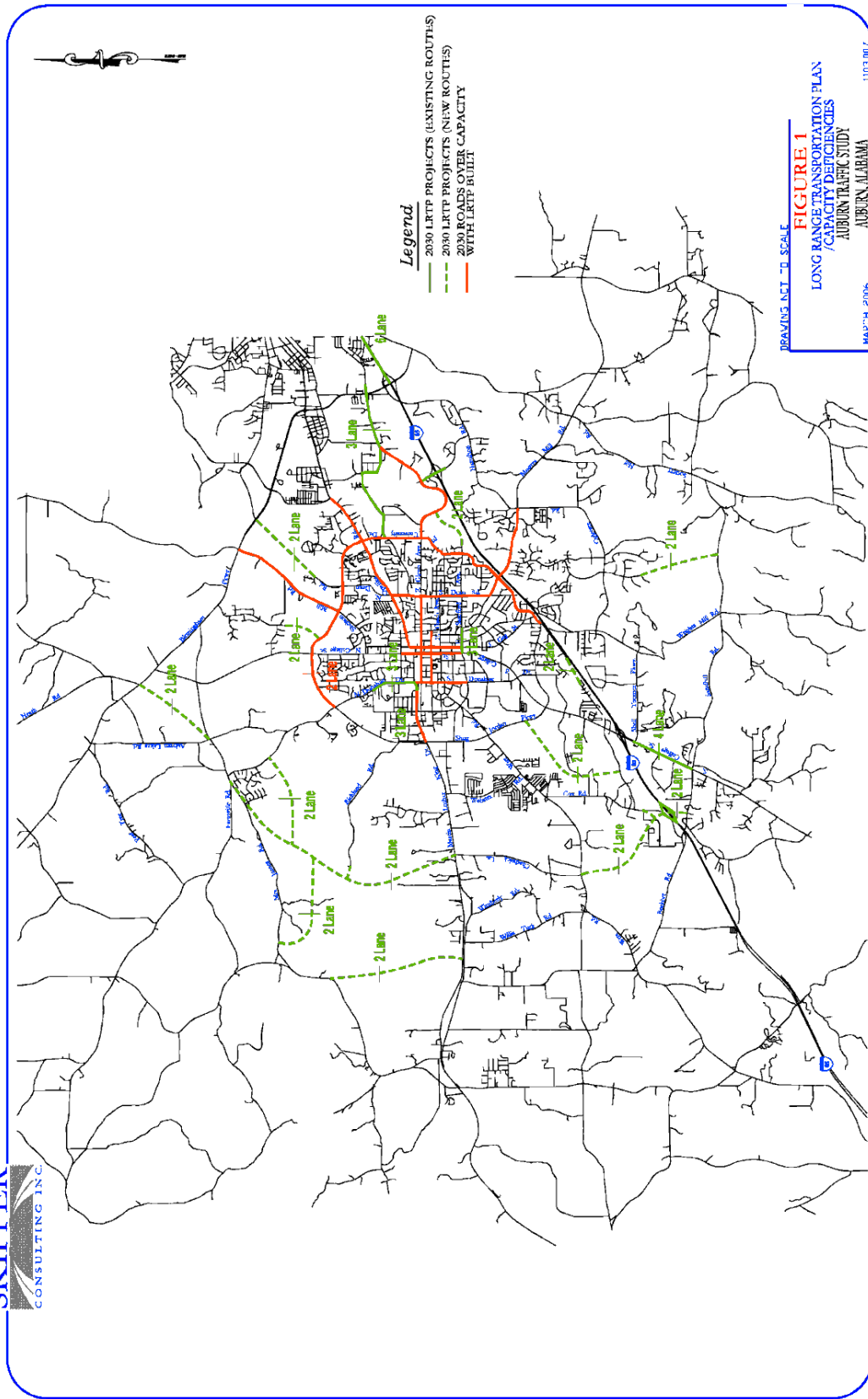
The currently adopted Long Range Transportation Plan of the MPO looks forward to 2035. The maps on the next pages show the existing and future road network. The first map was commissioned by the City of Auburn as part of the Comprehensive Traffic Study of 2006. This map shows projects in green that are identified in the 2030 LRTP and road segments in red that, after all 2030 LRTP projects are completed, will be over capacity, meaning that regular traffic delays and congestion will be found on these road segments.

The next two maps come from the draft of the 2035 Long Range Transportation Plan of the MPO. Of these two, the first shows levels of service as per 2005 data. The areas of red are those roads where, again, road capacity issues exist, resulting in regular traffic delays and congestion. The second map of these two shows anticipated levels of service should all of the projects in the 2035 Plan be constructed.⁵ The red segments in the 2035 scenario are significantly more prevalent than the 2030 scenario.

⁴ Includes traffic signal optimization as well as lane improvements

⁵ “E+C” means those transportation projects or facilities that are either “existing” or “committed” for completion by 203

Figure 5.6



22 May 2009

Figure 5.7

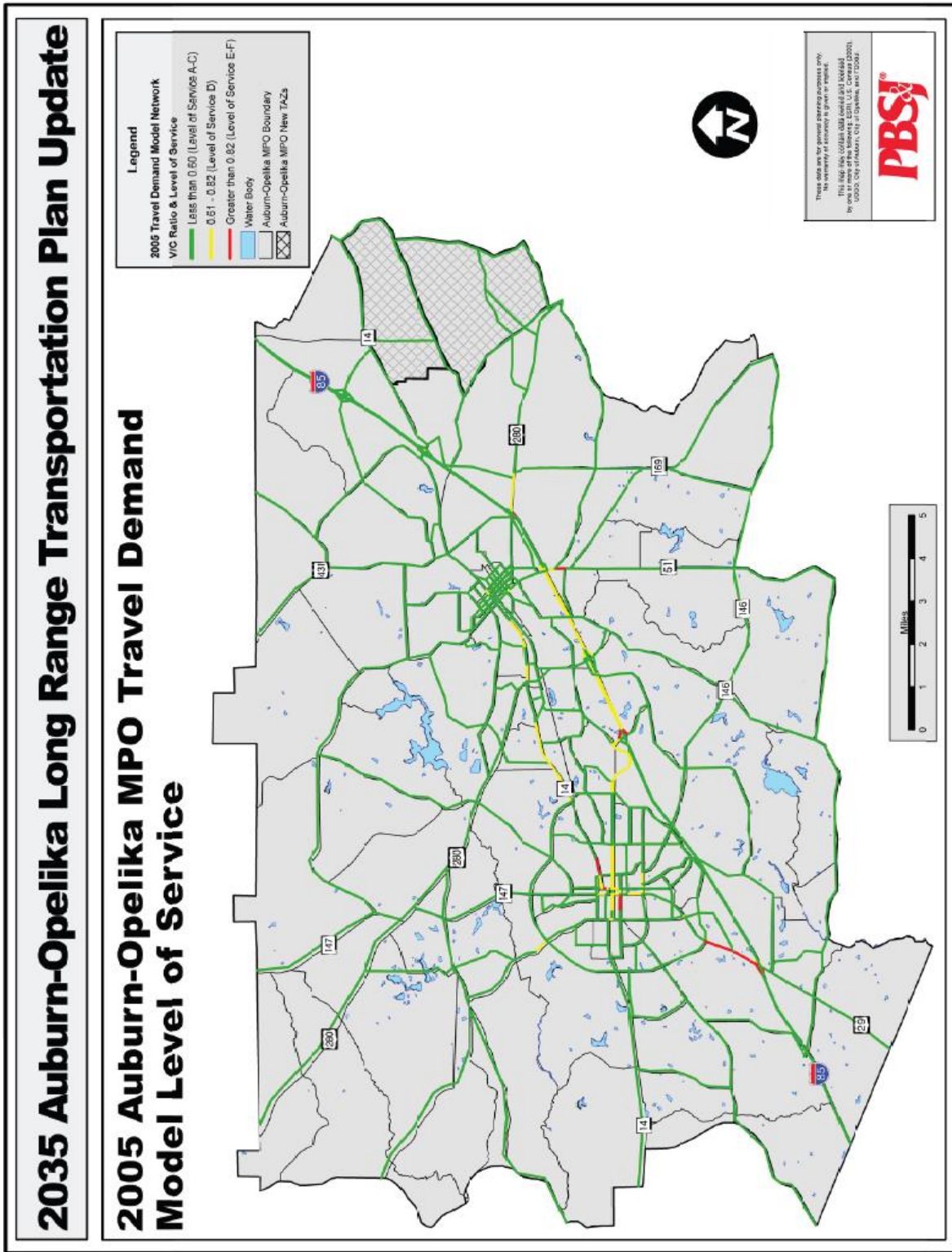
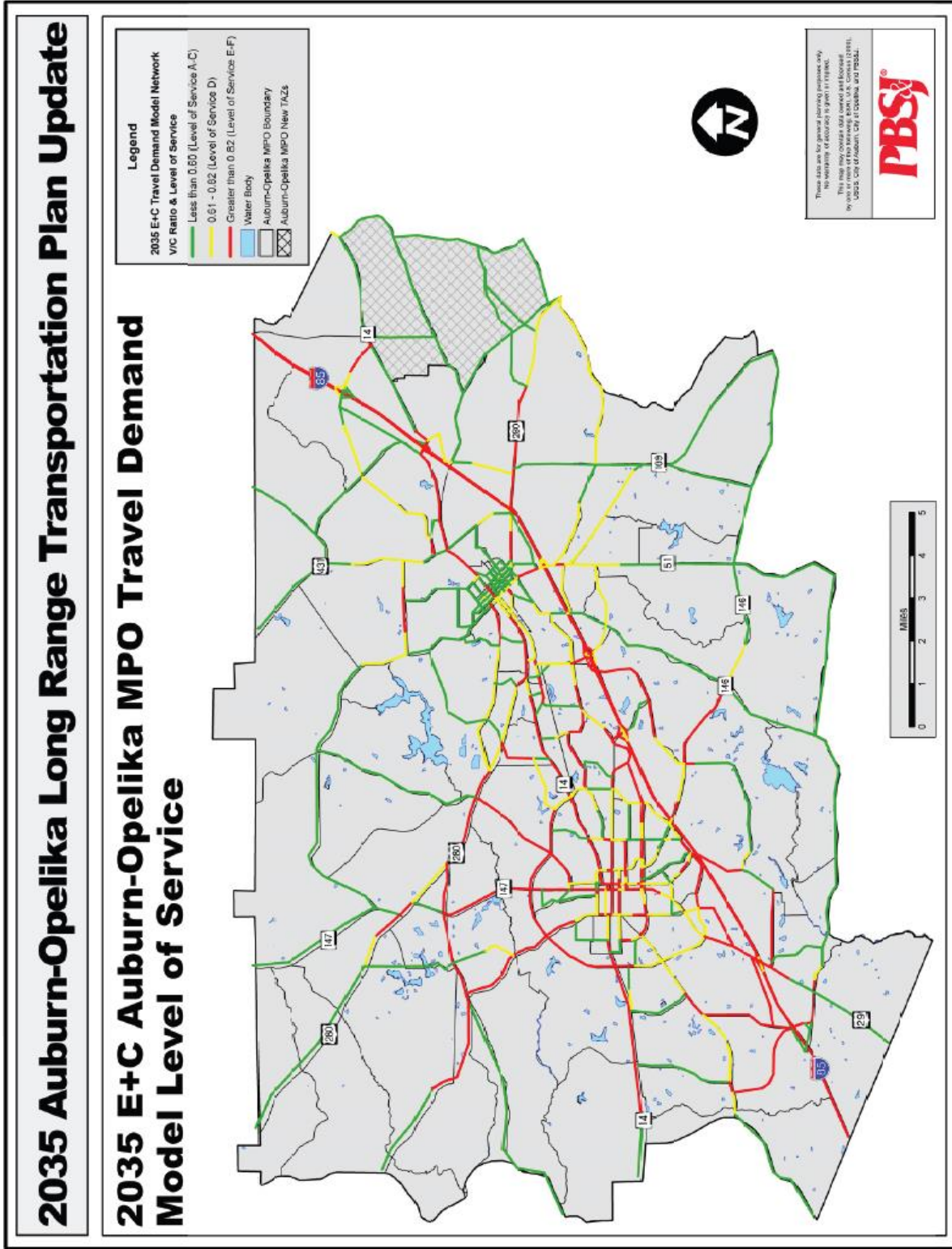


Figure 5.8



Below is an inventory of the miles of congested streets as per the 2035 LRTP. At the time horizon date, the 2035 plan projects significant congestion.

Table 5.4: Congested Street Inventory		
		2035 LRTP (2009)
	Location	Miles
Inside Inner loop*	Hwy 14/MLK Dr.	10.56
	Glenn Ave.	1.50
	Opelika Rd.	2.15
	Dean Rd.	0.22
	Gay Street	0.54
	College Street	2.90
	Donahue Dr.	0.72
	Samford Ave	1.80
	Hemlock Dr.	0.25
	Thach Ave.	1.0
	Magnolia Ave.	0.73
Inner Loop	Shelton Mill Rd.	0.93
	East University Dr.	3.59
	Shug Jordan Pkwy.	3.33
Outside Inner Loop	Moores Mill Rd.	2.28
	Glenn Ave.	2.02
	Opelika Rd.	0.66
	Shelton Mill Rd.	2.05
	Samford Ave.	0.92
	Wrights Mill Rd.	1.22
	Shell Toomer Pkwy.	1.56
	Beehive Rd.	0.75
	Cox Road	2.56
	Planned road **	2.11
	I-85	12.33
	Donahue Dr.	2.65
	Longleaf Dr.	0.70
	Veterans Blvd.	1.53
	Wire Rd.	0.81
AL Hwy 14	2.95	
Al 147	2.13	
Farmville Rd.	5.12	
	US 280	1.23
TOTAL		75.8

* East University and Shug Jordan

** Between Cox Rd interchange with I-85 and Chadwick Lane

5.4.3 Design Standards and Access Management

Access management deals with how transportation users gain access to the transportation system, where, and at what frequency. When looking at roads, this is often done through examination of standards for intersections and driveway placement. The more access points there are on a road, the more likely conflicts arise that can affect traffic flow and safety. The City has continued to develop and refine access management standards, including the development of standards for driveway spacing.

Additionally, the City has considered road classifications based on traffic volume. In the City's Comprehensive Traffic Study of 2006, two additional roadway classifications were adopted. The two new classifications are the residential collector street and local commercial street. These additional classifications will allow the City to set curb cut spacing and cross-sections more appropriate for how the roadway is being used.

As part of the roadway classification, the Study contains recommendations on the maximum trip generation for each category. The volume associated with the roadway should help developers appropriately design their roadways consistent with the classifications as they enter into the preliminary design phase of the proposed development.

Table 5.5: Maximum Roadway Volumes by Classification										
Classification	Two-Lane		Three-Lane		Four-Lane		Four-Lane Divided (5-Lane)		Six Lane	
	Maximum Volumes									
	Peak Hour (vph)	Daily (vpd)	Peak Hour (vph)	Daily (vpd)	Peak Hour (vph)	Daily (vpd)	Peak Hour (vph)	Daily (vpd)	Peak Hour (vph)	Daily (vpd)
Arterial*	1,300	13,300	1,570	15,700	2,050	20,500	2,540	25,400	3,750	37,500
Collector*	1,030	10,300	1,290	12,900	1,620	16,200	1,770	17,700	2,600	26,000
Residential Collector**	500	5,000	630	6,300	790	7,900	860	8,600	N/A	N/A
Local Commercial*	1,030	10,300	1,290	12,900	1,620	16,200	1,770	17,700	N/A	N/A
Local Residential/ Alley***	200	2,000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	30	300	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

* Developed by Skipper Consulting, Inc. and approved by the Alabama Department of Transportation

** Based on trip generation for 500 detached residential dwelling units from ITE

*** Based on maximum daily volumes from standards of other communities in Southeast

Source: *Comprehensive Transportation Plan, Fiscal Year 2010*, City of Auburn, Public Works Department

The City continues to look at stacking space requirements for driveways accessing collectors and arterials. Currently there are no requirements; however, the Public Works Design and Construction Manual includes recommendations for arterial and collector roadways. The intent of creating standards for stacking space is to avoid rear-end collisions at the driveways.

5.5 Bicycle and Pedestrian Networks

5.5.1 Bicycle Network

One of the most significant steps that the City of Auburn has taken to establish bicycle transportation as an alternative was in 1998, when *The Auburn Bicycle Plan* was adopted as part of the *Auburn 2020* strategic plan for the City. While bicycles have always been a significant part of the transportation network, the *Bicycle Plan* came at a time when policy and focus had been dominated primarily by automobile traffic.

The plan was forward thinking in many ways and recognized the important link between land use and transportation. While patterns of sprawling auto-oriented development patterns have been convenient for many citizens in Auburn, “It must be recognized, however, that this convenience comes at considerable cost, both to individuals and to communities.”⁶ A significant focus in the plan was how bicycling could be utilized as a means of overcoming these costs, as well as providing benefits that include:

- Increased choice and flexibility
- Reduction of traffic congestion
- Efficient travel in urban traffic
- A non-polluting means of transportation
- Conservation of non-renewable resources
- A quiet mode of transportation
- Being less of a hazard to other road users than motorists
- Less space needed for travel and parking than an automobile
- Low cost
- Improved health

The plan led to many initiatives, including the creation of a Bicycle Committee, bike maps, an annual Bike Bash event and the construction of several new bike facilities. The current 49 mile system of bicycle paths is planned to be increased to 159 miles. On the next page is a map that shows the existing and planned bicycle network.

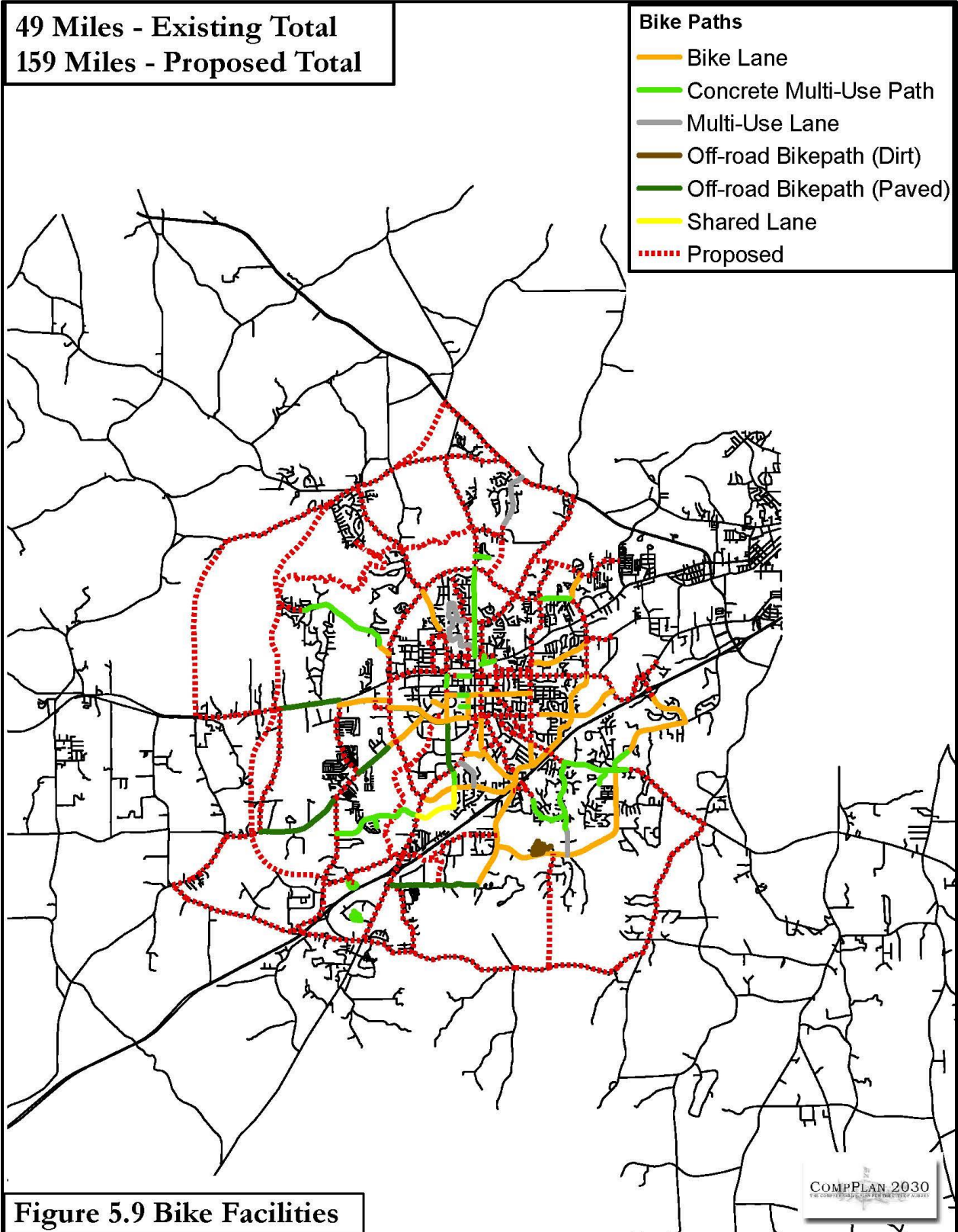
The most recent construction projects involving bike facilities include:

- North Donahue Drive widening and resurfacing
- Woodfield Drive resurfacing
- East Longleaf Drive restriping (South Donahue Drive to South College Street)
- South Donahue Drive restriping (East University to East Longleaf Drive)

Currently programmed construction projects include:

- Highway 14 Multi-use Path

⁶ *Auburn Bicycle Plan*, (*Auburn 2020*), City of Auburn, p. 58



Auburn Subdivision regulations now require public easements or rights-of-way (ROW) to be set aside for future construction of bicycle facilities on newly developed parcels that show a bicycle facility on the Bike Map.⁷ As part of the Parks and Recreation Cultural Master Plan, language will be added regarding cross-city greenways and bikeways.

Bicycle planning and coordination between the City, community groups and the schools led to designation of Auburn by the League of American Bicyclists as a Bicycle Friendly Community, a prestigious award that requires meeting a number of criteria. Additionally, the City of Auburn is partnering with Auburn University on the Ware Eagle Bike Share program. The program will have a strong impact on multi-modal transportation, particularly within the vicinity of campus. The program is in its infancy, but the goal is to extend the programs to include off-campus hubs and bicycle. The War Eagle Bike Share program launched with just 75 bicycles, but has more than 6900 users and more than 57,000 trips of the current 125 bicycles since its launch in 2015 and it continues to grow.

Significant bicycle activities and programs coordinated by the City of Auburn include:

- **Bike Bash** - an annual event hosted by the Bicycle Committee to encourage bicycling activities, endorse bicycles safety, promote the health benefits of bicycling, and emphasize local bicycle friendly trails and areas.
- **Bicycle safety class** – a free course taught by a League of American Bicyclist Certified Instructor.
- **4th Grade Bicycle Education Program** in conjunction with Auburn Civitan Club, a two-week training course on bicycle safety to all fourth grade classes in the Auburn City School System
- **Auburn Tours Guide** - a color booklet to highlight some of the preferred routes used by local cyclists that is provided free at several City buildings, area bike shops, and area hotels. It is also available in digital format on the Bicycle Committee’s website
- **Bicycle Loaner Program** - utilizes bicycles confiscated by Public Safety to allow citizens and visitors to borrow a bicycle and helmet for up to two weeks at no charge
- **Weekly Rides** at least two times a week, organized by the Bicycle Committee
- ***You Can Get There From Here*** - to be used as a reference for individuals exploring the idea of commuting to work but unsure of a route they would feel comfortable traveling by bicycle. As part of this initiative the Bicycle Committee is working with Auburn GIS Division to develop an interactive Internet map to aid citizens in developing their commute routes.

5.5.2 Pedestrian Network

Regardless of one’s mode of transportation, at some point in their trip, everyone becomes a pedestrian. Walking has been the most common mode of transportation since the city was incorporated in 1836. With the strong presence of the University, a vibrant downtown nearby and a city full of pleasant neighborhoods, walking continues to be a significant form of transportation for both commuting and leisure.

Just as the *Bicycle Plan* recognized that the low density, auto-centric development predominant in the 20th century provided challenges for biking in the city, this development pattern has had a significant

⁷ Article IV.C.7, Subdivision Regulations, City of Auburn

effect on the pedestrian environment as well. The Auburn 2020 plan formally recognized the need to “Establish a community network of sidewalks and bicycle trails that will allow all citizens to use alternative modes of transportation.”

In response to this, in 1998 the Planning Commission changed the Subdivision Regulation requirements to include sidewalks in all new subdivisions. These requirements are now part of the Public Works Design Manual (PWDM). The PWDM now requires that there is sidewalk along at least one side of every street. Additionally, the City Council has supported the construction of new sidewalks in areas of high pedestrian movements. In the last three years, the City has constructed a little over one miles of new sidewalk. With added interest and awareness of health and environmental benefits, and as gas prices continue to fluctuate toward anticipated price increases, it is reasonable to expect that use of sidewalks and bikeways will increase and become part of the daily routine for many citizens.

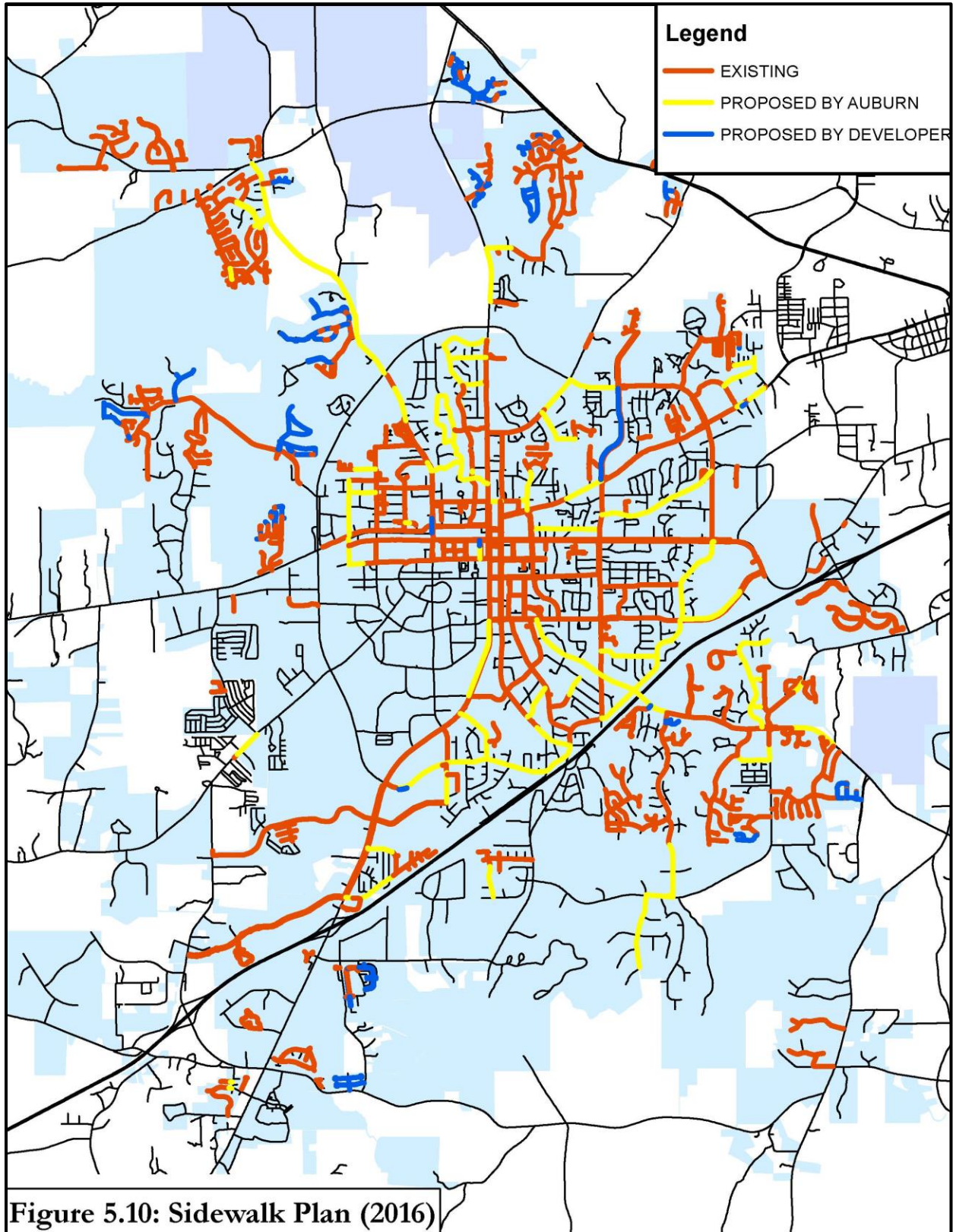
To meet future demands, the Public Works Department has recommended a policy to address sidewalk construction in established neighborhoods and areas of redevelopment. The City’s goal is to have sidewalks on city streets wherever needed for the benefit of health, safety, and welfare of the citizens. The sidewalk policy focuses attention, first, to areas of high pedestrian movement, particularly around schools, as well as destinations most frequented, and missing links in the sidewalk network. At the state level, the Department of Transportation has been tasked through the Statewide Transportation Plan with a statewide bicycle and pedestrian planning effort that will address statewide needs as well as include each urbanized area’s plan for bicycle and pedestrian facilities.

At the national level, among various transportation programs, federal transportation law has introduced the Fixing America’s Surface Transportation (FAST) Act, replacing the previous MAP-21 Transportation Alternatives Program with the primary aim of encompassing a variety of smaller-scale transportation projects such as pedestrian and bicycle facilities, recreation trails, safe routes to school projects, community involvement projects, and environmental mitigation related to stormwater and habitat connectivity. In addition, federal legislation permits cities constructing bicycle and sidewalk facilities to dip into several funding sources including those set aside for congestion mitigation, improvements to air quality and other transportation enhancement funds. Other federal aid funds can be used as appropriate.

Also, as part of the Public Works Department’s comprehensive planning efforts, their staff evaluated roadways with missing segments of sidewalks and major routes within the city where sidewalks are needed. The city’s Master Sidewalk Plan (Figure 5.10) is provided on the following page.

The City Council funds sidewalk projects in the Capital Improvements Program portion of the biennial budget and in the Departmental Budget for new sidewalks and for replacement and maintenance of sidewalks. In addition to local money budgeted by the Council, the City has applied for and received federal funds through Alabama Department of Transportation for the following:

Transportation Alternatives Program Grant in FY16 to construct sidewalks on Moores Mill Road from East University Drive to Samford Avenue.



Recent construction projects in the City that incorporate sidewalks:

- West Glenn Avenue from Donahue Drive to Byrd Street
- East University Drive from Carolyn Court to Samford Avenue
- East Samford Avenue from East University Drive to the new Auburn High School
- East Glenn Avenue from Airport Road to East Samford Avenue
- Wright Street Sidewalk plan
- South Cary Drive from Sanders Street to North College Street

Construction and Maintenance Projects:

- East Glenn Avenue from Airport Road to near Samford Avenue
- East University Drive from Glenn Avenue to Carolyn Court
- South Cary Drive

5.6 Transit

Alabama has both urban and rural transit systems, with approximately 55 of its 67 counties having some type of public transit. Alabama Department of Transportation responsibilities for transit are specified in state and federal law and include planning as well as capital and operating funds grant program management and administration. Transit systems in the state also rely on Metropolitan Planning Organizations and Rural Planning Councils to assist with reporting and meeting state and federal requirements.

For fiscal years 2014 through 2019, the State Transportation Improvement Program has allocated \$620 thousand in transit funding for the Auburn-Opelika (Lee County) area⁸.

There are 61 transit systems in the state, 13 of which are considered urban transportation systems. Locally, the Lee-Russell Public Transit is classified as an urban transportation system and provides transit service to the Auburn area⁹ and Tiger Transit, which provides service for Auburn University students, faculty and staff.

5.6.1 Lee-Russell Public Transit

Lee-Russell Public Transit (LRPT) began in 1988 as the Lee County Transit Agency (LETA). The system operates with federal funds administered by the Alabama Department of Transportation,



⁸ ALDOT <http://cpmsapps.dot.state.al.us/OfficeEngineer/Plan/SoutheastRegion>

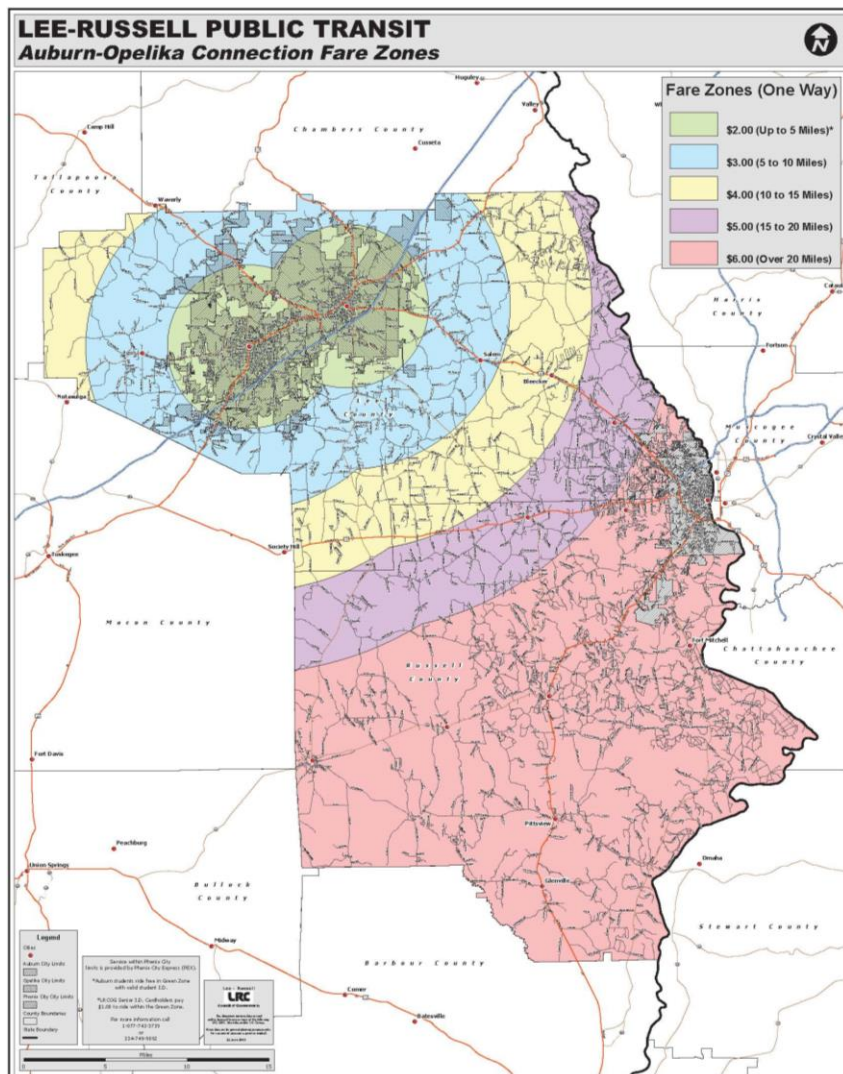
⁹ ALDOT <http://www.dot.state.al.us/tpmpweb/mp/transit.html>

Federal Transit Administration, and local monies from the governments of the City of Auburn, City of Opelika, Lee County Commission, and Russell County Commission. The mission of LRPT is to safely and efficiently provide affordable and dependable transit service throughout Lee and Russell Counties to meet the transportation needs of the community. The LRPT provides dial-a-ride service to meet the needs of all residents in Lee and Russell Counties.

This approach to transit service effectively opens up the entire Auburn-Opelika region providing access to every residence and destination. This dial-a-ride approach allows riders to plan trips in from one day to two weeks in advance with service hours Monday through Friday, excluding holidays, from 6:00 AM through 6:00 PM

Within a 5-mile radius of Auburn and Opelika city halls, fares each way are \$1 for Seniors, \$2 dollars for others age five and older. Auburn University students, faculty and staff ride free with a valid student identification. Outside of the 5-mile radius of the respective city halls, the LRPT's Lee Metro Connection Service provides transportation with one-way fares based on the distance from the respective city halls. A complete fare zone map is provided on the following page. More information, including a passenger's guide, is available on the LRPT website: <http://www.lrcog.com/LETA.html>

Figure 5.11



5.6.2 Tiger Transit

Tiger Transit is owned and managed by Auburn University and provides transit services to students, faculty and staff of the University. Tiger Transit services can be divided into three service areas; regular daytime service, night time service and Toomer's Ten.



Fall and Spring semester daytime service is provided on Monday through Friday from 7:00 AM to 6:00 PM (7:00 AM to 5:00 PM Summers). There are 20 routes, 12 of which are external routes (travel on and off campus) that operate on 15 to 30 minute intervals, and eight on-campus routes that operate on 10 to 15 minutes apart.

Night time service is provided Monday through Friday from 6:15 PM to 10 PM (5:15 PM to 9:00 PM Summers). The Off-Campus Night Transit line has multiple mini-buses traveling to all external Tiger Transit destinations. This line departs from the Haley Center (Monday - Friday) every 30 minutes. The Night Transit off-campus route is one-way and will not board passengers for return trips to campus or for other Tiger Transit destinations. Another subcomponent of this service is the AU Night Security Shuttle Service which provides travel to and from any on-campus destination. It is available on an as needed basis between the hours of 6 PM and 7 AM seven days a week while classes are in session.

Tiger Ten is an additional night time service that starts at 10:30 PM and runs through 3:00 AM Friday and Saturday when classes are in session. It is provided through a partnership between the transit agency and the Student Government Association and offers six different lines between campus and off-campus destinations.

Students' university fees help cover the costs of all transit services which allows the students to use Tiger Transit free of charge. Faculty and staff may use internal routes free of charge but are required to purchase a bus pass for external routes. In 2010, Tiger Transit had 2.33 million riders and averaged between 10,000 and 12,000 riders per day¹⁰. Tiger Transit buses have bicycle racks on the front of the vehicle for bicycle loading and unloading.¹¹

A key feature provided by the transit agency is a real-time GPS-based Transit Virtualization that is available online and allows students to see the exact locations of buses. It is accessible through the University's website at <http://auburn.transloc.com/>.



¹⁰ Final 2040 Long Range Transportation Plan Auburn Opelika Metropolitan Planning Organization
<http://www.lrcog.com/Final%20AOMPO%202040%20LRTP%20September%202015.pdf>

¹¹ Photo courtesy of http://www.auburn.edu/administration/parking_transit/transit/bike.php

5.7 Rail, Freight and Aviation

The City of Auburn has several rail, freight and air systems that lie either within the city or within the region where residents and businesses have access.

5.7.1 Passenger Rail

(Photos: upper left, 1942, students on way to ROTC camp in Atlanta, Lower right: 1955 students celebrating the defeat of Georgia Tech, courtesy of the Auburn University Digital Library)



While passenger rail services no longer exist within the city, those who prefer to travel long distance by train may do so by way of Amtrak. Amtrak's Crescent Line operates between New York City and New Orleans via Philadelphia, Baltimore, Washington, Charlotte and Atlanta. In Alabama, it stops in Anniston, Birmingham and Tuscaloosa as it follows a Norfolk Southern corridor through the state. Service is provided on a daily basis in both directions with stops in Alabama midday.

5.7.2 Rail Freight

Despite the lack of local passenger rail service, rail lines through the city are still very active with freight transportation. Being able to move goods in and out of the area is a vital component to the city's economic strength. Businesses and residents rely on daily shipments of materials and supplies to support every day activities and commerce.

Regarding rail freight, two companies, CSX and Norfolk Southern, operate rail lines within the Auburn-Opelika area. The CSX line runs from Montgomery to Lanett and passes through both the City of Auburn and the City of Opelika. While not within Auburn, the Norfolk Southern line is located in neighboring Opelika. This line runs from Birmingham to Columbus, Georgia. The Auburn-Opelika area does not currently have any intermodal rail.



5.7.3 Other Freight

To help sustain the area's economy and ensure financial viability for the future, transportation systems have been established to serve the needs of the freight industry. The ability to safely and efficiently move goods across the state is an essential function of the transportation system. In addition to the rail system mentioned above, Alabama's freight network also consists of highway system ports and waterways, railroads, airports and intermodal facilities. Freight planning efforts focus on maintaining and improving connections to freight facilities and enhancing the flow of freight throughout the state.

Locally, the Auburn Opelika MPO area has four State routes classified for freight movement and two Federal routes classified for freight movement under the Surface Transportation Assistance Act of 1982 (STAA). State routes include SR 14, SR 147, SR 1 and SR 38. Federal routes include I-85 and US 280/US 431 from Phenix City northwest to I-85. Auburn has three interchanges along I-85 providing opportunity for access and mobility for freight movement.

According to data from the State Department of Transportation, truck traffic will likely increase over time. The State Transportation Plan adopted in 2008 looks forward to 2035. In the southeast planning area of the State that includes Auburn, Montgomery and Dothan, ALDOT projects the following:

Table 5.7: Truck Traffic

Planning Area	Functional Classification	2005 Mean Values		2035 Mean Values	
		Truck Volume*	Truck Percent	Truck Volume*	Truck Percent
1	Interstate	2,300	11%	5,320	15%
	Arterial	520	15%	1,220	17%
	Areawide	590	14%	1,460	17%
2	Interstate	4,180	12%	9,980	20%
	Arterial	760	22%	1,700	27%
	Areawide	990	20%	2,320	26%
3	Interstate	3,940	17%	9,460	21%
	Arterial	1,210	40%	2,910	31%
	Areawide	1,300	37%	3,140	30%
4	Interstate	3,120	8%	7,180	13%
	Arterial	410	17%	710	15%
	Areawide	500	16%	980	14%

*Truck volumes were retrieved from the freight model developed by the University of Alabama at Huntsville.

Additionally, Figures 5.17 and 5.18 show freight volumes for 2005 and projected volumes for 2035 based on the existing road system plus projects that are committed (E+C) in the state transportation plan.

In addition to interstate access, the Auburn-Opelika MPO study area has several freight terminals for freight transfer and distribution as well as several trucking service businesses. These conveniently serve the industrial and technology parks in the City of Auburn. Other freight systems include:

Table 5.8: Other Freight Systems

Nearest navigable waterway	Chattahoochee River (38 miles away)
Nearest Deepwater Port	Port of Mobile located in Mobile, AL, 231 miles Southwest
Other Carriers	Greyhound Bus Lines, Trailways Bus Lines
Overnight Package Carriers	Federal Express, UPS, Express Mail

5.7.4 Aviation

Aviation is critical to the economic growth of the region, for not only freight, but for human transport as well. Alabama's airport system consists of over 200 registered airfields, six of which are publicly owned airports and have regularly scheduled commercial service and include: Birmingham, Dothan, Huntsville, Mobile, Montgomery, and Muscle Shoals.

The Auburn area has been served since 1930 by the Robert G. Pitts Airport, renamed in 2010 to the Auburn University Regional Airport. It is a public use, regional airport facility that is owned and maintained by Auburn University. The airport is located at Exit 57/I-85 at the northern terminus of Bent Creek Road/Mike Hubbard Boulevard. It consists of 423 acres with two runways; Runway 18-36 (5,265 feet) and Runway 11-29 (4,002 feet). The airport houses 47 based aircraft and handles approximately 65,000 aircraft annually¹².



As well as a transportation facility, the Airport also serves as an education facility. The University's flight education program consists of approximately 200 student pilots and hosts intercollegiate flying meets of the University.

It is also an airport that is growing. On June 18, 2009, the ground was broken for a new terminal and flight line that is now completed. The Airport's new entrance is located off of Mike Hubbard Boulevard, which is an extension of Bent Creek Road that intersects I-85. The new terminal provides a modern, fresh facility that contributes to economic development in the region.



Auburn University Terminal opened 2010

5.8 Analysis

As is clear from the existing conditions review, planning for transportation facilities in the City of Auburn takes place primarily outside of the comprehensive planning process. As Auburn's first comprehensive plan, the focus of this transportation section is on those aspects of transportation that

¹² <https://www.airnav.com/airport/KAUO>

are most closely tied to land use, and vice versa. There are opportunities in future iterations of the plan to more comprehensively integrate land use and transportation planning.

5.8.1 Connectivity

Connectivity is the overall connectedness of a street network. Are streets laid out on a grid, or do subdivisions consist of a series of loops and cul-de-sacs with one or two entrances and exits? Connectivity is important because, the more connected a street network is, the more travel options exist. This limits the strain on any particular route or intersection, and allows traffic to take alternate routes as primary routes become congested. A lack of connectedness in a street network over time forces collectors and arterials to become more congested and will often require public investment in widening or otherwise improving those routes to handle more traffic. Those improvements will then draw new traffic to the routes, reducing the value of the improvements considerably sooner than might be expected. Providing a higher level of street connectivity as development occurs will help reduce the long-term strain on the road network indicated in the MPO's level-of-service projections.

5.8.2 Transportation Choices

The automobile is the dominant form of transportation in Auburn. While that is not expected to change now or in the future, there is no question that Auburn's reliability on that form of transportation will place an increasing strain on the City's transportation network over time. In a future of increasing fiscal constraints, searching for alternate ways to relieve pressure on the road network is desirable. Connectivity, mentioned earlier, is one method. Reducing vehicle trips is another. In part the plan seeks to reduce vehicle trips through reducing trip lengths and frequency; this is accomplished by providing daily needs in closer proximity to the places where people live. Providing for alternate forms of transportation is another way to reduce vehicle trips. Alternate forms of transportation include walking, biking, and mass transit. One way to better integrate various transportation facilities into a given street segment is through adoption of Complete Streets standards. Complete Streets "are designed to safely accommodate pedestrians, bicyclists, motorists, and transit riders of all ages and abilities to be able to safely move along and across a complete street. Complete Streets make it easy to cross the street, walk to shops, and bicycle to work".

At present, walking is a viable transportation choice in some parts of the City. CompPlan 2030 seeks to improve the viability of this choice by improving the extent and connectivity of the pedestrian network over time, and improving the safety of the pedestrian network. A walkable community has benefits beyond providing an alternate form of transportation: walking is demonstrably good for public health; provides improved accessibility; and is necessary for the creation of the vibrant mixed-use nodes discussed in the land use section. The City should work to continue expansion of the network of sidewalks and greenways, and should work to integrate the Greenway Master Plan and an expanded Sidewalk Master Plan to make connections for a City-wide network of on- and off-street facilities. The on-street sidewalk network, in particular, should be expanded in and to locations where walkability is desirable. As development occurs, provide options for construction of pedestrian

facilities; off-street trail networks or more limited pedestrian facilities will be more appropriate in some locations. Ongoing efforts to support pedestrian safety should also be expanded.

Bicycling is somewhat better established in the City as an alternate transportation choice, with a successful bicycle master plan, an ever-expanding bicycle facility network, and the City's status as the only designated bicycle-friendly city in Alabama. Bicycles represent an efficient, non-polluting transportation alternative that is particularly viable in and near the Auburn University campus. The bicycling community is made up of both recreational users as well as bicycle commuters. The network of bicycle facilities should be designed to accommodate both types of users, with an appropriate mix of the off-street and on-street facilities. Review of bicycle connectivity should be considered as part of the development review process; encouraging placement of bike racks in new non-residential development would also be positive. The City of Auburn and Auburn University both maintain bicycle facilities and in 2016 the "War Eagle Bike Share" program was launched with 65 bicycles but has increased to 125 bicycles. The program is available to students, faculty, Auburn residents, and visitors by logging into an app (app.socialbicycles.com) or using the bike's keypad to check out bicycles for up to two hours at no charge.

5.8.3 Mass Transit

As mentioned previously, Auburn is served by two mass transit systems; Tiger Transit and Lee-Russell Public Transit (LRPT) dial-a-ride services. Tiger Transit provides a tremendous benefit in taking many vehicles off of City streets, thus reducing traffic, and LRPT provides a valuable public service to those who may not otherwise have access to transport; but, with the City's population approaching 100,000 in 2030, it will be prudent to explore the timing and feasibility of providing a viable mass transit system that serves the entire City. Such a system should take the form of fixed-route service on multiple routes, with reasonable wait times, serving popular destinations. Many cities of Auburn's current size and smaller currently operate fixed-route service. Such systems are more viable when serving areas of greater residential density (12 units per acre or more), such as nodes or apartment complexes. Another element in a successful mass transit system could be providing a system of park-and-ride lots for commuters as well as game-day visitors. Thirty-four percent of workers in Auburn live in Auburn; this means there is significant weekday commuting, both in and out of the City, that could be served in part by a park-and-ride system.

5.8.4 Citywide Signage

Effective signage systems help visitors and residents navigate successfully from place to place and improve safety. The City should continue the current wayfinding effort to design and build a network of signs Citywide by completing a wayfinding master plan. Opportunities also exist for upgrading pedestrian signals and street lights to enhance safety on City streets.

5.8.5 Land Use-Transportation Connection

One of the organizing principles of the CompPlan is that land use influences the transportation network, and vice-versa. Fundamentally, traffic demand is driven by two factors: employment, and

housing. All trips, vehicular or otherwise, have origins and destinations; determining where people want to go, when they want to do it, and in what order, is at the heart of traffic demand modeling. It follows, then, that employment is a function of the presence of employers, which can be commercial, industrial, or institutional establishments, or may be home occupations. The actual locations of those establishments, as well as the housing that is the second factor driving traffic demand, are determined by the market, which operates within a framework established by zoning, which is administered by local governments. Zoning should ideally reflect a jurisdiction's Future Land Use Plan, so that the locations of future development and redevelopments align with planned future investments in civic infrastructure and civic goals established in the comprehensive plan, such as promoting infill development and mixed-use centers.

The Land Use First strategy mentioned in policy T 3.1.1 is the idea that the Future Land Use Plan should drive investment in transportation infrastructure, and not vice-versa; that changes in land use should not take place just because a new street connection is made or a new roadway alignment built, but instead those street construction projects should take place because they support the community's vision for the type, location, and scale of new development and redevelopment in the City of Auburn.

The idea behind examining transportation funding options as discussed in policy T 3.1.6 is not to increase fees overall but to spread fees across all users. As it stands, developers are required to pay for transportation improvements as indicated by their individual traffic studies. Often times this results in inequities, as the first or last developer in is required to pay for improvements that either benefit all who follow or were only needed due to incremental prior development. The intent is to spread those costs across all users instead of the first or last in, not to increase costs overall.

5.8.6 Parking

A transportation network that relies on automobiles will always need a place to put them when they are not in use. It is important to balance the amount of parking provided for development, to ensure that adequate parking exists, but also so that excessive parking is not required. Excessive parking has many negative effects, including increasing impervious surfaces, thus increasing the amount of stormwater runoff. Excessive parking also reduces the amount of land available for actual development, limiting investment in that land and thus reducing tax revenue to local governments.

There is often not a logical nexus between parking requirements and what is actually needed by new development. The parking requirements in most zoning ordinances in the United States are derived from the Institute of Traffic Engineer's *Parking Generation* manual. Unfortunately, out of all of the uses therein, only shopping centers have been studied in sufficient detail to provide statistically defensible parking generation data. This suggests that local study of parking requirements would be beneficial, both to determine what our parking requirements should be and if our existing requirements are appropriate. The City has responded in this regard by amending its current parking regulations to provide flexibility where appropriate.

5.9 Goals, Objectives, and Policies

- T 1:** Provide improved street connectivity to reduce distance traveled, reduce congestion, reduce maintenance costs, improve walkability, and improve emergency services response times.
- T 1.1:** Encourage reduction in the use of dead-end streets in new subdivisions.
- T 1.1.1:** Establish and codify a methodology for assessing the street connectivity of new development.
- T 1.1.2:** Provide incentives for providing a higher level of street connectivity in new development.
- T 1.2:** Improve pedestrian facilities on new and existing streets.
- T 1.2.1:** Continue requiring construction of new sidewalks as development occurs along existing streets.
- T 1.2.2:** Evaluate requiring sidewalks on both sides of all streets except local streets, or, if preferable in new development, an off-street trail network that connects internal and external uses. Develop criteria for determining if local streets require sidewalks on both sides.
- T 1.2.3:** Establish a process to review pedestrian connectivity when reviewing proposed development.
- T 1.2.4:** Conduct a review of pedestrian access from downtown parking sites to downtown destinations and provide recommendations for improvement.
- T 1.2.5:** Continue to support the Travel With Care Auburn campaign.
- T 1.2.6:** Continue to install pedestrian crossings/audible signals in compliance with the standards of the Manual on Uniform Traffic Control Devices.
- T 1.3:** Provide new street connections based on the Major Street Plan and as development occurs.
- T 1.3.1:** Update the Major Street Plan to reflect land uses proposed in the Future Land Use Plan. Provide future updates in conjunction with updates to the Future Land Use Plan.
- T 1.3.2:** Conduct more formal assessments of the locations of proposed connections in the Major Street Plan. Place connections where they are most logical and include assessments of any challenges to implementation.

- T 1.3.3** As part of a future downtown master plan, assess opportunities for improved street connectivity as redevelopment occurs.
- T 1.3.4** Consider conversion of remaining one-way streets in and near downtown to two-way streets.

T 2: Provide a well-balanced range of transportation choices including a well-functioning road network, a viable mass transit system and a system of on- and off-street walking/biking paths that connect the places we live, work, learn and play.

T 2.1: Reduce frequency of vehicle trips to improve projected roadway levels-of-service by 2030.

T 2.1.1: Continue to promote alternate forms of transportation such as walking, biking, and transit as alternatives to driving. Set targets for use of each transportation mode.

T 2.1.2 Encourage implementation of the Future Land Use Plan’s nodal strategy, locating daily needs in close proximity to residential areas, providing pedestrian and bicycle facilities within each node and providing sufficient residential density to support transit service.

T 2.1.3 Identify funding for the Outer Loop project to relieve through-traffic congestion in the central city.

Also see policy T 2.3.2.

T 2.2: Evaluate capacity of existing streets and explore possible multi-modal opportunities.

T 2.2.1: Implement road improvements as identified in the City of Auburn Comprehensive Transportation Plan.

T 2.2.2: Consider adopting Complete Streets standards into the City Public Works Manual. Complete Streets are designed and operated to enable safe access for all users.

T 2.2.3: Design and construct new streets in such a manner as to alleviate the need for traffic calming.

T 2.2.4 Provide multi-modal transportation connections between nodes.

T 2.3: Evaluate the timing and feasibility of providing a viable mass transit system that serves the entire City.

T 2.3.1: Explore funding and opportunities for implementing fixed-route service in cooperation with Tiger Transit and LETA, with reasonable wait times, serving residential, commercial, and institutional destinations.

- T 2.3.2: Consider implementing park-and-ride services to serve the City’s large commuting population and game-day visitors.
- T 2.3.3 Consider allowing new development to provide transit subsidies in lieu of some required parking once scheduled mass transit service is established citywide.
- T 2.4: Provide a system of on- and off-street walking/biking paths that connect the places we live, work, learn and play.
 - T 2.4.1: Continue working toward full implementation of the greenway master plan. Update the master plan to reflect changes proposed in the Future Land Use Plan.
 - T 2.4.2: Improve integration between bicycle and pedestrian paths and trails. Initiate formal discussions between bicycle and pedestrian interest groups on how best to accomplish this.
 - T 2.4.3 Review opportunities for providing rails-to-trails conversions.
- See T 2.6 for additional bicycle recommendations.**
- T 2.5: Provide an effective and attractive system of city-wide signage and lighting to safely convey and direct visitors and residents to a full-range of destinations.
 - T 2.5.1: Complete a wayfinding master plan for the City.
 - T 2.5.2 Continue installation of lighted street signs at key intersections downtown and on major gateway corridors.
 - T 2.5.3 Evaluate the existing street light system to determine if improvements are needed.
- T 2.6: Provide a safe, connected network of bicycle facilities that meets the needs of bicycle commuters as well as recreational users.
 - T 2.6.1: Establish a process to review bicycle connectivity when reviewing proposed development.
 - T 2.6.2: Continue to proactively include bicycle facilities when planning transportation improvements
 - T 2.6.3: Consider requiring new mixed-use and commercial development to provide bicycle parking facilities.

T 2.6.4: Expand the existing bikeway network and improve connections between the City and AU networks.

T 2.6.5: Continue to regularly update the City Bicycle Plan.

T 3: Balance the needs of transportation and land use, recognizing the intrinsic connections between both.

T 3.1: Work to align investments in transportation infrastructure with proposed future land uses.

T 3.1.1: Continue to base future updates to the Long-Range Transportation Plan, City of Auburn Comprehensive Transportation Plan, and the Major Street Plan on growth projections and land uses as provided by the AIGM and the Future Land Use Plan (Land Use First strategy).

T 3.1.2: Review the City’s current parking regulations and consider methods for reducing excess parking in order to promote the highest and best use of land, as well as determining what uses many require additional parking.

T 3.1.3: Continue to monitor parking needs downtown and provide additional parking, including expansions to parking structures, as needed.

T 3.1.4: Provide educational opportunities for the development community and the general public concerning the significant impact of land use on transportation needs and efficiency.

T 3.1.5 Explore the possibility of establishing a railroad quiet zone through Auburn.

T 3.1.6 Consider options to adequately fund needed transportation infrastructure triggered by new development while balancing the cost burden across all new users, avoiding concentrating impacts on first-in or last-in projects.

T 3.1.7 When considering the location and use of any future parking decks in proximity to the current or proposed urban core, work to provide facilities designed to serve a variety of users.

See Land Use goals related to infill development for additional recommendations.