

***“Revised
Long Range Transportation Plan”***

Auburn, Alabama

Prepared for:

City of Auburn, Alabama

Prepared by:

Skipper Consulting, Inc.

June 2006

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INTRODUCTION

The Auburn-Opelika Metropolitan Planning Organization (MPO) adopted a 2030 Long Range Transportation Plan in January 2005 which was financially constrained. The financially constrained plan adopted by the MPO was unable to address all roadway deficiencies on the Auburn 2030 network. In an effort to develop a 2030 Roadway Plan that will eliminate all roadway deficiencies for the year 2030, the City of Auburn contracted with Skipper Consulting, Inc. to review the 2030 Long Range Transportation Plan adopted by the Auburn-Opelika MPO and to develop a roadway plan for the year 2030 that will mitigate all project roadway deficiencies without regard to financial constraints.

Sources of information used in this study included the City of Auburn, the Auburn-Opelika MPO, the Lee-Russell Council of Governments, the Alabama Department of Transportation, Day Wilburn Associates, Inc. and office files and field reconnaissance efforts of Skipper Consulting, Inc.

BACKGROUND

The City of Auburn has approximately 43,000 inhabitants and is a part of the Auburn-Opelika Urbanized Area (population 50,000 and above). Each designated urbanized area must prepare a long range transportation plan. The long-range transportation plan is a document required by the Federal Highway Administration and Federal Transit Administration in accordance with 23 CFR 450. The basis for this requirement arises from the passage of the Transportation Equity Act for the Twenty-first Century (TEA 21). This plan is a portion of the overall transportation planning function of the metropolitan planning process. The current MPO long-range transportation plan addresses a twenty-five year planning horizon, through the year 2030. However, this plan must be updated every five years.

Study Area Boundary

The Auburn-Opelika MPO includes the entire corporate limits of the cities of Auburn and Opelika, as well as the urbanized area around the two cities in Lee County. The land area of the Auburn-Opelika MPO study area is approximately 219 square miles.

Metropolitan Planning Organization Structure

Responsibility for transportation planning for the Auburn-Opelika MPO, including the long range transportation plan, rests with the staff of the Lee-Russell Council of Governments. The MPO planning and decision-making is directed by the MPO Board. The Board is comprised of seven voting members and two non-voting members. Local representation on the MPO Board includes the mayors and one councilperson from Auburn and Opelika, a Lee County Commissioner, the Lee County Commission Chair, and the Division Engineer from the Alabama Department of Transportation (ALDOT). The two exofficio members are an ALDOT transportation planning engineer and a Federal Highway Administration (FHWA) representative. The MPO Board is supported and receives recommendations from a Technical Advisory Committee (TAC), a Citizens Advisory Committee (CAC), and technical staff at LRCOG. The TAC has 23 voting members, and the CAC has 12 voting members.

TRANSPORTATION MODELING PROCESS

Travel demand models are developed to predict future traffic on the street and highway system. The models are initially developed using estimates of existing socioeconomic data to duplicate travel for the base year, which, for this study was 2000. How well the model duplicates for the base year is taken as an indication of how well it will predict future travel. If the model cannot produce traffic volumes similar to those observed on existing streets and highways, then the model is reevaluated and adjustments are made. This adjustment or calibration process continues until the model is adequately simulating base year traffic conditions. The process of building and modifying the model to simulate base year travel is called calibration. After the model is calibrated, forecasts for the future year socioeconomic data are used as input into the model to predict future travel demand.

Roadway travel demand in the study area was analyzed using a standard travel demand modeling process. The standard modeling process is defined by a four-step analysis procedure:

Step 1	Trip Generation
Step 2	Trip Distribution
Step 3	Mode Split
Step 4	Assignment

As the standard transportation demand modeling process in the State of Alabama deals only with private transportation, (i.e., not public transit), Step #3, mode split, is ignored.

The Alabama Department of Transportation has adopted a transportation demand modeling package known as TRANPLAN, developed by the Urban Analysis Group, for use in modeling in the State of Alabama. TRANPLAN performs the various steps required in the modeling process.

2030 LRTP REVIEW

The 2030 Long Range Transportation Plan adopted by the Auburn-Opelika MPO was reviewed to determine the proposed projects that were within the Auburn City Limits and to determine the roadway deficiencies that would exist with the proposed LRTP in place. The following projects are located inside the Auburn City Limits and were included in the 2030 LRTP that is financially constrained.

- Construct an interchange at Interstate 85 and Bee Hive Road;
- Widen U.S. Highway 29 from County Road 10 to Shell Toomer Parkway;
- Widen the Moore's Mill Road Bridge at Interstate 85;
- Widen Bent Creek Road at Interstate 85;
- Widen Donahue Drive from 300 feet north of Bragg Avenue to Bedell Avenue;
- Widen State Route 14 from 500 feet south of Donahue Drive to Bragg Avenue;
- Widen Samford Avenue from College Street to Moore's Mill Road;

- Improve traffic operations along Shelton Mill Road from U.S. Highway 280 to East University Boulevard;
- Improve traffic operations along Hamilton Road from Bent Creek Road to Moore's Mill Road; and
- Improve traffic operations along Moore's Mill Road from Dean Road to Ogletree Road

The following list of projects that appeared on the City of Auburn Major Street Plans was listed in the MPO's LRTP for illustrative purposes only. They were not a part of the LRTP funding source. Therefore, they can not be included as part of the financially constrained MPO LRTP.

- Construct a connector road from Mrs. James Road to Martin Luther King Drive;
- Construct a connector road from Richland Road to the proposed road between Mrs. James Road and Martin Luther King Drive;
- Construct a connector road from Donahue Drive to the proposed road between Mrs. James Road and Martin Luther King Drive;
- Construct a connector road from Mrs. James Road to the proposed road between Mrs. James Road and Martin Luther King Drive;
- Construct a connector road from Shug Jordan Parkway to Veterans Parkway;
- Construct a connector road from Ogletree Road to Sand Hill Road;
- Construct a connector road from East University Boulevard to Veterans Parkway;
- Construct a connector road from Watercross Street to East University Boulevard;
- Construct a connector road from Mrs. James Road to U.S. Highway 280;
- Construct a connector road from Macon's Mill Road to Martin Luther King Drive;

- Construct a connector road from Chadwick Road/Conway Parkway to Cox Road; and
- Extend Dean Road from East University Boulevard to U.S. Highway 280.

Figure 1 illustrates the projects that were included in the MPO's LRTP as well as the projects on the City of Auburn's Major Street Plan that were shown in the MPO LRTP for illustrative purposes. The roadways that will be over capacity in 2030 with both of these elements in place are also shown in Figure 1.

Model Review and Revisions

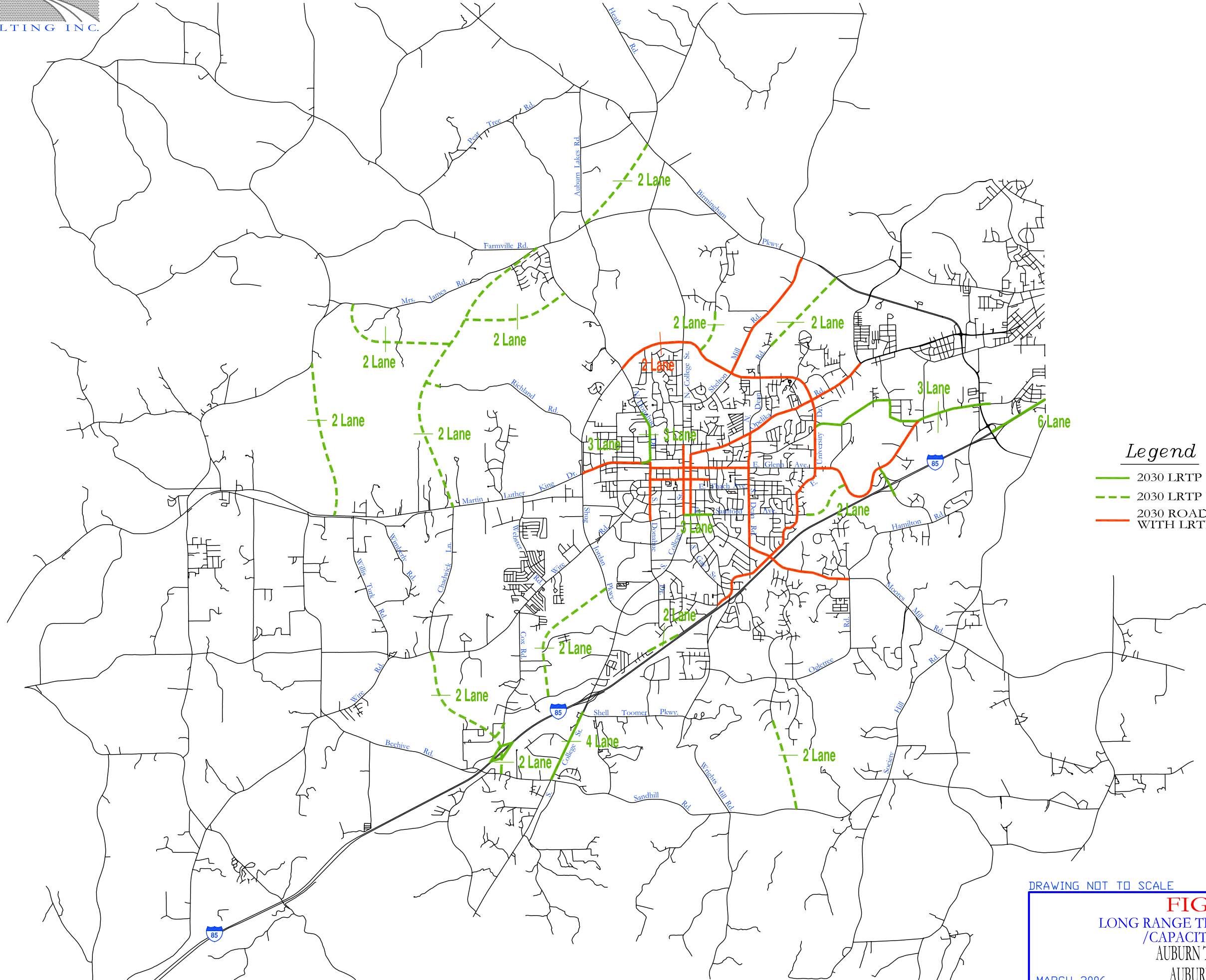
The 2030 transportation demand model was reviewed to determine if all projects identified in the MPO's long range transportation were included in the model. It was determined that the proposed interchange on Interstate 85 at Bee Hive Road was not included in the travel demand model. The 2030 travel demand model which represented the proposed long range transportation plan was revised to include the Bee Hive Road interchange.

TRANSPORTATION PLAN DEVELOPMENT

A two-step process was followed to develop a long range transportation plan for the City of Auburn that would minimize the number of roadways that would be over capacity by 2030. The steps included data review and analyses, project selection and plan review.

Data Review and Analyses

The data review process involved analyzing the results from the transportation demand model runs. The results of the transportation demand model analyses were used to identify segments of the roadway network that were expected to exceed their design capacities by the year 2030 with MPO's LRTP and the illustrated projects in place. The data was also analyzed to determine if there were any transportation deficiencies that were not identified in the transportation demand modeling process.



- Legend*
- 2030 LRTP PROJECTS (EXISTING ROUTES)
 - - - 2030 LRTP PROJECTS (NEW ROUTES)
 - 2030 ROADS OVER CAPACITY WITH LRTP BUILT

DRAWING NOT TO SCALE

FIGURE 1
LONG RANGE TRANSPORTATION PLAN
/CAPACITY DEFICIENCIES
AUBURN TRAFFIC STUDY
AUBURN, ALABAMA

Project Selection

When the process began for selecting projects for inclusion in the City of Auburn's new long range transportation plan, projects that would help to alleviate roadway capacity deficiencies were identified. Projects that were included in the LRTP and the illustrated projects from the City of Auburn's Major Street Plan that addressed only economic development activities were also identified. The projects that addressed only economic development activities were removed from consideration in the City's new long range transportation plan. The projects included in the LRTP that addressed roadway capacity deficiencies and the projects that were developed through the review and analyses process were brought forward for consideration into the new long range transportation plan. The selected projects were brought forward for consideration were analyzed using the transportation demand model to determine their effects on future traffic flow. Projects that the travel demand model identified as alleviating future roadway capacity deficiencies and facilitating future traffic flow were included in the new City of Auburn Long Range Transportation Plan.

REVISED LONG RANGE TRANSPORTATION PLAN

Using the process outlined in the Transportation Plan Development section of this report a revised long range transportation plan was developed. The goal of the revised plan was to alleviate all roadway capacity deficiencies in Auburn for the year 2030. The projects that were identified for inclusion in the revised Long Range Transportation Plan are described below:

Shug Jordan Parkway – from Donahue Drive to Opelika Road the current cross-section is adequate. 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. Construction lanes at those locations where required to ensure two through lanes in both directions (Shelton Mill Road).

Shelton Mill Road – reconstruct as three lanes from Shug Jordan Parkway 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 – 6 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.
2. College Street to Gay Street – no change from current cross section
3. Gay Street to Dean Road – construct left turn lanes required to ensure two through lanes are continuous through this section. Employ access management.
4. Dean Road to Bent Creek Road – no change from current cross section

Magnolia Avenue

1. Donahue Drive to College Street – three lane cross section with access management.
2. College Street to Ross Street – no change required.

Alabama Highway 14 – from Donahue west to Shug Jordan Parkway – three lane cross section

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

College Street

1. Bragg Avenue to Glenn Avenue – three lane cross section
2. Glenn Avenue to Magnolia Avenue – no change

Gay Street

1. Opelika Road to Glenn Avenue – three lane cross section
2. Glenn Avenue to Magnolia Avenue – three lane cross section
3. Magnolia Avenue to Samford Avenue – three lane cross section

Dean Road

1. Opelika Road to Annalue Drive – current cross section acceptable
2. Annalue Drive to Glenn Avenue – current cross section acceptable. Add a northbound right turn lane on Dean Road at Annalue Drive
3. Glenn Avenue to north of Dean Road Elementary School – current cross section acceptable
4. North of Dean Road Elementary School to South of Auburn High School – reconstruct as five lane cross section with reconfiguration of high school access points.
5. South of Auburn High School to Moore’s Mill Road - no change recommended

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

Future Analyses

Future year trips were assigned to the new roadway network using the TRANPLAN model to determine the benefit of the revised Long Range Transportation Plan. The results of the assignment indicated that the revised plan would alleviate roadway capacity deficiencies in Auburn for 2030 conditions.

CONCLUSIONS

The City of Auburn’s revised Transportation Plan has been carefully designed to accommodate existing as well as future transportation needs. With the continuing effort of the City of Auburn, it will be possible to maintain a plan, which meets the needs of the City for the next twenty-five years, while retaining the flexibility to accommodate unanticipated growth. Efforts should be made to the MPO’s LRTP to include the projects that are identified in the City of Auburn’s revised Long Range Transportation Plan.