

RESOLUTION 2008-__

A RESOLUTION ADOPTING THE 2030 LONG RANGE TRANSPORTATION PLAN FOR THE LAWTON METROPOLITAN AREA

WHEREAS, the Lawton Metropolitan Planning Organization (LMPO) is the designated Metropolitan Planning Organization and is responsible for a continuing, cooperative and comprehensive transportation planning process that results in plans and programs that consider all transportation modes and supports community development and social goals;

WHEREAS, the plans and programs will lead to the development and operation of an integrated, intermodal transportation system that facilitates the efficient, economic movement of people and goods; and

WHEREAS, the 2030 Long Range Transportation Plan complies with the requirements of United States Code, Title 23, Section 450 et. seq.; and

WHEREAS, the 2030 Long Range Transportation Plan has been developed in accordance with the stated desires and needs of residents of the Lawton Metropolitan Area as expressed in numerous public meetings; and

WHEREAS, the Lawton Metropolitan Planning Organization established a forty-five day public review and comment period at their November 8, 2007 meeting; and

WHEREAS, the Lawton Metropolitan Planning Organization held a public hearing on January 10, 2008 and adopted a Resolution approving the 2030 Long Range Transportation Plan; and

WHEREAS, all transportation projects, programs and operations receiving federal funds must be approved by the LMPO and Transportation Policy Committee.

NOW, THEREFORE, BE IT RESOLVED by the Transportation Policy Committee that the 2030 Long Range Transportation Plan for the Lawton Metropolitan Area is hereby approved.

PASSED AND APPROVED by the Transportation Policy Committee this 17th day of January, 2008.

JOHN P. PURCELL, JR. CHAIRMAN

ATTEST:

SECRETARY

Approved as to form and legality this _____ day of _____, 2007.

JOHN VINCENT, CITY ATTORNEY

RESOLUTION 2008-__

A RESOLUTION ADOPTING THE 2030 LONG RANGE TRANSPORTATION PLAN FOR THE LAWTON METROPOLITAN AREA

WHEREAS, the Lawton Metropolitan Planning Organization (LMPO) is the designated Metropolitan Planning Organization; and

WHEREAS, the LMPO is responsible for a continuing, cooperative and comprehensive transportation planning process that results in plans and programs that consider all transportation modes and supports community development and social goals;

WHEREAS, the plans and programs will lead to the development and operation of an integrated, intermodal transportation system that facilitates the efficient, economic movement of people and goods; and

WHEREAS, the 2030 Long Range Transportation Plan complies with the requirements of United States Code, Title 23, Section 450 et. seq.; and

WHEREAS, the 2030 Long Range Transportation Plan is constrained to the reasonably available or expected financial resources needed to implement, operate, and maintain all projects and recommendations in the plan; and

WHEREAS, the 2030 Long Range Transportation Plan addresses intermodal and multimodal needs with minimum expense while maintaining and improving the social, economic, and environmental qualities of the metropolitan area; and

WHEREAS, the 2030 Long Range Transportation Plan has been developed in accordance with the stated desires and needs of residents of the Lawton Metropolitan Area as expressed in numerous public meetings; and

WHEREAS, the Lawton Metropolitan Planning Organization established a forty-five day public review and comment period at their November 8, 2007 meeting.

NOW, THEREFORE, BE IT RESOLVED by the Lawton Metropolitan Planning Organization that the 2030 Long Range Transportation Plan for the Lawton Metropolitan Area is hereby approved.

PASSED AND APPROVED by the Lawton Metropolitan Planning Organization this 10th day of January, 2008.

PAT HENRY, CHAIRMAN

ATTEST:

RICHARD ROGALSKI, SECRETARY

Approved as to form and legality this _____ day of _____, 2007.

JOHN VINCENT, CITY ATTORNEY

The Lawton Metropolitan Planning Organization 2030 Long Range Transportation Plan was successfully completed thanks to the continued involvement and support of many committees and people.

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Chapter 1: Introduction

Purpose

This is the Long Range Transportation Plan (LRTP) for the Lawton Metropolitan Area Transportation Study area (LMATS), an area where metropolitan transportation planning process is carried out to meet federal regulations. This chapter is intended to give the reader a brief introduction to the transportation plan development process, federal requirements and the goals and objectives that support the development of this plan. Acronyms (Appendix A), definitions (Appendix B) and other information used for the development of this plan can be found in the Appendices at the end of the Plan.

The transportation plan sets a vision for the development the Study Area (SA) transportation for a twenty-year planning horizon. It includes goals, objectives, and analyses of area trends and planned improvement projects throughout the SA. The LRTP includes a study of roadway, bicycle, pedestrian, and transit improvements to be incorporated within the SA. For federal funding eligibility, a transportation project must be included in the LRTP.

Federal Regulations

Under Federal law, any urbanized area (as defined by the Census Bureau) exceeding a population of 50,000 people, must have an established Metropolitan Planning Organization (MPO). In 2003, the City Planning Commission (CPC) was designated as the Lawton Metropolitan Planning Organization (LMPO) by the Governor of Oklahoma (Map 1 at the end of Chapter 1). As the LMPO, it is tasked with the primary role and responsibility of ensuring that the transportation planning process is being carried out according to Federal and State regulations. The planning and program management functions are administered and carried out by the City of Lawton's Planning Division, which provides staff, technical and clerical support, and is also designated as the LMPO Secretary.

Two committees vital to the transportation planning process: the Transportation Technical Committee (TTC) and the Transportation Policy Committee (TPC). Coordination of technical transportation issues is one function of the TTC responsibilities. Other functions of this committee include:

1. Presenting transportation planning items to various agencies;
2. Developing the Transportation Improvement Program (TIP);
3. Developing transportation plans and studies;
4. Providing recommendations concerning transportation planning issues to the TPC; and
5. Assisting staff in the development of the Unified Planning Work Program (UPWP).



The TPC is the final approval authority for transportation planning and reviews and approves the overall work program. The TPC also adopts the transportation plan and the transportation improvement program. Membership includes representatives from the City, Lawton Fort Sill Regional Airport, Comanche County Board of Commissioners, the Oklahoma Department of Transportation (ODOT),

Federal Highway Administration (FHWA), Federal Transit Administration (FTA), and Fort Sill. The functions of the TPC include the following:

1. Develop and maintain a comprehensive transportation planning program in conformance with Section 134 and 49 U.S.C.;
2. Develop and approve all policy procedures for transportation planning for the transportation SA;
3. Review and approve the Long Range Transportation Plan (LRTP) and the (TIP);
4. Ensure that established Public Involvement Procedures are carried out appropriately for all major transportation activities;
5. Establish and revise the metropolitan area boundary as required by law;
6. Prepare certifications; and
7. Review and approve UPWP.

Federal regulations establish various requirements MPOs must address during the transportation planning process: The Safe, Accountable, Flexible, Efficient Transportation Equity Act – A Legacy for Users (SAFETEA-LU) outlines the issues that need to be considered in developing the Plan. The new law authorizes federal surface transportation programs through 2009. SAFETEA-LU essentially maintains the programs and funding formulas established by previous transportation bills. The new law extends the five current core programs and adds a new core program. The six programs are interstate maintenance (IM), national highway system (NHS), surface transportation program (STP), bridge and bridge maintenance, congestion mitigation and air quality (CMAQ), and the new highway safety improvement program (HSIP).

However, with the adoption of SAFETEA-LU several changes were made that affect the transportation planning process including:

1. Update the TIP at least every four years;
2. Include investments in pedestrian and bicycle facilities in the published annual list of projects;
3. Update the LRTP in non-attainment and maintenance areas every four years;
4. Consult with other state planning agencies, particularly about relevant habitat and environmental plans;
5. Promote a planning process that increases consistency between transportation improvements and local planned growth patterns; and
6. Ensure that the public participation in the development of LRTPs includes identifying users of bike and pedestrian facilities and expanded provisions related to visualization techniques and the internet.

SAFETEA-LU sets out eight broad areas to be considered in the transportation planning process. These areas recognize that the growing importance of operating and managing the transportation system is the focal point for transportation planning. This list of factors was expanded since the previous federal transportation bill, so that safety and security are now separate planning factors. In formulating the long-range Plan, the MPO must consider the eight planning factors as such factors relate to the twenty-year planning horizon.

The eight planning factors are:

1. Support the economic vitality of the United States, the States, and metropolitan areas, 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.
4. Increase accessibility and mobility options available to people and for freight.
5. Protect and enhance the environment, promote energy conservation, and improve quality of life.
6. Enhance integration and connectivity of the transportation system, across and between modes throughout the state, for people and freight.
7. Promote the efficient system management and operation.
8. Emphasize the preservation of the existing transportation system.

In addition to the eight planning factors, described above, the following are multiple requirements, as specified in federal law and regulation for MPOs:

1. Identify transportation facilities (including major roadways, transit, multi-modal and Intermodal facilities, and Intermodal connectors) that function as an integrated system, giving emphasis to facilities that serve important national, state, and regional transportation functions. [23 U.S.C. 134(i)(2)(A)]
2. Include discussion of the types of potential environmental mitigation activities and potential areas to carry out these activities, including activities that may have the greatest potential to restore and maintain the environmental functions affected by the plan. This discussion shall be developed in consultation with federal, state, tribal, wildlife, land management and regulatory agencies. [23 U.S.C. 134(i)(2)(B)(I)]
3. Include a financial plan that demonstrates how the adopted transportation plan can be implemented and indicates public and private resources that can be made available to carry out the plan. [23 U.S.C. 134(i)(2)(C)]
4. Include operational and management strategies to improve the performance of existing transportation facilities to relieve vehicular congestion and maximize the safety and mobility of people and goods. [23 U.S.C. 134(i)(2)(D)]
5. Include capital investment and other strategies to preserve the existing and future system and provide for multimodal capacity increases based on regional priorities and needs. [23 U.S.C. 134(i)(2)(E)]
6. Include proposed transportation and transit enhancement activities. [23 U.S.C. 134(i)(2)(F)]
7. Employ visualization techniques to describe the plan. These can include maps, charts, graphs, and diagrams, and techniques such as scenario planning. [23 U.S.C.(i)(5)(C)(ii)]
8. Identify the projected transportation demand of persons and goods in the metropolitan area over the period of the plan. [23 C.F.R. 450.322(b)(1)]
9. Identify adopted congestion management strategies including, as appropriate, traffic

- operations, ride sharing, pedestrian and bicycle facilities, alternative work schedules, freight movement options, high occupancy vehicle treatments, telecommuting, and public transportation improvements (including regulatory, pricing, management and operational options), that demonstrate a systematic approach in addressing current and future transportation demand. (23 C.F.R.450.322(b)(2))
10. Identify pedestrian walkway and bicycle transportation facilities in accordance with 23 U.S.C. 217(g). [23 C.F.R. 450.322(b)(3)]
 11. Describe proposed improvements in sufficient detail to develop cost estimates. [23 C.F.R. 450.322(b)(6)].
 12. Reflect a multimodal evaluation of the transportation, socioeconomic, environmental, and financial impact of the overall plan, including all ongoing major transportation investments. [23 C.F.R. 450.322(b)(7)]
 13. Reflect, to the extent that they exist, consideration of and coordination with: the area's comprehensive long range land use plan and metropolitan development objectives; national, state, and local housing goals and strategies, community development and employment plans and strategies, and environmental resource plans; local, state and national goals and objectives such as linking low income households with employment opportunities; and the area's overall social, economic, environmental, and energy conservation goals and objectives. [23 C.F.R. 450.322(b)(9)].

Plan Preparation

The LRTP is updated every five years to reflect existing conditions, transportation needs, and anticipated changes as illustrated in Figure 1. This plan discusses issues facing the SA concerning limited funding, increased population growth and policies/strategies that need to be addressed to ensure the achievement of the proposed system changes. The LRTP specifically looks at major urban transportation planning concerns such as: environmental/air quality, complete access to transportation, alternative transportation modes, the impact of land development on the transportation system, highway traffic congestion, and maintenance of the existing infrastructure. This plan recognizes that we cannot always expand the network or build our way out of congestion by adding new lanes. Alternatives to expanding the network capacity without adding new lanes include operational and management strategies.

Assumptions

This LRTP is based upon the assumptions listed below.

Assumption one: The downtown area will be redeveloped into a mixed use environment with greater emphasis on a walkable environment. The mixed use will increase density and thus create a positive atmosphere for public transportation.

Assumption two: Population growth is forecasted to occur in the southwest, northeast and southeast quadrant of the SA.

Assumption three: Alternative modes of transportation will be developed and existing alternative modes will be expanded.

Assumption four: Most of the SA population and land area is within the City of Lawton. The assumption is made that the number of persons per occupied dwelling unit for the year 2030 will be 2.61, the same as the City of Lawton.

Assumption five: The SA will be developed as a walkable community and developed following practices identified in the manual “Context Sensitive Solutions in Designing Major Urban Thoroughfares for a Walkable Community”.

Assumption six: The LRTP is based on a performance standard of a volume/capacity ratio of 0.90 or Level of Service (LOS) E.

Assumption seven: The revenue projections used for developing the LRTP’s financial plan are based on historic trends and assumptions that future funding will increase.

The development of the 2030 LRTP began with the review of the existing conditions and changes since the adoption of the 2025 LRTP. A travel demand model was used to evaluate existing conditions and existing and committed conditions. An analysis of this data identified areas where LOS exceeds or will exceed LOS F by 2030. A cost benefit ratio was done on the projects. Comments received from various committees, city staff, and the public, led to the development of nonconstruction projects to reduce congestion. An analysis of historical and existing financial conditions was completed and a list of capital needs was developed.

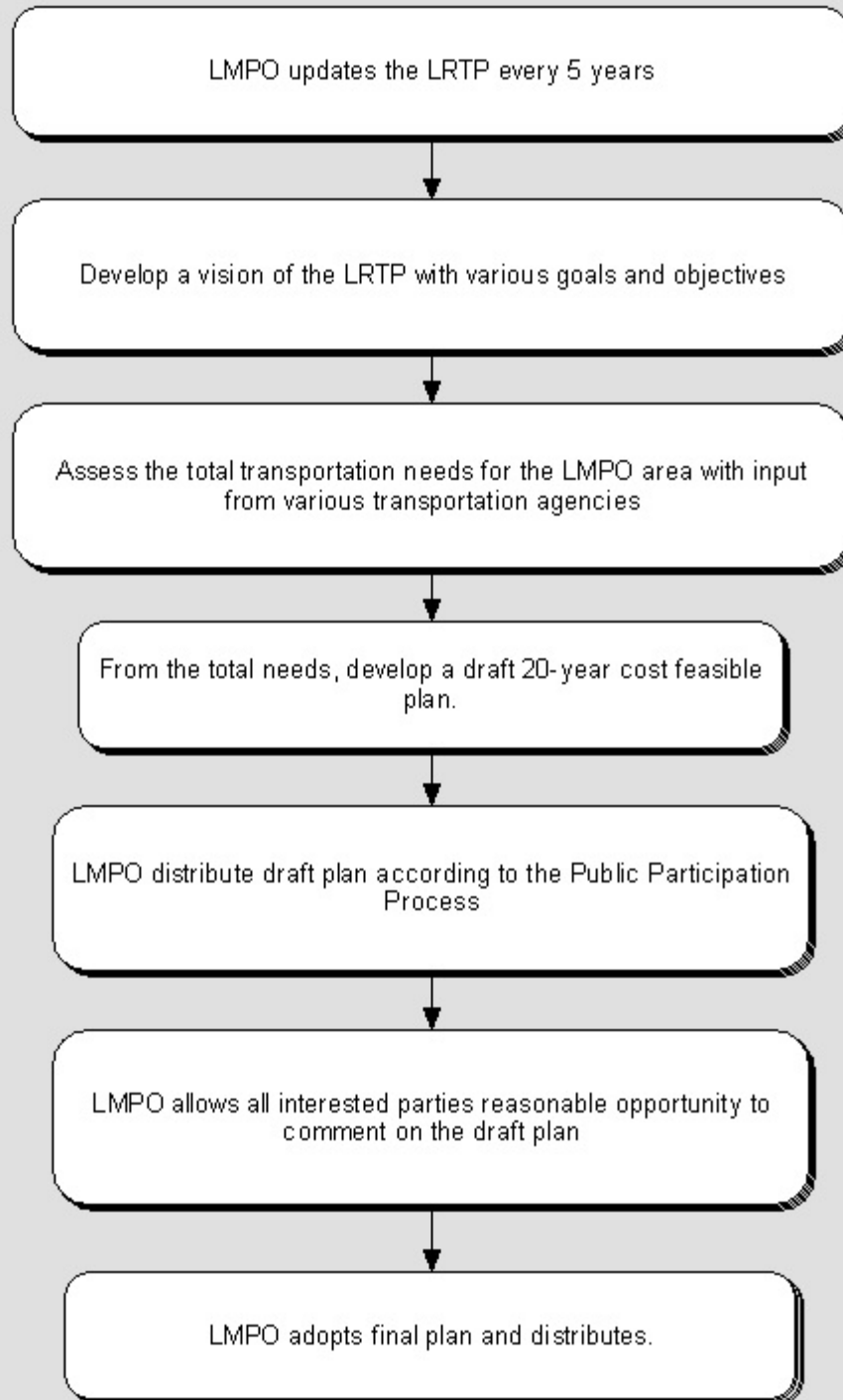
The development of this plan was a collaborative effort between the following organizations: LMPO, City of Lawton, Fort Sill, Lawton Chamber of Commerce and Industry, Lawton-Fort Sill Regional Airport, Lawton Area Transit System, Association of South Central Oklahoma Governments, Local Native American Tribes, ODOT, and FHWA.

Approval Process

The public involvement process for the 2030 Long Range Transportation Plan includes the following major activities:

- ✓ Created a master database of organizations for the transportation planning process.
- ✓ Conducted boarding and deboarding surveys on three of the five transit routes.
- ✓ Conducted a freight survey.
- ✓ Held five public meetings in 2004 in coordination with the Lawton City Council.
- ✓ Participated in a Visioning Meeting in November 2005.
- ✓ In January 2007, the LMPO adopted the Public Participation Process (PPP). Appendix C provides information on the public involvement process.
- ✓ Prior to the adoption of the 2030 LRTP the LMPO, TTC, and TPC held seven public meetings.

LRTP Development Process



Goals and Objectives

The overall mission of the LRTP is to foster a transportation system that enhances the quality of life in the SA. This plan envisions a multi-modal transportation system that seeks to preserve and enhance the current transportation system while improving safety, access, mobility, and livability in the SA. This section outlines the plan's goals and objectives. Goals identify key subjects, while objectives provide the means to achieve the stated goals. The goals of this transportation plan are mobility, multi-modal, livability, safety and security, system management, coordination, land use planning, and environmental impacts. Chapter 5 identifies implementation strategies for this plan. The goals and objectives for the 2030 LRTP are listed below:

Goal One: Access and Mobility

Develop and maintain a multi-modal transportation system that provides for the effective movement of people and goods.

Objectives:

- A. Establish standards for the connection of streets, pedestrian and bicycle facilities within individual subdivisions of land, between adjacent land areas, in relation to existing and planned facilities, that allows for efficient movement of vehicles, pedestrians and goods and services.
- B. Create context-based options for street designs that support multiple users and multiple modes of transportation within the rights-of-way, and through which the design of streets may transition along their length to better support anticipated and adjacent land uses.
- C. Identify freight routes that provide direct connections to the interstate system.
- D. Designate hazardous material transport routes.
- E. Design intersections on freight routes to accommodate large vehicles.
- F. Develop a multi-modal transportation system that includes appropriate public transit, bicycle, and pedestrian facilities.
- G. Require connectivity (automobile, pedestrian and bicycle) among new and existing developments to promote reduction in trip length.
- H. Design transportation facilities that consider the needs of individuals with disabilities or restricted mobility.
- I. Develop and maintain a continuous network of attractive public facilities, including multi-use trails, bicycle routes, bicycle lanes, and walkways.
- J. Encourage adequate bicycle parking facilities for employee, customer, and visitors at businesses, libraries, schools, transit stops, and other public destinations.

Goal Two: Livability

Develop and maintain a transportation system that promotes safe, healthy, and attractive neighborhoods.

Objectives:

- A. When modifying or rebuilding the road network: beautify streetscapes, restore roadways to a human scale, and improve the character and livability of the area through which they pass.
- B. Set up traffic-calming measures where appropriate, with special attention to safety needs, to

control vehicle movements and speeds on neighborhood streets when supported by local residents.

- C. Employ road design guidelines that encourage compliance with posted speed limits and support a walkable community design.
- D. Develop visual and sound barriers between roads classified as arterials and homes.
- E. Enable bicycle and pedestrian circulation within and between neighborhoods.
- F. Develop design guidelines for streetscapes, including landscaping, street trees, pedestrian-scale lighting, transit stops, curbing, and other elements of the streetscape.

Goal Three: Safety and Security

Strive to develop and maintain a safe and secure transportation system.

Objectives:

- A. Rank safety and security in the achievement of every goal for both motorized and non-motorized modes of transportation.
- B. Increase the number of interconnections within the transportation network to provide multiple possible routes for emergencies. For example, a home on a road that intersects two other roads offers two exits, while a dead-end offers only one.
- C. Regularly monitor motor vehicle accidents to analyze high accident locations, and develop mitigation measures. Consider existing safety-related problems—such as speeding, following too close, failure to yield, stop sign noncompliance, etc.
- D. Identify appropriate mitigation techniques to reduce the number and severity of accidents.
- E. Promote safe frontage access by limiting curb cuts onto collectors and arterials.
- F. Where possible, physically separate bicycle and pedestrian paths from roads carrying large volumes of traffic.
- G. Evaluate alternatives to reduce traffic delays associated with signalized intersections and stop-controlled intersections.
- H. Identify priority corridors where access management techniques can be carried out to improve traffic flow and have positive safety benefits.
- I. Encourage the Lawton Area Transit System (LATS) to incorporate safety and security measures into the operating system.
- J. Develop street crossings to be safe, attractive and easy to navigate.
- K. Improve traffic safety through engineering, education and enforcement.

Goal Four: Transportation System Management

Preserve and maintain the transportation system.

Objectives:

- A. Regularly evaluate the condition of the transportation network to allocate the City's and County's resources efficiently.
- B. Preserve current and planned right-of-way for the transportation system.
- C. Provide sufficient roadway capacity to maintain a Level of Service of D on streets and at intersections.
- D. Identify and preserve right-of-way, including abandoned rail lines, for future bicycle and multi use

trails.

Goal Five: Growth and Development

Ensure that future development minimizes adverse impacts on the current and future transportation system by promoting development patterns that reduce the need of automobiles and encourages the use of alternate modes of transportation.

Objectives:

- A. Consider and mitigate the impact of development on the transportation network.
- B. Ensure transportation decisions are consistent with and support the goals of the Land Use Plan.
- C. Plan and design future transportation facilities to be physically and aesthetically compatible with the character of the SA.
- D. Relate the scale and concentration of development to what can be supported by the transportation system.
- E. Promote connectivity by developing an interconnected network of low-speed and low -volume streets.
- F. Direct development toward areas already served by multiple modes of transportation, or where such facilities can be provided.

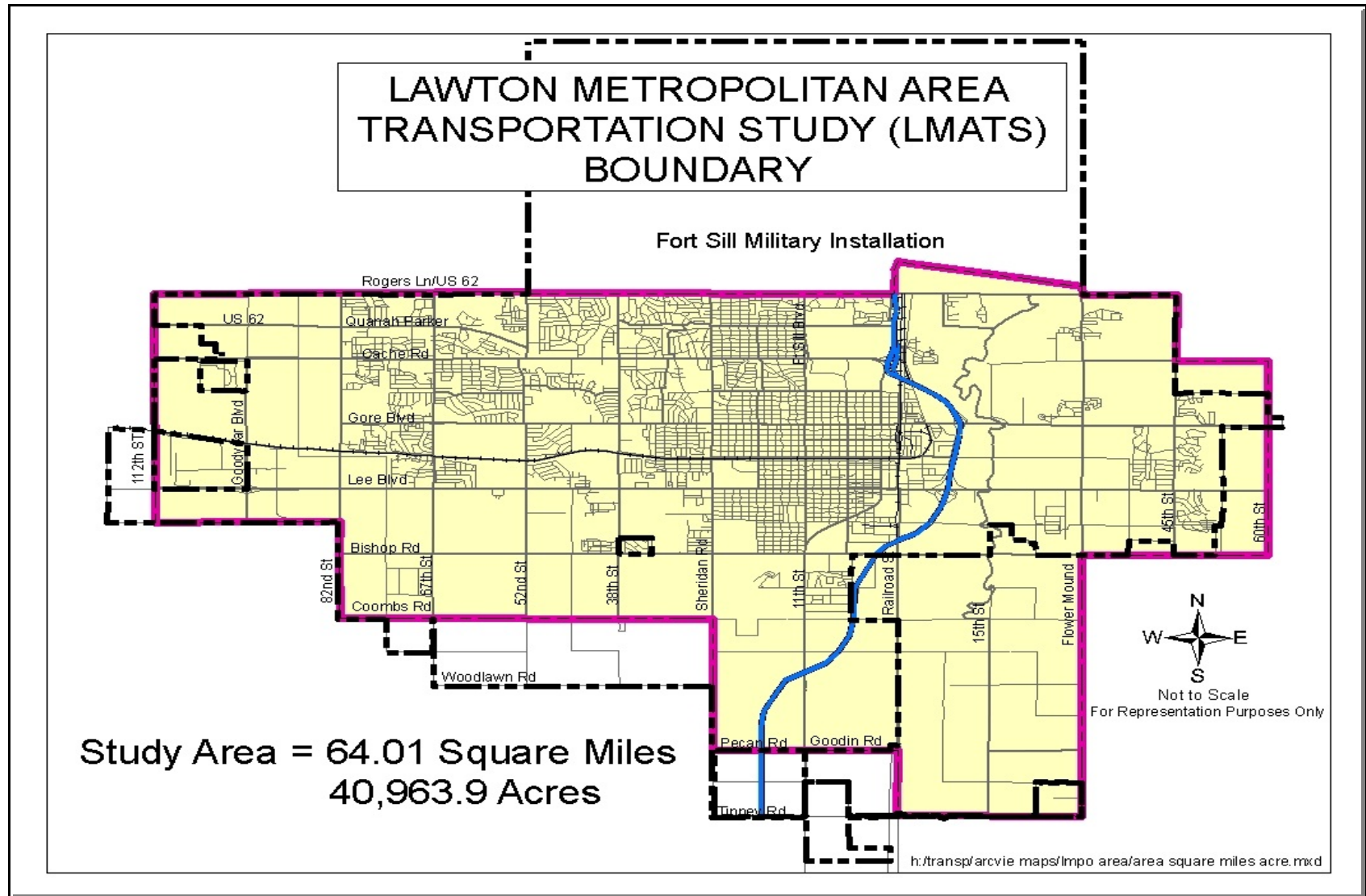
Goal Six: Environment

Protect the environment and the significant natural, agricultural, scenic, and historic resources.

Objectives:

- A. Reduce transportation impacts on water quality, wetlands, and wildlife habitats.
- B. Reduce dependency on single-occupancy vehicles by supporting transit and car pool/vanpool/rideshare initiatives and working to make bicycle and pedestrian travel an attractive alternative to motor vehicles.
- C. Reduce adverse noise impacts related to the transportation system.
- D. Evaluate potential impacts of transportation on environmentally sensitive areas, parks and recreational facilities, and historical and archaeological sites.
- E. Discourage disruption to cohesive neighborhoods.
- F. Preserve adequate right-of-way for future transportation infrastructures to reduce the negative impacts, including potential displacement to area residents and businesses.
- G. Protect neighborhoods from excessive through traffic and travel speeds.
- H. Maintain an open transportation planning process that encourages involvement and participation from all communities, businesses, individuals and stakeholders.
- I. Incorporate Federal Environmental Justice principles into planning activities to ensure maximum representation for traditionally under-represented and minority populations.
- J. Provide a cost-effective transportation system where the public and development industry pay respective share of the system's costs proportional to their demands on the system.

Map 1: SA Boundary



Chapter 2: Existing Conditions

Base Year 2000

The transportation system and land development patterns have a tremendous influence on each other in terms of highway capacity, traffic flow, traffic distribution, transit use and bicycle and pedestrian facilities. Because of this, the Comprehensive Land Use Plan was used in the identification and planning for improvements to the network. The evaluation of the future transportation system is based on understanding the relationship between economic activity, demographic trends, land use patterns, and travel behavior. Requirements for the movement of people and goods are influenced by a myriad of interrelated socioeconomic factors such as population, housing, employment, land use patterns and economic growth.

The personal automobile has had a significant effect on the economy, as well as the land use patterns of the SA. Today, this sprawling land use pattern contributes to traffic congestion and air pollution. This community can look at other urban area's experiences that illustrate that construction of wider roads is not always the solution to alleviate congestion.

In *"Transportation and Land Development"*, written by Virgil G. Stover and Frank J. Koepke, the authors identify a term "The Transportation-Land Use Cycle." The widening of a road, in an effort to alleviate traffic congestion, could increase congestion. For example, a road is constructed that modifies the accessibility of an area. This in turn makes the land more valuable and commercial development occurs. The new development is a destination and traffic volumes increase on the new road. In many urban areas the new development will be of the strip-development type with multiple closely spaced driveways. The numerous access points exacerbate the problem with vehicle turning movements into and out of the multiple driveways. The result is reduced speeds, traffic delays, accidents, and a lower level of service. The cycle is completed when the increased traffic demand requires further roadway improvements. The cycle can be broken if travel demand patterns are changed through land use and development regulations.



Land Use and Economy

The SA includes all of the City of Lawton (excluding Fort Sill) and portions of Comanche County. In 2000, the SA accounted for approximately 70% of the area's population, with 81,429 people. Population growth in the SA historically has been slow. The City of Lawton's large population gain between 1990 and 2000 can be attributed to the annexation of Fort Sill. Table 1 provides a summary of the population and growth of the area as compared with Comanche County. The SA accounts for approximately 70% of the population and 76% of the employment in the County. The 2000 population for SA was determined to be 81,429. Table 1 points out that between 1980 and 2000, the population of the SA decreased by approximately 3.7%, whereas the population of the County increased by approximately 19.6%. The decrease of population in the SA can be attributed to a reduction in the SA boundary and

migration. Map 2 on the following page illustrates the 2000 population distribution by Traffic Analysis Zones (TAZ).

Table 1: Population and Growth Summary

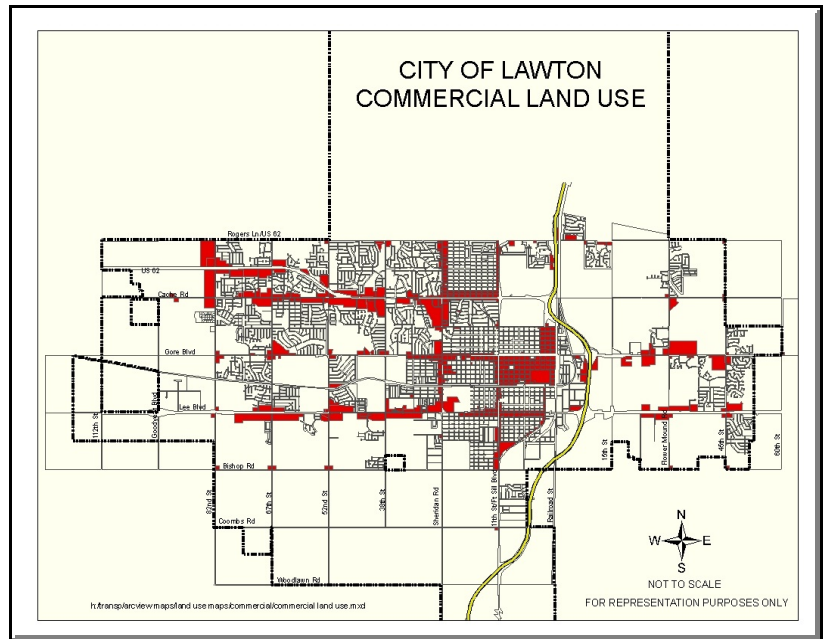
	1980	1990	2000	1980 - 2000 DIFFERENCE
SA	84,584	81,528	81,429	-3.73%*
City of Lawton	80,054	80,561	92,757	15.87%
Comanche County	96,134	111,486	114,996	19.62%
Fort Sill	15,924	12,107	11,731	-26.33%

Source: U.S. Census Bureau.

*Note: The SA planning area boundary changed in 2000.

Development Patterns Within SA

Growth and development patterns within SA generally reflect low density developments, built a considerable distance from commercial and employment centers. Beginning in 2005, there has been an increase in the construction of multi-family apartments. The commercial growth pattern has occurred haphazardly and the strip mall is the predominant shopping facility in the SA. This has caused stress on the network due to lack of adopted development policies for the orderly growth. The commercial areas as illustrated in the figure to the right are primarily in the downtown area and along the major arterial roadways with Cache Road, Sheridan Road and Lee Boulevard being the roads with a large number of commercial establishments. Industrial growth has occurred to the west of SW 52nd Street, to the south of Lee Boulevard between SW 11th Street and SW Sheridan Road, and SW 11th Street south of the Lawton Fort Sill Regional Airport. Freight traffic along the corridors providing access to the commercial and industrial areas continues to increase, causing conflict with automobile drivers and other large vehicles. The Downtown Revitalization Plan shows that the downtown area is planned for mixed use development with higher density residential and high technology office and retail.



Transportation

The SA consists of a network of highways and streets, ranging from local streets serving the needs of a neighborhood to multi-lane highways serving regional and national trip purposes. This network is the primary means by which people and goods are transported within and through southwest Oklahoma. Appendix D provides additional information on the network. An overview of the characteristics of the transportation system is given in Table 2, while a more detailed description of the many components of the transportation system is found after the table below.

Table 2: Existing Transportation System

NETWORK / SERVICES	EXISTING CONDITIONS
Sidewalks & Bikepaths	<ul style="list-style-type: none"> • There are no established bicycle paths or trails. • New construction in R-3 (Multi-Family Dwelling District), R-4 (High Density Apartment District), P-O (Professional Office District), P-F (Public Facilities District), C-1 (Local Commercial District), C-2 (Planned Neighborhood Shopping Center District), C-3 (Planned Community Shopping Center District), C-4 (Tourist Commercial District), C-5 (General Commercial District), CBD (Central Business District) zoning districts must include the installation of sidewalks. • New construction of schools and churches in any zoning district (except industrial districts) are required to install surfaced walkways along public street frontages. • Many sidewalks are not maintained and there are limited number of curb ramps. • There are limited pedestrian facilities linking the elementary schools, residential areas, employment centers and recreation areas.
Public Transit	<ul style="list-style-type: none"> • The City Transit Trust contracts with a management company to operate and manage the Lawton Area Transit System. • The fleet consists of 14 low floor buses and one paratransit vehicle. • Service is provided Monday-Friday 6:00 a.m. - 6:00 p.m. and on Saturdays 9:00 a.m. - 9:00 p.m. • There are five routes. Four routes have two buses operating clockwise/counter clockwise on a 55 minute schedule. One route operates with two buses in a radial manner with 55 minute schedule. • Fixed route ridership for the month of December 2005 totaled 23,487. December 2005 ridership was up by 15.01% over December 2004. Ridership through the end of December 2005 totaled 146,201. Ridership year to date was up 20.4% over last year at this point. • Paratransit ridership for the month of December 2005 totaled 507. This represents an increase of 22% over December 2004. • Bicycle racks are installed on the 14 low floor buses.

NETWORK / SERVICES	EXISTING CONDITIONS
Road System	<ul style="list-style-type: none"> • The Oklahoma Department of Transportation (ODOT) maintains US 62, SH 7 and Interstate 44. • The City of Lawton maintains the public dedicated streets within the city limits that are not maintained by ODOT. • The Comanche County Board of Commissioners is responsible for maintenance of rural roads within SA not under the jurisdiction of ODOT or the City of Lawton.
Parking	<ul style="list-style-type: none"> • The City Parking Authority (City Council) owns the parking in the downtown.
Freight	<ul style="list-style-type: none"> • There is not a designated freight route within SA, which leads to conflict between large freight vehicles and automobiles.
Rail Services	<ul style="list-style-type: none"> • There is no passenger rail service.
Inter-City Bus	<ul style="list-style-type: none"> • Bus terminal located at 3rd & SW B Avenue.
Airport	<ul style="list-style-type: none"> • Lawton-Fort Sill Regional Airport is operated by the Airport Authority.

Source: Planning Division, City of Lawton

Federal-Aid Highways

The LMA is served by several highways: Interstate 44, State Highway 7 (SH7) and US Highway 62 (US 62). Interstate 44 is the major north-south transportation corridor and SH7 and US 62 provides major east-west routes.

State Highways

The State Highway (SH) System in Oklahoma represents roads maintained and controlled by ODOT. Existing state highways in the SA include the following:

- State Highway 7 – SH 7 extends from its interchange with I-44 east. This facility is access controlled by ODOT.
- U. S. Highway 62 - US 62 extends from its interchange with I-44 west on Rogers Lane and is a limited access freeway. This facility separates the City from the Fort Sill Military Installation.

Local Streets

The local network consists of more than 640 miles of roads. The City maintains the roads within the corporate limits excluding the Interstate system, U.S. or State Highways, which are maintained by ODOT. The County maintains the roads outside the City's corporate limits.

Design Standards

Historically, the arterials and collectors constructed in the SA have been five lane facilities with a center turn lane. However, as a mechanism to preserve the existing and future network and its' capacity this Plan recommends that four-lane roads with a divided landscape median should be considered as the prevailing road concept on proposed widening or reconstruction. The ITE Proposed Recommended Practice, *Context Sensitive Solutions (CSS) in Designing Major Urban Thoroughfares for Walkable*

Communities, provides guidance on applying the principles of CSS in transportation planning and in the design of roadway improvement projects in places where community objectives support walkable communities. Appendix I provides illustrations for recommended street design standards for CSS.

Public Transportation

Pedestrian friendly cities are supportive of transit. Transit users begin their trips by walking. The success of a transit system will depend in part, on the quality of a supporting pedestrian system. Transit planners generally regard the bus stop service area as approximately a 1/4 mile walking-distance radius from a bus stop, a five minute walk. Ensuring that the bus stop service area is convenient, safe and attractive for pedestrians can be the major force for transit travel.

This section focuses on the Lawton Area Transit System (LATS) service including both fixed route bus service, as well as paratransit service. In other parts of the country, such as densely developed cities in the northeastern United States, the development pattern facilitates easy and efficient public transit service. This is not the situation in Lawton, where the development pattern reflects the wide reliance on the automobile which is typical of development after World War II. Nevertheless, a coordinated public transit service, developed and implemented in conjunction with a land use plan that encourages its utilization, can offer an attractive alternative to the private automobile which can conserve energy, reduce traffic congestion, air pollution, and most important, to offer mobility to the transportation disadvantaged segments of society -- the young, the elderly, the disabled, and the economically disadvantaged.

Lawton Area Transit System (LATS) is the fixed route transit and complementary paratransit services available to this community. LATS buses provide service to Ft. Sill, including the Post Main Exchange, Commissary, and Reynolds Army Community Hospital. All routes run through the Downtown Transfer Center, on the north side of the 400 Block of "B" Avenue. LATS serves all of the major shopping areas and movie theaters in town. All of the Lawton Public Schools junior high and high schools are on a LATS route. LATS operates Monday - Friday, 6 a.m. to 6 p.m., and Saturday, 9:00 a.m. to 9:00 p.m. A network of five fixed routes with 10 buses operating on a pulse/clockwise/counter clockwise manner serves the community. LATS makes flag stops for passengers standing at any street corner along the Fixed Routes. Bus passes, transfers or correct fares are collected in the fare box. Reduced fares are available for: Medicare patients, elderly, and students. On air alert days adult full fares are reduced to \$0.50.



LATS's equipment and facilities are in good shape. The fixed route fleet consists of fourteen (14) Aero Access low floor buses. These vehicles are equipped with a factory-installed wheelchair accessible ramp. The paratransit system has one thirty-foot low floor vehicle. The administrative and maintenance facility is within blocks of the City of Lawton's Public Works Yard where fueling and washing of the buses occurs. (Appendix E provides additional information on the public transportation system.)

Bicycle & Pedestrian Facilities

It should be assumed that people will walk, and plans should be made to accommodate pedestrians. Where and when people are not walking is often because they are discouraged from doing so due to insufficient facilities. In 1992, the City of Lawton adopted an ordinance which required the installation of sidewalks in new residential subdivisions as an element of the building permit process. Sidewalks in the City are required with the construction of new streets when federal funding is involved. The City Code requires those abutting property owners to maintain the sidewalks. Sidewalk design should be in accordance with standards identified in the Bicycle and Pedestrian Plan.

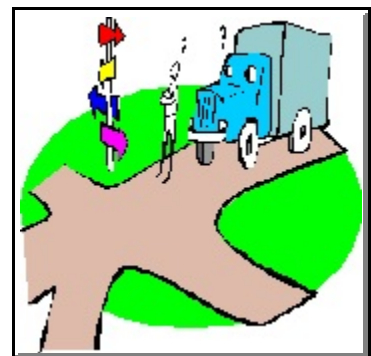


In 2006, the City of Lawton adopted an ordinance requiring all applicants for building permits to construct new buildings in the following zones: R-3 (Multi-Family Dwelling District), R-4 (High Density Apartment District), P-O (Professional Office District), P-F (Public Facilities District), C-1 (Local Commercial District), C-2 (Planned Neighborhood Shopping Center District), C-3 (Planned Community Shopping Center District), C-4 (Tourist Commercial District), C-5 (General Commercial District), CBD (Central Business District) to install sidewalks along public street frontages. This ordinance also requires the installation of sidewalks with the construction of churches and schools in any zoning district except industrial districts.

There are no bicycle lanes/routes within the SA. Historically, City and County streets throughout the SA were designed and built with little regard for modes of transportation other than the automobile. It was not until the adoption of ISTEA in 1990 that pedestrian/bicycle facilities were required to be constructed on streets using federal highway funds. The LMPO hired Kimley-Horn Associates Inc., in April 2007 to develop a Bicycle and Pedestrian Plan for the SA. This Plan, once completed, will be adopted by the appropriate agencies in accordance with the LMPO's Public Participation Process and will be considered an element of the 2030 LRTP. See Appendix F for additional bicycle and pedestrian information. The County development regulations do not require sidewalks.

Freight Facilities

SAFETEA-LU identifies eight areas to be included in the planning process. Two of these areas specifically address freight transportation: "increase the accessibility and mobility options available to people and for freight" and "enhance the integration and connectivity of the transportation system, across and between modes for people and freight." More efficient freight flow will make the SA an attractive location for the freight industry and its many associated businesses, i.e., warehousing, transportation, retailing, etc. FHWA has determined that if traffic congestion is reduced by 10%, the demand for trucking will increase by 1%. Designated freight routes would reduce freight congestion. (Appendix G Freight provides additional information.)



Airport

The Lawton-Fort Sill Regional Airport is centrally located within the SA and operates as an intermodal

(Ground Air) facility for the area's freight. Facilities and infrastructure exist to serve truck to plane transfers of freight and vice-versa. According to the Federal Aviation Administration (FAA) the airport is classified as a Commercial Airport because it exceeds two thousand five hundred passengers per year. The Airport has one major carrier. The Airport Authority has hired a consultant to update the Airport Master Plan.

Railroad

Freight movement by rail in the SA is primarily used by the industries in the west industrial park. There are approximately 13.75 miles of open rail track in the region. The rail infrastructure is the responsibility of the Stillwater Central Railroad.

Environment

The SA has many of the same environmental concerns as other similarly-sized metropolitan areas. The City's land development and transportation policies that impact environmental issues will be addressed prior to development. SAFETEA-LU Section 6008. Section 109(c) (2) of title 23, USC includes consideration of identified documents and materials that define the core principles of context sensitive solutions (CSS). The basic concept is that a proposed transportation project must be planned not only for its physical aspects as a facility serving specific transportation objectives, but also for its effects on the aesthetic, social, economic and environmental values, needs, constraints and opportunities in a larger community setting. FHWA defines CSS as a collaborative, interdisciplinary, approach that involves all stakeholders in developing a transportation facility that complements its physical setting and preserves scenic, aesthetic, and historic and environmental resources while maintaining safety and mobility. Appendix H Environment provides additional information.

Outdoor Air Quality

The LMPO working with The Oklahoma Department of Environmental Quality (ODEQ), ensures that the metropolitan transportation system contributes to improving air quality. Currently Comanche County is designated as an "attainment area." If the EPA designates Comanche County as nonattainment, the impact will be felt by all towns and cities within the County. The impact to the transportation planning process would result in the LMPO having to show that the LRTP and the Transportation Improvement Program (TIP) "conform" to the air pollution reduction goals. To conform, the nonattainment area cannot have an increase in on-road mobile sources generated Volatile Organic Compounds (VOC) or Nitrogen Oxide (NOx) emissions over air pollutant loads shown in previous emission inventories, even if the area experiences significant increase in vehicle miles traveled. The area must also show that transportation emissions continue to decline throughout the long-range transportation planning period, and that the area is meeting the State Improvement Plan commitments it has made.



Local Outdoor Air Quality Data

The Oklahoma Department of Environmental Quality (ODEQ) operates an air quality-monitoring station in Lawton. The monitor was at the USPHS Indian Hospital - east of I-44 until the end of the 2006 season when it was relocated by ODEQ south of town on city property. This station continuously

samples the air for Comanche County for ground level ozone. Data gathered at this station is used by the EPA and ODEQ to report on air quality in the LMA. Table 3 shows the 2005 8-hour average for ground-level ozone readings taken at sites throughout Oklahoma. Lawton exceeded the NAAQS once for ground level ozone during the 2005 ground-level ozone season. The ODEQ monitors weather conditions and informs the City of Lawton Planning Division of air alert days.

The trend of ground-level ozone transport from Dallas-Fort Worth through Oklahoma is expected to continue, considering that prevailing winds during the ground-level ozone season are predominantly from the south. The transport of pollution by prevailing wind patterns is one factor that is out of the control of the LMA. However, reducing transport across state boundaries of NO_x (one of the precursors to ground-level ozone pollution) is being actively pursued by the EPA. The Texas Natural Resource Conservation Commission (TNRCC) is addressing air pollutant transport in its SIP.



The LMPO must focus on the parts of the problem within our control. On alert days, the community is urged to do their part to reduce emissions for the day. The Clean Air Lawton program encourages citizens to take personal responsibility for reducing air pollution and helping our area avoid expensive penalties and economic development consequences for violating federal air quality standards. The City of Lawton and Comanche County address air quality issues by encouraging behavior that reduces transportation-related air pollution and using best management practices to provide system improvements that reduce congestion. The City and County can also address air quality issues by:

- establishing land use patterns that potentially reduce the number and length of trips and that promotes the use of alternative, less polluting, transportation modes,
- promoting the planting of vegetation to absorb air pollutants,
- purchasing fuel efficient vehicles, and
- upgrading old equipment.

Water Quality

Transportation also has a significant impact on water quality. Development of transportation facilities must include an erosion and sediment control plan. Runoff from roads, bridges, parking lots and other impervious surfaces can lead to changes in water chemistry that degrade habitat quality and ultimately pollute drinking water. The City of Lawton has adopted a stormwater ordinance.

Table 3: 2005 Highest 8 Hour Averages Through October 2005

Site			1 st	2 nd	3 rd	4 th	02-04 Avg*	03-05 Avg*
02 4 th	03 4 th	04 4 th	(date)	(date)	(date)	(date)	4 th Highs	4 th Highs
Terral (670)			0.093	0.093	0.080	0.080		
(new site)			22-Jun	9-Sep	6-Sep	10-Sep		
Burneyville (300)			0.090	0.090	0.086	0.085		
(new site)			2-Jun	23-Jun	29-Jun	6-May		
Tulsa West (144)			0.096	0.086	0.079	0.076		0.076
	0.081	0.071	29-Jul	1-Sep	31-Aug	20-Jun		
Tulsa East (178)			0.092	0.084	0.082	0.081		0.079
0.080	0.084	0.073	21-Jun	15-Jun	6-Aug	29-Jul		
Tulsa Central (1127)			0.091	0.083	0.083	0.082	0.076	0.076
0.080	0.080	0.068	1-Sep	20-Jun	21-Jun	29-Jul		
Tulsa North (137)			0.090	0.087	0.087	0.083	0.079	0.079
0.083	0.083	0.071	8-Aug	22-Jun	2-Sep	20-Jun		
Tulsa South (174)			0.085	0.077	0.073	0.072	0.079	0.076
0.082	0.086	0.071	29-Jul	14-Jul	30-Aug	20-May		
Edmond (037)			0.085	0.083	0.080	0.078	0.079	0.079
0.078	0.082	0.077	2-Jun	23-Jun	29-Jul	1-Aug		
OKC (033)			0.089	0.083	0.079	0.077	0.078	0.077
0.080	0.080	0.076	29-Jul	22-Jun	23-Jun	20-Jun		
Moore (049)			0.081	0.079	0.078	0.076	0.073	0.074
0.075	0.076	0.070	13-Jul	22-Jun	2-Jun	9-Apr		
Goldsby (073)			0.088	0.078	0.076	0.073	0.074	0.072
0.078	0.077	0.068	13-Jul	29-Jul	30-Aug	23-Jun		
Choctaw (096)			0.082	0.080	0.076	0.075	0.074	0.075
0.078	0.070	0.072	23-Jun	22-Jun	9-Apr	17-May		
Yukon (101)			0.094	0.093	0.081	0.079	0.076	0.076
0.081	0.078	0.071	21-Jun	29-Jul	20-May	20-Jun		
Lawton (647)			0.085	0.081	0.079	0.079	0.076	0.077
0.076	0.078	0.075	22-Jun	29-Jul	23-Jun	9-Sep		
McAlester (415)			0.075	0.073	0.072	0.071	0.073	0.071
0.076	0.076	0.068	28-Jun	9-Apr	10-Sep	17-Apr		
Seiling (860)			0.087	0.079	0.077	0.076	0.071	0.073
0.069	0.077	0.067	22-Jun	23-Jun	21-Jun	2-Sep		

*0.085 or greater indicates exceedance of National Ambient Air Quality Standards

Source: ODEQ

Environmental Justice

On February 11, 1994, President Clinton issued Executive Order 12898 concerning Environmental Justice. The intent of environmental justice (EJ) is to improve transportation opportunities, planning and decision-making by including all public groups in the planning process and in the implementation of transportation services and facilities. Specifically, MPOs are expected to enhance public participation in their area by eliminating participation barriers and engaging minority and low-income populations in making transportation decisions. The LMPO receives federal monies through the FHWA and FTA and the City Transit Trust receives FTA funds and as a result is subject to the same federal requirement. There are three guiding principles to EJ, as illustrated in the box below.



Environmental Justice Populations

- To avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority populations and low-income populations.
- To ensure the full and fair participation by all potentially affected communities in the transportation decision-making process.
- To prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority and low-income populations.

The LMPO's analysis groups include minorities, persons in poverty, persons with disabilities, persons more than 65, persons of Hispanic origin and households without automobiles. The LMPO identified EJ target areas by examining the concentration of the EJ target population at the Traffic Analysis Zone (TAZ) level using GIS. The LMPO conducted various technical analyses for the 2030 LRTP to address EJ, recognizing that no single measurement can determine whether disproportionate adverse impacts exist or not. Specifically, the LMPO analyzed accessibility to selected major facilities, and transit services.

The purpose of these analyses was to decide if target areas are adversely affected by the Plan, compared to non-target areas, for various population groups. This analysis show that, overall, targeted population groups have better accessibility compared with the general population, which leads to the conclusion that there is no adverse impacts regarding targeted populations. Appendix H provides additional information.

Chapter 3: Future Conditions

Land Use and Demographic Forecasts

Socioeconomic data is an important element of the travel demand modeling process. The need for travel is directly connected to demographic data. Necessary data consists of base year information and forecasts population, occupied dwelling units, retail and non-retail employment, and number of automobiles per household. The LMPO employed a modeling consultant to prepare the historical employment, population, occupied dwelling units and number of automobiles and to prepare their respective forecasts by TAZ, for the year 2030.

Future growth in land use in the SA will change travel demand. In addition, growth in travel demands outside the area will also affect the traffic volume. The land use data used by the travel demand model is probably the most rapidly changing element with occupied-dwelling units and retail and non-retail employment being the most important factor for modeling. Appendix D provides additional information on the development of the model and demographic forecast.

Population Forecast

Typically during the update of the plan, staff relies on the Oklahoma Department of Commerce (ODOC) to provide population forecast. Due to more current information the basis for this Plan's data was obtained from Dr. Thomas, Great Plains Technology Center and the REMI (Regional Economic Models, Inc) Simulation Group's analysis of the Base Realignment and Closure (BRAC) data released April 21, 2006. Table 4 on the following page provides the data developed by the Transportation Modeling Consultant for the 2030 population projection for the SA. The following assumptions were used by the Modeling Consultant to develop the SA 2030 projections.

1. The REMI model predicts for Comanche County a 39,631 (34%) population increase from the 2000 population of 114,996 to a 2030 population of 154,627.
2. Fort Sill estimates by 2011 a population of 20,005 will be living on base, for a gain of 8,643 (76%) from a 2000 population of 11,357. Based on this estimate Fort Sill's share of the County's population will increase from 10% to 13%.
3. Based primarily on the Fort Sill increase in population, the City of Lawton's share of the County's population will increase from 81% in 2000 to 84% in 2030 increasing population from 92,757 in 2000 to an estimated 130,000 in 2030, for a 37,214 population gain.
4. Since the SA is approximately the same as the Lawton city limits (excluding Fort Sill) the Fort Sill 2030 population of 20,000 was subtracted from the Lawton City 2030 population of 130,000 to obtain the SA 2030 population of 110,000.
5. This is a gain of 28,571 (35%) population by the year 2030.
6. The SA proportion of the County's population will remain at 71% in 2030 the same as in 2000.
7. The balance of the County's population is predicted to increase 2,388 (11%) and it's proportion of the County's population is expected to drop from 19% in 2000 to 16% in 2030 due to the distance from Fort Sill and Lawton city area.

Table 4: SA 2030 Population Projection

	US CENSUS 2000 ⁽¹⁾	2030 PROJECTION	CHANGE 2000-2030	% CHANGE	% OF TOTAL 2000	% OF TOTAL 2030
Comanche County ⁽²⁾	114,996	154,627	39,631	34%	100%	100%
Lawton City ⁽³⁾	92,757	130,000	37,214	40%	81%	84%
Fort Sill ⁽⁴⁾	11,357	20,000	8,643	76%	10%	13%
SA ⁽⁵⁾	81,429	110,000	28,571	35%	71%	71%
Balance of Population	22,239	24,627	2,388	11%	19%	16%

Source: Art Pendergraft, Transportation Modeling Consultant

NOTE: Population estimates below the County level were made by the Transportation Modeling Consultant.

⁽¹⁾ 2000 Census Data

⁽²⁾ REMI projection based on Fort Sill population increase of 10,445.

⁽³⁾ Includes Lawton and Fort Sill population.

⁽⁴⁾ Fort Sill estimate of 20,005 population living on base by 2011 rounded to 20,000.

⁽⁵⁾ SA is approximately the same as the Lawton City Limits excluding Fort Sill.

The 2000 and 2030 SA population, employment, number of occupied dwelling units and the number of automobiles is shown in Table 5. From this table it is easy to see that due to BRAC; the population, housing, employment and automobiles are forecast to increase 35% by 2030. Map 3 illustrates the distribution of the SA 2030 forecast population by TAZ. The areas with the largest population gain are located:

- I. south of Lee Blvd. between SW 52nd and SW 82nd Streets,
- II. north of East Cache Rd. between NE 45th Street and NE 60th Streets, and
- III. west of NW 82nd Street between Cache Road and Quanah Parker Trailway.

Table 5: SA 2000 Census and 2030 Forecast

CATEGORY	CENSUS 2000	2030 FORECAST	CHANGE 2000-2030	PERCENT CHANGE
SA Population	81,429	110,000	28,571	35.09%
SA Employment	34,848	47,000	12,152	34.80%
SA Occupied Dwelling Unit	30,485	41,000	10,515	34.49%
SA Automobiles	48,824	66,000	17,176	35.18%
Fort Sill Population	11,357	20,000	8,643	76.10%
Lawton City Population	92,757	130,000	37,243	40.15%

Source: Art Pendergraft, Transportation Modeling Consultant

Employment

SA employment is projected to increase from 34,848 in 2000 to 47,000 in 2030 for a growth of 12,152 or 35%. This estimate is based on the REMI (Regional Economic Models, Inc.) run on April 21, 2006 by Dr. Thomas of Great Plains Technology Center and the Bureau of Labor Statistics data for 2000 through 2004 projected to 2030. As with 2030 population, the 2030 projected employment was distributed among the 95 TAZ based on present employment, available land use and local knowledge of probable employment growth locations.

Occupied Dwelling Unit

The 2030 occupied dwelling unit count is projected to increase from 30,485 to 41,000, an increase of 34.49%.

Vehicle Ownership

For Comanche County the 2000 total vehicles available were 67,643 or 1.70 vehicles per occupied dwelling unit. For the City of Lawton the total vehicles available were 50,994 or 1.61 vehicles per occupied dwelling unit. By the year 2030 vehicle ownership in the SA will increase by 35.18%. This is an increase of 17,176 vehicles from 2000.

Growth Patterns

Logically, growth in population and employment levels in the SA will lead to growth in travel needs for all modes. To help in forecasting, a transportation model was developed to simulate future travel patterns. The model incorporates the population and employment forecasts discussed previously.

Over the life of the Plan the fastest growth within the SA is expected to occur south of Lee Boulevard and west of SW 38th Street. Maps 3 and 4 illustrate the distribution of the 2030 projected population and employment distribution by TAZ. By 2030, the highest density residential areas within the SA will continue to be in and adjacent to the downtown, near medical facilities, Cameron University and major employment centers.

Programmed Transportation Projects

Streets

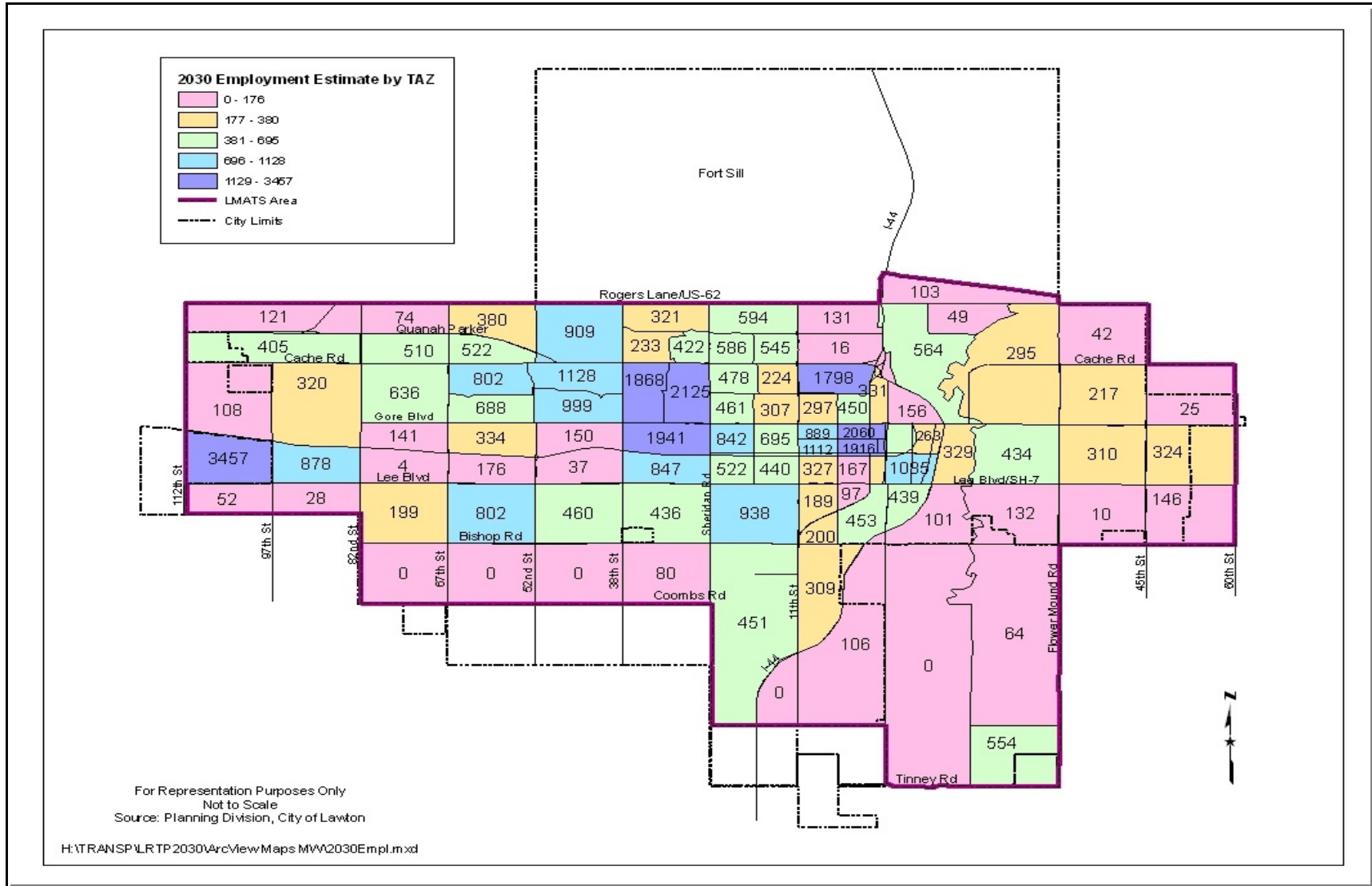
Several roadway projects, now in various stages of design and construction, will provide additional capacity to meet the need due to the dramatic growth projected for the SA. The planned roadway projects are funded either by the City of Lawton and/or ODOT. Additional roadway improvements, such as expansion of the local/collector street system, will continue to be accomplished by developers through the development process.

Public Transportation

The expansion of public transportation service continues to be a high priority. Appendix E provides additional information.



Map 4: SA 2030 Employment Distribution by TAZ



Bicycle & Pedestrian Facilities

SAFETEA-LU calls for an increased planning effort for the design and construction of bicycle-pedestrian facilities. This Plan recognizes the importance of bicycle-pedestrian facilities as a vital component of the area's network. The LMPO retained Kimley-Horn Associates, Inc. in fiscal year 2006-2007 to develop a Bicycle and Pedestrian Plan for the SA. This plan is anticipated to be adopted in the spring of 2008 and when adopted will be the guiding document for the development of bicycle and pedestrian facilities. Appendix F provides additional information for bicycle and pedestrian facilities.

Freight

Various national and state-level projections for freight volumes – by truck, air and rail – call for continuing increases that will affect the interstate system, airport, and future rail service. To help predict freight movement over the next twenty years, FHWA developed the Freight Analysis Framework (FAF). FHWA estimates that over the next twenty years freight volume nationally will increase 75% with 80% of the freight to be carried by truck. Table 6 reveals the current and projected growth of truck traffic for SA. This increase in truck volume will have a significant impact on the interstate system, and on arterials and collectors. Appendix G provides additional information on freight.

Based on the dramatic increase in freight as forecasted by FHWA, it is suggested that 82nd Street from Lee Boulevard to SH 36 be included as a potential freight route in the Plan. Construction of the freight route will require coordination and cooperation between multiple local, state and federal agencies. Map 7 illustrates the proposed freight route. The proposed regional freight route will provide a loop for trucks to service the industrial area along 97th Street without having to use local streets thereby reducing congestion. The southern portion of the proposed truck route leading to SH 36 is outside the SA.

Table 6: SA Truck Freight Current and Projected (Percent of Annual Daily Traffic)

TRUCK ROUTE	PERCENT OF TRUCKS 2000	PROJECTED PERCENT OF TRUCKS 2030
Rogers Ln.	8.71%	12.77%
I-44	12.19%	15.68%
Cache Rd.	4.30%	5.22%
Lee Blvd.	12.99%	15.60%

Source: Art Pendergraft, Transportation Modeling Consultant

Operational and Management Strategies

Congestion Management

Given the limited financial resources available to increase road capacity by building additional lanes, it is imperative that the transportation system (and all of its modes) is operated and managed in an efficient and effective way. A Congestion Management Plan is a tool to increase the efficient use of available street capacity, reduce vehicle emissions and maximize financial resources. It can help in identifying needed improvements to reduce traffic congestion



along arterial corridors and at intersections throughout the SA. Appendix J Operational and Management Strategies provides additional information.

Traffic Safety Management

Traffic safety is a major concern of the community. The consequences of motor vehicle crashes are not only felt by the motorists involved in collisions, but also to the agencies tasked with responding to crashes. To reduce accidents, a Traffic Safety Management plan should be developed. Appendix K provides information on traffic safety and security.

Intelligent Transportation Systems

In 2004, ODOT completed a *Statewide ITS Strategic Deployment Plan* to guide the future implementation of ITS technologies for transportation projects. The process used in the plan development follows the requirements and direction of the National ITS Architecture (NIA). See Appendix L for local ITS projects.

2030 Transportation System Network

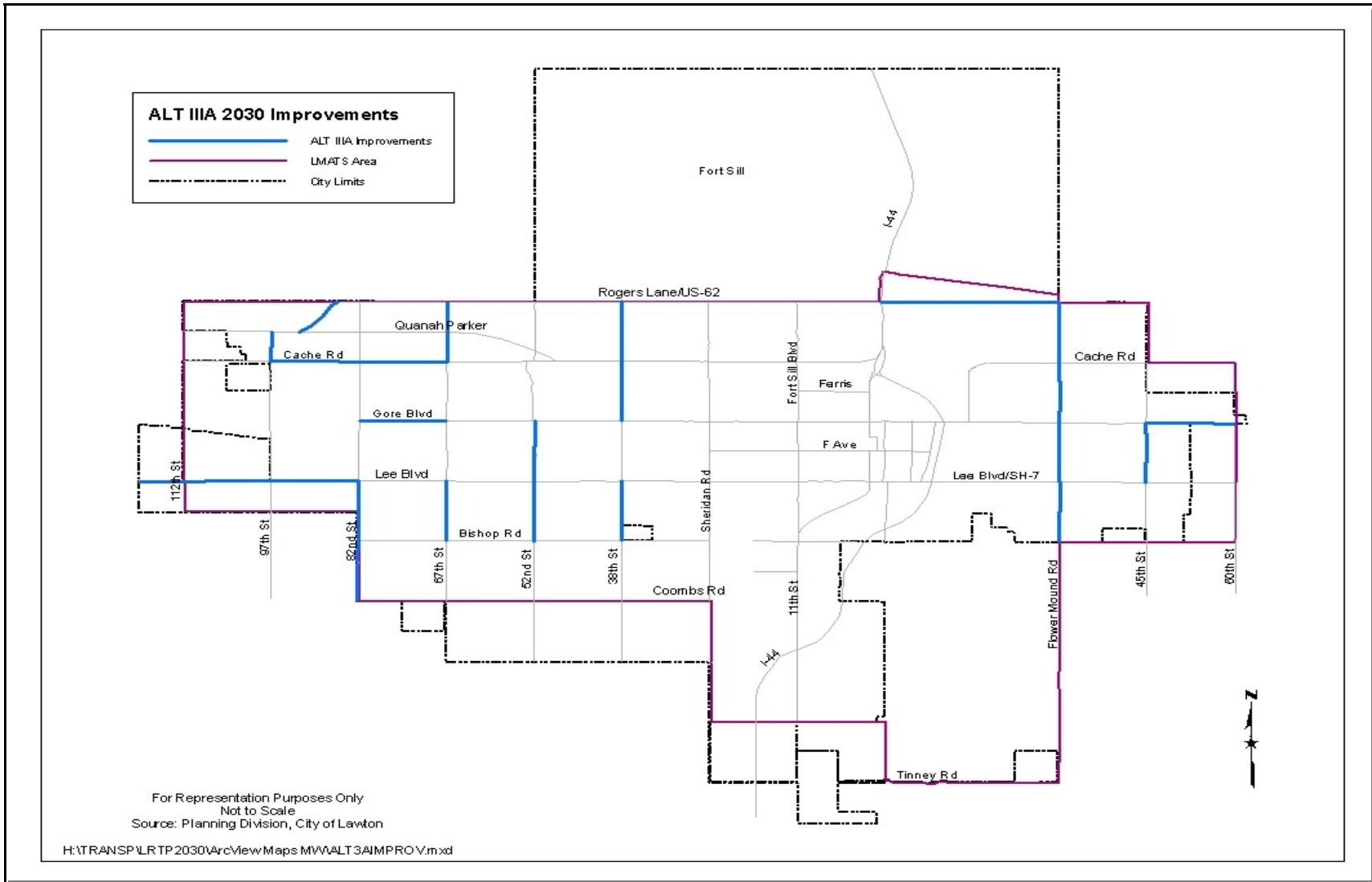
The local transportation system consists predominantly of streets, limited pedestrian facilities and public transportation. Motorists, transit vehicles, truck drivers, pedestrians, and cyclists all compete for a place on the road network. Enhancing the network by providing bicycle facilities and increasing the number of pedestrian facilities will provide an alternative to the car without expanding the road network.

Traffic volumes identify existing travel patterns and assist in determining the transportation system's ability to serve area travel demands. The identification of existing travel patterns and travel demands is based upon available daily traffic volume counts provided by ODOT and the LMPO. Historic traffic volume data is shown in Appendix D. It should again be mentioned that for this update of the LRTP, it was assumed that the transportation network for planning purposes was modeled at Level of Service (LOS) E or a volume/capacity ratio of 0.90. The LMPO used a computerized travel demand program for the update of its LRTP. Appendix D provides additional information on the development and evaluation of the analyzed street and highway network alternates.

Alternate III-A - Recommended 2030 Transportation Network

Alternate III-A consists of changes to Alternate III recommended by the LMPO and Transportation Policy Committee. The changes include both major construction improvements and non-construction improvements for congestion mitigation. Table 7 lists the projects with an inflation factor of 2.5% per year and Map 5 illustrates the project locations. The inflation rate of 2.5% a year agrees with the Consumer Price Index from 1996 through 2006. This is a 75% increase of estimated costs over the base year. The project costs for years 2000 through 2005 are actual costs and inflation rate is not included in the total projects cost. The Alternate III-A system is projected to have 11.68 miles of streets at LOS "D" by 2030, illustrated in Map 6.

Map 5: Alternate III-A Project Location



Map 6: Alternate III-A 2030 Level of Service

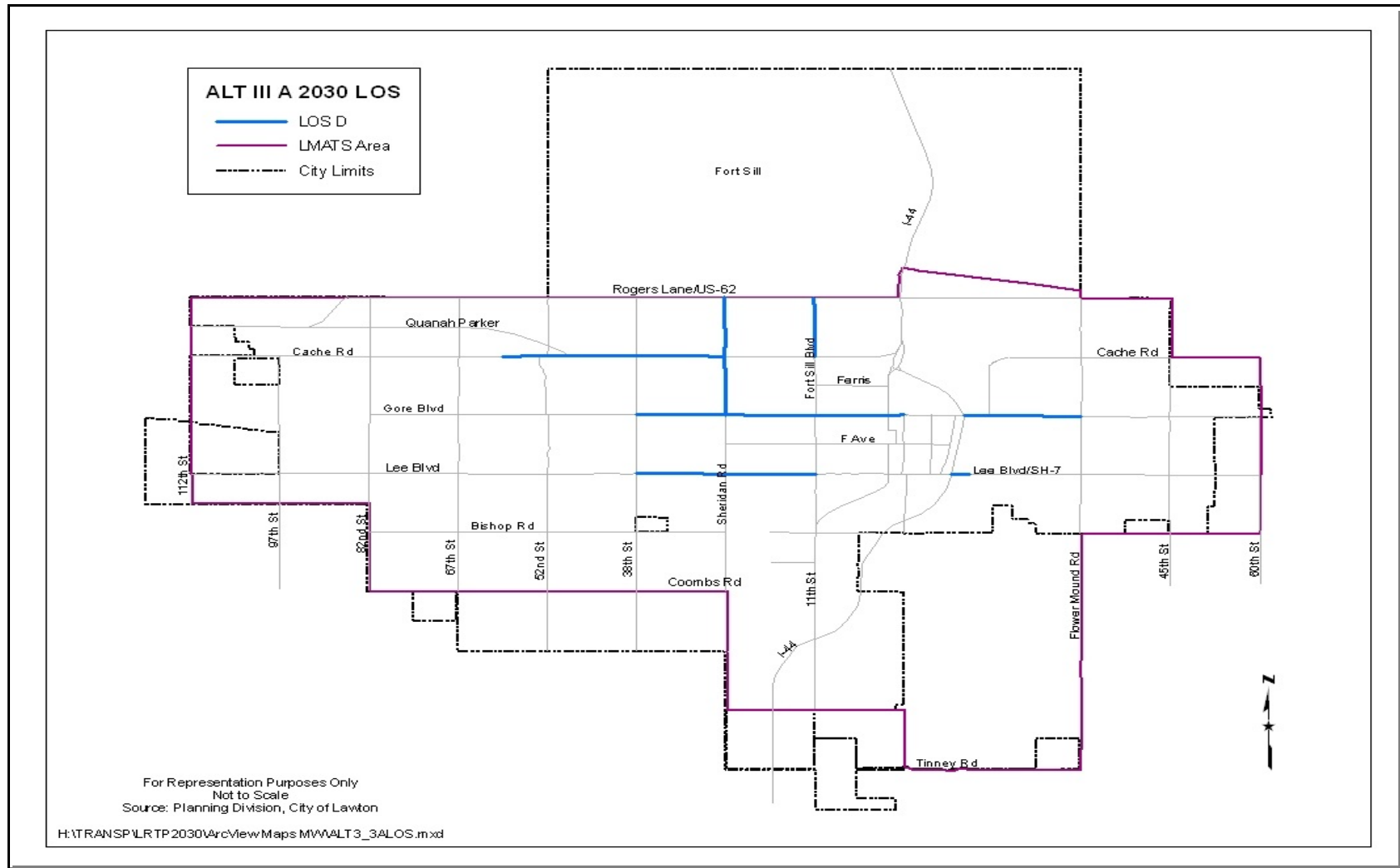


Table 7: Alternate III-A Projects

PROJECT YEARS	PROJECT	FEDERAL FUNDING	STATE FUNDING	LOCAL FUNDING	ESTIMATED TOTAL COST
<i>2000-2005</i>					
Arterial Streets	Expansion joints	\$0	\$0	\$640,000	\$640,000
Flower Mound Rd. (Bishop Rd. - Lee Blvd.)	Reconstruction	\$0	\$0	\$119,720	\$119,720
NW Lindy Ave.	Reconstruction	\$0	\$0	\$364,439	\$364,439
SW 38 th St. (Lee Blvd.)		\$0	\$0	\$33,000	\$33,000
SW Wendy Dr.		\$0	\$0	\$195,924	\$195,924
NW 53 rd St. (Gore Blvd. - Cache Rd.)	Overlay	\$0	\$0	\$68,484	\$68,484
SW Crystal Hill (SW 75 th St.)	Reconstruction	\$0	\$0	\$385,132	\$385,132
NW 67 th St. (Quanah Parker Tr. - Rogers Ln.)		\$0	\$0	\$228,921	\$228,921
NW 38 th (Cache Rd. - Rogers Ln.)	Reconstruct from 2 lanes to 5 lanes	\$2,932,557	\$0	\$1,567,443	\$4,500,000
NE Flower Mound Rd. (Gore Blvd. - Rogers Ln.)	Reconstruct from 2 lanes to 5 lanes	\$5,600,000	\$0	\$1,400,000	\$7,000,000
SE Flower Mound Rd. (Gore Blvd. - Lee Blvd.)	Reconstruct from 2 lanes to 5 lane	\$2,477,513	\$0	\$1,022,487	\$3,500,000
Rogers Ln. "S" Curve	Construct 2 lanes connecting US 62 to Rogers Ln.	\$4,000,000	\$0	\$0	\$4,000,000

LMPO 2030 LRTP

PROJECT YEARS	PROJECT	FEDERAL FUNDING	STATE FUNDING	LOCAL FUNDING	ESTIMATED TOTAL COST
TE Intermodal Railroad Museum	Construct transportation museum	\$400,000	\$0	\$100,000	\$500,000
TE 2 nd St. Enhancement Phase I	Streetscape beautification from Ferris Ave. to Columbia Ave.	\$400,000	\$0	\$100,000	\$500,000
Congestion Mitigation Air Quality		\$300,000	\$0	\$75,000	\$375,000
Maintenance		\$3,250,000	\$5,333,000	\$10,000,000	\$18,583,000
Transit		\$3,619,195	\$0	\$2,332,016	\$5,951,211
	Total 2000-2005	\$22,979,265	\$5,333,000	\$18,632,566	\$46,944,831
2006-2010					
W. Gore Blvd. (67 th St. - 82 nd St.)	Reconstruct from 2 lanes to 4 lanes divided	\$3,206,250	\$0	\$1,425,000	\$4,631,250
NW 38 th (Gore Blvd. - Cache Rd.)	Reconstruct from 4 lanes to 5 lanes	\$0	\$0	5,343,750	\$5,343,750
Lee Blvd. (82 nd St. west 6 miles)	Resurface	\$0	\$676,875	\$225,625	\$902,500
I-44 (11 th St. - Gore Blvd.)	New shoulders and patching	\$6,194,580	\$0	\$0	\$6,194,580
I-44 (pob 1.6 miles N of SH 7 then N 2.6 miles)	Right-of-way and utilities	\$1,705,450	\$0	\$0	\$1,705,450
Rogers Ln. US 62 (I-44 - 52 nd St.)		\$178,075	\$0	\$0	\$175,075

LMPO 2030 LRTP

PROJECT YEARS	PROJECT	FEDERAL FUNDING	STATE FUNDING	LOCAL FUNDING	ESTIMATED TOTAL COST
Cache Rd. / I-44		\$47,500	\$0	\$0	\$47,500
SE 45th St. (Lee Blvd.)	Signalization/Intersection Modification	\$237,500	\$0	\$321,083	\$558,583
I-44	Bridge maintenance	\$418,677	\$0	\$0	\$418,677
NW 67 th St. (Cache Rd. - Rogers Ln.)	Reconstruct from 2 lanes to 5 lanes	\$3,300,000	\$0	\$825,000	\$4,125,000
Rogers Ln / I-44 / Gate 2	Reconstruction of interchange	\$3,022,672	\$0	\$0	\$3,022,672
Bicycle / Pedestrian Facilities	Design, Construction, Education	\$2,375,000	\$0	\$593,750	\$2,968,750
Intersection Modification / Signalization	Design, Construction	\$950,000	\$0	\$237,500	\$1,187,500
Maintenance		\$3,859,375	\$6,332,938	\$11,875,000	\$22,067,313
Transit		\$6,071,701	\$397,100	\$3,945,618	\$10,414,419
Enhancement		\$950,000	\$0	\$237,500	\$1,187,500
	Total 2006-2010	\$32,516,780	\$7,406,913	\$25,029,826	\$64,953,519
2011-2015					
Cache Rd. (82 nd - 97 th)	Reconstruct from 2 lanes to 5 lanes	\$4,725,000	\$0	\$1,181,250	\$5,906,250
Cache Rd. (67 th - 82 nd)	Reconstruct from 4 lanes to 5 lanes	\$3,150,000	\$0	\$787,500	\$3,937,500
SW 52 nd St. (Bishop Rd. - Lee Blvd.)	Reconstruct from 2 lanes to 5 lanes	\$4,725,000	\$0	\$1,181,250	\$5,906,250

LMPO 2030 LRTP

PROJECT YEARS	PROJECT	FEDERAL FUNDING	STATE FUNDING	LOCAL FUNDING	ESTIMATED TOTAL COST
SW 52 nd St. (Lee Blvd. - Gore Blvd.)	Reconstruct from 2 lanes to 5 lanes	\$4,725,000	\$0	\$1,181,250	\$5,906,250
Bicycle / Pedestrian Facilities	Design, Construction, Education	\$3,117,187	\$0	\$779,297	\$3,896,484
Intersection Modification / Signalization	Design, Construction	\$1,246,875	\$0	\$311,719	\$1,558,594
Maintenance		\$4,265,625	\$6,999,563	\$13,125,000	\$24,390,188
Transit		\$6,367,233	\$548,625	\$4,123,173	\$11,039,031
Enhancement		\$1,050,000	\$0	\$262,500	\$1,312,500
	Total 2011-2015	\$33,371,920	\$7,548,188	\$22,932,939	\$63,853,047
2016 - 2020					
SE 45 th St. (Lee Blvd. - Gore Blvd.)	Reconstruct from 2 lanes to 5 lanes	\$5,175,000	\$0	\$1,293,750	\$6,468,750
E. Gore Blvd. (NE 45 th St. - NE 60 th St.)	Reconstruct from 2 lanes to 5 lanes	\$5,175,000	\$0	\$1,293,750	\$6,468,750
SW 38 th St. (Bishop Rd. - Lee Blvd.)	Reconstruct from 2 lanes to 5 lanes	\$5,175,000	\$0	\$1,293,750	\$6,468,750
Bicycle / Pedestrian Facilities	Design, Construction, Education	\$3,414,862	\$0	\$852,716	\$4,267,578
Intersection Modification / Signalization	Design, Construction, Education	\$1,365,625	\$0	\$341,406	\$1,707,031
Maintenance		\$4,671,875	\$7,666,188	\$14,375,000	\$26,713,063
Transit		\$6,973,636	\$600,875	\$4,515,856	\$12,090,367

LMPO 2030 LRTP

PROJECT YEARS	PROJECT	FEDERAL FUNDING	STATE FUNDING	LOCAL FUNDING	ESTIMATED TOTAL COST
Enhancement		\$1,150,000	\$0	\$287,500	\$1,437,500
	Total 2016-2020	\$33,100,998	\$8,267,063	\$24,253,063	\$65,621,789
2021-2025					
Rogers Ln. (I-44 - Flower Mound Rd.)	Reconstruct from 2 lanes to 5 lanes	\$10,000,000	\$0	\$2,500,000	\$12,500,000
SW 67 th St. (Bishop Rd. - Lee Blvd.)	Reconstruct from 2 lanes to 4 lanes	\$5,625,000	\$0	\$1,406,250	\$7,031,250
Bicycle / Pedestrian Facilities	Design, Construction, Education	\$3,710,937	\$0	\$927,734	\$4,638,671
Intersection Modification / Signalization	Design, Construction	\$1,484,374	\$0	\$371,094	\$1,855,468
Maintenance		\$5,078,125	\$8,332,813	\$15,625,000	\$29,035,938
Transit		\$7,580,039	\$653,125	\$4,908,539	\$13,141,703
Enhancement		\$1,250,000	\$0	\$312,500	\$1,562,500
	Total 2021-2025	\$34,728,475	\$8,985,938	\$26,051,117	\$69,765,530
2026 - 2030					
NW 97 th (Cache Rd. - Quannah Parker Trailway/US 62)	Reconstruct from 2 lanes to 5 lane	\$6,075,000	\$0	\$1,518,750	\$7,593,750
SW 82 nd (Lee Blvd. - Combs Rd.)	Reconstruct from 2 lanes to 4 lanes	\$12,150,000	\$0	\$3,037,500	\$15,187,500
Bicycle / Pedestrian Facilities	Design, Construction, Education	\$4,007,812	\$0	\$1,001,953	\$5,009,765
Intersection Modification / Signalization	Design, Construction	\$1,603,125	\$0	\$400,781	\$2,003,906

LMPO 2030 LRTP

PROJECT YEARS	PROJECT	FEDERAL FUNDING	STATE FUNDING	LOCAL FUNDING	ESTIMATED TOTAL COST
Maintenance		\$5,484,375	\$8,999,438	\$16,875,000	\$31,358,813
Transit		\$8,186,442	\$705,375	\$5,301,222	\$14,193,039
Enhancement		\$1,350,000	\$0	\$337,500	\$1,687,500
	Total 2026 - 2030	\$38,856,754	\$9,704,813	\$28,472,706	\$77,034,273
ESTIMATED COST ALTERNATE III A		\$195,554,192	\$47,245,915	\$145,372,882	\$388,172,989

Source: Art Pendergraft, Transportation Modeling Consultant

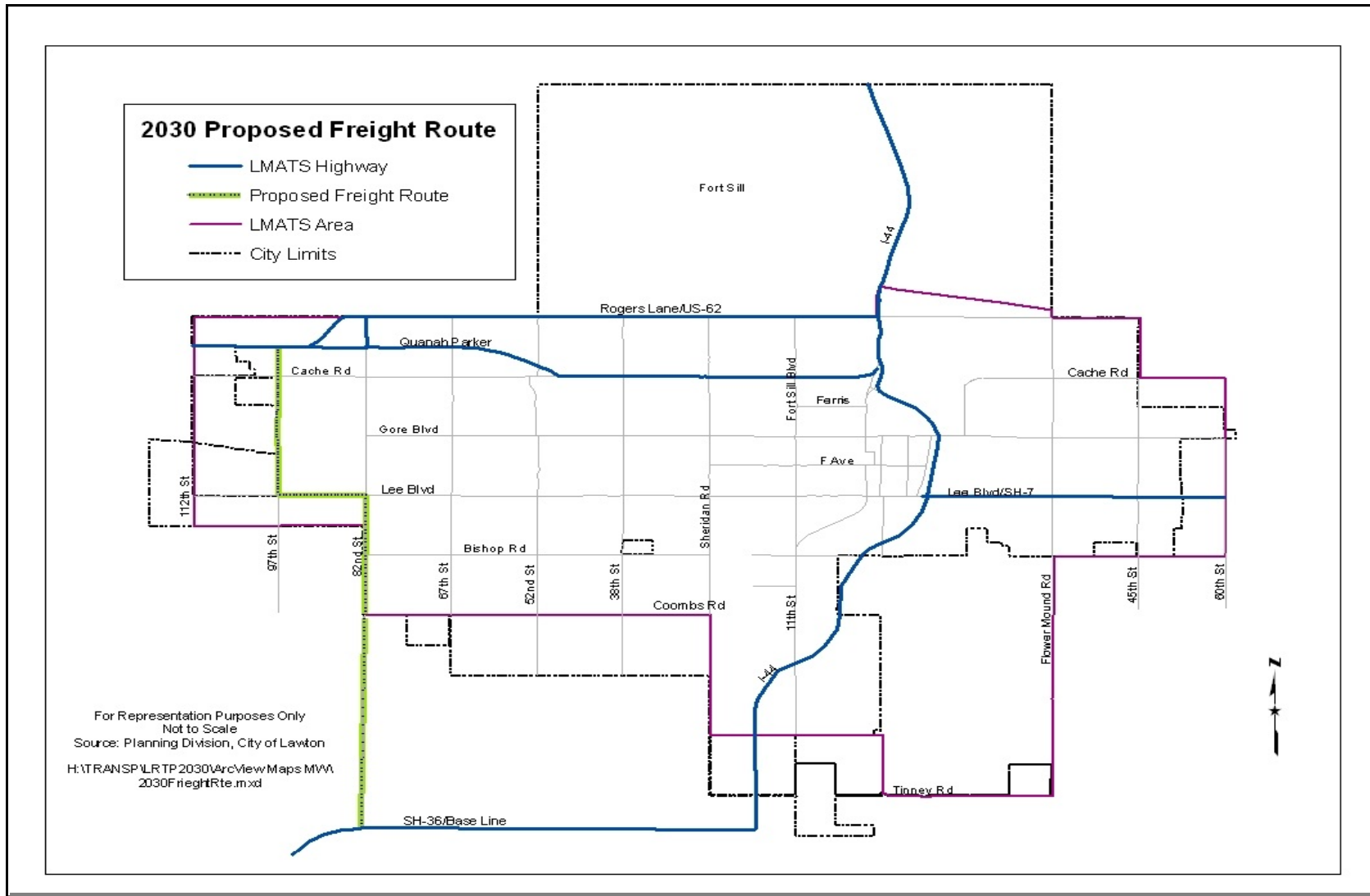
Also, included in the 2030 network is the development of a freight route. FHWA estimates that over the next 20 years freight will double with 80% of the freight to be carried by truck.

Lawton Area Transit System

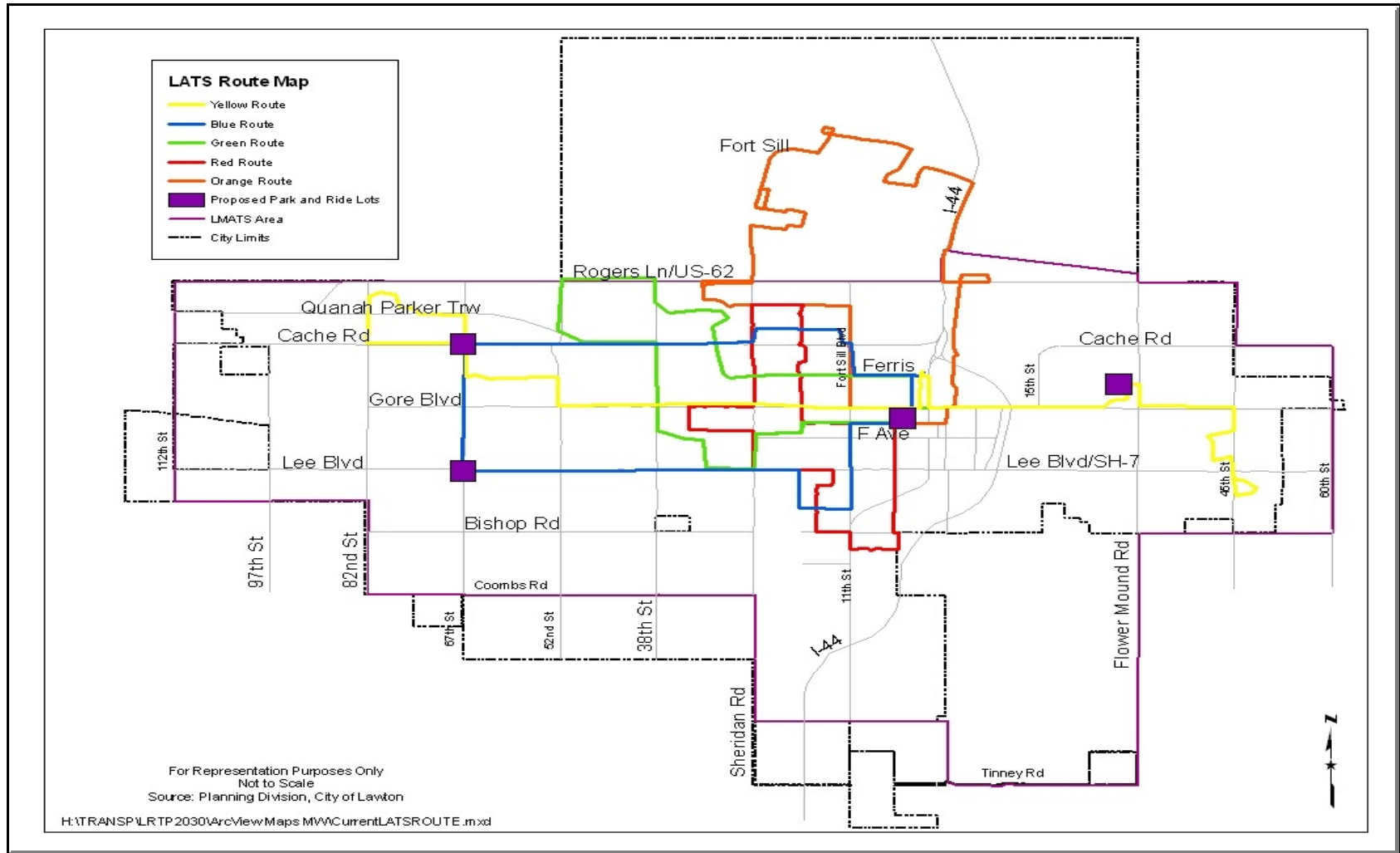
The Lawton Area Transit system (LATS) was started in 2002 and has 5 routes coded by color as shown on Map 8 covering approximately 50 miles of the street system. System changes for Alternate III include:

- extend operating hours,
- examine "Floating Routes",
- develop transit cutouts on arterial streets,
- install GPS system on buses and
- develop Park and Ride Lots.

Map 7: 2030 Freight Route



Map 8: LATS Route with Potential Park & Ride Lots



Alternate III-A Non-Build Projects Identified by the LMPO

- I. Intelligent Transportation Systems (ITS) - ITS makes the existing transportation system more efficient by increasing existing capacity with
 - A. Signalization: Traffic signal retiming is one of the most cost effective ways to help traffic move and is one of the most basic strategies to help mitigate congestion. Optimizing traffic signals can produce benefit cost ratios as high a 40 to 1 and reduce pollution by as much as 40%.
 - B. Signboards: Motorists can be notified in real time of changes in traffic conditions. Example: Motorists planning on using Sheridan Rd. can be notified of an accident or slow down on Sheridan while they are traveling on Rogers Lane or Cache Rd.
 - C. GPS Navigation Systems: As onboard GPS systems become more prevalent, motorists can be notified of accidents and shown an alternate route.
 - D. Internet Information: Motorists can check the internet at any time to see traffic conditions and plan their route.
 - E. Accident Clearance: Since traffic incidents (accidents, breakdowns) account for 25% of traffic congestion, this is the second largest cause of traffic congestion. ITS can help locate accidents and direct emergency vehicles to the accident by the quickest route and allow the emergency vehicles priority by changing the signals thereby reducing secondary accidents and saving lives.
 - F. Security: Real time updates of the traffic condition on the street system.
 - G. Transportation Demand management: The primary purpose of Transportation Demand Management (TDM) is to reduce the number of vehicles using highway facilities while providing a wide variety of mobility options for those who wish to travel. In the past the answer to traffic congestion has been major construction, however that is becoming less feasible due to space limitations, construction costs, disruption to neighborhoods, and environmental costs.
- II. Transit
 - A. Increase bus service and/or frequencies.
 - B. Implement Park-and-Ride Lots.
 - C. Develop Bicycle Facilities at Trip Origins/Destinations.
 - D. Develop design guidelines for transit cutouts on arterials.
- III. Bicycle/Pedestrian Plan
 - A. Construct facilities in accordance with the Bicycle & Pedestrian Plan.
 - B. Adopt design standards and ordinances to support the implementation of the Bicycle & Pedestrian Plan.
- IV. Land use
 - A. Require raised medians.
 - B. Implement left turn restrictions at intersections operating above Level of Service E or have an Accident Severity Index of 0.40 or greater for two consecutive years.
 - C. Develop regulations to mitigate traffic impacts from new development based upon trip generation.
 - D. Develop requirements for curb openings. Minimize the number of curb openings and establish a minimum distance between curb openings. Establish a minimum distance between curb openings and street intersections.



- E. Develop regulations to support infill development, develop regulations to support mixed use development.
- F. Develop design guidelines for pedestrian-oriented development and guidelines for mixed use development.
- G. Develop and implement an Access Management Plan.
- H. Develop and implement a Congestion Management Plan.

In Summary the 2030 Alternate III-A proposed projects will:

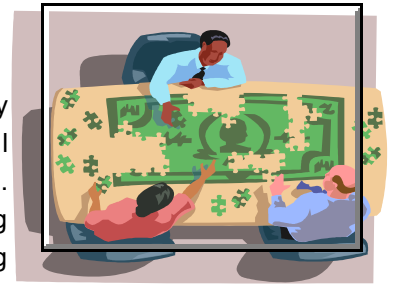
1. Reduce 1.0 mile of congestion on NW Cache Rd. (NW 82nd to NW 97th) from LOS "F" to LOS "C".
2. Reduce 0.65 mile of congestion on NW Cache Rd. (Homestead to NW 38th) from LOS "E" to LOS "D".
3. Reduce 0.55 mile of congestion on NW Cache Rd. (NW 52nd to NW 61st) from LOS "E" to LOS "D".
4. Reduce 1.0 mile of congestion on N Sheridan Rd. (Cache Rd. to Rogers Ln.) from LOS "E" to LOS "D".
5. Reduce 1.0 mile of congestion on Fort Sill Blvd. (Cache Rd. to Rogers Ln.) from LOS "E" to LOS "D".
6. Reduce 0.6 mile of congestion on E Gore Blvd. (NE 45th east 0.6 mile) from LOS "E" to LOS "D".
7. Reduce 0.35 mile of congestion on Rogers Ln. (I-44 east 0.35 mile) from LOS "D" to LOS "C".
8. Decrease travel times 2% - 4%
9. Decrease delay times 15% - 18%
10. Decrease fatal crashes 7% - 9%
11. Decrease injury and property damage 3%
12. Decrease emissions 10% - 25%
13. Decrease fuel use 11% - 24%
14. Increase incident clearance 29%
15. Returns \$6 to \$12 for every dollar invested
16. Total estimated cost \$386,467,539.

Appendix D provides information that supports this chapter.

Chapter 4: Funding

Funding Sources

MPOs are required by federal law to consider funding needs and availability in long range transportation planning. The LRTP must include a financial section that estimates the level of funding needed over the life of the plan. Identification of funding sources for each project in the plan, including resources needed for the maintenance and operation of the existing transportation system must also be included.



The purpose of this chapter is to provide an overview of anticipated revenue sources and the transportation funds through the year 2030 needed to implement this plan. Every effort was made to accurately estimate the revenues and costs closely. This analysis was based on past trends and future revenue estimates. However, fulfilling the investment scenario presented in this Plan is contingent upon continued financial commitments by local, state and federal authorities.

The SA has experienced slow growth in population over the past twenty years. However, due to BRAC, the population growth for the SA is expected to increase by 35% by the year 2030. With this increase in population there will be a significant increase in vehicle miles of travel (VMT). Accommodating the additional demand on the transportation system requires additional financial investment. In addition to this growth in demand for transportation services, construction costs also continue to increase.

Transportation system improvements will ultimately be made based on need and the local government's ability to pay for needed improvements. The City of Lawton funds its transportation infrastructure and services almost entirely from the general operation budget and Capital Improvement Program (CIP). Federal and State funding is on a project-by-project basis. These funds are highly competitive and availability of funds may not follow the City's priorities.

Funding for streets and highways within the SA comes from three sources: City of Lawton, Comanche County and ODOT. Private sources also may be available for a limited amount of funding. Most large transportation projects, such as highway improvements and enhancements, will rely on federal funds. For these federally funded projects, the federal government usually supplies 80% of the construction costs, with local and state sources typically paying the remaining 20%. The 2030 LRTP assumes that the current funding level for highways will continue.

As noted above, the City's ability to pay for projects will influence its project priorities and its rate of project implementation. The 2004 CIP identified funding for transportation projects through 2007. As previously stated, the City's ability to pay for new capital projects has historically been tied to the CIP. However, due to the overwhelming infrastructure needs of the community transportation projects are a small element in the CIP. Funding for projects not identified in the CIP must be provided in the local budgets. This includes maintenance. The City of Lawton in their annual adopted budget includes funding for items such as maintenance of roads, signal maintenance, striping, road cleaning etc. Historically, the City spends an average of \$2,000,000 for maintenance of roads.

If the City cannot tap into new revenue sources, such as additional federal and state revenues, it will

consider a range of possible solutions including deferral of transportation infrastructure, constraints on growth, and impact/user fees. The annual budget process and CIP process will remain the City's principal forums for deciding how to spend available capital funds. Funding shortfalls will require choices to be made among different projects.

The combined estimated replacement value of the SA's transportation infrastructure, including roads, bridges, sidewalks — is \$1,600,000,000. These assets are continuously deteriorating, and will eventually require rehabilitation or replacement. With limited budgets and increasing demands on the transportation network, the City and County leaders are challenged to manage transportation assets in a way that reduces total life-cycle costs and sustains expected levels of service.

Revenues

The total estimated revenues for the 2030 LRTP are \$460,817,077 (capital roads, transit, maintenance, pedestrian and bicycle facilities). This estimate includes federal, state and local funding sources. Table 8 shows the estimated revenue for implementation of Alternate III-A. These costs include a mid-range inflation factor as identified in Table 9.

Table 8: Estimated Revenue for Implementation of Alternate III-A

STREETS AND HIGHWAYS	ESTIMATED 30- YEAR TOTAL
Federal-Aid Funds: IM, NHS, STP, STP Enhancement and CMAQ, matching funds	\$91,492,283
State Funds: State Highway Maintenance Taxes and Fees	\$57,196,425
Local Funds: General Fund, Developer Contributions, bonds and sales tax	\$234,965,016
<i>Subtotal</i>	\$383,653,724
TRANSIT	
Federal Funds: FTA Section 5307, Section 5309, Section 5310, Section 5311	\$40,022,611
State Funds: Transit Revolving Funds	\$3,448,500
Local Funds: Municipal, County and private funds for urban and rural operations and fares	\$33,692,242
<i>Subtotal</i>	\$77,163,353
TOTAL	\$460,817,077

Source: Art Pendergraft, Transportation Modeling Consultant

Table 9: Midpoint Factor Inflation Rate

PROJECT YEARS	INFLATION RANGE	AVERAGE RATE
2006 - 2010	12.5% - 25%	18.75%
2011 - 2015	25% - 37.5%	31.25%
2016 - 2020	37.5% - 50%	43.75%
2021 - 2025	50% - 62.5%	56.25%
2026 - 2030	62.5% - 75%	68.75%

Source: Art Pendergraft, Transportation Modeling Consultant

Costs

The implementation of the 2030 LRTP has an estimated total cost of \$388,172,989. Table 10 provides cost estimate breakdown by categories.

Table 10: 2030 LRTP Implementation Costs

COST CATEGORIES	ESTIMATED COSTS
Total Road Construction	\$131,538,657
Total Bicycle/ Pedestrian Facilities	\$20,781,248
Total Intersection Modification / Signalization	\$8,312,499
Total Maintenance	\$152,148,315
Total Enhancement	\$8,187,500
Total Transit	\$66,829,770
Total No Build	\$375,000
TOTAL	\$388,172,989

Source: Art Pendergraft, Transportation Modeling Consultant

Chapter 5: Implementation

The opportunities to implement the policies, practices, and programs contained within the LRTP are almost unlimited. Obviously, addressing the broad array of transportation issues included in the Plan and managing implementation of the Plan is a large undertaking. To assist with this undertaking, this chapter identifies action steps that need to be undertaken to bring the City's and or County's operations into compliance with the policies, practices, and programs set forth in the LRTP 2030.

This LRTP presents a viable means to address existing and future needs of the SA and lays a foundation for future development of an efficient and accessible transportation network. Implementation of this Plan will require local, state and federal agencies to work together. Table 11 list the activities and the agency responsible for developing and implementing the activities.

Some of the activities/projects included in the tables on the following pages are eligible to be included in the annual Unified Planning Work Program (UPWP). The UPWP is based on the transportation planning priorities of the SA as well as federal planning factors and federal emphasis areas. The UPWP is one element of the transportation planning process that the LMPO is responsible for developing during each fiscal year.

Table 11: 2030 LRTP Non-Build Project Implementation Schedule

ACTION	RESPONSIBLE ENTITY	TIMING
Standards		
A. Adopt an ordinance updating standard detail sheet and ordinances, as necessary, to ensure compatibility with the LRTP.	City and County	2007-2012
B. Design local streets to reduce traffic speeds so that pedestrians, cyclists and vehicles can mix safely.	City and County	2007-2012
C. If separate cycle paths are provided indicate them with street markings or by clearly displayed and well-designed sign age.	City and County	2007-2012
D. Adopt concepts from the report Context Sensitive Solutions in Designing Major Urban Thoroughfares for walkable Communities.	City and County	2007-2012
E. Adopt landscape ordinance for the right-of way consistent with traffic safety and design standards.	City and County	2007-2012
F. Develop standard details for streets and intersections to support freight traffic.	City and County	2007-2012
G. Require installation of sidewalks on both sides of arterials and collectors.	City and County	2007-2012
H. Identify freight routes that provide direct connections to the interstate system.	City and County	2007-2012

ACTION	RESPONSIBLE ENTITY	TIMING
<p>Development</p> <p>A. New sites must be connected to the existing street network. Adopt an ordinance requiring the continuance of existing streets when an adjacent area is undeveloped, prohibiting dead end streets, requiring subdivisions to be designed with a minimum of two access points. Require bicycle and pedestrian facilities to connect.</p> <p>B. Adopt an ordinance limiting curb cuts onto collectors and arterials, establishing minimum spacing between curb openings. Design intersections to reflect the street function.</p> <p>C. Develop and adopt a Traffic Impact Analysis and Mitigation Ordinance.</p> <p>D. Develop and implement traffic-calming measures.</p> <p>E. Develop an ordinance requiring visual and sound barriers between residences and roads classified as arterials.</p> <p>F. Develop design guidelines for streetscapes, including landscaping, street trees, pedestrian-scale lighting, transit stops, curbing, and other elements of the streetscape.</p> <p>G. Ensure transportation decisions are consistent with and support the goals of the Land Use Plan.</p> <p>H. Plan and design future transportation facilities to be physically and aesthetically compatible with the character of the surrounding area.</p>	<p>City and County</p> <p>City and County</p> <p>City and County</p> <p>City</p> <p>City</p> <p>City</p> <p>City</p> <p>City and County</p>	<p>2007-2012</p> <p>2007-2012</p> <p>2007-2012</p> <p>2007-2012</p> <p>2007-2012</p> <p>2007-2012</p> <p>2007-2030</p> <p>2007-2030</p>

ACTION	RESPONSIBLE ENTITY	TIMING
Intersection Modification / Signalization		
A. Install traffic control devices in conformity with the Manual of Uniform Traffic Control Devices (MUTCD).	City and County	2007-2030
B. Upgrade traffic signals to include activation devices to be used by pedestrians and bicyclists.	City and County	2013-2018
C. Identify intersections where left turns will be prohibited.	City	2013-2018
D. Develop a signal synchronization and actuation program.	City	2013-2018
E. Utilize available ITS technologies for the signalization system.	City and County	2007-2030
Management Strategies		
A. Develop and adopt: Access Management Plan, Congestion Mitigation, and Pavement Management System.	City and County	2019-2024
B. Develop and adopt a Traffic Safety & Security Plan that will regularly monitor motor vehicle accident locations, analyze high accident locations, and develop appropriate mitigation techniques to minimize the number and severity of accidents.	City and County	2019-2024
C. Where possible, physically separate bicycle and pedestrian paths from roads carrying large volumes of traffic.	City and County	2007-2030
D. Evaluate alternatives to minimize traffic delays associated with signalized intersections and stop-controlled intersections.	City	2007-2030
E. Design and construct street crossings to be safe, attractive and easy to navigate.	City and County	2007-2030

ACTION	RESPONSIBLE ENTITY	TIMING
Transit		
A. Increase LATS service and/or frequencies.	Transit Trust	2007-2012
B. Develop and implement park and ride lots.	City	2013-2018
C. Incorporate safety and security measures into the LATS operating system.	Transit Trust	2007-2030
D. Develop a program to rehabilitate or install ADA accessible sidewalks adjacent to the public transportation route.	City	2007-2012
E. Develop and adopt standards for transit-oriented street improvements such as bus stops bays during the planning and design phase of street improvements.	City	2007-2012
F. Develop a savings plan for the local match for transit capital replacement.	Transit Trust	2007-2012
G. ITS - install silent activated alarms and/or audible alarms on board LATS transit vehicles.	Transit Trust	2007-2030
H. ITS - install Global Positioning System software on LATS transit vehicles.	Transit Trust	2013-2018
I. ITS - purchase vehicle dispatching and scheduling and ride matching and reservation software.	Transit Trust	2007-2012
J. ITS - purchase electronic fare collector/automatic passenger counters software and hardware.	Transit Trust	2012-2018
K. ITS - purchase financial tracking and billing system software.	Transit Trust	2019-2024
L. ITS - purchase transit vehicles fleet management software.	Transit Trust	2008-2012
M. ITS - purchase automatic passenger counters	Transit Trust	2008-2012

ACTION	RESPONSIBLE ENTITY	TIMING
<p>GIS & Data Management and Collection</p> <p>A. Identify and then electronically map the major barriers to traffic movement.</p> <p>B. Create and maintain electronic maps identifying such information as traffic counts, accident data, signal, speed limits, and right-of-way.</p>	<p>City and County</p> <p>City and County</p>	<p>2007-2012</p> <p>2007-2012</p>
<p>Bicycle & Pedestrian Facilities</p> <p>A. Develop and implement a Bicycle & Pedestrian Plan.</p> <p>B. Include funding in the annual budget and City's CIP funding for pedestrian and bicycle facilities.</p> <p>C. Establish priorities and identify funding for the retrofitting of existing arterials and collectors for sidewalks.</p>	<p>City and County</p> <p>City</p> <p>City</p>	<p>2007-2012</p> <p>2007-2030</p> <p>2007-2030</p>