Abilene Metropolitan Area Metropolitan Transportation Plan 2010-2035

Developed by

The Abilene Metropolitan Planning Organization

In cooperation with the following:

City of Abilene, Texas
City of Impact, Texas
City of Tye, Texas

Jones County
Taylor County

Texas Department of Transportation

United States Department of Transportation
Federal Highway Administration
Federal Transit Administration

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Links to Additional Reference Materials

Abilene Comprehensive Plan
http://www.abilenetx.com/planningservices/doc/AbileneCompPlan.pdf

Available at http://abilenempo.org/documents.html

Abilene Frontage Road Feasibility Study
Regional Transit Service Coordination Plan
South Downtown Abilene Plan
Thoroughfare plan map

Glossary of Key Terms

The **Abilene Metropolitan Area** is the area in and near Abilene, Texas, which is considered urbanized or is expected to become urbanized within twenty years. The Abilene Metropolitan Area is located in Jones County and Taylor County including the cities of Abilene, Impact, and Tye, and the communities of Caps, Elmdale, Hamby, and Potosi.

The **Abilene Metropolitan Planning Organization (MPO)** is the organization designated by the Governor's Office of the State of Texas to conduct the metropolitan transportation planning process within the Abilene Metropolitan Area. In the Abilene Metropolitan Area the MPO is operated by the City of Abilene in cooperation with the Texas Department of Transportation and under the direction of the Abilene MPO Transportation Policy Board.

A **Metropolitan Planning Organization (MPO)** is an organization designated to carry out the transportation planning processes required by federal law.

The **MPO Transportation Policy Board** is a committee consisting of elected and appointed representatives of local governments and other entities involved in transportation planning or transportation development. The MPO Transportation Policy Board oversees the metropolitan transportation planning process and is responsible for approving the Metropolitan Transportation Plan, the Transportation Improvement Program, and the Unified Planning Work Program.

The **Metropolitan Transportation Plan** is a long-range plan (20 years or more) to deal with major transportation needs in the Abilene Metropolitan Area. The metropolitan transportation plan must be reviewed and updated within five years of adoption.

The **metropolitan transportation planning process** is intergovernmental planning process that considers the transportation needs of the Abilene Metropolitan Area through analytical means, consultation with other entities interested in transportation issues, and public input. The program of cooperation in the metropolitan transportation planning process between the MPO and the Texas Department of Transportation is referred to as the Abilene Urban Transportation Study. The Metropolitan Transportation Plan and Transportation Improvement Program are principal products of the metropolitan transportation planning process.

Surface transportation means all forms of ground-based transportation including public roads, public transit, and public bike paths and sidewalks.

The **Transportation Improvement Program (TIP)** is a four-year schedule of projects to improve or maintain the quality of public surface transportation. The TIP is normally updated at least once every two years. Any projects or programs that use money from the Federal Highway Administration or Federal Transit Administration must be contained in the TIP. The TIP referred to herein is the TIP for the Abilene Metropolitan Area.

The **Unified Planning Work Program (UPWP)** describes the MPO surface transportation planning processes funded by the U.S. Department of Transportation and the amount of funding to be used for each work task.

Key to Abbreviations

ADA	Americans with Disabilities Act
BI	Interstate Highway Business Route
Bl.	Boulevard
BU	US Highway Business Route
City	City of Abilene, Texas
Class.	Classification
Col.	Collector
E.	East
Equip.	Equipment
FAA	Federal Aviation Administration
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
FR or fr	Frontage Road
FM	Farm to Market Road
Fwy or FW	Freeway
FY or fy	Fiscal Year
IH	Interstate Highway
ISTEA	Interstate Surface Transportation Efficiency Act of 1991
Ln.	Lane
MA	Minor Arterial
Mod.	Modified
MPO	Metropolitan Planning Organization
N.	North
NA	Not Applicable or Not Available
NHS	National Highway System
PA	Principal Arterial
Rd.	Road
R.O.W.	Right-of-way
RR	Railroad
S.	South
SAFETEA-LU	Safe, Accountable, Flexible, Efficient Transportation Equity Act – A Legacy for Users
SH	Texas State Highway
St.	Street
STP	Surface Transportation Program
TEA21	Transportation Equity Act for the 21st Century
TIP	Transportation Improvement Program
TxDOT	Texas Department of Transportation
UPWP	Unified Planning Work Program
US or U.S.	United States Highway
W.	West

Section 1
Introduction

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Introduction

This document contains descriptions of projects, plans, and strategies, which together are the Metropolitan Transportation Plan (MTP) for the Abilene Metropolitan Area. The MTP is a minimum 20 year plan to develop, improve, and maintain an integrated transportation system for the Abilene Metropolitan Area which will efficiently maximize mobility of people and goods within and through the urbanized area and minimize transportation related fuel consumption and air pollution.

This plan is the result of a continuing, cooperative, and comprehensive metropolitan planning process as required by law. Planning considerations that have influenced the development of this plan include the following goals:

1. Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency;

2. Increase the safety of the transportation system for motorized and nonmotorized users;

3. Increase the ability of the transportation system to support homeland security and to safeguard the personal security of all motorized and non-motorized users;

4. Increase the accessibility and mobility options available to people and for freight;

5. Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns;

6. Enhance the integration and connectivity of the transportation system, across and between modes, for people and for freight;

7. Promote efficient system management and operation; and

8. Emphasize the preservation of the existing transportation system.

Abilene Metropolitan Transportation Planning Background

Late in 1964 a study of transportation in the Abilene urban area was begun with respect to existing facilities, existing deficiencies, and future needs. This was initiated as a result of the passage by Congress of the Federal-Aid Highway Act of 1962, which provided for a "continuing, comprehensive transportation planning process carried on cooperatively by States and local communities" for each urban area of more than 50,000 population. Completion of the initial phase of study covering 10 basic study elements resulted in the publication of a 2 volume report: *Abilene Urban Transportation Plan, Volume 1, 1965 Origin-Destination Survey* published in 1966; and *Abilene Urban Transportation Plan, Volume 2, 1965-1985 Transportation Plan,* published in 1968.

In order to provide for the continuing phase of the comprehensive, cooperative planning process for the purpose of keeping Abilene's transportation plan up to date, a continuous phase agreement between the City of Abilene and the State of Texas was executed on January 23, 1969, and superseded by a revised agreement, including Taylor County as a party, executed March, 30, 1973. This revised agreement provided the guidelines for the organization and functioning of the continuing phase of the Abilene Urban Transportation Study. It also assigned the primary responsibility of each of the basic study elements to the City, State, or County.

On July 2, 1974, the Governor of Texas designated the City of Abilene to be the host organization for the Metropolitan Planning Organization (MPO) which, in cooperation with the State, would have overall transportation planning responsibilities for the urbanized area. The designation was repeatedly renewed until 1988 when the designation became continuous. A series of agreements between the State of Texas and the City of Abilene assigned individual and joint responsibilities to the State and the City of Abilene in the conduct of transportation planning activities to fulfill the requirements of Federal and State law. In 2007, a trilateral agreement among the City of Abilene, the State of Texas, and the Abilene MPO Transportation Policy Board (Board) clarified the authority of the Board and partially redefined the positions of the other entities. A separate memorandum of understanding between the Board and the City of Abilene further defined the roles of the two entities for fiscal activities and personnel policies.

The 1973 agreement established a group structure to provide overall transportation policy guidance for the planning activities. Initially, the group structure contained 2 committees, a Policy Advisory Committee consisting of area legislators and elected officials of local governments and a Steering Committee consisting of other elected officials and key transportation planning personnel. The group structure evolved in response to changes in the legislation and contractual agreements, becoming a single Abilene Urban Transportation Planning Committee with both voting and non-voting members. The group adopted the name Abilene MPO Transportation Policy Board in 1993 and continues to act as the forum for cooperative transportation planning decision making, the provider of transportation planning policy guidance to the MPO, and the decision-making body for programming federal funds for surface transportation projects in the Abilene Metropolitan Area.

In 1991, the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) was signed into law. ISTEA reemphasized the role of cooperative decision making in the development, review, and approval of transportation plans and programs and introduced requirements that the

Metropolitan Transportation Plan and the Transportation Improvement Programs reflected realistic expectations of available funding for projects. In 1998, the Transportation Equity Act for the 21st Century (TEA21), continued the planning provisions of ISTEA with some revision and increased the availability of Federal funding for surface transportation. In 2005 Congress passed the Safe, Accountable, Flexible, Efficient Transportation Equity Act-a Legacy for Users (SAFETEA-LU), which further emphasizes the needs for cooperative decision-making and public involvement in the transportation planning process.

The metropolitan transportation plan must be a financially constrained plan of surface transportation improvements for a period of at least 20 years. The plan must be periodically updated at least once every 5 years. The transportation plan is implemented by advancing planned projects to the transportation improvement program.

Planning requirements established for transportation improvement programs mandate a financially constrained, prioritized program of projects for at least 4 years. The transportation improvement programs must be updated at least once every 2 years. The Abilene MPO typically updates the Abilene Metropolitan Area Transportation Improvement Program (TIP) on a biannual bias.

Abilene Metropolitan Planning Area

The Abilene Metropolitan area is the area in and around the City of Abilene that is currently considered urbanized or that is expected to become urbanized by the year 2030. The Abilene Metropolitan Area contains portions of Taylor County and Jones County including the City of Abilene; the City of Impact; the City of Tye; the communities of Caps, Elmdale, Hamby, and Potosi; and some adjacent rural area. An illustration is included at the end of this section.

Organization of the Planning Program

The cooperative transportation-planning program in the Abilene Metropolitan Area is known as the Abilene Urban Transportation Study. The personnel who direct or perform the operations of the Abilene Urban Transportation Study consist of the Transportation Policy Board, Planning Coordinators, employees of the Texas Department of Transportation (TxDOT), and employees of the City of Abilene. Due to the joint responsibility of the MPO and TxDOT to carry out transportation planning, the Abilene Urban Transportation Study uses 2 planning coordinators. One coordinator directs the TxDOT's planning staff in its day-to-day activities and on directs the MPO planning staff. The MPO coordinator and the TxDOT coordinator work closely to see that the planning process is accomplished in a comprehensive and efficient manner.

A technical committee was appointed by the Policy Board in May 1994 to provide technical review and comment on the TIP and other technical matters as appropriate. The membership of the technical committee is detailed in a group of tables at the end of this section.

The Transportation Policy Board has 3 membership categories; ex-officio members, voting members, and non-voting members. Policy Board membership is detailed in a group of tables at the end of this section.

The ex-officio members consist of 5 State and Federal elected officials. The 17 regular voting members consist of elected officials from the City of Abilene, City of Tye, City of Impact, Jones County, and Taylor County; delegates from the West Central Council of Governments and the Abilene Chamber of Commerce; and staff from the City of Abilene and from TxDOT,. The 4 non-voting advisory members are representatives of State and Federal review agencies.

Organizational Chart

ABILENE METROPOLITAN PLANNING ORGANIZATION
TRANSPORTATION POLICY BOARD

EX-OFFICIO MEMBERS	VOTING MEMBERS				OTHER MEMBERS
(Non-Voting) State & Federal Elected Officials	City of Abilene Officials	Local Elected Officials	TxDOT District Officials	Other Voting Members	(Non-Voting) Review & Advisory Agency Officials
U.S. Representative District 19	Planning Director	City of Abilene Mayor	District Engineer	Abilene Chamber of Commerce delegate	TxDOT Transportation Planning and Programming, Area Planner
State Senator District 24	Director of Public Works	City of Abilene Councilperson	Director of Transportation Planning and Development	West Central Texas Council of Governments delegate	Texas Commission on Environmental Quality Regional Director
State Senator District 28	Traffic and Transportation Administrator	City of Impact Mayor	Abilene Area Engineer		Federal Highway Administration Planning Engineer
State Representative District 71		City of Tye Mayor	Transportation Planner		Federal Transit Administration review officer
State Representative District 85		Jones County County Judge			
		Jones County County Commissioner			
		Taylor County County Judge			
		Taylor County County Commissioner			

Nine voting members shall constitute a quorum.

ABILENE METROPOLITAN PLANNING ORGANIZATION
TRANSPORTATION POLICY BOARD MEMBERS
October 20, 2009

Local Elected Officials

Mayor Norm Archibald, City of Abilene – Board Vice-Chairman
Councilman Joe Spano, City of Abilene
Mayor Jack Sharp, City of Impact
Mayor Nancy Moore, City of Tye
The Honorable Dale Spurgin, County Judge, Jones County – Board Chairman
Commissioner Gaite Taylor, Jones County
The Honorable George Newman, Ph.D., County Judge, Taylor County
Commissioner Randy Williams, Taylor County

City of Abilene Planning and Development Officials

Megan Santee, Director of Public Works
James Condry, Traffic and Transportation Administrator
Jon James, Director of Planning and Development Services

Texas Department of Transportation Abilene District Officials

Lauren Garduno, District Engineer
Blair Haynie, Director of Transportation Planning and Development
Joe Clark, Transportation Planner
Alan Hufstutler, Abilene Area Engineer

Other Voting Members

Mike McMahan, Abilene Chamber of Commerce
Tom Smith, Executive Director, West Central Texas Council of Governments

Ex-Officio Members

Randy Neugebauer, U. S. House of Representatives, District 19
Troy Fraser, Texas Senate, District 24
Robert Duncan, Texas Senate, District 28
Susan King, Texas House of Representatives, District 71
Joe Heflin, Texas House of Representatives, District 85

Advisory and Review Agency Officials

Christina Currier, Urban Planner, Federal Highway Administration, Texas Division
Cary Karnstadt, Transportation Planner, TxDOT Transportation Planning and Programming Div.
Winona L. Henry, Abilene Regional Administrator, TCEQ Region 3
Robert C. Patrick, Regional Administrator, Federal Transit Administration Region 6

ABILENE URBAN TRANSPORTATION STUDY
TECHNICAL COMMITTEE MEMBERSHIP
October 20, 2009

City of Abilene Officials

James Condry, Traffic and Transportation Administrator - Committee Chair
Don Green, Aviation Director, Abilene Regional Airport
Vacant (Held for City Traffic Engineer)

County Representatives

Judge Dale Spurgin, Jones County
Commissioner Randy Williams, Taylor County

Texas Department of Transportation, Abilene District

Blair Haynie, Director of Transportation Planning and Development
Joe Clark, Transportation Planner
Dan Richardson, Abilene District Design Engineer
Roy Wright, Director of Transportation Operations

Transit Officials

Brad Patrick, CityLink General Manager

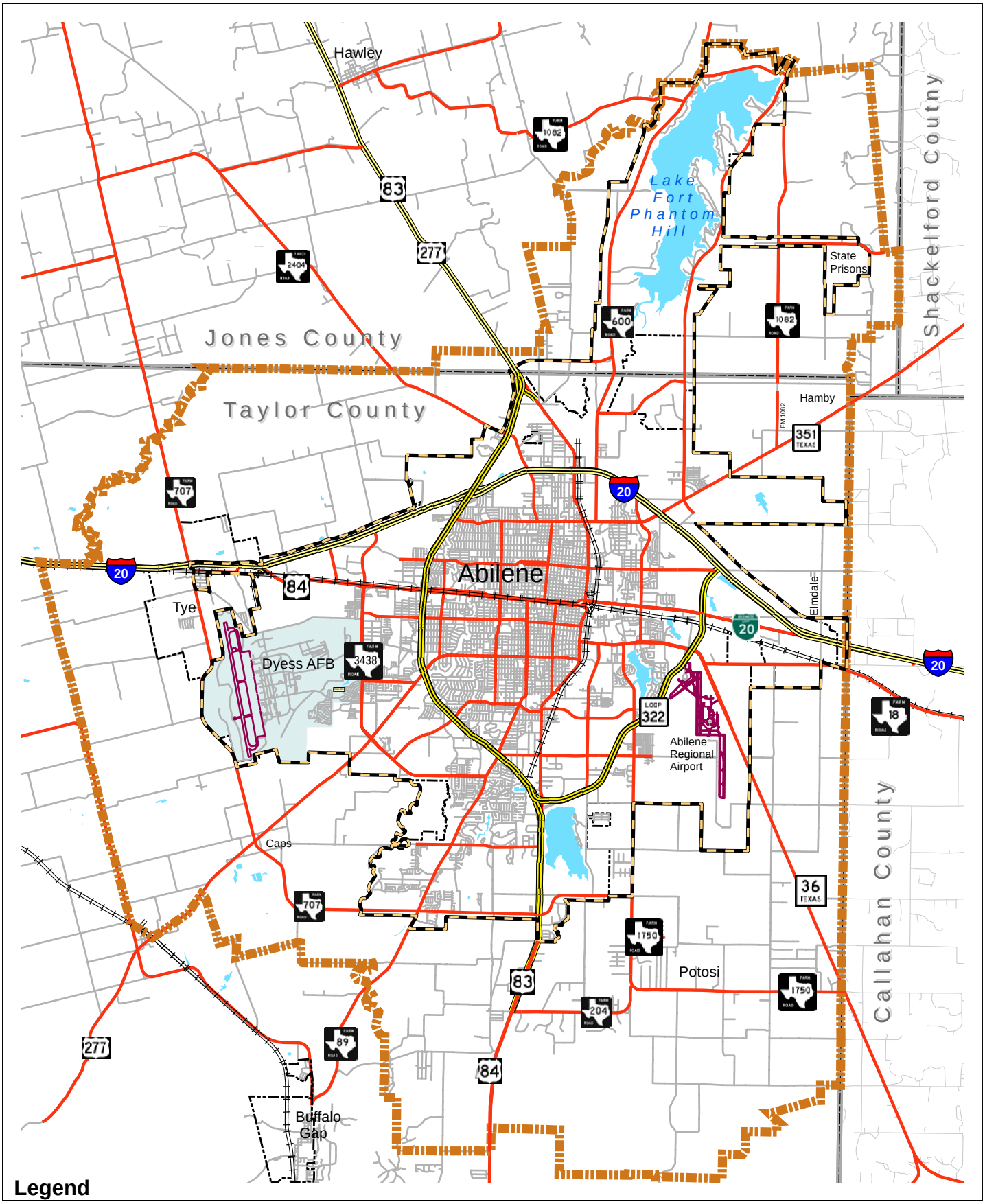
Other

Bob Lindley, former Abilene City Engineer

MPO Staff (Non-Voting)

Robert Allen, Abilene MPO Transportation Planning Director

Abilene Urbanized Area and Metropolitan Planning Area



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Planning Goals

Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency

The Abilene Metropolitan Area is located within a major east-west interregional, intercoastal commercial corridor that contains IH 20, the Union Pacific Railroad, the BNSF Railway, and numerous pipelines and communication lines. Significant international travel is developing and is expected to increase with completion of the Texas Trunk System priority corridor connecting I-44 at Wichita Falls with I-20 at Abilene. This plan contains elements that will expedite travel and the free movement of commerce within and through the Abilene Metropolitan Area. Important elements of the plan are projects that will improve the principal arterials that pass through the metropolitan area and the connections between these arterials and Dyess Air Force Base (AFB).

Increase the safety of the transportation system for motorized and nonmotorized users

Safety of the users of the transportation system is a primary consideration in the development of plans and projects. Virtually all TIP and road and trail improvement projects include safety improvement elements. The Abilene MPO has incorporated TxDOT Strategic Highway Safety Plan in the metropolitan planning process. The MPO emphasizes providing safe travel for all users, including nonmotorized users such as persons walking or riding bicycles.

Increase the ability of the transportation system to support homeland security and to safeguard the personal security of all motorized and non-motorized users

The Abilene MPO, in cooperation with Dyess AFB, the Texas Department of Transportation, the City of Abilene, and the Abilene Chamber of Commerce has developed and implemented plans and projects to provide transportation system support for Dyess AFB. The Abilene MPO consults with emergency management planning groups and officials, such as the Taylor County Local Emergency Planning Committee, on issues such as hazardous materials transportation, evacuation routes, and emergency detouring capability.

Increase the accessibility and mobility options available to people and for freight

The Plan includes programs to increase the accessibility of the transit system, especially to mobility-impaired citizens, and provide a better range of options to commuters, tourists, and commercial traffic, especially heavy freight carriers on the highways.

Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns

The MTP and the planning process are designed to produce a more efficient transportation system which will reduce the amount of fuel used in travel, reduce the emission of automotive exhaust, and reduce traveler and commuter stress by reducing traffic congestion and minimizing stop-and-go travel conditions. The MTP is developed to be in coordination with the Abilene Comprehensive Plan and the Abilene Metropolitan Thoroughfare Plan. The MPO consults routinely with the City of Abilene to ensure consistency between MPO plans and goals and the plans and policies developed to implement the Abilene Comprehensive Plan. Among the joint goals of the MTP and the Abilene Comprehensive Plan are the promotion of efficient urban form, ensuring the connectivity of the transportation system, increasing the efficiency of the road system through access management policies, and improving opportunities for safe and accessible transit, pedestrian, and bicycle travel.

Enhance the Integration and Connectivity of the Transportation System Across the Between Modes, for People and Freight

The plan contains numerous elements to accomplish the following:

a. Improve the interconnectivity of national and regional highways within the metropolitan area
b. Improve the interconnectivity of the local, regional, and national transportation systems
c. Reduce conflict between local travel and travel passing through the area
d. Ensure the connectivity of surface roadways across major rail lines
e. Reduce conflicts between road travel and rail travel
f. Ensure efficient surface access to airports
g. Enhance the interconnectivity of pedestrian travel and transit services, especially for mobility-impaired citizens

Roadways

All proposed publicly financed roadway projects involving federal-aid roadways and other regionally significant projects are addressed in the plan. Privately financed projects for new public roads and improvements to existing roads are coordinated with the overall plan through the development oversight authority of the City of Abilene and by application of plans and principles contained in the Thoroughfare Plan, which was developed jointly by the City of Abilene and the Abilene MPO.

Transit

Transit in the Abilene Metropolitan Area is provided primarily by buses and vans that use the general purpose street and road system. The urban transit provider is the City of Abilene. The transit service, which is known as CityLink, provides scheduled route service and the associated demand-response paratransit service for persons with disabilities during the day and demand-response service for the general public in the evening after scheduled routes service hours. The demand for the demand-response service is growing at a significant rate. Rural transit providers that serve rural portions of the metropolitan area are the Central Texas Rural Transit District which operates City and Rural Rides service in Taylor County and the Aspermont Small Business District, which operates Double Mountain Coach service in Jones County. Greyhound Bus Lines maintains an active intercity bus service terminal in downtown Abilene. Coordination between human services agencies and transit agencies has become routine with the development

of a regional service coordination plan and regular meetings of a regional transit coordination steering committee.

A joint bus terminal for urban, rural, and intercity bus services has been recommended by a study sponsored by the MPO and by the Regional Transit Service Coordination Plan. Attention is given to making improvements at bus stops to facilitate the transition between transit and pedestrian use. Transit use is not expected to grow to a degree that would justify the construction of separate transitways.

Air Transportation

Projects to maintain good surface access routes to the Abilene Regional Airport are proposed. These routes will continue to be important to the intermodal transportation system as improvements and strategies proposed in the Airport Master Plan continue to be implemented to promote the expansion of airline services, general aviation service, and industrial aviation uses at the Abilene Regional Airport.

Railways

Conflicts between railways and roadways continue to play a major role in the Abilene Metropolitan Area. Conflicts occur when roadway traffic is blocked at crossings by trains, especially when the trains have stopped to allow other trains to pass. These conflicts become safety problems when vehicular traffic fails to yield to trains.

The Union Pacific mainline continues to be the dividing line between the north and south portions of the urban area. This railway is a major cross-country mainline for the Union Pacific, connecting Los Angeles, El Paso, Dallas, and Memphis. The BNSF Railway, which is operated by the Burlington Northern Santa Fe Corporation, also has trackage rights to use the rail line for service connecting Dallas-Fort Worth with the BNSF line serving the southwestern part of the nation. All of the public road crossings of the Union Pacific mainline in the Abilene Metropolitan Area are either equipped with automatic warning signals and gates or are grade separated.

Grade separated crossings of the Union Pacific mainline have been provided to all freeways and other primary arterials, and at some minor arterial crossings. Six minor arterials -- FM 707 in Tye and FM 3438 (Arnold Bl.), Pioneer Dr., Leggett Dr., Sayles Bl., Grape St., and Elmdale Rd. in Abilene – and several lesser roads still have at grade crossings. A grade separation is under construction for FM 3438 as part of a project to improve access to Dyess Air Force Base.

The average number of trains per day on the Union Pacific line increased from 8 trains per day in 1990 to 17 trains per day in 2000 and to 25 trains per day in 2005. The number of trains per day fluctuates greatly depending in large part on conditions at the railway bottleneck in Fort Worth and on conditions along the Union Pacific line connecting Houston to El Paso via San Antonio and Del Rio. In 2004, train speed on the Union Pacific line increased from 35 mph to 60 mph.

The BNSF railway forms a portion of the Abilene Metropolitan Area’s southwestern boundary, crossing US 277 at a grade-separated crossing and FM 1235 at grade. Other minor conflicts

occur at road crossings of feeder, spur, and short lines in the metropolitan area. The rail traffic on these lines average less than 1 train per day and does not involve a high level of interaction.

Bicycles and Pedestrians

Accommodation of bicycles and pedestrians has too often been overlooked in the development and construction of roadways in the past. Sidewalks, once a standard feature of urban streets, had been omitted from new streets for a long period. Many roads that were once shared by motorists, cyclists, and pedestrians have become so heavily traveled that pedestrians and cyclists can no longer use them safely. Other heavily used facilities, particularly freeways, have become major obstacles to pedestrian and bicycle traffic where safe crossings were not specifically included, and the travel lanes of street crossings have become congested with vehicular traffic. The problem is being addressed by plans to retrofit existing roadways with sidewalks and / or bike paths, and the specific inclusion of accommodations for bicycles and pedestrians in the design of new bridges and overpasses.

MPO staff has closely cooperated with City of Abilene staff in the development and implementation of a new Sidewalk Master Plan--approved by the Abilene City Council in 2006--that calls for sidewalks on almost all new streets and for retrofitting sidewalks on existing arterial roads, existing collector streets, and many portions of existing local streets. The Sidewalk Master Plan has undergone some minor revisions. Proposed revisions that would have eliminated requirements to provide sidewalks in many new residential developments were rejected by the Abilene City Council, however, due in part to a large outpouring of public support for the sidewalk requirements.

The Sidewalk Master Plan calls for sidewalks to be added to existing streets by private developers as new land development occurs. Retrofitting sidewalks along State highways has been problematic in many areas, often requiring sidewalks to be provided in easements off of the State right-of-way. MPO staff, City of Abilene staff, and TxDOT Abilene District staff have met to attempt to identify issues concerning existing conditions of State rights-of-way that complicate retrofitting sidewalks along State system roads and attempt to identify ways to improve future conditions.

Promote efficient system management and operation

In addition to numerous projects designed to improve operation of the existing system, the plan reserves substantial funding for projects which will be identified as priority projects through the use of management systems for bridge management, operational improvements for congestion management, pavement management, and safety management.

Emphasize the preservation of the existing transportation system

A major portion of plan funding is targeted to projects and programs specifically intended to maintain, repair, rehabilitate, or reconstruct the existing system. The majority of mobility improvement projects also contain elements of system preservation and rehabilitation. The Abilene MPO encourages the use of strategies in the design and construction of new or rehabilitated facilities that prolong the useful life of the facility and minimize maintenance requirements. Strategies considered for the achievement of this goal include the combination of

rehabilitation, mobility improvements, and safety improvements into single projects whenever feasible, and the use of long-lasting, low maintenance construction materials and design.

The Abilene MTP includes numerous projects that combine rehabilitation, mobility improvements, and /or safety improvements. If a mobility improvement project is needed that requires widening a street or intersection, rehabilitation work is done concurrently even if the facility is not failing. This ensures consistency in design and in material used in the facility segment, and lengthens the time before work must be done on the same road segment again. Similarly, if a structure or road segment must be rehabilitated due to poor condition and additional capacity is expected to be added during the life cycle of the rehabilitated facility, the additional capacity is added at time of rehabilitation whenever feasible, thereby forestalling the need to do additional work on the same road segment.

The Abilene MPO supports the use of concrete construction in rehabilitation or new construction of major intersections. Concrete pavements, though more expensive, are longer lasting and require less maintenance than asphalt pavements. Therefore, less interruption of service is experienced for maintenance operations, and the period between rehabilitation operations is greatly increased.

Other Planning Factors

Land Use and Development Trends

General Trends

The 1990s saw a recovery in the housing market after the economic slump of the latter 1980s. Low mortgage interest rates energized the construction of new single-family homes but not in the manner or extent that created the "housing bubble" seen in other areas of the nation. The majority of these homes are in new development areas. The recession that began in 2008 has slowed the industry greatly and has brought speculative development to a virtual standstill.

Residential development is interactive with the locations of schools, supermarkets, and other household supplies retailers. Homebuyers tend to prefer neighborhoods convenient to schools and basic shopping just as retail businesses try to locate near population centers or in high growth areas. This interaction tends to reinforce existing development trends.

Directional growth patterns have become more diverse in the last decade. The recent developments of new commercial and residential areas in the northeast and southeast have changed the formerly concentrated direction of growth. Growth has continued south and southwest of the Winters Freeway, especially in the Buffalo Gap Road area, and along the Judge Ely Bl. – Oldham Ln axis in the east. The concentration of Wylie Independent School District facilities near Buffalo Gap Rd. has helped to stimulate residential growth in that area but the southwest is no longer the predominate direction of growth that it was for the latter part of the twentieth century.

In the early 2000's, Abilene ISD decided to close some facilities in efforts to consolidate dwindling student population into appropriate sized schools. The decrease in school enrollment was attributed to the "empty nest" syndrome, a mobile military culture, and growth in the Wylie school district. The neighborhoods that have lost Abilene ISD facilities may experience a slight decline in family households and a slight increase in nonfamily households and households with householders over 65.

The trend of growth outside of the area bounded by IH 20, Winters Freeway, and Loop 322--called the "Loop" area--impacted population and commerce inside of the Loop area in a manner that concerned City planners and other officials. In 2004, the Abilene City Council passed the Abilene Comprehensive Plan, a plan to guide the future development of Abilene. This plan calls for encouraging infill residential and commercial development without penalizing development in other areas.

During the development of the Abilene Comprehensive Plan, several land developers filed zoning changes conducive to residential development outside of the Loop area before new, and possibly more stringent, regulations could be adopted to implement the new Abilene Comprehensive Plan. A map of the Future Land Use is provided in Appendix C.

Floodplains and floodways impact development feasibility in much of the urbanized area due to cost and regulatory requirements. In 2003, a new shopping center on Southwest Dr. and Catclaw Dr. was constructed in an area with significant flood issues. Other nearby commercial development soon followed, extending along Southwest Drive out to Elm Creek, despite the difficulties of the flood issues. However, flood plains will continue to hinder development northwest of Winters Freeway and in the north central area near the City of Impact.

Inside the Loop area, western and south central areas will remain relatively stable. Neighborhoods developed in the 1950's will continue to experience turnover in population as new families replace the original homeowners. Neighborhoods developed in the 1960's will continue to experience a mild decline in population with the increasing numbers of "empty nests" among the original residents.

In the northeast, the ACU area has grown gradually as a slowly diminishing number of older rental units were more than offset by an increasing number of new homes. Development trends have shown an increase in the rate of residential and commercial development near SH 351 and northeast of I-20 in this area. A new Wal-Mart Supercenter in this area initiated a surge of commercial development. The State prisons did provide a boost to residential development in the vicinity but the recent commercial development has been reflected by an increase in residential growth in a variety of forms.

Residential growth in the far eastern areas of the city will continue to be discouraged by the relative inconvenience of school facilities in the Eula school district. Little residential development is expected east of Pasadena Heights in the Rainey Creek watershed.

The oldest, most deteriorated neighborhoods on the central and north central areas will continue to decline as residential areas unless stabilization or redevelopment projects are successfully initiated. Most of these neighborhoods are in the oldest areas of town, which were burdened with poor quality, overcrowded housing conditions after the boom years of the 1950's. These areas are often characterized by high vacancy rates and relatively high portions of households with persons 65 or older who live alone. The neighborhoods will continue to decline unless strategies, such as those found in the Abilene Comprehensive Plan, can be taken to encourage new families to occupy the homes that will be vacated as these persons die or become unable to live independently.

The continued vigorous development of Hendrick Medical Center and associated enterprises are allowing the north central area to be redeveloped as part of a growing center for the medical services industry. Hardin-Simmons University also continues as a stabilizing center for the area.

The Sears Park neighborhood has been responsive to community stabilization efforts. Although the area experienced tremendous population loss from1960 to 2000, the remaining neighborhood has strength in the high proportion of owner occupancy and relatively low homeowner and rental vacancy rates for available housing. A surge of new multifamily developments along Old Anson Road have brought new growth to the area in the last decade. North Park, Sancudo, and southern portions of the Locust neighborhood also have demographic factors that are relatively positive for achieving stability.

Subarea Trends

The Abilene Metropolitan Area may be split into major subareas for easy reference. The areas are divided into central and outer areas by a roadway loop around the central portion of the Metropolitan Area. This loop is formed by IH 20 on the north and northeast, Loop 322 on the east and southeast, and US 83 (Winters Freeway) on the southwest and west. Most of the currently heavily urbanized area is inside the loop or within a mile of the loop. A significant extension of urbanization extends further southward between Catclaw Creek and US 83 out to FM 707.

The central area may be further subdivided into an east central area generally east of Cedar Creek, a north central area north of the Union Pacific railroad and west of the Cedar Creek, and a south central area south of the Union Pacific railroad and west of Cedar Creek. The outer area may be further subdivided into a northeast area north of IH 20 and east of US 83 including the Lake Forth Phantom Hill area and the community of Hamby; a southeast area south of IH 20 and east of Loop 322 and US 83 including the Potosi community; a southwest area west of US 83 and south of Hartford St. including Dyess AFB and the Caps Community; and a northwest area west of US 83 and north of Hartford St. including the City of Tye.

Household Trends

East Central Area

Modest residential growth is projected in the east central area between Cedar Creek and Rainey Creek. However, residential development in the easternmost portion of this area, along and east of Rainey Creek, is expected to be suppressed by the restrictions imposed by flood plains and the psychological barrier of a change in school districts. Most of this area is located within the Abilene Independent School District (ISD), a large urban school district, but the easternmost portion of this area is in the Eula ISD, a mostly rural district with its only campus located several miles outside the urban area. The population increase in the area is not enough to create a congestion concern on the east-west principal arterials connecting to this area or along Judge Ely Blvd.

North Central and South Central Areas

The eastern portions of the north central and south central areas are expected to continue to experience modest declines in population as old, often substandard, dwelling units built during the rapid growth era of 1940-1960 continue to be eliminated from the housing stock. Many of these units are in floodplains, commercial areas, or industrial areas, and are not being replaced. An optimistic new vision for the southern portion of the central business district calls for the creation of significant new housing opportunities. Implementation of the vision is still uncertain but even partial success would be a very significant change in long term trends.

Other parts of these areas are expected to remain fairly stable. Most areas that are appropriate for residential development are already built out, although a significant number of single-family lots are still available in the Sear neighborhood west of Catclaw Creek. Some minor changes among neighborhoods may be expected in the remaining area, but they are not expected to have a significant impact on the transportation system. An exception is in the Sears neighborhood,

primarily north of Ambler Avenue and west of Old Anson Road. New multifamily developments have been built and are being planned between Old Anson Road and Catclaw Creek. Roadway capacity is adequate, however, due to capacity that was added in the early 1990s.

Southwest Area

The most active residential growth had been in the southwest area with the most intense residential growth occurring in the freeway corridor and between Catclaw Creek and US 83. The freeway corridor has high density residential development. Significant residential growth is expected to continue in the form of infill and incremental growth.

In 2008, mulitfamily development resumed in the area west of the mall between Ridgemont Drive and Catclaw Drive after a significant period of dormancy. This residential growth is expected to impact the transportation system by causing or exacerbating roadway congestion problems in the southwestern portions of the Metropolitan Area.

In 2001, a new medium to high density residential area was established near the northeast corner of intersection of US 277 and Rebecca Lane with the construction of an off-base housing area for military families. This development was outside normal growth patterns of the metropolitan area. In 2009, however, a new low to medium density residential development was begun just north of the formerly isolated residential area.

In 2006 urban density single family development began to extend south of FM 707 with a new development between FM 89 and Catclaw Creek and an isolated pocket southwest of the intersection of US 83 and FM 204. Elsewhere, significant rural and semirural residential development has continued, especially in the Iberis area. Residential development is somewhat restricted south and west of Dyess AFB by policy and noise impacts.

Redevelopment of family housing areas on Dyess AFB has created a fluctuation in population on the base, as many families were moved off-base during reconstruction. The most recent information indicates that there will be a small reduction in overall housing units when the redevelopment is complete.

Southeast Area

The southeast will continue to experience residential growth primarily in an area between US 83 and Lytle Creek. Moderate low-density residential growth is occurring south of Industrial Blvd between Maple Street and Lytle Creek . A smaller area of low to medium density residential growth is occurring in former State School land northeast of Cisco College. The rest of the area should continue to experience modest residential growth of a very low-density suburban and semi-rural variety, primarily near FM 1750 in the southern portions and near the community of Potosi. This growth is expected to impact the transportation system by contributing to roadway congestion problems in the southern portions of the Metropolitan Area.

Northeast Area
The northeast area is projected to experience modest residential growth throughout most of the area, primarily in low density or semi-rural developments. This growth is not expected to be sufficient to have a significant impact on the transportation system except in localized areas.

An exception is in an area northeast of the intersection of SH 351 and FM 2833, where a significant increase in new development has occurred since 2005, including some medium to high density development. The potential for additional new growth in the area is great with large tracts of land owned by a major developer.

Northwest Area
The northwest area, including the City of Tye, is projected to experience little urban growth except in the neighborhoods immediately northeast of Dyess AFB. The City of Tye continues to see slow, incremental residential growth. Rural and semirural residential development is continuing along county roads northeast of Tye. Barriers to continuous residential development in the forms of industrial areas, floodplains, and freeways deter incremental small developments, and there are no current active plans for major residential developments in the northwest. This limited growth is expected to have little impact on the transportation system.

Group Quarters

No significant impacts on the transportation system are expected as a result of changes in the populations in group quarters. Among significant concentrations of persons in group quarters, the populations at the area universities and at Dyess AFB are projected to experience neither significant increases nor declines.

Group quarters populations at the local jails and the state prisons have shown recent increases and may be expected to continue to grow. The population at the Abilene State School is gradually declining. However, the residents of the institutions do not engage in significant amounts of travel.

Hardin Simmons University announced plans to cap their enrolment at 2,500 students. Dorms at full capacity will house1,000 student residents. Mc Murry University also plans on capping their enrolment by holding to a 6:1 student – teacher ratio. The number of dorm residents will show little to no increase over this time period. Abilene Christian University anticipates moderate growth in enrolments.

Commercial and Institutional Activities

East Central Area
The Judge Ely Bl. corridor is not projected to gain a significant amount of employment.. Abilene Christian University (ACU) is expected to continue a moderate growth and development trend. A shift of commercial development to the northeast that began with the construction of a new Walmart Supercenter in 2004 is expected to produce short-range decline in commercial activity along Judge Ely Blvd. The area near Judge Ely Blvd. and E. N. 10th Street, however, is expected to remain relatively stable due to the impact of ACU, with a gradual cycling and replacement of older commercial properties. The shift of commercial development to the

northeast is expected to be a contributing factor to congestion in localized areas, however, the problems are not expected to be as widespread as the congestion problem in the southwest commercial area has been over previous years.

North Central Area

The north central area is not projected to experience a significant increase in general commercial employment. Continuing vigorous growth in medical services and related activities centered on Hendrick Medical Center is expected. Among new developments in the Hendrick Medical center area is the Texas Tech School of Pharmacy. Redevelopment is occurring along Pine Street between the central business district and Hendrick Medical Center. A City of Abilene plan to improve the commercial corridor along Pine Street from the central business district north to IH 20 has been developed to guide and support additional redevelopment.

The Central Business District and N. 1st St. commercial corridor are expected to continue to be significant commercial areas but are not expected to experience major increases in activity. Traffic congestion problems already exist in various locations in the north central area but not on a widespread basis.

South Central Area

Commercial trade along the US 83 (Winters Freeway) corridor from S 1st St. to Buffalo Gap Rd. will continue to be a primary focus of commercial activities in this area. The S 1st St. and S. 14th St. commercial corridors are expected to continue to be significant commercial areas but are not expected to experience significant increases in activity. Commercial redevelopment and revitalization is expected to continue in these areas, pointing toward a relatively stable long-term pattern of commercial activity. Traffic congestion problems already exist in these areas.

A visionary new plan for revitalization of the south portion of the central business district was developed in 2009 and has received much philosophical support . Means for implementation of the plan are still lacking but even a partial realization of the plan would be a significant change in commercial activity trends. Currently the area has little retail activity. Employment currently consists largely of professional services, government services, and wholesale or warehousing activities.

Southwest Area

The US 83 (Winters Freeway) corridor in this area is a major commercial corridor. The most intense concentration of retail commercial activity in the Abilene Metropolitan Area is in the US 83 (Winters Freeway) corridor from Southwest Dr. to FM 89 (Buffalo Gap Rd.) The Mall of Abilene at Buffalo Gap Rd. (FM 89) and US 83 (Winters Freeway) served as the original nucleus for the area, which now includes multiple small shopping centers and big box retailers. The western end of this area, which includes a Wal-Mart Supercenter on Southwest Dr, and a new shopping center at Southwest Dr. and Catclaw Dr., has seen the greatest commercial growth in the last ten years. This concentration of commercial activity has created a serious traffic congestion problem in the area, especially at the bottlenecks created on FM 89 and Southwest Drive by the complex intersections at the freeway interchanges.

Abilene Regional Medical Center at US 83 (Winters Freeway) and Antilley Rd. is a growing center for medical services and related commercial activities. Less intensive commercial growth is expected to occur further south along FM 89 (Buffalo Gap Rd.) and in the US 277 corridor.

The total commercial and military employment at Dyess AFB has experienced minor fluctuations in recent time period as various units were moved into or away from Dyess as a home facility. Increased security measures following the terrorist attacks of September 11, 2001, have reduced the ease with which persons living on base can travel for routine activities. In response to this and other quality of life issues for military personnel, more commercial locations for food service have been established on base and an expansion of the base exchange has occurred.

The long term employment picture is difficult to predict but the Dyess AFB has fared well so far in considerations of base closures or realignments. The Abilene community has an excellent history of positive relationships with the military base and military personnel and retention of the base is a major economic priority of the Abilene community.

Southeast Area

A modest area of new general commercial activity near the campus of Cisco College is significant largely because it is the first new commercial area to be located in the southeast in a generation. Other commercial activity will continue to consist mostly of scattered commercial locations serving suburban commuters and the relatively large amount of industrial employment in this area, including Blue Cross/Blue Shield on Loop 322 and a group of employers on FM 18.

Northeast Area

General commercial activity in this area is limited primarily to an area near the interchange of IH 20 and SH 351 with only scattered locations elsewhere. Commercial employment increased dramatically with the opening of a new Wal-Mart Supercenter, which spurred further commercial and food services development. This area has the potential to continue to experience significant growth as large tracts of land under single ownership are available and warrants special monitoring of the transportation system. Transportation barriers created by IH 20 and the Cedar Creek-Rainey Creek system cause significant bottlenecking of traffic on SH 351 at IH 20.

Northwest Area

General commercial activity in this area is limited primarily to the US 84 (S 1st St.) commercial corridor and the IH 20 corridor in Tye with only scattered locations elsewhere. Commercial employment is expected to remain modest with no major impact in the transportation system.

Industrial Activities

Overall employment in basic industries is expected to follow the national trend and show little net growth. Service, transportation, and distributive industries are expected to increase in employment significantly. The pattern of industrial location is expected to change, however, from closure or relocation of existing enterprises and arrival of new industries. Long-term land use plans and economic development efforts call for guiding industrial and freight intensive

activities away from the central parts of the metropolitan area into industrial areas along major transportation facilities in the outer portions of the urban area.

These industrial relocations are expected to have the greatest impact on the transportation system in the northwest with the continued development of the Five Points Business Park between IH 20 and BI 20 (S 1st St.). Industrial activities are also expected to increase significantly in the southeast, particularly in and near the Abilene Regional Airport.

Trends in Household and Families

The average number of persons per household continues to decline but the rate of decline is slowing. The average household size dropped from 3.01 persons per household in 1970, to 2.61 in 1990, to 2.54 in 2000. However, the average size is not likely to drop below 2.5 within the next 20 years.

One reason for the decline in household size is the increasing numbers of persons who live alone. One-person households have increase from 1 of every 6 in 1970 to 1 of every 4 in 1990. The 1 of every 4 ratio has remained constant into 2000. The proportion in Abilene is slightly higher and increasing faster than the State as a whole. These households are most prevalent in older neighborhoods and among concentrations of apartment complexes.

Of particular interest is the increasing number of persons 65 or older who live alone. There were 3,830 such households in 1990 and 4,072 such households in 2000. This equates to almost 1 out of every 10 in Abilene. The ratio is higher than the state average and increasing faster. The potential need for services, such as nutrition, recreation, and transportation, is very great among this group.

Offsetting the increase in single person households is a slight proportional increase in families with children under 18. The proportion of families with children dropped from about 45% to 38% between 1970 and 1980, rebounded to 39% in 1990, and dipped to 38% in 2000. The City trend mirrors statewide trends although the proportion is slightly lower in Abilene.

Unfortunately, the growth in number of families with children has come primarily among families not headed by married couples. The proportion of single parent families is rising rapidly and now accounts for about 23% of all families with children in Abilene and about 25% of all families with children in Texas.

As the proportion of single parent families and single person households has increased, the proportion of married couples had declined. The proportion of married couple families in Abilene has dropped from 73% of all households in 1970, to 59% in 1990, to 52% in 2000. The rate of decline is slowing, however, and the proportion is not likely to fall below 50%.

Among all Abilene households, the proportion of married couples with children has fallen most rapidly, declining from 40% of all households in 1970, to 31% of households in 1990, to 24% of households in 2000. The proportion declined rapidly from 1970 to 1980, and more slowly into 1990 and 2000, indicating that the trend may be leveling. The proportion of couples without children in the home declined to 28% in 1990, after hovering near 32% from 1970 to 1980. This

proportion remained constant at 28% into 2000. These trends are similar to statewide trends among married couples.

Married couple families are important to the stability of neighborhoods. A direct relationship exists between married couple households and home ownership, which is a traditional indicator of neighborhood stability.

Preservation of Right-of-Ways

The City of Abilene and its extraterritorial jurisdiction cover approximately 95% of the Abilene Metropolitan Area, including all of the areas projected to experience increased urbanization or new development by 2035. The *Thoroughfare Plan*, developed jointly by the City of Abilene and the Abilene MPO, identifies current and projected alignments in the Abilene Metropolitan Area for all roads designated as collectors, arterials, or expressways. The *Thoroughfare Plan (1986)* further identifies minimum right-of-way (ROW) requirements for the respective facility types.

Chapter 23, Subpart D of the Code of Abilene, Texas, requires that developers dedicate public ROW by plat, and construct or contribute to the construction of all public roads in or abutting new subdivisions within the incorporated area of the City of Abilene. Abilene City Code Section 23-262, entitled CONVENTIONAL DESIGN STANDARDS, specifies the exact requirements for street design and associated ROW dedication according to type of facility and location.

Abilene City Code Section 23-266, entitled EXCEPTIONS, specifies requirements for public roads ROW associated with land subdivision in the extraterritorial jurisdiction of the City of Abilene. Both sections require that new developments requiring subdivision of land preserve the approximate alignments and appropriate ROW of roads designated in the *Thoroughfare Plan*.

The City of Abilene is in the process of creating a new Land Development Code that combines the Zoning Code and the Subdivision Regulations. The staff of the Abilene MPO has worked closely with City of Abilene staff in the process to ensure that MPO expectations are consistent with the proposed regulations. The proposed regulations provide updated provisions for ROW requirements including a proposal for an additional classification of thoroughfares.

Freight Movement

A strategy exists to encourage freight intensive activities, especially operations utilizing both motor freight and rail freight, to locate or relocate away from the central business district, preferably in one of the planned industrial districts in the outer portions of the urbanized area. These planned industrial districts have ample connections to major arterials and rail line spurs, and can be provided without conflicting with the roadway network. The *Comprehensive Plan and Development Strategy for Downtown Abilene, Texas*, recommends that traffic in industrial and warehousing areas should be separated from traffic in the core area of downtown, and identifies the removal of rail spur trackage as a highly desirable goal.

Significant concentrations of truck terminals, freight distributors, and related operations are located along IH 20 in the City of Tye, in the eastern BI 20 (East Highway 80)/Union Pacific Railroad corridor, in the southern BU 83-D (S. Treadaway Bl./Union Pacific rail spur corridor,

and in the industrial areas along the BI 20/Union Pacific Railroad corridor west of US 83. Interregional freight movements are accomplished primarily on the Union Pacific Railroad mainline and on IH 20, US 83, and SH 36.

Land Use and Development Controls

Forecasted land uses for the MTP are based primarily on the *Abilene Comprehensive Plan* developed by the City of Abilene, Texas, and the *Thoroughfare Plan)*.

The City of Abilene and its extraterritorial jurisdiction encompass about 99% of the Metropolitan Area population and approximately 95% of the Abilene Metropolitan Area, including all of the areas projected to experience increased urbanization or new development by 2035. This plan was developed in coordination with the City of Abilene departments responsible for planning and directing the physical, economic, and social development of the city.

Environmental Issues In the Abilene Metropolitan Area

All transportation projects selected for funding must be reviewed for their potential impact on the environment including biological, physical, and cultural resources. All federally funded projects must conform to the requirements of the National Environmental Policy Act (NEPA), the National Historic Preservation Act (Section 106), and the U.S. Department of Transportation (DOT) Act [Section 4(f)]. These laws ensure that the environment is both protected and enhanced. These laws generally require that environmental impacts must be identified for all actions involving federal funds and that negative impacts must be avoided or minimized and mitigated.

NEPA is a federal law which requires that federal agencies consider natural and socio-economic factors using a systematic interdisciplinary approach before committing to a project. Section 106 provides for the protection, rehabilitation, restoration and reconstruction of historic sites and objects significant in American architecture, archeology and culture. The Advisory Council on Historic Preservation (ACHP) has established procedures to be followed if a federal action impacts significant historic sites. Section 4(f) provides special protection for parks and publicly owned recreation areas, wildlife and waterfowl refuges and significant historic sites. FHWA cannot approve a project that uses land from a Section 4(f) resource unless it demonstrates that there is no feasible and prudent alternative to the use of the resource and that all possible planning has been done to minimize harm to the property

Stormwater Drainage

Stormwater drainage is the primary environmental issue affecting development of surface transportation in the Abilene Metropolitan Area. Several creeks flow across the Abilene Metropolitan Area, most converging in a fan shape toward Lake Fort Phantom Hill at the north end of the area. Stormwater drainage affects floodplain management, wetland protection, and water quality.

The transportation system and the stormwater drainage system interact with each other, often in complex ways. The transportation system is affected directly and indirectly by drainage features. Roadways, railways, and pathways are directly impacted in location, design, and cost of construction by their interaction with the drainage features of the area.

The terrain of the metropolitan area is mostly gently rolling, so drainage features are generally the dominant topographical elements in the selection of locations for surface transportation features. Drainage features tend to interrupt the continuity of transportation corridors and the networking of road systems, especially at classifications below the level of primary arterial.

Floodways and floodplains also interrupt the continuity of urban development. The resulting gaps tend to spread out urbanization, requiring a more stretched-out transportation system.

Floodplain Management

In 1979, the City of Abilene and the Federal Emergency Management Agency (FEMA) cooperated in a flood insurance study that identified flood-prone areas within the City of Abilene. Floodways and floodplains were mapped for regulatory purposes of the National Flood

Insurance Program (NFIP) and published on flood insurance rate maps (FIRM), which have been revised as needed. As of January 12, 2010, significant revisions to the maps are in the review process.

The City of Abilene is a participant in and the local enforcement agency for the NFIP. The City of Abilene adopted by ordinance and codified in the Subdivision Regulations of the City of Abilene a comprehensive set of stormwater management requirements. The purposes of the stormwater management requirements are to promote the public health, safety, and welfare and to minimize public and private losses due to flood conditions.

The City of Abilene stormwater management requirements state, "No structure or land shall hereafter be located, altered, or have its use changed without full compliance with the terms of [the City of Abilene stormwater management requirements] and other applicable regulations. The provisions of [the City of Abilene stormwater management requirements] shall apply to and be binding upon every person, firm, or corporation who seeks to develop, redevelop, grade, excavate, fill, berm, or dike land within the City of Abilene."

Among the methods emphasized for implementing the stormwater management requirements are policies and procedures that: control the alteration of natural flood plains, stream channels, and natural protective barriers that are involved in the accommodation of flood waters; control filling, grading, dredging and other development which may increase flood damage; and prevent or regulate the construction of flood barriers that will unnaturally divert flood waters or that may increase flood hazards to other lands.

Federal law requires that all entities that use federal funding for actions in regulatory floodplains and floodways must comply with FEMA requirements for enforcement of the NFIP and implementation of the recommendations of the report, *A Unified National Program for Floodplain Management*, which is concurred in by eight cabinet level agencies, including the Department of Transportation. These requirements are effectively similar to local requirements. Among the recommended practices are those that: minimize floodplain fills and other actions that require fills such as construction of dwellings, factories, highways, etc.; preserve free natural drainage when designing and constructing bridges, roads, fills and large built-up centers; and prevent intrusion on and destruction of wetland ecosystems.

Consistency with NFIP criteria is also mandated by policy in the design of all TxDOT projects involving encroachments in floodplains of communities participating in the NFIP. All private projects, local government projects, federal-aid activities, and TxDOT construction projects must comply with NFIP guidelines.

Close attention to hydraulic design is essential for all projects involving surface construction or development within the urbanized area. A key guideline concerns the allowable amount of increase in flood levels that a project may cause. A complete prohibition on increasing the flood level would make most development prohibitively expensive. As a general rule projects that encroach onto a designated floodplain may be permitted through routine review processes as long as the work does not result in more than a one foot increase in the level "base flood"-- the flood having a one percent

chance of being equaled or exceeded in any given year, also called the "hundred year flood" or "regulatory flood"—at *any point* in the community.

Protection of the main floodway is considered to be especially important. A project that encroaches into the floodway may not cause any increase in the base flood at any point in the community without special reviews and processes.

If the allowable increases are exceeded, a special review process with FEMA is required to determine if a revision to the flood areas on the flood insurance rate maps (FIRM) is required. Any revision to the FIRM requires a substantial additional amount of technical study, public participation, and intergovernmental cooperation. Any loss of property or property value that results from an increase requiring a FIRM revision will probably be considered a taking requiring compensation to the property owners.

In most cases the concern about increasing flood levels applies upstream from a project location due to water being backed up by embankments or structures. The approach to the problem is fairly straightforward from a design standpoint, simply ensure that there is no *decrease* in the amount of water that passes. From a cost standpoint even this approach can be tricky as costs generally increase dramatically with increases in the amount of water that can pass under a structure or through culverts. Most federal-aid eligible roads and all roadways classified as primary arterial, expressway, or interstate, encroach on a floodplain at some point in the Abilene urbanized area.

On some of the main roadway corridors in the Abilene urbanized area the problem is compounded by concerns about increases in flood levels that may occur downstream from projects. Much of the major roadway system was already in place when the floodplains were first designated. The built-up roadbeds and existing drainage structures created an unintended dike and weir system in some areas. New construction or changes to existing roads and structures in these areas not only must not back up more water but also must not allow more water through. This double complication increases difficulty of environmental assessments and project design and tends to greatly increase construction costs for projects.

The roads most affected by this double hydraulic problem are IH 20, BI-20, and US 83. The 2010-2035 MTP has projects on each of these roads that will be impacted. US 83 is the most affected. It has the most challenge from urbanization both upstream and downstream from potential project work areas. Revision of the flood insurance rate maps (FIRM) and consequential takings actions are least likely to be acceptable financially and politically for projects along this roadway.

There are three lakes that collect water drainage in the Abilene Metropolitan Area. Lytle Lake is located in the east central region of the area and Kirby Lake is located in the southeast region of the area. Lake Fort Phantom Hill is located in the northeastern region of the area, and acts as the primary drainage collection. Contrary to most of Texas, the drainage in Abilene primarily flows from south to north.

There are 5 major creeks converging in the Abilene Metropolitan Area. They are Big Elm Creek, Little Elm Creek, Catclaw Creek, Rainey Creek, and Cedar Creek. Big Elm Creek is

joined by Little Elm Creek before it flows into Lake Fort Phantom Hill. Catclaw Creek also flows into the Elm Creek system. Cedar Creek connects Kirby Lake, Lytle Lake, and Lake Fort Phantom Hill, terminating at Lake Fort Phantom Hill. Rainey Creek converges with Cedar Creek between IH-20 and Lake Fort Phantom Hill.

The subtle south to north slope of Abilene is not large enough to warrant an elaborate storm water runoff system. An extensive underground system would not be economically feasible. Therefore, the City of Abilene has decided to use the street system as the major drainage conveyance system. This creates localized drainage problems at numerous intersections and along streets.

The Big Elm branch of the Elm Creek system has good channel depth compared to its watershed. Sedimentation has built the banks of Big Elm Creek higher than the adjacent terrain through much of the urbanized area. During normal circumstances, this creek remains within the banks in a narrow floodway. When Big Elm Creek overtops its banks in the areas where the banks are elevated above the adjacent terrain, the water disperses into a wide floodplain, often flowing long distances before rejoining the floodway or flowing into the floodways of other creeks. This situation is exacerbated in places by the design of roadways in place before designation of the floodplains, as discussed previously. The elevated banks complicate localized stormwater management in routine storm events by preventing nearby areas from being drained into Big Elm Creek.

The main channel of Little Elm Creek is largely channelized although overflow can still threaten low areas following intense rainfall events. The primary transportation issues concerning Little Elm Creek are low water crossings that currently exist on Hartford Street, Steffens Street, and Magnolia Street in Abilene and a low water crossing of a tributary of Little Elm Creek on Market Street in Tye .

The Catclaw watershed is smaller than the Big Elm Creek watershed, and is shallower. Catclaw Creek is prone to overflow during high, intense rainfall. During major events, flooding along Catclaw Creek may be aggravated by water flowing out of Big Elm Creek.

Cedar Creek has three notable tributaries. Buck Creek, Button Willow Creek, and Lytle Creek join the Cedar Creek watershed on the eastern side of the Abilene Metropolitan Area. The flow of stormwater into the Cedar Creek system particularly affects Treadaway Bl. and local east-west streets feeding water into the system.

Areas along the Rainey Creek system in the BI-20 corridor contain a substantial amount of older development that did not take stormwater drainage into consideration. Abilene has yet to experience rejuvenation in this area. Until substantial new development occurs, drainage problems will continue to exist in this area.

Maps titled Water Features of the Abilene Metropolitan Planning Area, and Flood Zones of the Abilene Metropolitan Area are provided in the Appendix C.

Air Quality

The Abilene Metropolitan Area is in attainment with all Federal and State regulated air quality standards. Three main factors for attainment are low to minimum traffic congestion, low per capita of industrial businesses, and high wind speed common to West Texas. A study of population, economic, and land use trends indicate that the Abilene Metropolitan Area will continue to be in attainment should the current regulated standards remain.

State and national air quality problems impact the Abilene transportation system indirectly and through policy direction. Requirements for alternative fuel vehicles are likely to impact transit in the Abilene Metropolitan Area within the plan period.

Though well under regulated level, the highest air pollutant concern for the Abilene Metropolitan Area is Particulate Matter 2.5 (PM 2.5). Particulate matter refers to any and all substances suspended in the air. The source of the particulate matter can be by natural occurrences as well as man-made events. Particulate matter has been cited to aggravate existing respiratory problems, and also create new respiratory problems.

Particulate matter is measured by size in units known as microns (1 millionth of a meter or 25 thousandth of an inch). For comparison, the average human hair is 50 microns in diameter. A measurement of 2.5 microns would be 1/20 of that diameter. PM 2.5 is therefore classified as fine particulates.

Typically, PM 2.5 is generated by emissions related to industrial and residential combustion activities, and vehicle exhaust. The agricultural activities in and around the Abilene Metropolitan Area also contribute to the PM 2.5 generation. However, sand storms and wind gusts are the largest contributors.

Currently, each MSA with a population of 200,000 is monitored for PM 2.5. However, the Texas Commission on Environmental Quality, in conjunction with the University of Texas at Austin, has plans to increase statewide monitoring. It is understood that more stringent standards will also take weather patterns, such as wind, into consideration.

Historically, only El Paso has gone over the standard of PM 2.5. The Abilene MPO should analyze the actions and reactions of the Lubbock TMA and Midland-Odessa MPO to act as an indicator.

Historic Preservation

The Abilene area contains recognized historic districts in the central part of the urbanized area, a number of sites that are on or are eligible for the National Register of Historic Places, an active historic preservation society, and areas of historic zoning within the City of Abilene. Considerations of historic preservation have played an active role in corridor planning and transit facility location decisions. Historic preservation considerations are expected to play increasingly larger roles in transportation decision-making in the Abilene urbanized area as number of sites passing the fifty-year criteria for National Register eligibility has been rapidly growing.

Preservation of Public Parks and Recreation Areas

Public parks and recreation areas are located along the corridors of existing and proposed roads and paths in numerous places. Consideration given to avoiding or minimizing the impact of transportation projects on theses areas plays a significant role in both corridor level and system level planning.

Additional Mitigation Plans

The MPO will consider the development of new or additional mitigation strategies. In addition to the agencies with which the MPO routinely consults, the MPO will further consult on matters of environmental mitigation strategies with the following public agencies, the listing of which shall not be considered to exclude consultation with others:

- United States Army Corps of Engineers,
- United States Fish and Wildlife Service,
- Texas Parks and Wildlife Department, and
- Texas Historical Commission.

Climate Change Issues

"Climate change" includes a range of issues that have been discussed under the less appropriate term of "global warming." The multitude of factors and interactions that create climate effects at various geographic scales greatly complicates the examination and discussion of relationships among transportation-related activities and measurable climate changes. The Abilene MPO will continue to monitor scientific and regulatory developments concerning climate change and take appropriate steps as the appropriate strategies become more well-defined.

Greenhouse Gases

The Abilene MPO is aware that the emissions from mobile sources on the transportation network may be contributing to greenhouse gases. The Abilene area, however, is not currently experiencing congestion issues that would afford an opportunity to readily address emissions and greenhouse gases. Such opportunities would include the ability to reduce emissions from idling or slow-moving vehicles caught in congested road segments. The Abilene MPO is aware that changing automotive technology is leading to a vehicle fleet that will have reduced emissions that produce greenhouse gases. The Abilene MPO and member agencies will continue to monitor congestion, as well as guidance and emerging technology related to greenhouse gases and strategies to reduce them that would be applicable in the Abilene area.

Other Issues

Other environmental issues are discussed elsewhere in this document, are subject to routine mitigation activities, or do not have known implications at the system and corridor planning levels. Each project is subject to complete environmental review and assessment as it is developed.

Public Involvement in the Metropolitan Transportation Plan

Public Involvement

The Abilene MPO adopted an official public involvement procedure in June 1994 and updated the procedure in 2007. Public involvement and comment are included in many other ways as well. Major elements included in the planning process were developed with public input. The Thoroughfare Plan, the Abilene Comprehensive Plan, local zoning and development regulations, and the CityLink transit plans are among the major elements used in the MPO that included opportunity for public involvement in their development.

Cooperation and coordination with the development of the Abilene Comprehensive Plan was the most important public involvement activity in development of this Metropolitan Transportation Plan (MTP). In this process, transportation planners were able to interact with the general public, local officials, and the urban planning team in a robust and extended process. Basic assumptions about urban form, desired growth and change in urbanization, and land use patterns were questioned.

Assumptions about urban growth and public investment in infrastructure were coordinated between the MTP and the Comprehensive Plan in the process. The MTP and the Comprehensive Plan have been jointly updated and are designed to be mutually supporting.

The Abilene MPO, the City of Abilene, and TxDOT have continually accepted and considered the comments, concerns, and recommendations of individuals, organizations, and elected officials in planning transportation improvements. In order to involve a wider perspective on transportation planning in the review and approval process, the Abilene MPO Transportation Policy Board was enlarged at the beginning of FY 1994 to include voting representatives of the Abilene Chamber of Commerce and the West Central Texas Council of Governments.

Additional public comments on plan elements and projects were obtained in various ways. Comments were obtained by advertising for input and conduct of a public hearing specifically for the plan in accordance with the formally adopted procedure. Comments were solicited and obtained through the Abilene Reporter-News, a newspaper of general circulation in the Abilene Metropolitan Area. Significant comments were also obtained at public hearings for the TIP, public hearings on specific projects, and through public involvement procedures intended to develop projects in nearby rural areas.

The Abilene MPO maintains an MPO website. Within the website are notices, agendas, and information packets for public hearings and meetings. Contact information for Abilene MPO staff is also provided.

Title VI and Environmental Justice

Title VI of the Civil Rights Act of 1964 prohibits discrimination on the basis of race, color, and national origin in programs and activities receiving federal financial assistance. Environmental Justice broadens this scope to include economically challenged individuals as well. One of the purposes of the MPO process is to insure these protections. The Abilene MPO is charged to

uphold Title VI and Environmental Justice principles when studying and evaluating each transportation project.

Responsibilities of the Abilene MPO

With regards to Title VI issues, the Abilene MPO must assess if a transportation project that may be proposed for the MTP, UPWP, or TIP complies with Title VI. If the staff believes that the project does not comply as proposed, then the MPO staff will recommend that the MPO Transportation Policy Board not include the project in the respective document until it is in compliance with Title VI.

The Abilene MPO believes in the worth of economically challenged individuals. With regards to Environmental Justice, the Abilene MPO understands that transportation can play a major role in aiding individuals' economic recovery. The Abilene MPO's philosophy is to advocate public transportation at reasonable rates, establish a quality transportation network and structure, and to guard against unnecessary projects that encroach upon economically disadvantaged areas or that will cause inequitable economic stress to any group.

Strategies

During study of a transportation project proposal, Abilene MPO staff will conduct Title VI and Environmental Justice review. Using racial and income data from the the most recent Census, racial and household income percentages have been assigned for each census Block Group. Each project's location will then be compared to the percentages. The percentages will then be evaluated with the project's potential benefit to surrounding residents, the project's need, transportation flow through the region and the entire MPO area, encroachment of area by other projects, and funding.

The Abilene MPO will also continually review procedures used to solicited public participation and comments and recommend updates as appropriate.

Bicycle and Pedestrian Path System

History

The Abilene City Council has adopted several bicycle and pedestrian plans in the past. The first notable bicycle and pedestrian plan dates back to 1983. The 1983 *Bicycle Plan* was the result of a Federal Highway Administration grant in 1980 to conduct a bicycle feasibility study, and was spurred by the 1981 Abilene Energy Management Plan. Due to financial constraints during a declining economy, this plan was never implemented.

The latest major distinct planning effort is the 2001 *Abilene Multi-Use Bicycle and Pedestrian Trail Plan.* This effort incorporates the philosophies of previous plans, and incorporates design standards. The six main goals of the *Abilene Multi-Use Bicycle and Pedestrian Trail Plan* are as followed:

1) Improve access to the downtown, including municipal, cultural and shopping locations
2) Improve access to local recreational opportunities
3) Provide for safe crossing of major highways
4) Provide access to a key inter-modal transit center
5) Improvement in bicycle and motor vehicle operator education
6) Promotion of opportunities for bicycling in the City.

The *Abilene Multi-Use Bicycle and Pedestrian Trail Plan* was tabled at the Abilene City Council and never adopted. The Planning Department used the *Abilene Multi-Use Bicycle and Pedestrian Trail Plan* as a foundation to the pedestrian mobility philosophies in the 2004 *Abilene Comprehensive Plan*.

System Structure

Using information gathered from previous plans and solicited desires from the public, a framework for the proposed bicycle and pedestrian trail system was made. Many parts of the system would have to be retrofitted into the current thoroughfare system. To aid in this process, the planned location of lanes, paths, and trails are to be considered "conceptual". However, efforts were made to establish the system along transit stops, shopping areas, parks, local attractions, hospitals, and public housing. A first phase map of the bicycle and pedestrian trail system is provided in the Appendix C.

Paths

Paths will be the preferred development of the bicycle and pedestrian trail system. It is possible that a planed route may become a path during more intensive planning stages closer to construction. This upsizing will be dependent on adequate space and funding.

Paths will consist of a minimum of an eight foot wide surfaced path with two foot graded shoulders on either side, separated from vehicular traffic, and designed exclusively for bicycles and pedestrians. Paths should be at least five feet away from the edge of a paved road.

Lanes

A bicycle lane will be a portion of the roadway designated exclusively for the use of bicycles. Lanes will require a minimum of a four foot width designated by a six inch white stripe separating the roadway from the bike lane.

Routes

Bike routes can be shared by bicyclists, pedestrians, and motorists, and should have sufficient width to accommodate all. A route will be designated by signage. Due to the lack of separation from vehicular motorists, routes are most appropriate along less traveled local streets.

Encouraging Use

The *Abilene Multi-Use Bicycle and Pedestrian Trail Plan* incorporates strategies to help encourage use of the bike and pedestrian path system. Some of these strategies include:

- Bicycle parking
- Shower and locker facilities
- Theft reduction measurements
- Early planning on new development (employment, commercial and recreation centers)

Land Use Strategies

- Increase housing densities to allow citizens to live closer to neighborhood destinations such as stores and schools
- Encourage mixed-use developments that provide services such as stores and professional buildings closer to residential areas
- Establish multiple-use zoning that allows residences and businesses to share the same structure
- Locate buildings close to the street to provide easy access by pedestrians
- Preserve open spaces between communities or large developed areas to establish greenbelts, or natural buffers, that helps prevent urban sprawl
- Resolve conflicts with neighborhood traffic management (traffic calming) to make streets more inviting to walkers and cyclists
- Create better access management by limiting or consolidating driveways, providing raised or landscaped medians, and creating frontage roads
- Giving sidewalk construction priority to transit routes and local streets feeding transit routes
- Improve bus stop amenities to include shelters, landscaping, road buffering and lighting

Suggested Funding

The *Abilene Multi-Use Bicycle and Pedestrian Trail Plan* suggests a conglomerate of funding sources to establish the bicycle and pedestrian path system.

Federal and State Funding

- *Transportation Enhancement Funds*
  - Provision of facilities for pedestrian and bicycles
  - Provision of safety and educational activities for pedestrians and bicyclists

  - Acquisition of scenic easements and scenic/historic sites
  - Scenic or historic highway program
  - Landscaping and other scenic beautification
  - Historic preservation or the rehabilitation and operation of historic transportation facilities including historic railroad facilities
- *Safe Routes to School Program*
  - Sidewalk improvements
  - Pedestrian/bicycle crossing improvements
  - On-street bicycle facilities scenic or historic highway program
  - Traffic diversion improvements
  - Off-street bicycle and pedestrian facilities
  - Traffic calming measures for off-system roads
- *National Park Service*
  - Technical assistance in planning community-based conservation of river and trail corridors
- *Texas Park and Wildlife – Recreational Trails Program*
  - Construction of new recreation trails on public or private lands
  - Trail restoration or rehabilitation
  - ADA upgrades
  - Acquisition of easements or property
  - Maintenance of existing trails
  - Environmental mitigation
  - Development of trailside and trailhead facilities (signs, restrooms, parking areas, water fountains, horse-watering, corrals, hitching posts, tool storage, bike racks, benches, picnic tables, and fencing)
- *Pedestrian and Bicycle Information Clearinghouse*
  - Distributing information about health and safety, engineering, advocacy, education, enforcement and access and mobility

<u>Private or Non-Profit Funding</u>

- *Rails to Trails Conservancy*
  - Provide technical assistance, public education, advocacy, negotiation, legislation and regulatory action along former rail lines and connecting corridors
- *Student Conservation Association*
  - Coordinate individuals to volunteer and agencies to recruit volunteers from AmeriCorp's, Conservation Career Development, Wilderness Work Skills, High School Conservation Work Crew, and Resource Assistant / Conservation Associate programs
- *Walking Magazine Trail Restoration Fund*
  - Restoration of a specific trail
  - Purchase equipment such as weed trimmers, clippers, bow saws, or other trail tools

Other Possible Funding and Assistance

- *Developer Impact Fees*
  - These fees could be charged by local governments based on the size and density of new developments and its impact on the resources. Developers can be required to pay these fees, which could be used to purchase land and develop new trails and greenways, or to dedicated open space and to construct trails along designated greenways.
- *"Friends" Groups*
  - Establishing a "Friends of the Trail" group that could be responsible for fund raising, building projects, education projects, and some of the maintenance and implementation.
- *Leasing Sub-Surface Utility Rights beneath Greenway Corridors*
  - Several trail efforts have been successful in funding their entire trail development efforts through the leasing of sub-surface rights to telecommunications firms. Other utilities such as water, sewer, and natural gas may also be interested in discussing opportunities for shared use of corridors.
- *Local Bond Issues*
  - A local bond can be used as the sole source of funding for trail and greenway acquisition and development, but it is preferable to leverage these local dollars with funding from additional sources
- *Private Fundraising*
  - Ask for in-kind contributions or donated materials (labor, equipment, advertising space / support, printing, signs, picnic tables, benches, trees, etc.) along with cash contributions from individuals, businesses / corporations, civic organizations, foundations, family trust / foundations, memberships, or special events
- *Scout Troops*
  - Scout troops throughout Texas have been involved in the adoption and construction of trails

Review of Significant Public Comment

Planning Process

Comments were received on the amount of publicity given to specific projects as part of the overall transportation planning process. These comments were received in large part as a result of dissatisfaction with ramp relocations along US 83 that were made in conjunction with a widening project between S. 7th Street and the US 83/Loop 322/BU-83-D interchange.

Plan Elements and Assumptions

Southwest Area Growth and Congestion

Significant comment was received concerning traffic safety and traffic congestion in three corridors, which intersect near the mall of Abilene in southwestern Abilene. The corridors are the Winters Freeway (US 83) corridor from S 7th St to Buffalo Gap Rd., Southwest Drive from S. 27th Street to Elm Creek, and the Buffalo Gap Rd. corridor from S 27th St. to Antilley Rd. Comments generally centered on safety, traffic operations, and increased traffic. A problem repeatedly identified in comments is the difficulty in crossing the Winters Freeway (US 83) which separates the Mall of Abilene-Southwest Drive commercial area and a large and growing residential area from the main urbanized area.

The MTP has identified the growth patterns and congestion problems about which comments were received and includes them as assumptions and planning elements. Projects to address improvement of the transportation system in this area have been included in response to the public comment.

Completed projects that have addressed the congestion problems are the addition of lanes on Southwest Drive between Danville Drive and Catclaw Drive with intersection operation improvements and the addition of auxiliary lane along the US 83 frontage roads between the exit ramps and entrance ramps between FM 89 (Buffalo Gap Road) and Southwest Drive. The auxiliary lanes relieve the bottleneck at the exit ramp on Clack Street and provide a much greater length for weaving maneuvers. A plan to add additional frontage road aulixiary lanes is included in the MTP, as are other projects that will improve the capacity of Buffalo Gap Rd. (FM 89), from US 83 to Antilley Rd.

The public comments concerning a need for an additional freeway crossing prompted the study of potential sites for a grade separation. Two potential projects were first identified in the 1995-2015 MTP. One is the development of a new collector street along an abandoned railroad right-of-way, which could be extended to cross over the freeway and provide an alternate route for a large residential area. Further analysis indicates that this project would do little to relieve congestion in the area of primary concern but would have merit in serving other development needs.

The second project would have created a new surface crossing in the area by adding structures to carry the freeway mainlines over a new connection between existing surface streets. Analysis has indicated that the only location that would significantly improve traffic flow is a surface

connection between Ridgemont Dr. and Ivanhoe Ln. This project has not been included in the current MTP for two reasons: the adverse impact of greatly increased traffic flow through the residential area to the north of the freeway (an area which includes an elementary school, a major city park, and a retirement center); and the high cost in funding, construction-related traffic delay, and environmental disruption of retrofitting a grade separation structure in existing right-of-way. The situation will continue to be considered for future project feasibility but is not currently seen as a priority.

US 83 (Winters Freeway) Frontage Roads

A large number of comments were received concerning relocation of ramps along US 83 (Winters Freeway) between S. 7th Street and FM 89 (Buffalo Gap Road). Ramps were relocated to change operations from a diamond pattern to an X pattern to improve safety and serve local development. Comments that had been received during project planning and design had been mostly positive. Comments received from the driving public after the change were highly critical based on increased time of travel, increased congestion on the frontage roads, disparity between congestion on the main lanes and the frontage roads, increased circuity of travel, and the perception that insufficient publicity was give to the changes in the planning and development process. Many of the comments called for the ramps changes to be undone. However, a primary reason for the project was to improve safety, which is a primary consideration for projects in the Abilene Metropolitan Area. Unless further study reveals that the ramp changes can be undone without decreasing safety, the changes are planned to stay. TxDOT engineers and other metropolitan area transportation officials will continue to monitor the situation and seek ways to address the concerns of the public without diminishing safety. A completed project to add additional auxiliary lanes between exit and entrance ramps along the frontage roads between FM 89 and Southwest has improved congestion issues. The greatest improvements have occurred at intersection conflict points and in the area approaching the exit ramp, which was initially pinched down to one lane to create a free lane for traffic exiting the freeway. The addition of the auxliliary lane restores two through lanes, which has made a significant improvement.

Northeast Area Growth

The MTP anticipates significant urban growth in the northeastern portion of the metropolitan area near SH 351. Public comment was received indicating the potential for a change in urbanization patterns that would cause continued substantial growth in this area. The comments resulted in a change in the Abilene Metropolitan Thoroughfare Plan, realigning a proposed arterial road and several collectors, which are expected to be built by developers as needed. An extension of Loop 322 from IH 20 to SH 351 was also proposed in response to these comments. Travel demand analysis shows that a two lane portion of this proposed new road would serve enough system-wide travel to justify including it in the plan regardless of a change in urban growth patterns that may extend out to this road. Other projects to improve the arterial roads in this area for system-wide travel demand include added capacity projects or operational improvements on IH 20, IH 20 frontage roads, SH 351, and West Lake Rd.

Railroad Issues

Comments have been received calling for the construction of one or more additional grade-separated rail crossings between downtown Abilene and US 83 due to concerns over increased rail traffic resulting from a merger of the Union Pacific and Southern Pacific railroads. Such a

project would have marginal feasibility due to high cost, current lack of major adverse effects from increased rail traffic, and the presence of several grade separations already in the area. No project to address this comment has been included in the MTP.

Comments were received about the concerns for the public's safety due to the increase of speed on the Union Pacific railroad. Union Pacific made improvements to the rail system through Abilene to handle the increased speed before the increase in speed was allowed. The automatic warning signals and gates, and grade separated system currently in use will provide the same amount of protection, regardless of speed. No project to address this comment has been included in the MTP.

Metropolitan Area Highways in Interregional and International Travel Corridors

Comments were received concerning the potential for major interregional and international travel corridors to pass through the Abilene Metropolitan Area. Significant increases in traffic on IH 20, US 83, and US 277 are foreseen. Major added-capacity projects and operational improvements on IH 20, US 83, US 277, and Loop 322 are planned to serve the added traffic.

Pedestrian Crossings

The deaths of pedestrians attempting to cross freeway mainlanes prompted requests for pedestrian overpasses and/or fencing the freeway right-of-way. A task force studied the problem and determined that there are no locations for pedestrian overpasses that would serve enough pedestrian traffic to justify the installation of a structure. Fencing was also not considered practical for various reasons. Design elements are included in planned projects to discourage attempted pedestrian crossings of the main traffic lanes.

Poor Street Condition

A number of comments were received about the poor condition of many metropolitan area streets and roads. Numerous road rehabilitation or reconstruction projects are planned, including many that have funding already programmed.

Sidewalks and Pedestrian Paths

Comments were received about inadequate provision of sidewalks and pedestrian paths for pedestrian travel. Additional sidewalk construction is planned and regulatory measures to encourage private development of sidewalks are being considered. Special attention is given to the installation of ramps and transit passenger pads for mobility-impaired citizens.

The death of a school child being struck by an automobile while in a crosswalk prompted requests to establish better safety along the commonly traveled paths of grade school students. This spurred an internal study of the sidewalk system in the City of Abilene. Sidewalks and Safe Routes to School are addressed in the *Abilene Comprehensive Plan*, which the Abilene MPO uses to guide project designs and locations.

During the public meetings of the *Abilene Comprehensive Plan*, several comments were received about the Abilene transportation system not being pedestrian and bicycle friendly. Comments pointed out the lack of a bicycle system, discontinuity of sidewalks, and poor sidewalk maintenance. The *Abilene Comprehensive Plan* addresses the need to establish bicycle paths and

lanes, hiking paths, improved sidewalk maintenance, sidewalk continuity, and ADA standards. The Abilene MPO is working in conjunction with the City of Abilene to achieve a successful pedestrian trail system as described in the *Abilene Comprehensive Plan*.

Specific Proposals

Significant comments were received specifically concerning certain roadway projects and transit services proposed in the MTP or proposing the addition of specific projects.

Loop 322

Community leaders have actively advocated the completion of Loop 322 as an urban expressway connecting US 83 and IH 20 for several years. Construction has been completed on three phases to add capacity: the first phase from the US 83 interchange to FM 1750 is complete, the second phase from FM 1750 to ST 36 is complete, and the final phase from SH 36 to IH 20 is complete in its current form. Additional improvement are foreseen: providing frontage bridges across Lytle Creek to improve connectivity and mobility, changing frontage road operations and improving ramps to improve safety and operation efficiency, and extending Loop 322 to SH 351—initially as a two-lane roadway—to improve connectivity and mobility, Reconstruction of the interchange with IH 20 to provide direct connections has been proposed but the priority is currently not high enough compared to the cost to include in a fiscally restrained plan.

Evening Transit Service

The provision of evening transit service was advocated to help provide access to jobs. Job Access/Reverse Commute grant to implement evening service have been repeatedly received. This service has been implemented and is planned to continue. This service receives much favorable public comment.

Dyess Air Force Base (AFB) Access

Improvements to the surface street system around Dyess AFB have been the subject of comment in several forums. Comments for the improvement of Market St. in Tye to serve freight traffic using the north gate of Dyess AFB were received late in the process of creating the 2000-2025 MTP. The Abilene MPO Policy Board recommended that an improved route for the freight traffic should be studied. A study group involving TxDOT, the City of Abilene, Dyess AFB, the City of Tye, and the Abilene MPO studied several options and recommended a proposal known as the Dyess North Entry project. The Dyess North Entry project does not use Market St. in Tye, but is uses FM 3438 (Arnold Bl.), Military Drive, and ramp and frontage road improvement at IH 20 to improve connections between Dyess AFB and the IH 20 generally and to create an improved route for truck and commercial traffic to the north (Tye) gate of Dyess AFB. The overall project received much favorable comment. Comments on the individual implementing phases have been mixed, with much support but some concern from adjacent property owners over the effects of particular operational aspects. In 2009, the planned project phases are either under construction or completed. Consideration continues to be given to improving Air Base Road and Market Street in Tye but means of providing local match funding for project implementation is still an unresolved obstacle.

Multimodal Transportation Facility

To improve the public transportation services in the City of Abilene, Taylor County, Jones County, and to help create seamless state and national public transportation, the Abilene MPO fostered a Multimodal Transportation Facility (MTF) study. During the process of this study, the site in question was deemed unusable due to the historic value of a structure that would have been demolished. Several comments were received both in favor and against the demolition of the historic structure to create the MTF. Most comments received against the demolition also further commented that there is a need for the MTF in the city of Abilene.

The project is now being actively pursued in the planning stages as the Abilene Regional Intermodal Transit Facility. The project is recommended in the regional transit services coordination plan and is desired by Greyhound Lines as a replacement for its current intercity bus terminal location. Funding requests for the project and for updating the location study are being actively pursued.

Freeway Frontage Road Changes and Improvements

Due to safety concerns about the mixture of one-way and two-way sections of frontage road along freeways in the Abilene urbanized area and increasing conflicts between ramp traffic and oncoming traffic on busier sections of two-way frontage roads, plans to begin converting frontage roads to one-way operation were pushed forward in 2006. The frontage roads along IH 20 between the US 84 interchange in Tye and US 83, and connecting portions of the US 83 westside frontage road were rehabilitated and converted to one-way operations in conjunction with other improvements made to improve access to Dyess AFB.

A study of the need and feasibility for converting additional freeway frontage roads to one-way operation and relocating ramps was undertaken by TxDOT through consulting engineers in 2007. [add link to document] The study included two rounds of public meetings at various locations in the area. Many concerns were voiced about safety issues resulting from the mixture of one-way and two-way sections and the expectation by visitors that freeway frontage roads in urbanized areas would be one-way. Some concerns were expressed about increased circuity of travel, particularly along IH 20 east of Loop 322, and lack of alternate safe access for residents of the Lakes at Saddle Creek Subdivision south of FM 707.

The resulting study indicated conversion to one-way operations would be beneficial on most of the frontage roads that were studied. The recommendations were to undertake conversion to have consistent one-way operations along the following freeway sections: IH 20 from the US 84 interchange at Tye east to Loop 322, Loop 322 from Maple Street to SH 36, and US 83 from FM 707 north to FM 3404. In response to comments received from area residents and businesses and other considerations, conversion in the near term was not recommended along IH 20 from Loop 322 east to Elmdale Road and along US 83 from Iberis Road north to FM 707.

The consultant study recommended one new capacity project and a number of projects for operational improvements to facilitate the one-way conversion process. The new capacity project was to extend a road along an old rail right-of-way west of US 83 from Antilley Road north to near Windmill Circle, then connect back to Windmill Circle. This project was important to development around Abilene Regional Medical Center and on Windmill Circle. A portion of

the north-south road, now called Memorial Drive has been built by private developers and an east-west collector street, Covenant Drive, has been built north of Windmill Circle in lieu of a direct connection Windmill Circle.

An interchange at US 83 and FM 3034 was also deemed to be a prerequisite to one-way conversion of Clack Street (US 83 frontage road) between FM 2404 and FM 3034. This project was previously planned but was moved to a higher priority due to the frontage road study.

The operational improvements recommended included changing ramp configuration from diamond to X-ramps along Loop 322, and along IH 20 between Loop 322 and SH 351 and reversing individual ramps on Clack Street north of Antilley Road and on Danville Drive south of Summit Street. Many other ramps were recommended for reconstruction including the IH 20 ramps between FM 600 and SH 351. Due to specific concerns expressed about the south frontage road exit ramp just to the west of Judge Ely Blvd. in this area and the desire for more consistency in ramp configuration, further consideration after the initial studied resulted in plans to change all of the ramps between FM 600 and Loop 322 to an X configuration.

Other operational improvements that have been identified as needed by 2035 include U-turns at certain interchanges, new traffic signals to be implemented as warrants are met, and the removal of substandard ramps at IH 20 and BU 83-D (Pine Street). Safety improvements that have been recommended include removing connections between Iberis Road and US 83 main lanes, and between Danville Drive and the ramps connecting US 83 and S. 1st Street.

SH 36 (E.S. 11th Street) at Expo Drive

Concerns about traffic safety and operations during events at Shotwell Stadium and the Taylor County Expo Center were brought forward by Abilene Police Department and other local leaders. The configuration of the frontage roads, which are of an outdated design, were a particular issue. A section of SH 36 between Judge Ely Blvd. and Loop 322 was studied to assess approaches to addressing the problem but still retaining adequate access to three major destinations along the section of road: the Abilene Zoo and Nelson Park operated by the City of Abilene, Shotwell Stadium operated by the Abilene Independent School District, and the Taylor County Expo Center operated by Taylor County. The resulting design study included a series of meetings between the major stakeholders and other businesses, government offices, and residents that currently take access from the frontage roads. The resulting design will effectively remove the outdated frontage roads, although portions of them will remain as ramps, access drives, and a hike and bike trail. The project is scheduled to be let to contract as an American Recovery and Reinvestment Act project.

Cooperation and Consultation

The MPO will seek to promote harmony between transportation plans and projects and the plans and goals of other public agencies. The MPO will seek to take advantage of the professional insight of other public officials and the public input processes of local governments and other public agencies. In pursuit of these goals, the MPO will consult in the development of its plans and projects with public officials and public agencies that may be concerned with public transportation, development of transportation systems, land development, land use management, emergency management, natural resources, and environmental protection issues that may relate to transportation projects and services.

The extent and timing of consultation may vary depending upon the type of plans and projects being considered or the degree of change to plans and projects being considered. Consultation may occur indirectly through the actions of another public agency or official that is cooperating with the MPO in the development of plans or projects. The MPO may further consult with private organizations, individuals, and businesses when projects or services under consideration have the potential to affect the interests of such organizations, individuals, or businesses in a specific manner not shared by the public at large or when such consultation is otherwise deemed to be in the public interest.

Cooperation means that the parties involved in carrying out the planning, programming and management systems processes work together to achieve a common goal or objective. Consultation means that one party confers with another identified party in accordance with an established process and, prior to taking action(s), considers that party's views and periodically informs that party about action(s) taken.

Cooperation

The MPO will cooperate with the following public agencies or officials in the development of transportation plans and projects affecting the Abilene Metropolitan Area:

- The County Judge of each county within the Abilene Metropolitan Area
- Officials of the City of Abilene
  - The Planning Director for the City of Abilene
  - The Director of Public Works for the City of Abilene
  - Other City of Abilene official(s) responsible for oversight of traffic engineering
  - Other City of Abilene official(s) responsible for oversight of the urban transit system
- The General Manager of CityLink, which is the urban transit provider
- The Public Transportation Division of the Texas Department of Transportation
- The Transportation Planning and Programming Division of the Texas Department of Transportation
- Officials of the Abilene District of the Texas Department of Transportation
  - Abilene District Engineer
  - Transportation Planning and Development Division officials
  - Abilene Area Engineer
  - Public Transportation Coordinator

Consultation

The MPO will further consult or attempt to consult with the following public agencies or officials, the listing of which shall not be considered to exclude consultation with others:

- Chief elected officers of all local governments within the Abilene Metropolitan Area
- City of Abilene Historic Preservation Officer
- City of Abilene officials responsible for neighborhood services and development
- City of Abilene flood plain management officials
- City of Abilene emergency management official(s)
- Taylor County flood plain management officials
- Taylor County Local Emergency Planning Committee
- The Texas Commission on Environmental Quality
- The West Central Texas Council of Governments
- The Abilene Chamber of Commerce
- Dyess Air Force Base civil engineering officials

Consultation for Environmental Mitigation Strategies

The MPO will further consult on matters of environmental mitigation strategies with the following public agencies, the listing of which shall not be considered to exclude consultation with others:

- The United States Army Corps of Engineers
- United States Fish and Wildlife Service
- Texas Parks and Wildlife Department
- Texas Historical Commission

Coordinated Public Transit-Human Services Transportation Planning

The Abilene MPO has cooperated in the development of a regional transit services plan to coordinate all public transit services using state funding. The participants included urban and rural transit providers, public human services agencies, private non-profit organizations that provide transportation services for persons that are elderly or handicapped, metropolitan transportation planners, and public officials with oversight for transit services funding or operation. This planning process was required by state law prior to the passage of SAFETEA-LU. The planning process so far has produced a review of current conditions, obstacles, and opportunities in the *WCTCOG REGIONAL TRANSPORTATION SERVICE PLANNING TECHNICAL MEMORANDUM #1* This planning document was developed with the West Central Texas Council of Governments and the Central Texas Rural Transit District as lead agencies.

The Abilene MPO, CityLink, the City of Abilene, the rural transit providers that serve the Abilene Metropolitan area, and the Texas Department of Transportation actively cooperated with representatives of human services agencies in the planning process for the portions of the regional plan that affect the Abilene Metropolitan Area. The plan and the consultation that occurred during its development have resulted in a coordinated medical transportation services program for the region. Further planning and coordination of services and projects is expected.

Related Activities

The MPO, both directly and through the actions of its cooperative partners, regularly consults with agencies and individuals concerned with providing human services transportation in the Abilene Metropolitan Area. CityLink, the Abilene urban transit provider, maintains an ADA Advisory Committee appointed by the Abilene City Council. The ADA Advisory Committee represents the interests of urban transit system users who have qualifying disabilities under the American with Disabilities Act.

CityLink has had an active Job Access/Reverse Commute (JARC) service since the program was first instituted. Abilene was one of the first communities in the nation to receive JARC program funding. A cooperative planning effort among CityLink, the community's private, non-profit providers of transportation services, the Texas Work Force Commission, and area employers had provided the groundwork for the initial program application.

An increasing demand for transit services that cannot be adequately served by the scheduled transit service coupled with rapidly increasing costs that are outpacing federal and state funding led to the City of Abilen form an Ad Hoc Transit Committee to study service demands, funding sources, fare structures, and potential effects of service reductions. This Ad Hoc Transit Committee included representatives of the ADA Advisory Committee, the Texas Work Force Commission, and the United Way of Abilene. The TxDOT Abilene District Public Transit Coordinator and the Abilene MPO Transportation Planning Director consulted with the Committee.

Safe Routes to Schools

The Abilene MPO supports the Safe Routes to Schools program and concepts. The Abilene MPO has cooperated with the City of Abilene in the development of proposals for Safe Routes to Schools (SRTS) projects and the development of SRTS plans. Additional opportunities for cooperation among the MPO, local governments, school districts, and neighborhood organizations are anticipated as the program matures.

Section 3
Transit - CityLink

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Introduction

The City of Abilene operates a municipal transit system. The City of Abilene began operating the system when it took over operations of local bus service from Moore Services, Inc. in November 1964. In May of 1981, the City of Abilene contracted with a management firm to provide management and operation of the transit service. The City of Abilene retains ownership and budgetary control over the assets of the transit service. The transit service is managed and operated by the McDonald Transit Associates, Inc. In February 1992 a public image name change to CityLink Transit was introduced to the public in conjunction with the purchase of new fixed route buses.

Primary Services

CityLink currently provides three primary types of service to the public. They include Fixed Route Service, ADA paratransit, and Evening Service. All services are provided within the city limits of Abilene, and all services are provided Monday through Saturday. No Sunday service is provided. CityLink also provides some special services to the community on an incidental basis.

Fixed Route Service
The basic transit service is provided by a set of fixed routes that operate on a fixed schedule. There are12 weekday routes and 7 Saturday fixed route service begins at 6:15 A.M. each day and ends 6:15 P.M. Exact service schedules vary by route and abbreviated service is provided on Saturdays. CityLink currently provides approximately 31,000 hours of fixed route service annually.

ADA Paratransit Service
The ADA Paratransit Service is a demand – response. This service is provided for individuals who can not use the fixed route service due to physical or mental mobility limitations. It is provided during the same service hours as the Fixed Route system door-to-door service. Individuals qualify to use the service according to eligibility criteria established by the American with Disabilities Act (ADA). Currently there are approximately 800 individuals eligible for ADA Paratransit Service. CityLink provides approximately 37,000 hours of ADA Paratransit Service on an annual basis.

Evening Service
Evening Service is an advanced reservation demand-response curb-to-curb service available to the general public. This service is provided using Paratransit vans. Evening Service is provided after regularly scheduled fixed route service and ADA service ends. Service begins at 6:15 P.M. each evening and ends at 12:00 P.M. CityLink currently provides approximately 10,440 hours of even service annually.

Other Services

Medical Transportation Program

In September 2001 the State contracted with CityLink to provide non-emergency medical transportation services for Medicaid clients within the Abilene city limits. CityLink has been averaging 900 contracted Medicaid trips per month. In June 2006 the State contracted with the Central Texas Rural Transit District to be the Transportation Service provider for service area 7 (WCTCOG area) for medical transportation. CityLink is a subcontractor provider in service within the City of Abilene. The medical transportation service is provided from 5:15 AM to 7:00 PM Monday through Saturday. Medicaid participants may gain eligibility for transportation by contacting the state's DHHS offices. Clients contact the Medical Transportation Program toll-free number to set up transportation for medical appointments. State staff verifies a client's eligibility, and prepares trip requests. Valid trips are only to and from medical appointments or to a pharmacy for new prescriptions. The State staff faxes the trip requests no later than 5:30 PM the day before the trip and CityLink staff obtains the information and includes the trips on the schedule for the assigned date and time.

Contracted Fixed Routes

In August 2001, the City entered into an agreement with the Boys and Girls Club of Abilene to provide special fixed route service after school between several public school campuses and the Boys and Girls Club facilities. It has been renewed for each subsequent school year. The Boys and Girls Club pays the full cost for operating the routes. Passengers do not pay a fare. The City entered into a similar agreement with the West Central Council of Governments for their Community in Schools program. This agreement was in effect for the 2003-2004 school year, and was renewed through 2007-08 school year. The ridership for these programs is included in the Fixed Route statistics.

Other Special Routes

CityLink provides other special routes in cooperation with community events or on request. Special services include Kiddie Tours, which offer a view of the historic downtown area as an educational experience for children, annual Christmas Light Tours, and various other special movements planned in conjunction with community events. These special routes are provided under the FTA's charter regulations and requirements since 2008.

Charter Service

CityLink may provide charter service for private groups only when the private sector chooses not to provide the service. Charter services are provided under the FTA's charter regulations and requirements.

Ridership

Table 3-1: Ridership by Type of Service

Fiscal Year	Fixed Route	ADA Paratransit	Evening Service	Special Service	Total Ridership
1995	405,722	31,865	0	322	437,909
1996	415,046	32,602	0	252	447,900
1997	432,058	38,195	0	576	470,829
1998	468,230	43,656	0	844	512,730
1999	440,666	49,323	0	1,409	491,398
2000	436,681	56,571	5,982	1,652	500,886
2001	434,921	79,913	16,166	1,682	532,682
2002	491,331	86,946	19,263	3,403	600,943
2003	482,785	88,778	16,079	2,272	589,914
2004	464,275	98,220	15,767	2,172	580,434
2005	497,574	91,448	17,629	3,007	609,658
2006	506,631	92,193	18,554	2,345	619,723
2007	485,658	83,972	20,337	2,845	592,812
2008	481,051	82,092	19,987	1,977	585,107
2009	470,306	86,276	18,221	7,899	582,702

Fleet Information

The current CityLink fleet consists of 48 vehicles. Five of the 48 vehicles (2 sedans, 2 vans, and 1 truck) are used for supervisory and maintenance support functions. The remaining 43 are revenue service vehicles.

As illustrated by Table 3-2, many vehicles in the November 2009 CityLink fleet inventory have exceeded the useful life as determined by the Federal Transit Administration. For example, each of the 1992 Chance RT-52 buses exceeded the useful life mileage by the end of 1999. The bulk of capital expenditures over the life of the MTP result from planned expenditures for vehicle replacement based on the useful life expectancy for each vehicle.

		Support (5)						
		Vehicle ID Number	License #	Year	Make/Model	Type	FTA Useful Life	Mileage
Fixed Route Buses (16)	T9701	1A9FB3743V1365003	730-363	1997	AAI-ACL/Trolley	Type XIV	10yr/350,000 mile	225,670
	T9702	4VZRN0295VC023900	734-412	1997	AAI-ACL/Trolley	Type XIV	10yr/350,000 mile	142,099
	2001	1N9LLAC81YC084111	783-452	2000	ElDorado National/E-Z Rider	Type XV	10yr/300,000 mile	373,884
	2002	1N9LLAC83YC084112	783-449	2000	ElDorado National/E-Z Rider	Type XV	10yr/300,000 mile	338,613
	2003	1N9LLAC85YC084113	783-448	2000	ElDorado National/E-Z Rider	Type XV	10yr/300,000 mile	321,866
	2004	1N9LLAC87YC084114	783-450	2000	ElDorado National/E-Z Rider	Type XV	10yr/300,000 mile	345,718
	2005	1N9LLAC89YC084115	783-451	2000	ElDorado National/E-Z Rider	Type XV	10yr/300,000 mile	319,007
	0101	1N9FLAC892C084135	827-992	2001	ElDorado National/E-Z Rider	Type XV	10yr/300,000 mile	280,104
	7000	1N9MLACL67C084225	102-0950	2007	ElDorado National/E-Z Rider II Max	Type XVI	12yr/500,000 mile	107,734
	7001	1N9MLACL87C084226	102-0951	2007	ElDorado National/E-Z Rider II Max	Type XVI	12yr/500,000 mile	112,559
	7002	1N9MLACLX7C084227	102-0952	2007	ElDorado National/E-Z Rider II Max	Type XVI	12yr/500,000 mile	95,406
	7003	1N9MLACL17C084228	102-0953	2007	ElDorado National/E-Z Rider II Max	Type XVI	12yr/500,000 mile	107,244
	7004	1N9MLACL37C084229	102-0986	2007	ElDorado National/E-Z Rider II Max	Type XVI	12yr/500,000 mile	111,987
	7005	1N9MLACLX7C084230	102-0985	2007	ElDorado National/E-Z Rider II Max	Type XVI	12yr/500,000 mile	102,499
	9000	1N9MLACL09C084238	107-7058	2009	ElDorado National/E-Z Rider II Max	Type XVI	12yr/500,000 mile	22,587
	9001	1N9MLACL29C084239	107-7059	2009	ElDorado National/E-Z Rider II Max	Type XVI	12yr/500,000 mile	24,482
Trippers (5)	9202	1C9CR2DS4NW077625	611-758	1992	Chance Coach/RT-52	Type XI	7yr/200,000 mile	293,474
	9206	1C9CR2DSXNW077629	611-765	1992	Chance Coach/RT-52	Type XI	7yr/200,000 mile	317,841
	9207	1C9CR2DS8NW077630	611-761	1992	Chance Coach/RT-52	Type XI	7yr/200,000 mile	274,685
	9208	1C9CR2DSXNW077631	611-762	1992	Chance Coach/RT-52	Type XI	7yr/200,000 mile	385,413
	9211	1C9CR2DS5NW077634	613-999	1992	Chance Coach/RT-52	Type XI	7yr/200,000 mile	309,743
Demand Response Vans (21)	9607	1FDJE30FXVHB90809	842-632	1997	ElDorado National/Elf	Type III	4yr/100,000 mile	145,560
	0202	1FDXE45F12HB70677	846-553	2002	Glaval/Universal	Type III	4yr/100,000 mile	286,396
	0203	1FDXE45F52HB70679	846-551	2002	Glaval/Universal	Type III	4yr/100,000 mile	297,396
	0204	1FDXE45F52HB70682	846-550	2002	Glaval/Universal	Type III	4yr/100,000 mile	320,039
	0205	1FDXE45F22HB70672	846-552	2002	Glaval/Universal	Type III	4yr/100,000 mile	279,739
	0206	1FDXE45F82HB70675	846-549	2002	Glaval/Universal	Type III	4yr/100,000 mile	230,655
	0502	1FDXE45P24HB49980	884-055	2005	ElDorado National/Aerotech 240	Type III	4yr/100,000 mile	165,781
	0503	1FDXE45P44HB49981	884-056	2005	ElDorado National/Aerotech 240	Type III	4yr/100,000 mile	195,834
	0504	1FDXE45P64HB49982	883-770	2005	ElDorado National/Aerotech 240	Type III	4yr/100,000 mile	155,814
	0505	1FDXE45P84HB49983	883-771	2005	ElDorado National/Aerotech 240	Type III	4yr/100,000 mile	187,937
	0506	1FDXE45PX4HB49984	883-772	2005	ElDorado National/Aerotech 240	Type III	4yr/100,000 mile	195,407
	0507	1FDXE45P14HB49985	883-773	2005	ElDorado National/Aerotech 240	Type III	4yr/100,000 mile	146,568
	0508	1FDXE45P36HA32637	204-821	2005	ElDorado National/Aerotech 240	Type III	4yr/100,000 mile	147,298
	0509	1FDXE45P56HA32638	204-819	2005	ElDorado National/Aerotech 240	Type III	4yr/100,000 mile	156,108
	0510	1FDXE45P76HA32639	204-823	2005	ElDorado National/Aerotech 240	Type III	4yr/100,000 mile	151,641
	0511	1FDXE45P36HA32640	204-822	2005	ElDorado National/Aerotech 240	Type III	4yr/100,000 mile	150,240
	0512	1FDXE45P56HA32641	204-825	2005	ElDorado National/Aerotech 240	Type III	4yr/100,000 mile	161,302
	0513	1FDXE45P36DA68383	100-4806	2007	ElDorado National/Aerotech 240	Type III	4yr/100,000 mile	96,814
	0901	1FDFE45S19DA37797	107-7118	2009	ElDorado National/Aerotech 240	Type III	5yr/150,000 mile	15,979
	0902	1FDFE45S19DA39372	107-7121	2009	ElDorado National/Aerotech 240	Type III	5yr/150,000 mile	14,252
	9901	1FBSS31L6XHB34928	803-541	1999	Ford E-350/Alamo	Type II	4yr/100,000 mile	209,788
Support (5)	971	2G1WL52MOV1182978	720-093	1997	Chevrolet/Lumina	Type IV	3yr/36,000 mile	122,576
	903	2G1WF52E449344093	872-115	2003	Chevrolet/Impala	Type IV	3yr/36,000 mile	48,235
	904	1GNCS13X85K107824	889-103	2005	Chevrolet/Blazer	Type IV	3yr/36,000 mile	35,071
	905	1GNCS13XX5K107517	889-102	2005	Chevrolet/Blazer	Type IV	3yr/36,000 mile	32,404
	951	1GCFC24K5PZ168103	629-021	1993	Chevrolet/C2500	Type V	3yr/36,000 mile	74,109
Inactive	9203	1C9CR2DS6NW077626	611-759	1992	Chance Coach/RT-52	Type XI	7yr/200,000 mile	371,920
	9210	1C9CR2DS2NW077633	614-000	1992	Chance Coach/RT-52	Type XI	7yr/200,000 mile	372,750

49 FLEET VEHICLES (42 REVENUE / 5 SUPPORT / 2 INACTIVE)

AWAIT DISPOSAL (7)	9209	1C9CR2DS1NW077632	612-801	1992	Chance Coach/RT-52	Type XI	7yr/200,000 mile	312,859
	9204	1C9CR2DS8NW077627	611-763	1992	Chance Coach/RT-52	Type XI	7yr/200,000 mile	383,994
	9205	1C9CR2DSXNW077628	611-764	1992	Chance Coach/RT-52	Type XI	7yr/200,000 mile	366,222
	9608	1FDLE40F2THB26467	239-169	1996	ElDorado National/Elf	Type III	4yr/100,000 mile	332,694
	9609	1FDLE40F4THB26468	239-170	1996	ElDorado National/Elf	Type III	4yr/100,000 mile	321,118
	9610	1FDJE30F0SHB54851	239-171	1996	ElDorado National/Elf	Type III	4yr/100,000 mile	293,715
	501	1FDXE45P64HB49979	884-054	2005	ElDorado National/Aerotech 240	Type III	4yr/100,000 mile	21,246

Financial Plan

Funding for the CityLink system has varied from year to year based on the capital needs of the system. Substantial increases in the amount of Federal allocation resulted from vehicle acquisition and replacement. Vehicles are scheduled for replacement based on the established useful life of the vehicle. Operating costs have remained stable with incremental increases from year to year consistent with inflation and annual increases in operating costs.

Section 5307 Funds

Generally, federal transit funds for urbanized areas have been readily available if local funds were available for match. The average annual Section 5307 funding for CityLink for the period was $1,027,544. Beginning with FY 2000, however, available federal funds from the Section 5307 program were insufficient to meet the needs of transit operators in the State of Texas. Several new transit systems requested funding from the State's allocation, reducing funds that had previously been available for the existing transit systems.

Historically, funding from the Governor's apportionment for CityLink has exceeded the urban formula funding level posted in the Federal Register. The Federal Register formula allocation is being used as a conservative projection of available funding. Table 3-3A shows the Federal Register formula funding for Abilene through 2009.

Table 3-3A: - Abilene Urban Program Formula

FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004
$706,544	$768,847	$831,074	$892,985	$955,465	$1,237,852

FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010
$1,268,452	$1,287,479	$1,306,791	$1,326,393	$1,346,289	$1,635,379

Table 3-3B shows the 1.5% annual increase for FY 2010 to 2015.

Table 3 – 3B: Projected Abilene Urban Program Funds

FY 10	FY 11	FY 12	FY 13	F 14	F 15
1,635,379	1,659,910	1,684,441	1,708,972	1,733,503	1,759,505

State Public Transportation Funding

State funds appropriated for public transportation have increased significantly beginning with the 1992-1993 biennium. However, the formula for allocation of state funds has changed during the time period. The addition of new transit systems in the state will

impact the availability of state funds in the future years. There currently is no predictable basis for projecting state funds for the Abilene Urban Area. However, projections assume continued increase in the State appropriations.

Local Funding

Local funds used to match available funds from the Section 5307 apportionment consist of State Public Transportation Funds as well as local revenues, such as fares generated by the transit system and General Fund contributions from the City of Abilene. Local revenues and General Funds contributions have remained constant for the time period between FY 1990 and FY 2009, averaging $400,000 per year. The non-state local funding is expected to increase to match available federal funds.

Funding Projections

Table 3-4 summarizes funding availability for transit based on the methodology for projecting funding from each source. Funding is listed in five year increments (Six years for 2010 to 2015).

Table 3-4: Funding Projections by Source for Fiscal Years 2010-2035

	Federal Section 5307	Local (State)	Local (Non-State)	Total
2010 - 2015	$5,545,500	$2,701,000	$2,000,000	$10,246,500
2016 - 2020	$5,974,100	$2,913,000	$2,000,000	$10,887,100
2021 - 2025	$6,435,700	$3,123,000	$2,000,000	$11,558,700
2026 - 2030	$6,933,180	$3,276,068	$2,000,000	$12,209,248
2031 - 2035	$7,345,624	$3,488,854	$2,000,000	$12,209,248
Total	$37,329,004	$17,992,256	$10,000,000	$67,321,250

As Table 3-4 shows, based on funding estimates for the period FY 2010-2035, there will be a total of approximately $67,321,250 available for transit projects. This total is composed of $37,329,004 in Federal funds, $17,992,256 in State Public Transportation funds, and $10,000,000 in local funds.

Projected Expenditures

Table 3-5 summarizes projected expenditures for the CityLink transit for the years 2010 to 2035 in 5 year increments (six years for 2010 to 2015). The table provides a total estimated cost for each project and divides planned expenditures between funding categories. Operations and maintenance expenditures are benchmarked from actual costs for the 2009 fiscal year with a conservative 3% increase between each five year period to adjust for inflation and increased costs. Planning costs remain constant. The majority of all capital costs are related to the cyclical replacement of fleet vehicles based on the expected useful life for each vehicle type. Projected vehicle replacement costs are based on the expected cost for a similar vehicle at the time the vehicle is programmed for replacement.

Based on the Federal Register method of projecting funding for Abilene, Table 3-5 suggests that Federal Section 5307 funds will be insufficient to meet vehicle replacement needs for CityLink. The need for replacement of fixed route fleet busses in the years 2016-2020 results in the substantial shortfalls in available Federal funding. The need for replacement of two trolley buses and several paratransit vans between the years 2011 and 2015 also result in a substantial shortfall in available Federal funding. Although there are no shortfalls projected in available local funding, local funds would be insufficient to offset needed Federal funds for vehicle replacement. Additionally, local funds are typically allocated to match Federal allocations and may not be available in the absence of Federal funding to support capital costs. It should be noted that the planned capital replacement schedule presumes that the service life for most vehicles would exceed the useful life schedule by several years. Postponed vehicle replacement could result in significant increases in maintenance costs for older vehicles.

Table 3-5: Planned Projects and Projected Expenditures Fiscal Year 2010-2035

Fiscal Years	Expenses	Est. Cost	FTA Share	Local Share (State PTF)	Local Share (Non-Share)
	Operations	6,386,000	3,193,000	2,283,000	910,000
	Maintenance	1,431,700	1,145,360	286,340	0
	Planning	450,000	360,000	90,000	0
	2 - 30 pass Buses (Trolleys	570,000	456,000	41,660	72,340
	7 - Paratransit Vans	686,000	548,800	0	137,200
	Facility/Bus Stop Improvements	357,960	298,300	0	59,660
	Subtotal				
	Projected Available Funding		6,001,460	2,701,000	1,179,200
	Surplus/Shortfall		5,545,504	2,701,000	2,000,000
			-455,956	*0*	*820,800*

Fiscal Years	Expenses	Est. Cost	FTA Share	Local Share (State PTF)	Local Share (Non-Share)
2016-2020	Operations	6,577,580	3,288,790	2,378,790	910,000
	Maintenance	1,474,651	1,179,720	294,931	0
	Planning	450,000	360,000	90,000	0
	11 - 30 Passenger Buses	3,234,000	2,587,200	149,279	497,521
	6 - Paratransit Vans	600,000	480,000	0	120,000
	Subtotal				
	Projected Available Funding		7,895,710	2,913,000	1,527,521
	Surplus/Shortfall		5,974,079	2,913,000	2,000,000
			-1,921,631	*0*	*472,479*

Table 3-5: Planned Projects and Projected Expenditures Fiscal Year 2005-2030 (continued)

Fiscal Years	Expenses	Est. Cost	Fiscal Years	Expenses	Est. Cost
2021-2025	Operations	6,774,907	3,387,453	2,477,454	910,000
	Maintenance	1,518,890	1,215,112	303,778	0
	Planning	450,000	360,000	90,000	0
	8 - Paratransit Vans	800,000	640,000	160,000	0
	Computer Dispatch Upgrade(MDT)	250,000	200,000	50,000	0
	Facility/Bus Stop Improvements	200,000	160,000	40,000	0
	Subtotal				
	Projected Available Funding		5,962,565	3,121,232	910,000
	Surplus/Shortfall		6,435,781	3,123,000	2,000,000
			473,216	*1,768*	*1,090,000*
2026-2030	Operations	6,974,907	3,487,453	2,577,454	910,000
	Maintenance	1,573,890	1,265,112	308,778	0
	Planning	450,000	360,000	90,000	0
	10 - 30 Passenger Vans	3,596,500	2,877,200	160,000	559,300
	10 - Paratransit Vans	925,000	640,000	160,000	125,000
	Subtotal				
	Projected Available Funding		8,629,765	3,296,232	1,594,300
	Surplus/Shortfall		6,435,781	3,123,000	2,000,000
			-2,193,984	*-173,232*	*405,700*
2031-2035	Operations	7,184,154	3,592,077	2,682,077	910,000
	Maintenance	1,621,107	1,296,886	324,221	0
	Planning	450,000	360,000	90,000	0
	10 - 30 Passenger Vans	3,596,500	2,877,200	160,000	559,300
	10 - Paratransit Vans	925,000	640,000	160,000	125,000
	Subtotal				
	Projected Available Funding				
	Surplus/Shortfall				
		13,776,761	8,766,163	3,416,298	1,594,300

Other Projects

The projected funding, expenditures, and planned projects for transit outlined in the MTP are those projects and needs expected pursuant to the Section 5307 program administered by the Federal Transit Administration. The City of Abilene may also choose to pursue other projects between 2010 and 2030 that have not been included in the MTP. Abilene will also continue to pursue available funding for evening/access to jobs transportation initiatives.

Parking Facility

Due to the increase in transit vehicles, CityLink has need for additional secure parking space. A project has been developed to acquire property near the existing CityLink facility, and construct a paved and fenced parking lot.

Multimodal Transportation Facility (MTF)

Interest in the development of a MTF led to the initiation of a feasibility study for a multimodal passenger transit facility in the City of Abilene. The feasibility study considered a shared-use facility for the local Section 5307 transit provider (CityLink), the local over-the-road coach provider (Greyhound Bus Lines), regional rural transit providers, bicyclist, and pedestrians. The feasibility study was facilitated by The Goodman Corporation of Houston with the active involvement of CityLink, Greyhound Lines management, the Abilene MPO, the Abilene District of TxDOT, and representatives of the City of Abilene responsible for community planning, development, neighborhood improvement, downtown development, traffic, transportation, and airport management.

The study, including public involvement activities, found that there exists a present and future need for transit facility improvement, and expansion for both CityLink and Greyhound Lines; that there is an active interest in facility sharing by CityLink, Greyhound Lines, and three regional rural transit providers; and that there exists an active and growing interest in improving connectivity between bicycle and pedestrian transportation and bus transit. The study further determined that there is a strong interest in the integration of customer amenities of food service and day care with a terminal and transfer facility.

The study determined that a downtown location for a new facility is necessary from an operational perspective, and desirable from a community development perspective. The study determined that direct integration of the transit terminal with an on-rail facility for planned Amtrak service would not be feasible, but that connectivity could be maintained through an enhanced visual and pedestrian corridor to the primary identified locations for a potential Amtrak stop. The study also determined a strong interest in providing amenities to integrate the transit facility aesthetically and functionally with downtown cultural and economic activities, including restored historic transportation structures, and planned visitors' center and transportation museum. The study identified multiple feasible sites, including a preferred site that will be more intensively studied.

The initial findings of the study have been given extensive public exposure. The concept of establishing a new MTF in downtown Abilene has received much positive response. Some negative comments have been received specific to the most preferred site due to concern about a structure on site with some historical significance. This and other issues will receive further study in determining the final location of the facility.

FY 11

Section 5304 Planning funds have been requested in an effort to update the Goodman Corporation's initial study

Project

A new MTF to be shared by CityLink, Greyhound Lines, and regional rural transit providers will be established at a cost of approximately nine million dollars. The anticipated facility will include shared terminal and transfer facilities, CityLink offices and dispatching services, customer amenities in the form of food service and day care, and amenities to encourage pedestrian and bicycle transportation. The proposed facility will be contingent upon the receiving of funds from outside the normal funding stream such as FTA Capital Program, TCSP funds, or other applicable funding sources that may be established by Congressional or legislative action. The Abilene MPO believes that a reasonable likelihood exists that such funding will be made available, possibly in multiple appropriations, within a time period encompassing FY 2010 to FY 2012.

Funding

The study estimated the cost of establishing the new MTF and incorporating the desired amenities at approximately nine million dollars. A review of funding sources has shown that FTA section 5309 Capital Program funds and Transportation and Community and Systems Preservation (TCSP) funds have been used as major funding sources for the facilities of this type, and that projects of this type and cost have a good record of being funded in recent years. Congressional support exists for pursuing project funding from these sources. Local match funding has been identifies through the City of Abilene's Capital Improvement Program for the preferred downtown sites. Other potential sources of funding include FTA Section 5311 and Transportation Development Credits.

Welfare to Work

The City of Abilene was awarded a Job Access Reverse Commute (JARC) grant from FTA in FY 1999. The grant awarded in the first round of funding under Section 3037 of TEA-21 allowed CityLink to implement evening public transportation service in November of 1999. The purpose of the JARC program is to expand employment opportunities for low-income individuals and welfare recipients by overcoming transportation barriers in order to assist them to become self-sufficient.

Since the inception of the Program, the Evening Service/Access to Jobs Program was provided 170,159 passenger trips. More than 90% of the trips provided have assisted passengers traveling to/from employment and education related location.

On February 17, 2009, President Barack Obama signed into law the American Recovery and Reinvestment Act (ARRA) of 2009. Among the $787 billion that was provided to stimulate the economy, $6.9 billion was programmed for transportation capital and infrastructure projects. Of this funding, CityLink Transit was allocated $2,057,460. In support of the ARRA goals to strengthen local infrastructure and to create and transport individuals to jobs, CityLink Transit identified eight projects of interest. These projects enabled the agency to pursue necessary fleet replacement and facility improvements:

4 – 30' Low-Floor El Dorado National Buses	$1,300,000
5 – Type III Paratransit Vans	$450,000
Transfer Facility Rehabilitation	$99,460
1 – Replacement Shop Truck	$50,000
2 – Replacement Supervisor Sedans	$50,000
Interior/Exterior Facility Surveillance Equipment	$40,000
6 – Bus shelters and Concrete Slabs	$60,000
Replacement Training/Breakroom Equipment	$8,000

Section 4
Road and Trail Element

Contents of Section 4

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Significant Changes from 2005-2035 Plan

Separation of Financial Constraint into baseline and enhanced revenue with specific assumptions for revenue enhancement

Use of total project cost accounting for preliminary project planning and engineering and right-of-way costs

Use of year of expenditure (YOE) estimates for projects and with costs inflated to YOE versus constant dollar constraint analysis

Significant increases in project cost estimates due to major cost increases in the 2005-2010 timeframe and projected inflation

Movement of many projects from financially constrained list to illustrative list

Financial Constraint for Roadway Improvements

The twenty-six year financial constraint analysis for the Abilene MTP has been conducted using an average 4% compound inflation for year of expenditure purposes for individually listed projects. The year of expenditure is treated as the year in which costs are tied down by letting regardless of payout over the life of the project.

To estimate total project cost, standardized amounts of 10% of construction cost are added for preliminary engineering on all projects and an additional 12% of construction cost for right-of-way on mobility projects. Exceptions for the additional right-of-way costs are made for projects in existing rights-of-way when the project design and/or concept is such that existing right-of-way is sufficient. These standards are based on a study statewide conducted for the purpose of assessing nonconstruction costs for consideration of decentralizing control of State nonconstruction funds. The Abilene MPO recognizes that a standardized approach yields varying degrees of accuracy for individual projects but is useful both in concept and in foreseeing aggregated amounts over a program of projects.

State and Federal Road Financing

The Abilene Metropolitan Area is not a Transportation Management Area, and does not receive any direct allocations of state or federal roadway funds. All roadway funds from the FHWA and TxDOT are allocated at either the state or district level. Therefore, state and federal financing sources have not been analyzed independently at the metropolitan area level but have been treated as a combined funding source through the TxDOT Abilene District. Projects receiving state and federal financing frequently require varying amounts of local matching funds depending on the type of work and specific project requirements. For the financial constraint analysis, the required local matching funds have been treated as part of the state and federal financing.

Combined state and federal funding has been forecasted using baseline forecasts approved for long-range planning purposes together with enhanced revenue projections based on assumptions concerning future increases in transportation taxes and fees and the issuance of additional general revenue bonds. The Transportation Revenue Estimator and Needs Determination System (TRENDS) is a system developed jointly by TxDOT and the Association of Texas Metropolitan Planning Organizations with assistance from the Texas Transportation Institute. TRENDS was used by MPO staff to forecast incremental increases in fuel taxes and fees. TRENDS factors changes in fuel efficiency and population into the revenue forecasts that it produces, allowing a variety of different assumptions to be tested quickly. The TRENDS model is still under development but is a useful, if still somewhat awkward, tool.

The approach assumes the tested default values for statewide population growth and improvements in fuel efficiency. A base statewide revenue stream was generated assuming no changes in transportation tax rates, vehicle registration fees, or additional issuance of bonds. An enhanced statewide projection was produced factoring in staggered increases in fuel taxes and vehicle registration fees and assuming legislative approval and issuance of the remaining three billion dollars in "Proposition 12"general revenue bonds for transportation improvements.

The incremental differences between the two forecasts were aggregated into short term (FY 2010-2020) and long term (FY 2021-2035) amounts. A proportionate share, 0.4%, is deemed to be available for supplementing the baseline amounts provided by TxDOT for planning projects within the Abilene Metropolitan Area. The proportionate share is slightly less than the proportionate share of statewide maintenance and rehabilitation funding and the theoretical share of mobility funds that could be made available but is a reasonable, conservative amount that the actual share will approach due expected smaller percentages of future statewide population within the Abilene Metropolitan Area.

Revenue Enhancement Assumptions

Fuel taxes – A total of 25 cents per gallon in additional combined Federal and State fuel taxes, an amount found to be consistent with historical long-term trends:

Federal gasoline and diesel taxes increased by 7 cents per gallon in 2014 and increased again by 6 cents per gallon in 2022.

State gasoline and diesel taxes increased by 6 cents per gallon in 2016 and increased again by 6 cents per gallon in 2024.

Vehicle registration fees – Texas currently ranks among the lowest among the states in vehicle registration fees and registration fee increases will likely be advanced before a vehicle miles traveled tax, which most analysts agree is a necessary long-term solution to the disparity in trends between road usage and transportation revenues.

The vehicle registration fee will be increased by 50% in FY 2016 and again by 50% in 2022.

Programs Financially Constrained on Statewide Basis

Some classifications of funds, such as bridge rehabilitation and replacement, statewide transportation enhancement program, statewide safety program, and Safe Routes to Schools are managed and constrained at the state level. Projects that would be financed by these funds are expected to occur in the Abilene Metropolitan Area but may not be reasonably projected for particular amounts of funding or year of expenditure.

Special Programs and Congressional Earmarks

The short-range portion of the funding projection includes $10,000,000 in American Recovery and Reinvestment Act state discretionary funding that has been allocated by the Texas Transportation Commission for an IH 20 frontage road improvement project but not obligated as of January 12, 2010. Special programs such as the American Recovery and Reinvestment Act, which uses nontraditional funding streams or projects that allocate discretionary funds outside of the usual formula considerations are difficult to project. The Abilene MPO does, however, project that an additional $10,000,000 may be conservatively programmed for special funding in the 2021-2035 time period.

Plans, Specifications, and Estimates (PS&E) Related Revenue

The cost of preparing plans, specifications, and estimates (PS&E) associated with project development in the Abilene Metropolitan Area has traditionally been funded through separate revenue streams than those that pay for project construction. This is true for State projects and local projects alike. The total project cost shown in the project listing includes the cost of PS&E at the standardized rate of 10% of construction cost, however. The projected funding stream, therefore, contains additional funds at the same standardized rate to reflect the local general revenue funds or State non-construction dollars were not captured in analysis of historical distribution of construction funds or local capital expenditures.

State and Federal Funding Projections in Thousands of Dollars

	2010-2020	2021-2035	Total
Baseline	61,778	62,696	124,074
Enhanced Revenue	67,258	194,693	261,951
Total	129,036	256,989	386,025

State-Federal Mobility Funding
State Category 3 – Urban Area Corridor Projects

In 1991 the Texas Legislature requested that the Texas Transportation Commission (Commission) consider a simplified procedure for the planning, programming, and development of projects to contract letting. In addition, Governor Rick Perry requested that the Commission simplify the project planning process and deliver highway improvements in, “continuous and complete corridors,” thereby increasing efficiency and decreasing inconvenience to the Texas motorists.

As part of a plan to achieve these goals, the Commission approved reshuffling 12 existing statewide mobility categories into three. The three categories and 2009 share of allocations are:

- Category 2 – Metropolitan Area Corridor Projects - 72%

Corridors located within metropolitan Transportation Management Area (TMA) boundaries that have both local and statewide interest.

- Category 3 – Urban Area Corridor Projects - 10%

Corridors located within non-TMA MPO boundaries that have both local and statewide interest.

- Category 4 – Statewide Connectivity Corridor Projects - 18%

Corridors located outside of MPO boundaries that have statewide significance.

Category 3 - Urban Area (Non-TMA) Corridor Projects

Six criteria were used to establish funding targets for planning purposes for the urban areas. The criteria used are:

- On and Off-System Vehicle Miles Traveled (VMT)
- On-System Truck VMT
- Population (MPO Planning Boundary)
- On-System Centerline Miles
- On-System Lane Miles
- Fatal and Incapacitating Accident Rate (MVMT)
- Percent of Population Under the Federal Poverty Level

The Category 3 mobility funding amounts allocated for planning purposes to the Abilene Metropolitan Area through 2019 have been used by projects to improve Dyess Air Force Base access and to rebuild the IH 20 – US 83 (Winters Fwy.) interchange. New or enhanced sources of mobility funds that can be distributed to Category 3 must be created through revenue enhancement measures in order for mobility projects in the Abilene Metropolitan Area to receive funding in this category

No Category 3 Funding Available Within Baseline Revenue After 2020

In November 2009, the Texas Transportation Commission ordered that all baseline level funds over which the Commission has discretionary authority that would otherwise have been placed in these Categories of funding for planning purposes after 2020 would be redirected to maintenance and rehabilitation. Estimates provided to the Commission by staff and consultant agencies predicted that serious declines in the overall condition of the State highway system would occur even with all discretionary funds directed to maintenance and rehabilitation purposes.

Local Construction Financing

Local financing availability was analyzed by considering historic allocations of local funds for road improvement and maintenance projects. Estimates of costs for major improvement were taken on all roadways except those functionally classified for federal

aid purposes as local streets and roads or rural minor collectors. Costs expected to be borne by private developers as a required cost of land development are not included in this analysis. Estimates of costs for preventive maintenance operations at the local level include all road classifications.

The majority of funding for locally financed mobility improvement projects has historically come from the City of Abilene through general revenue bonds and Certificates of Obligation (CO). Preventive maintenance operations are typically financed by general funds of local entities, which rely heavily on sales tax and property tax revenues. County governments provide significant matching funds for county bridge rehabilitation and replacement, but the MPO does not project funding for that program as it is managed on a statewide basis. Other financial sources included City of Abilene economic development funds and funds derived from local tax increment financing funds, each may be used as financial resources for specific projects on a restricted basis. These additional financial resources are not expected to significantly increase total local commitments.

City of Abilene Bonds and Certificates of Obligation

City of Abilene staff reviewed historical commitments of general revenue bonds and certificates of obligations (CO) by primary purpose and provided the MPO with the historical information and with projections to FY 2035 based on the historical trends. The MPO staff looked at bonds and CO issued for transportation purposes: street construction and reconstruction, traffic improvements, and sidewalks. The historic trends showed no discernible tendency to increase to account for inflation, so the projected amounts are not inflation adjusted. The results for all transportation purposes aggregated by short-term and long-term periods as used previously:

FY 2010-2020	$42,906,000
FY 2021-2035	$54,607,000
TOTAL	$97,513,000

City of Abilene General Revenue Maintenance Funds

The overwhelming majority of local roads and streets in the Abilene Metropolitan Area are within the City of Abilene. The maintenance cost for City of Abilene streets represents a significant amount of the total public revenue available for roads and trails in the Abilene Metropolitan Area and is therefore included to reflect this significant local investment stream--although it only offsets the actual expenditure of funds—that affects the total local capacity for transportation investment. On advice of City of Abilene staff, the estimated cost of routine maintenance has been projected to be relatively level on a constant-dollar basis. The projection at this rate does not presuppose that this is sufficient to maintain the City street system at a desirable level, only that this is a funding rate that may be reasonably projected based on current trends. The City of Abilene street maintenance budget has been projected for inflation at 4% compound annual inflations and aggregated into short and long term periods:

FY 2010-2020	$47,082,000
FY 2021-2035	$107,069,000.
TOTAL	$154,151,000

City of Abilene General Revenue Engineering Funds

As mentioned in the preceding section of State and Federal Funding concerning reflection of the traditional separate funding stream used to pay for preparation of plans, specifications, and estimates (PS&E), the City of Abilene also has a general revenue burden for PS&E separate than the CO and bond funding that pays for construction. Although City of Abilene PS&E costs are reported to be typically lower than the standardized 10% of construction cost estimate, the standardized rate is still used in project total cost estimation and the revenue side is projected to offset the standardized cost factor.

FY 2010-2020	$2,332,000
FY 2021-2035	$2,161,000.
TOTAL	$4,493,000

Aggregate City of Abilene Funds

FY 2010-2020	$ 92,320,000
FY 2021-2035	167,297,000.
TOTAL	$259,617,000

Special Program Funding

Special programs provide unpredictable sources of revenue for short periods of time or for special types of projects. The funding may come designated for a specific project as an "earmark" in Federal transportation authorization acts or appropriation acts, from a special purpose program that may be competitive at either a national or state level such as transportation enhancements, or from a limited time, special purpose formula program such as the American Recovery and Reinvestment Act.

Congressional High Priority Projects (Earmarks)

The practice of designating funding in a federal transportation authorization act or appropriation act, commonly referred to as "earmarking," has become extremely popular in the last twenty years. The earmarking practice is generally considered to be inefficient in donor states such as Texas but can be an effective financial tool in areas that do not receive enough funding for large projects through formula distributions. In the Abilene Metropolitan Area, earmarks have provided funds that facilitated led large projects to widen US 83 and create improved connections to Dyess AFB. The Federal Lands Highway Program, a special funding program that requires earmarking of projects in the appropriations phase, provided significant additional funding for the Dyess AFB access projects.

The practice of widespread earmarking has been heavily criticized and significant reductions in the amount of earmarking are anticipated. The practice has significant political advantages, however, that create resistance to complete elimination. The funding that may be received through earmarking cannot be realistically projected but are considered as potential funding for projects that otherwise must be carried as illustrative projects unless and until the dedicated funding is enacted. If a project is fully funded through the earmarking process and requires no other sources of State or Federal funding, or if additional special funding is made available to supplement the earmark, the project may be inserted into the plan through a revision and the plan will remain constrained financially

Statewide Transportation Enhancements Program

The Statewide Transportation Enhancements Program (STEP) is an example of a program that is managed and constrained at a statewide level. STEP provides federal funding for specific categories of off-road projects. Project sponsors from the Abilene Metropolitan Area have been moderately successful in competing for program funding. Projects that are eligible for funding through STEP include projects that might otherwise be entirely locally funded, such as sidewalk or mixed-use pathway projects, as well projects that might not otherwise be done at all.

The use of federal transportation funding for transportation enhancement programs such as STEP has been quite popular from a "grass-roots" standpoint and is expected to continue. The program funding is provided through a competitive call for projects in Texas and is therefore not projectable. Projects that receive funding through STEP and do not include other sources of State or Federal funding will be considered constrained for application and award.

Safe Routes to Schools

The Safe Routes to Schools program is operated similarly to the STEP program in Texas but is designated for sidewalks, bike system improvements, and other similar projects that improve safety for children using non-motorized means of getting to school. Project sponsors in the Abilene Metropolitan Area were successful in getting some project funding in the first call for projects. The future of the program and the likelihood of competing successfully for projects are unpredictable. Projects that receive funding through the statewide SRTS program and do not include other sources of State or Federal funding will be considered constrained for application and award.

American Recovery and Reinvestment Act

The American Recovery and Reinvestment Act (ARRA) is an example of a special program that introduces funding in a manner not projectable. The ARRA program is notable particularly in that it uses general revenue funds completely outside the normal stream of surface transportation revenue sources, in that it requires no local match, and in that it has a very limited time span. Projects in the Abilene Metropolitan Area have ARRA funds committed to them from both the local formula suballocation to the area

and a major project along IH 20 that is being funded from the ARRA funds that were allocated to the discretion of the State.

ARRA funds that are available but are still not obligated to contracted projects as of December 15, 2009, include $10,000,000 committed to an IH 20 frontage road and ramp project proposed as project I0020-D1-01, previously identified under the group project ID I0020-XSR-IM. Other projects involve signals and safety lighting identified under the group project MVARI-XSR-MS and rehabilitation and reconstruction on local roads identified under the group project LVARI-XSR-RM.

Aggregate Road and Trail Funding Projections (Revenue Enhanced)

FY 2010-2020	$ 221,356,000
FY 2021-2035	424,286,000.
TOTAL	$645,642,000

Project Costs

Total Project Cost Approach

For many years prior to the implementation of SAFETEA-LU, roadway project costs in the MTP and TIP were reported in terms of construction costs. Federal highway funds for roadway development were only used for construction except in isolated cases of earmarking. The costs of right-of-way (r.o.w.) and a set of processes cumulatively called preliminary engineering (PE) were not included in either the historic funding analysis or future project costs. SAFTEA-LU rules require that total costs of projects, including r.o.w. and PE, be addressed for the purpose of financial constraint. Preliminary engineering costs are addressed as the cost associated with developing plans, specifications, and estimates (PS&E) that include preliminary plans, local environmental reviews, schematic plans, detailed engineering drawings and specifications, estimates of material quantities, and construction cost estimates.

The Abilene MPO staff consulted with staff of the Texas Department of Transportation (TxDOT), the Texas Transportation Institute (TTI), and other Texas metropolitan planning organizations concerning methods to estimate total project factors. As construction costs have historically been tracked separately from other costs associated with road development by TxDOT and other transportation providers, there is no definitive method of estimating nonconstruction costs by region, provider, or project type. A statewide review by TTI recommended as an interim measure that a standard estimate of 10% of construction costs be used for preliminary engineering and a standard estimate of 12% be used for costs associated with right-of-way.

The Abilene MPO Transportation Policy Board acting on advice of the Abilene Urban Transportation Study Technical Committee has chosen to use these standard estimates for all roadway mobility projects. The Abilene MPO recognizes that actual needs for right-of-way will vary significantly from project to project in a manner that cannot be accurately predicted until preliminary plans and environmental reviews are undertaken. The MPO believes that the aggregate costs of right-of-way within the overall plan will provide a useful recognition of the impact of right-of-way costs. The MPO further notes that more expensive construction designs may be used—as occurred with the US 84/FM 3438/UP Railroad interchange and grade separation—to prevent environmental impacts associated with right-of-way that would otherwise be required and the right-of-way factor may therefore influence total project costs even in cases where no actual right-of-way was acquired.

Other road and trail projects, such as rehabilitation and reconstruction, are not anticipated to require additional right-of-way but will have the standard preliminary engineering cost applied toward total project cost. The Abilene MPO will continue to cooperate with other transportation planning entities and transportation providers to attempt to develop more rigorous means of estimating the total cost of future projects.

Financing Nonconstruction Costs

Costs of preliminary engineering and right-of-way have traditionally been borne by TxDOT with state funds or by local governments. The financing for these costs like the costs themselves has not been as distinctly documented as construction costs. The financing has often been absorbed by organizational operating budgets or dispersed among multiple financing mechanisms. The necessary financing has occurred, however. As an interim measure, the financing provided for preliminary engineering and right-of-way for projects in this plan will be estimated to be provided through historic processes and at the rate used to estimate costs.

Year of Expenditure (YOE) Costs

In previous plans, the Abilene MPO used a constant dollar method of calculating revenues and costs based on historical analyses that revealed that over long time periods increases in revenue roughly offset inflationary costs. In its implementation of the SAFETEA-LU transportation authorization act, however, the US Department of Transportation required that inflationary factors be applied to estimate the actual dollar cost of projects at the time that a project is implemented. This method improves the process of comparing predicted costs to future revenue streams and estimating the need for increases in taxes and fees or introducing new sources of revenue.

A standardized inflation rate of 4% compounded annually is used to estimate the effect of inflation. This factor was derived from a long term historical analysis of net inflation effects. The Abilene MPO notes that actual rates will vary within the time period from much higher inflationary rates to brief periods of declining costs. It is not feasible to predict actual inflation for a given future time period by any known financial analysis process.

Note: The YOE cost for each individual project in the project listing is the standardized total project cost, based upon 2009 construction cost estimates, that is inflated at the standardized rate to the estimated year of expenditure. For individual construction projects that take multiple years to complete, the year of expenditure is considered to be the year that the cost is set through the contracting process, not necessarily the year that payments are actually made for construction progress.

Progress from Previous Plan

Dyess AFB Access Improvement Project

The Dyess AFB Access Improvement Project was a highlighted project in the FY 2005-2030 MTP and was the highest priority project in plan. Access to and from Dyess AFB is urgently needed for personnel, visitors, and freight movements. Improved access to the Dyess north gate is necessary to enable the base to route freight shipments, including hazardous materials, and other commercial traffic away from the Dyess main gate, thereby improving traffic flow and traffic safety around the base while enhancing base security. Heightened security procedures following September 11, 2001, caused the AFB command to begin redirecting all freight and other commercial traffic to the north gate.

The Dyess AFB North Entry project was a multiphase plan to establish a new route and street system to adequately handle the stress of military freight. This project should increase the safety of citizens and the freight movements. A route using FM 3438 (Arnold Bl.) and Military Drive was chosen as the preferred route because of the location, travel habits of freight transporters, and a 4 lane road divided by a wide median.

The first phase of the project allows redirecting military freight from IH 20 by an improved access road and ramp system. The freight will then traverse FM 3438 through the industrial park of Abilene. The next phase, an improved interchange at FM 3438 and BI 20 with a grade separation at the UP Railroad will greatly improve safety and lessen the congestion of this area, and allow the military freight to continue traveling southward to Military Dr. A rebuilt Military Dr. is the final leg of the Dyess AFB North Entry Project, as this leg will terminate at the north gate of the air force base.

IH 20 / FM 3438 (Arnold Bl.) Access Ramps and Frontage Roads

The scope of this portion of the Dyess AFB North Entry Project provided relocation and modification of access ramps on IH 20 to FM 3438 (Arnold Bl.) and upgraded IH 20 frontage roads, which were converted to one-way operations for additional safety improvement. The redesign and modifications will accommodate specific movements of the military freight transportation as well as improving the connection between Dyess AFB for all traffic. This intersection will become the main military freight access to IH 20 and allow the truck traffic to be routed onto a designated military freight designated route.

Construction is complete on this part of the project.

BI 20 / FM 3438 (Arnold Bl,) Interchange

The scope of this portion of the Dyess AFB North Entry Project is to redesign and rebuild the intersection of US 84 and FM3438 and establish a grade-separated rail crossing of the UP Railroad. This project will greatly improve safety at this location, especially for truck traffic and relieve congestion spurred by military personnel entering and leaving Dyess AFB.

This phase of the project is under construction in January 2010.

Military Drive Reconstruction

Military Drive needed reconstruction as it was not built adequately to be used as a military freight route. Frequent use of commuters to and from the north gate of Dyess AFB, in conjunction with traffic to and from the City of Tye, has created maintenance problems Military Drive.

This phase is substantially complete and open to traffic in January 2008.

IH 20 / US 83 (Winters Freeway) Interchange

The IH 20 / US 83 interchange project was on the illustrative project list in the 2000-2025 MTP and was established as a high priority project in the 2005-2030 MTP. The interchange was functionally obsolete due to insufficient vertical clearances and nonstandard exit design. The substandard vertical clearance created problems for routing oversize or overheight loads and presented the need for a series of repair projects due to damage to the structures from unpermitted overheight loads.

This project is complete.

SH 36 (ES 11th St.) Modification

The SH 36 modification project was a highlighted project in the FY 2002-2030 MTP. The project, which extends from Loop 322 to Judge Ely Blvd., originated with safety concerns about the traffic congestion experienced by visitors to Shotwell Stadium during football season and visitors to major events at the Taylor County Exposition Center. The design of the SH 36 frontage roads is no longer considered appropriate by current standards. The current configuration of the intersection of Expo Drive and SH 36 is not adequate to handle the short bursts of visitors.

A series of meetings with area stakeholders resulted in a design that effectively eliminates the frontage roads, although some portions will still be used in an altered configuration. A signalized intersection will be established at SH 36 and Expo Drive and other changes will be made to access to the major traffic generators.

This project was let for construction with American Recovery and Reinvestment Act funding in December 2009.

US 83 (Winters Freeway) Frontage Roads

A highlighted project in the 2005-2030 involved adding additional lanes to the frontage roads between FM 89 and US 277 (S. 14th) in two phases with the first phase to be FM 89 to Southwest Drive. A modified design was created to add an auxiliary lane between the exit and entrance ramps to improve weaving problems and eliminate the need to reduce frontage road traffic to one through lane at the exit ramps.

The first phase, between FM 89 and Southwest Drive, is complete.

Freeway Frontage Road Modifications to One-Way Traffic Operations

A plan to convert most remaining freeway frontage roads in the City of Abilene to one-way operations was a highlighted planning project in the 2005-2030 MTP. A consulting firm was contracted to assist in assessing the needs and issues. Two series of town hall meetings were held to discuss the plans with stakeholders and other members of the public. The resulting study and public input cut back the original planned eastern limits along IH 20 from Elmdale Road to Loop 322 and the original planned southern limits along US 83 from Iberis Road to FM 707.

The Abilene MPO Transportation Policy Board subsequently deemed the portion of the IH 20 frontage roads from the railroad grade separation near BU 83-D eastward to Loop 322 as the highest priority for use of new funding opportunities . The frontage roads along US 83 from Canyon Rock Road south to FM 707 were also named in the top five project priorities for new funding.

IH 20 Frontage Roads From the Railroad Near BU 83-D Eastward to Loop 322

The Abilene MPO requested State discretionary funding from the American Recovery and Reinvestment Act for this project in February 2009. The project involves roadway reconstruction, ramp relocation, and preparation for a follow-on phase that will add more improvements including auxiliary weaving lanes and "Texas" U-turns at SH 351. The project was not initially selected but was later allocated funding if the project could be ready for federal funding obligation by February 2010. Project-specific public meetings have been held and final design work is proceeding rapidly as of January 12, 2010.

EN 10th Street Reconstruction from Griffith Road to Loop 322

North 10th/EN 10th Street from FM 3438 to Loop 322 is the longest continuous arterial road not on the State-system that is currently designated for federal aid. Reconstruction of the portion from Griffith Road to Loop 322 was eligible for federal-aid and was a high priority for use of local funds. The previously existing roadway had not been significantly improved from rural county standards after being brought into the City of Abilene. The narrow, uneven roadway was dangerous at the speeds that drivers sought to travel and was the source of many complaints.

The City of Abilene acquired additional right-of-way to supplement prior dedications and built a new road meeting current standards that is designed to be the middle part of a future 64-foot section. The current design includes shoulders for most of the way with sections with an added lane and curb and gutter along the north side.

Project Prioritization

The projects have been listed using estimated year of expenditure as a surrogate form of prioritization. Projects in the project listing are listed separately for baseline State-Federal revenue and enhanced State-Federal revenue.

It is unrealistic to have a pure prioritization that would assume no restrictions on funding. Funds often come with restriction on period of availability, type of work that may be funded, or with funds limited to a specific project, as in the case of Congressional earmarks for priority projects. Therefore projects have been listed in order of use of expected availability of funds, recognizing that some projects may be moved forward if applicable funds become available more quickly. Project categories that are grouped over multiple years assume that some funding will be available over the time period. Grouped projects such as preventive and routine maintenance assume a base level of funding each year. Grouped projects that are managed statewide, such as bridge replacement and rehabilitation assume that projects will be funded from the state management system on a needs based system or on a competitive system.

Projects that are expected to be accomplished entirely with local funds based on expected voter approval of bonds are often restricted to specific projects by terms of election or by the local legislative body. The local voters and governments have not historically approved any significant cash contributions to projects on the State highway system, viewing such contributions as a type of double taxation, whether such view is rational or not.

Maintenance and rehabilitation projects are a significant priority both as specific projects and as categories of funding. Preservation of the existing system is recognized as both a local need and as a State priority for funding.

Safety is also a primary issue for prioritization of projects. Most projects have a safety component to them, including rehabilitation and reconstruction, as rough and uneven pavement can be a safety hazard. Some projects that are officially listed as mobility, operational improvements, such as the reconstruction of IH 20 frontage road for one-way operations, have safety and system preservation as major factors in project cost and prioritization.

Prioritization of Mobility Projects

Mobility projects on the State highway in the Abilene Metropolitan Area will require new sources of funding. In July 2008, the Abilene MPO Transportation Policy Board was asked to prioritize projects for the use of funds that could be made available if funds were distributed according to the established Categories 2, 3, and 4 formula from the voter approved Constitutional amendment to make transportation funding available from State general obligation bonds.

The MPO Board established the following projects as priorities in the following order:

1. IH 20 frontage roads from Pine Street east to Loop 322 - conversion to one-way operation

2. SH 351 from IH 20 to FM 2833 - access management project

3. FM 89 from south of Rebecca Lane north to US 83 - widening up to six lanes with access management design

4. Concurrent projects in south Abilene:
   US 83 frontage roads from Canyon Rock Rd to FM 707 conversion to one-way operation, and
   Memorial Dr. extension from Innisbrook Dr. to Antilley Rd. to provide reverse traffic flow

5. Concurrent projects in north Abilene:
   US 83 at FM 3034 and BU-83D (Pine Street) - Interchange construction, including possible minor realignment of FM 3034, and
   US 83 and BU-83D (Pine Street) frontage roads from IH-20 north to FM 3034 conversion to one-way operation.

The Technical Committee has recognized that the projects in items 4 and 5 above may be done nonconcurrently, but has recommended that the interchange project in item 5 should be done prior to the frontage roads conversion if the projects are not done concurrently. The Memorial Drive project in Item 4 may also be done prior to the frontage road conversion. The MPO Board and the Technical Committee have continued to adhere to these priorities in asking for funding from new sources, even after distribution of the bond funds was organized in a manner that does not guarantee any funds to the Abilene Metropolitan Area.

A necessary factor that has been considered, particularly in relation to long-term, high-cost projects is the long time period that major projects take to deliver from inception to completion. Twelve years is the average in Texas. A project must be included in the plan in order for preliminary planning, environmental reviews, and right-of-way preservation to be eligible for federal funds. Current TxDOT policy is changing to require that even State funds should not be spent for these purposes unless a project in listed in an MPO or State long-range plan. The desirability of being able to move forward with planning processes in the event that additional funding becomes available has been a consideration for retaining projects in the long-range portion of the plan. The extension of Loop 322 was deliberately included for planning purposes, with the recognition that other long-range projects that may be deliverable in a shorter time frame must be shown as illustrative in the plan.

Tables of Projects

The List of Projects is organized into three primary groups: projects that may be accomplished within baseline State-Federal revenue streams, projects that may be accomplished with the amount of revenue enhancement identified in this plan, and illustrative projects that are deemed worthy if sufficient funding is made available.

The baseline and enhanced-revenue projects are further separated into short-range and and long-range listings with specific projects ranked by estimated year of expenditure (YOE) and grouped projects shown to extend over the time period. Illustrative projects are separated into long-range mobility projects and short range rehabilitation and reconstruction needs on local roads. The short range projects on City of Abilene streets are listed in order of priority assigned by the City of Abilene.

Each specific project is shown with the name of the road on which it is located , then the extent of the project. The estimated YOE is followed by a project cost that represents the total project cost (construction; plans, specifications, and estimates; and right-of-way on mobility projects) inflated to the estimated YOE. A local project ID, explained below, is assigned for reference.

Project ID

The Project's ID is a unique local identification number assigned to each project to permit tracking of projects from the long-range plan through the funding processes to construction. Project numbers consist of a five-character system location code, a serial number distinguishing between projects with the same location code, and a project-type code.

Example: AXXXX-B3-CA

A	XXXX	-	B3	-	CA
System Code	Location Code		Serial Number		Project-type Code

System Codes
A- City of Abilene street system
I- Interstate Highway system
L- Local road systems, may include projects in Abilene
M- Metropolitan, may be on any road system within the Abilene Metropolitan Area
S- State Road system other than Interstate Highways

Location Codes
Lump sum projects all use VARI (various locations) regardless of system

> State system – Route numerical designation only, except for business routes which include business prefix (examples: s0018 = FM 18, SBI20 = IH 20 Business Route.

Other – Named streets are identified by first letters of street name, numbered city streets are identified by abbreviated directional prefix(es) and street number (Example: EN10 = East North 10th St.), and numbered county roads are identified by first letter of county name and road number.

Serial Number

X indicates a lump sum project.
(#) indicates a project carried forward from the 1995-2015 MTP
B(#) indicates a project included for the first time in the 2000-2025 MTP
C(#)indicates a project included for the first time in the 2005-2030 MTP
D(#) indicates a project included for the first time in the 2010-2035 MTP

Project-type Code

BR – Bridge rehabilitation or replacement
CA- Mobility, Capacity Added
IM – Interstate Maintenance, Rehabilitation and Safety
MS - Miscellaneous
OI – Mobility, Operational Improvement
PM- Preventative and routine Maintenance
RM – Reconstruction, Repair, Maintain

Status

LR – Long-range status. The project is expected to begin in the period 2011-2025 unless changes in funding or development cause the project to move forward or drop out.

SR – Short-range status. This project is expected to begin in the period 2000-2010 unless changes in funding or development cause the project to be delayed or drop out.

Abbreviations Used in the Tables

Ave.	Avenue	N.	North
BI	Interstate Highway Business Route	NA	Not applicable or not available
Blvd.	Boulevard	NHS	National Highway System
BU	U.S. Highway Business Route	NFR	North frontage road
CLT	Continuous center left-turn lane	PA	Principal arterials
City	City of Abilene, Texas	Rd.	Road
Class	Classification	R.O.W.	Right-of-way
Col.	Collector	RR	Railroad
E.	East	S.	South
FR	Frontage Road	SFR	South frontage road
FM	Farm to Market Road	SR	Short-range
Fwy.	Freeway	St.	Street
FY	Fiscal Year	SH	Texas State Highway
IH	Interstate Highway	US or U.S.	United States Highway
Ln.	Lane	W.	West
LR	Long-range		
MA	Minor arterial		

ABILENE URBAN TRANSPORTATION STUDY METROPOLITAN TRANSPORTATION PLAN PROJECTS YEARS 2010-2035

ALL COST AND REVENUES IN THOUSANDS OF DOLLARS

PROJECTS USING BASELINE STATE AND LOCAL FUNDING

LOCATION	FROM	TO	WORK DESCRIPTION	TOTAL PROJECT COST BEFORE INFLATION	YEAR OF EXPENSE	INFLATED COST 4%compound	LOCAL ID
IH 20 ACCESS ROADS	BU 83	LOOP 322	REHABILITATE AND CHANGE OPERATIONS, RELOCATE RAMPS	$11,000	2010	$11,000	I0020-D1-OI
COLLEGE-EN 13TH-EN 16TH	TREADAWAY BLVD.	JUDGE ELY BLVD.	RECONSTRUCT	$1,210	2011	$1,258	ACOL-D1-RM
INDUSTRIAL BLVD.	DANVILLE DR.	TREADAWAY BLVD.	REHABILITATE	$1,320	2012	$1,428	AIND-D1-RM
JUDGE ELY BIKEWAY	CAL YOUNG PARK	JUDGE ELY BLVD	SHARED USE PATHWAY CONNECTION	$264	2012	$286	AJUDG-D1-MS
JUDGE ELY BIKEWAY	YEOMAN'S DRIVE	N OF BI 20-R (E HWY 80)	CONNECT SECTIONS OF SHARED USE PATHWAY	$440	2012	$476	AJUDG-D2-MS
GRAPE ST.	HUCKLEBERRY LANE	PINE ST.	RECONSTRUCT AND WIDEN TO 40'	$1,659	2013	$1,866	AGRAP-1-RM
HARDISON LANE	MAPLE ST.	FM 1750 (OLDHAM)	RECONSTRUCT	$1,474	2014	$1,724	AHARD-D1-RM
CENTRAL BUSINESS DIST.	NORTH OF TRACKS		NEW CLOSED LOOP SIGNAL SYSTEM	$1,320	2015	$1,606	ACBD-1-OI
MEMORIAL DRIVE	INNISBROOK DRIVE	ANTILLEY ROAD	EXTEND 2 LANES ON OLD RR R.O.W.	$586	2015	$713	AMEM-D1-CA
NEW SIGNALS	VARIOUS INTERSECTIONS		NEW TRAFFIC SIGNALS	$610	2015	$742	MSIGN-XSR-OI
SIGNAL SYSTEMS	VARIOUS LOCATIONS		NEW CLOSED LOOP SIGNAL SYSTEMS	$2,562	2015	$3,117	MITSA-XSR-OI
US 83 ACCESS ROADS	BI 20-R	IH-20	REHABILITATE RAMPS AND FRONTAGE ROADS	$3,410	2015	$4,149	S0083-D2-RM
BI-20 R	AT RAINY CREEK		REPLACE BRIDGE, UPGRADE TO CURRENT DESIGN (TO BE FUNDED BY STATEWIDE BRIDGE PROGRAM)	$2,554	2016	STATEWIDE FUND	
INDUSTRIAL BLVD.	BU 83-D (TREADAWAY)	MAPLE	WIDEN TO 4 LANES WITH CLT	$1,293	2016	$1,636	AINDU-1-CA
N. 10TH ST.	FM 3438	WALL STREET	REHABILITATE, ADD BRIDGE, SHOULDERS AND TURN LANES	$4,636	2016	$5,866	AN010-D2-OI
US 84	AT UPRR		REPLACE BRIDGE, UPGRADE TO CURRENT DESIGN (TO BE FUNDED BY STATEWIDE BRIDGE PROGRAM)	$10,780	2016	STATEWIDE FUND	
WEST LAKE ROAD	SH 351 (AMBLER AVE.)	IH 20 SFR	REHABILITATE, ADD SHOULDERS AND TURN LANES	$1,220	2016	$1,544	AWEST-D1-OI
MEMORIAL DRIVE	CLACK STREET	PRESTON TRAIL	EXTEND 2 LANES ON OLD RR R.O.W.	$390	2017	$513	AMEM-D2-CA
E. S. 27TH ST.	LOOP 322 FR	FM 1750 (OLDHAM)	RECONSTRUCT AND WIDEN TO 40'	$979	2018	$1,340	AES27-3-RM
HARTFORD	AT LITTLE ELM CREEK		BRIDGE TO REPLACE LOW CROSSING	$1,298	2018	$1,776	AHART-1-BR
INDUSTRIAL BLVD.	LOOP 322	FM 1750	WIDEN TO 4 LANES WITH CLT	$525	2018	$718	AINDU-2-CA
ELMDALE ROAD	IH 20	FM 18	REHABILITATE, ADD SHOULDERS AND TURN LANES	$732	2020	$1,084	AELMD-D1-OI
MOCKINGBIRD BLVD.	AT S. 1ST ST.		CONSTRUCT AT GRADE CLOVERLEAF	$366	2025	$659	AMOCK-2-OI
E. S. 27TH	MAPLE	OLDHAM LANE	WIDEN TO 4 LANES WITH CLT	$1,330	2025	$2,395	AES27-2-CA
MAPLE ST.	S. 11TH	S. 27TH ST.	WIDEN TO 4 LANES WITH CLT	$2,111	2025	$3,801	AMAPL-2-CA
MAPLE ST.	S. 27TH ST.	INDUSTRIAL BLVD.	WIDEN TO 4 LANES WITH CLT	$1,025	2025	$1,846	AMAPL-3-CA
MOCKINGBIRD BLVD.	AT N. 1ST ST.		CONSTRUCT AT GRADE CLOVERLEAF	$244	2025	$439	AMOCK-3-OI
N. 10TH ST.	GRAPE	BU 83-D (TREADAWAY)	WIDEN TO 4 LANES	$4,636	2025	$8,349	AN010-1-CA
S. 27TH	RAILROAD	MAPLE STREET	WIDEN TO 4 LANES WITH CLT	$988	2025	$1,780	AS027-1-CA
NEW SIGNALS	VARIOUS INTERSECTIONS		NEW TRAFFIC SIGNALS	$2,393	2027	$4,660	MSIGN-XLR-OI
E.N. 10TH ST.	GRIFFITH ROAD	LOOP 322	WIDEN TO 4 LANES WITH CLT, BY ADJACENT DEVELOPER	$1,708	2028	$3,460	AEN10-1-CA
MAPLE ST.	INDUSTRIAL BLVD.	LOOP 322	WIDEN TO 4 LANES WITH CLT	$878	2030	$1,925	AMAPL-4-CA

ABILENE URBAN TRANSPORTATION STUDY METROPOLITAN TRANSPORTATION PLAN PROJECTS YEARS 2010-2035

ALL COST AND REVENUES IN THOUSANDS OF DOLLARS

LOCATION	FROM	TO	WORK DESCRIPTION	TOTAL PROJECT COST BEFORE INFLATION	YEAR OF EXPENSE	INFLATED COST 4%compound	LOCAL ID
LOCAL ROADS	VARIOUS LOCATIONS		ROUTINE MAINTENANCE	$47,082	2010-2020	$47,082	AVARI-XSR-PM
LOCAL ROADS	PROJECTS FROM MANAGEMENT SYSTEMS		REHABILITATE OR RECONSTRUCT EXISTING LOCAL ROADS	GROUPED PROJECTS OVER MULTIPLE YEARS	2010-2020	$400	LVARI-XSR-RM
MISCELLANEOUS PROJECTS ON LOCAL ROADS FOR SIGNS, SIGNALS, LANDSCAPING, DRAINAGE IMPS., ETC.			VARIOUS OFF-PAVEMENT IMPROVEMENTS	GROUPED PROJECTS OVER MULTIPLE YEARS	2010-2020	$1,980	LVARI-SXR-MS
MISCELLANEOUS PROJECTS ON STATE SYSTEM FOR SIGNS, SIGNALS, LANDSCAPING, DRAINAGE IMPS., ETC.			VARIOUS OFF-PAVEMENT IMPROVEMENTS	GROUPED PROJECTS OVER MULTIPLE YEARS	2010-2020	$2,697	SVARI-XSR-MS
PROJECTS FROM SAFETY MANAGEMENT SYSTEM			PROJECTS TO IMPROVE SYSTEM SAFETY	BASED ON STATEWIDE MANAGEMENT SYSTEM	2010-2020		MVARI-XSR-SA
SAFE ROUTES TO SCHOOLS	VARIOUS LOCATIONS FROM PLAN		PEDESTRIAN AND BIKEWAY IMPROVEMENTS	BASED ON STATEWIDE MANAGEMENT SYSTEM	2010-2020		SRTS-D1-MS
STATE SYSTEM	VARIOUS LOCATIONS		PREVENTIVE MAINTENANCE (ESTIMATED AT $2,000,000 FIRST YEAR WITH INFLATION OVER TIME)	GROUPED PROJECTS OVER MULTIPLE YEARS	2010-2020	$29,760	SVARI-XSR.PM
STATE SYSTEM	PROJECTS FROM MANAGEMENT SYSTEMS		REHABILITATE OR RECONSTRUCT EXISTING STATE ROADS WITH BASELINE FUNDS	GROUPED PROJECTS OVER MULTIPLE YEARS	2010-2020	$14,363	SVARI-XSR-RM
VARIOUS LOCATIONS			TRANSPORTATION ENHANCEMENT PROJECTS	BASED ON STATEWIDE MANAGEMENT SYSTEM	2010-2020		ENHA-D1-MS
VARIOUS LOCATIONS ON CITY STREETS			RETROFIT ADA CURB RAMPS	GROUPED PROJECTS OVER MULTIPLE YEARS	2010-2020	$550	ARAM-D1-MS
OPERATIONAL IMPROVEMENTS TO BE IDENTIFIED BY MANAGEMENT SYSTEMS			PROJECTS TO IMPROVE SYSTEM EFFICIENCY USING BASELINE FUNDING	GROUPED PROJECTS OVER MULTIPLE YEARS	2010-2021	$5,758	MVARI-XSR-OI
BIKEWAYS AND SHARED-USE PATHS	VARIOUS LOCATIONS		PAVING, SIGNS, DRAINAGE ON AND OFF STREET	GROUPED PROJECTS OVER MULTIPLE YEARS	2012-2020	$3,157	MBIKE-D1-MS
PEDESTRIAN PATHS	VARIOUS LOCATIONS		CONSTRUCT NEW SIDEWALKS	GROUPED PROJECTS OVER MULTIPLE YEARS	2012-2020	$2,700	MWALK-D1-MS
BIKEWAYS AND SHARED-USE PATHS	VARIOUS LOCATIONS		PAVING, SIGNS, DRAINAGE ON AND OFF STREET	GROUPED PROJECTS OVER MULTIPLE YEARS	2021-2035	$5,250	MBIKE-D2-MS
LOCAL MATCH AT VARIOUS LOCATIONS	VARIOUS LOCATIONS		LOCAL MATCH FOR STATEWIDE PROGRAM (BRIDGE, ENHANCEMENT, SRTS, ETC.) PROJECTS OFF STATE SYSTEM	GROUPED PROJECTS OVER MULTIPLE YEARS	2021-2035	$2,161	LMATC-XLR-MS
LOCAL MATCH AT VARIOUS LOCATIONS	VARIOUS LOCATIONS		LOCAL MATCH FOR STATEWIDE PROGRAM (BRIDGE, ENHANCEMENT, SRTS, ETC.) PROJECTS OFF STATE SYSTEM	GROUPED PROJECTS OVER MULTIPLE YEARS	2021-2035	$3,000	LMATC-XSR-MS
LOCAL ROADS	VARIOUS LOCATIONS		ROUTINE MAINTENANCE	GROUPED PROJECTS OVER MULTIPLE YEARS	2021-2035	$107,069	AVARI-XLR-PM
LOCAL ROADS	PROJECTS FROM MANAGEMENT SYSTEMS		REHABILITATE OR RECONSTRUCT EXISTING ROADS	GROUPED PROJECTS OVER MULTIPLE YEARS	2021-2035	$18,603	LVARI-XLR-RM
PEDESTRIAN PATHS	VARIOUS LOCATIONS		CONSTRUCT NEW SIDEWALKS	GROUPED PROJECTS OVER MULTIPLE YEARS	2021-2035	$4,200	MWALK-D2-MS
PROJECTS FROM SAFETY MANAGEMENT SYSTEM			PROJECTS TO IMPROVE SYSTEM SAFETY	BASED ON STATEWIDE MANAGEMENT SYSTEM	2021-2035		MVARI-XLR-SA
SAFE ROUTES TO SCHOOLS	VARIOUS LOCATIONS FROM PLAN		PEDESTRIAN AND BIKEWAY IMPROVEMENTS	BASED ON STATEWIDE MANAGEMENT SYSTEM	2021-2035		SRTS-D2-MS
STATE SYSTEM	VARIOUS LOCATIONS		PREVENTIVE MAINTENANCE WITHIN BASELINE REVENUE	GROUPED PROJECTS OVER MULTIPLE YEARS	2021-2035	$62,347	SVARI-XLR-PM
VARIOUS LOCATIONS			TRANSPORTATION ENHANCEMENT PROJECTS	BASED ON STATEWIDE MANAGEMENT SYSTEM	2021-2035		ENHA-D2-MS
VARIOUS LOCATIONS ON CITY STREETS			RETROFIT ADA CURB RAMPS	GROUPED PROJECTS OVER MULTIPLE YEARS	2021-2035	$700	ARAM-D2-MS
				TOTAL STATE BASELINE REVENUE PLUS LOCAL		**$383,933**	

ABILENE URBAN TRANSPORTATION STUDY METROPOLITAN TRANSPORTATION PLAN PROJECTS YEARS 2010-2035

ALL COST AND REVENUES IN THOUSANDS OF DOLLARS

PROJECTS REQUIRING ENHANCED STATE REVENUE

LOCATION	FROM	TO	WORK DESCRIPTION	TOTAL PROJECT COST BEFORE INFLATION	YEAR OF EXPENSE	INFLATED COST 4%compound	LOCAL ID
BI 20 R	LOOP 322	ELMDALE ROAD	RECONSTRUCT,ADD SHOULDERS, & TURN LANES	$5,500	2013	$6,187	SB120-C1-RM
IH 20 ACCESS ROADS	BU 83	LOOP 322	ADD AUXILIARY LANES, WIDEN BRIDGES, IMPROVE INTERSECTIONS	$11,000	2013	$12,374	I0020-D2-OI
SH351	IH 20	FM 2833	ACCESS MANAGEMENT IMPROVEMENTS	$7,198	2014	$8,421	S0351-D1-OI
US 83 ACCESS ROADS	IBERIS ROAD	CANYON ROCK	CHANGE FRONTAGE ROAD AND RAMP OPERATIONS	$4,636	2014	$5,423	S0083-C2-OI
FM 89 (BUFFALO GAP)	US 83 SFR	SOUTH OF REBECCA LANE	WIDEN TO 6 LANES WITH ACCESS CONTROL	$6,588	2015	$8,015	S0089-3-CA
US 83 ACCESS ROADS	S 7TH STREET	BI 20	CHANGE FRONTAGE ROAD OPERATIONS	$244	2015	$297	S0083-C3-OI
US 83 FRONTAGE ROADS	SOUTHWEST DRIVE	NEAR S 7TH	ADD AUXILIARY LANES and WIDEN BRIDGES	$5,490	2015	$6,679	S0083-D1-OI
LOOP 322 ACCESS RDS.	MAPLE ST	FM 1750	CHANGE FRONTAGE ROAD OPERATIONS	$6,588	2017	$8,669	S0322-D1-OI
US 83 MAINLANES	NEAR S. 7TH ST.	FM 2404	REHABILITATE SURFACE, ACP OVERLAY	$3,740	2018	$5,118	S0083-C4-RM
AIR BASE ROAD	FM 707	MILITARY DRIVE	RECONSTRUCT AND ADD SHOULDERS	$3,553	2021	$5,470	LAIRB-D1-RM
FM 707	FM 89	US83	WIDEN TO 4 LANES WITH MEDIAN/TURN LANES	$3,050	2021	$4,695	S0707-C1-CA
LOOP 322	IH 20	SH 351 AT FM 1082	CONSTRUCT NEW 2 LANE HIGHWAY	$25,620	2021	$39,441	S0322-B1-CA
US 277	FM 3438	BNSF RR	ADD TURN LANES	$5,795	2021	$8,921	S0277-D1-OI
US 83	AT FM 3034		CONSTRUCT NEW INTERCHANGE AND REALIGN FRONTAGE ROADS	$24,400	2021	$37,563	S0083-B2-OI
US 83 ACCESS ROADS	IH 20	FM 3034	CHANGE FRONTAGE ROAD OPERATIONS	$5,307	2022	$8,497	S0083-C1-OI
LOOP 322 ACCESS RDS.	S. OF LYTLE CREEK	N. OF LYTLE CREEK	EXTEND EXISTING ROADS, ADD BRIDGES	$1,830	2024	$3,169	S0322-B2-OI
FM 1750	INDUSTRIAL BLVD.	1/2 MILE SOUTH OF FM 707	WIDEN TO 4 LANES	$5,490	2025	$9,887	S1750-C1-CA
FM 3438	BI 20	IH 20 (SFR)	WIDEN TO 4 LANES WITH CENTER TURN LANE	$2,440	2025	$4,394	S3438-4-CA
FM 89 (BUFFALO GAP RD)	SOUTH OF REBECCA LANE	SOUTH OF CHIMNEY ROCK	WIDEN TO 6 LANES WITH ACCESS CONTROL	$7,186	2025	$12,941	S0089-C1-CA
LOOP 322 ACCESS RDS.	FM 1750	SH 36	CHANGE FRONTAGE ROAD OPERATIONS	$6,222	2025	$11,205	S0322-D2-OI
FM 18	SH 36	CALLAHAN CTY. LINE	ADD 2 LANES, STRUCTURES	$3,782	2030	$8,287	S0018-B1-CA
US 83	At FM 204		CONSTRUCT NEW INTERCHANGE	$6,222	2030	$13,633	S0083-C5-OI
OPERATIONAL IMPROVEMENTS TO BE IDENTIFIED BY MANAGEMENT SYSTEMS			PROJECTS TO IMPROVE SYSTEM EFFICIENCY USING ENHANCED FUNDING	GROUPED PROJECTS OVER MULTIPLE YEARS	2010-2021	$5,884	MVARI-XS2-OI
MISCELLANEOUS PROJECTS FOR SIGNS, SIGNALS, LANDSCAPING, DRAINAGE IMPS.			VARIOUS OFF-PAVEMENT IMPROVEMENTS	GROUPED PROJECTS OVER MULTIPLE YEARS	2021-2035	$1,401	MVARI-XLR-MS
STATE SYSTEM	VARIOUS LOCATIONS		PREVENTIVE MAINTENANCE WITH ENHANCED FUNDINGS	GROUPED PROJECTS OVER MULTIPLE YEARS	2021-2035	$5,470	SVARI-XL2-PM
STATE SYSTEM	PROJECTS FROM MANAGEMENT SYSTEMS		REHABILITATE OR RECONSTRUCT EXISTING ROADS USING ENHANCED REVENUE	GROUPED PROJECTS OVER MULTIPLE YEARS	2021-2035	$15,668	SVARI-XLR-RM
VARIOUS LOCATIONS: OPERATIONAL IMPROVEMENTS TO BE IDENTIFIED BY MANAGEMENT SYSTEMS			PROJECTS TO IMPROVE SYSTEM EFFICIENCY USING ENHANCED FUNDING	GROUPED PROJECTS OVER MULTIPLE YEARS	2021-2035	$4,000	MVARI-XLR-OI
				TOTAL STATE ENHANCED REVENUE PLUS LOCAL		**$645,642**	

ABILENE URBAN TRANSPORTATION STUDY METROPOLITAN TRANSPORTATION PLAN PROJECTS YEARS 2010-2035

ALL COST AND REVENUES IN THOUSANDS OF DOLLARS

ILLUSTRATIVE PROJECTS:

UNFUNDED NEW CAPACITY NEEDS

FM 1750	SOUTH OF FM 707	FM 204	WIDEN TO 4 LANES	$5,063	
IH 20	LOOP 322		RECONSTRUCT INTERCHANGE	$30,500	
IH 20	BI 20 EAST	ELMDALE ROAD	RECONSTRUCT INTERCHANGE	$38,552	
IH 20	US 83	EAST OF LOOP 322	WIDEN TO 6 LANES	$65,880	
LOOP 322	IH 20	SH 351 AT FM 1082	WIDEN TO 4 LANES WITH ACCESS CONTROLS	$17,080	S0322-C2-CA
US 83	NEAR S 7TH STREET	NEAR N. 10TH STREET	WIDEN TO 6 MAIN LANES , IMPROVE RAMPS AND CONNECTORS	$30,500	S0083-B3-CA
US 83	NEAR N. 10TH STREET	IH 20	WIDEN TO 6 MAIN LANES , IMPROVE RAMPS AND CONNECTORS	$21,960	
FM 89 (BUFFALO GAP RD)	SOUTH OF CHIMNEY ROCK ROAD	SOUTH OF ANTILLEY ROAD	WIDEN TO 6 LANES WITH ACCESS CONTROL	$13,176	S0089-C2-CA
SH 36	1.2 MILES SOUTH OF FM 18	FM 1750	WIDEN TO 4 LANES	$9,272	S0036-1-CA
			SUBTOTAL	**$231,983**	

UNFUNDED SHORT RANGE RECONSTRUCTION AND REHABILITATION NEEDS FOR CITY OF ABILENE STREETS

SAYLES BLVD.	S. 36TH STREET	INDUSTRIAL BLVD.	RECONSTRUCT	$768	
NORTH 5TH STREET	GRAPE STREET	VICTORIA STREET	RECONSTRUCT	$569	
N. 6th /LEGGETT STREET	N. MOCKINGBIRD LANE	N. 1ST STREET	RECONSTRUCT	$1,669	
E. S. 7TH STREET	CEDAR CREEK		REPLACE BRIDGE	$759	
N. WILLIS STREET	N. 1ST STREET	N. 10TH STREET	RECONSTRUCT	$769	
N. 1ST STREET	WALL STREET	CLACK STREET	RECONSTRUCT	$911	
BUTTERNUT STREET	S. 1ST STREET	TREADAWAY BLVD.	REHABILITATE	$2,231	
N 13TH STREET	HICKORY STREET	TREADAWAY BLVD.	RECONSTRUCT	$662	
SHORELINE DRIVE	LYTLE WAY	E.S. 27TH STREET	RECONSTRUCT	$455	
			SUBTOTAL	**$8,792**	

TOTAL ILLUSTRATIVE **$240,775**

REVENUE PROJECTIONS	SHORT RANGE 2010-2020	LONG RANGE 2021-2035		
STATE BASELINE (BASE PROJECTION + ARRA COMMITTED+PSE REVENUE REALIZATION)	$61,778	$62,296		
LOCAL BONDS +CO'S+GENERAL REVENUE + DEVELOPER CONTRIBUTION ON EN 10TH ST.	$92,320	$167,297		
SUBTOTAL STATE BASELINE REVENUE PLUS LOCAL	$154,098	$229,593	**TOTAL STATE BASELINE REVENUE PLUS LOCAL**	**$383,691**
STATE WITH ENHANCED REVENUE (PERCENT OF STATE ENHANCED + $10 MILLION SPECIAL PROJE	$129,036	$256,989		
LOCAL BONDS +CO'S+GENERAL REVENUE + DEVELOPER CONTRIBUTION ON EN 10TH ST.	$92,320	$167,297		
SUBTOTAL STATE ENHANCED REVENUE PLUS LOCAL	$221,356	$424,286	**TOTAL STATE ENHANCED REVENUE PLUS LOCAL**	**$645,642**

Note: Discrepancy between funding and cost totals is within rounding error

DIFFERENCE BETWEEN REVENUES AND COSTS - SURPLUS OR (DEFICIT)		
STATE AND LOCAL BASELINE FUNDING	($67,258)	($194,693)
STATE AND LOCAL WITH ENHANCED STATE REVENUE	$0	$0

Attachment A
Historic Growth Events and Trends

Headlines of Abilene Metropolitan Area History

Taylor County organized (1878)

July 3, 1878 - An election is held to organize Taylor County. Prior to the election, Taylor County was attached to Eastland County for judicial services.
Source: *Abilene Reporter-News* files

Abilene, Texas founded (1881)

After the Texas and Pacific arrived at the site in January 1881 the railroad promoted Abilene as the "Future Great City of West Texas." J. Stoddard Johnston and other railroad officials platted the townsite. Several hundred people arrived in Abilene before the sale of town lots and began to establish businesses and a church. The lots were auctioned on March 15, 1881; in two days buyers purchased more than 300 lots, and Abilene was officially established. On January 2, 1883, the residents voted to incorporate, and in an election held on October 23, 1883, Abilene became the county seat.
Source: The Handbook of Texas Online

Tye, Texas founded (1881)

Tye, previously known as Tebo and as Hines, was laid off by the Texas and Pacific Railway in 1881 and named Tebo. When a post office opened in 1899, it took the name Hines. In 1901 the name of the post office and community was changed to Tye, to honor John P. Tye, who served as the first postmaster. Tye incorporated in the mid 1950s.
Source: Juanita Daniel Zachry, *A History of Rural Taylor County* (Burnet, Texas: Nortex, 1980).

Baptists plan new college (1890)

Aug. 2, 1890 — At a meeting to organize a Baptist college in Abilene, Rufus Burleson urges Baptists to support Baylor University instead. Burleson’s plea is not unexpected since he is president of Baylor. West Texas folks decide to go ahead with their plans and on Oct. 17 they select a plot of land two miles north of town for the college. It becomes Abilene Baptist College, then Simmons College, and now Hardin-Simmons University.
Source: *Abilene on Catclaw Creek*

Caps, Texas. (1894)

Caps is near the intersection of U.S. Highway 277 and Farm Road 707 southwest of Abilene in Taylor County. The community began in 1882 when J. Stoddard Johnston of Abilene gave Ira and Anna Rollins Borders a wedding present of an acre of land just north of the current townsite. By 1894 the community had a post office, known as Border's Chapel, that served forty families. This office was replaced by mail delivery from Abilene in 1916. In 1905 residents gathered to select a new name; reportedly, someone threw his cap into the air and said, "Let's call it caps," and the idea was approved. The Caps community had a cotton gin, a telephone office, two churches, two stores, a school, and a blacksmith shop by 1920. Caps and View constructed the

Butterfield School halfway between the two communities in 1935. The school, named in honor of the Butterfield Overland Mail line, had eight grades. It was consolidated with the Wylie Independent School District in 1978.

Elmdale community originated. (1895)

Elmdale began as a stop on the Texas and Pacific Railway in the early 1880s. A one-room school building was erected in Elmdale in 1895, and by 1902 the school had thirty-six pupils and one teacher. A post office was opened in the community in 1905, and by 1914 Elmdale also had a grocery store and a general store. The post office closed in 1927, and by 1940 the community consisted of a church, the school, one business, and a number of scattered dwellings. The school closed after a fire in 1969 and the area was consolidated with the Eula School District.

Hamby, Texas. (1902)

Hamby, on State Highway 351 five miles east of Abilene in northeastern Taylor County, touches the corners of Taylor, Jones, Callahan, and Shackelford counties. The cotton and oil community was first named Corners, for the county corners its boundaries touched. Hamby Richardson, a bachelor from Georgia, owned the earliest store there shortly before 1900; he was the first postmaster when the community's post office opened in 1902. After the name Corners was rejected by postal authorities, friends urged Richardson to send in his first name since the place was already popularly called Hamby's. After the Hamby post office opened, a small settlement with several businesses sprang up there. Though the post office closed in 1919, many of these businesses continued until the mid-1930s, when the community's population was estimated at twenty. School education began for Hamby students in 1903, in a schoolhouse called Melrose, two miles south of the community. The Baptist church was organized at Hamby in 1906, the Methodist church in 1907, and the Church of Christ in 1914. In 1907 the school was moved to the west of Hamby, and an upper floor was added. Classes were held on the first floor, and the second was a meeting place for the local Woodmen of the World lodge. In 1915 a new school building was built; it still stood in the mid-1980s, when first through sixth grade classes were still being taught in Hamby.

Carnegie Library opens (1909)

July 7, 1909 — Abilene’s Carnegie Library had its formal opening. Financed by a $17,500 gift from the Andrew Carnegie Foundation, the two-story library was described as “almost awesome in comparison with the other buildings in town.” It was torn down in the late 1950s after voters agreed to build a new library on the same site.
Source: *Abilene Reporter-News* files

Hospital opens (1924)

September 15, 1924 - The West Texas Baptist Sanitarium, which later became Hendrick Memorial Hospital, opens with 72 rooms south of Simmons College. During the depression of the late 1930s the hospital accepted chickens, goats and black-eyed peas as payment for service. In 1936, a generous gift from T.G. Hendrick paid the hospital debts and the adding of a new wing. The hospital was renamed Hendrick Memorial Hospital. The hospital’s services grew and

the name was changed to Hendrick Medical Center in 1976. The medical center has continued to grow and in 2009 is the Abilene Metropolitan Area's largest civilian employer.

Record temperature set (1943)

Aug. 3, 1943 — The record high temperature for Abilene is set at 3:25 p.m. when the mercury reaches 111 degrees. Abilene did get some relief as the temperature dropped 31 degrees when the city "was treated to a downpour that measured .14 of an inch." On the next day's front page of the Reporter-News is a photo of ice skaters at Lake Lytle taken in January 1940.
Source: *Abilene Reporter-News* files

South First widening proposed (1954)

July 29, 1954 - The city announces that starting Aug. 2 no parking will be allowed along South First Street. The ordinance brings the city into compliance with a requirement set by the highway department so that a widening project will be considered. The state is proposing six lanes of traffic along U.S. Highway 80/South First plus a left turn lane. Also being considered are overpasses above Sayles Boulevard and Mockingbird Street.
Source: *Abilene Reporter-News* files

Update: A Mockingbird Blvd. underpass of S. 1st Street, the (now) Union Pacific railroad, and N. 1st Street is built. Planners continued to consider methods of building the Sayles Blvd. grade separation but cost and existing development north of the railroad have been obstacles that have been insurmountable.

Plans progress for new freeways (1955)

Aug. 18, 1955 - Taylor County approves paying $21,260 to purchase some of the right-of-way for a bypass on the west side of Abilene. The purchase is one of several to clear the way for the new road, though the process is not without some controversy. One landowner is receiving $92 per acre from Jones County for highway right-of-way but for property in Taylor County the price is $250 an acre. Land is also being bought for the U.S. 80 Freeway from Tye to the Taylor-Nolan county line. The bypass today is known as the Winters Freeway (US 83) and the U.S. 80 Freeway is Interstate 20.
Source: *Abilene Reporter-News* files

Name game continues for base (1955)

Aug. 15, 1955 - About 30 names are nominated for Abilene Air Base. Among those submitted by the deadline are: John Pershing, Franklin D. Roosevelt, Audie Murphy (whose father lived in Abilene), Ernie Pyle and Gen. H.H. Arnold. Others include Capt. Rudyard Grimes, who died in a Japanese prison camp; 2nd Lt. Claude Brewster, who was killed in a plane crash at Tye Air Field on Mother's Day 1945; and Lt. Col. Edwin Dyess of Albany, a war hero killed in a plane crash in California.
Source: *Abilene Reporter-News* files

Update: The base was named for Lt. Col. Dyess.

Downtown streets reopen (1959)

Aug. 24, 1959 — Downtown streets reopen after a storm sewer system is installed in the business district. Work, funded by a bond election, begins in January 1959 and for months streets and sidewalks are a huge mess. Among the improvements are the Butternut Street railroad underpass and new black sidewalks described as “slick as glass” when it rains.
Source: *Abilene Reporter-News* files

Impact, Texas, impacts Abilene area (1960)

IMPACT, TEXAS. Impact, then north of Abilene, voted incorporation in 1960 as the only wet town in dry Taylor County. When two liquor stores opened in Impact, Abilene lawyers went to court to oppose the incorporation of the town. In 1963 the Texas Supreme Court upheld the incorporation and also the selling of liquor in Impact. The town, covering forty-seven acres, was named for Impact, Incorporated, the advertising business of its mayor, Dallas Perkins. The City of Impact is now completed surrounded by the City of Abilene.
Source: The Handbook of Texas Online

New Gibson's store opens (1965)

July 1, 1965 - A huge crowd attends the grand opening of Abilene's new Gibson's Discount Center at 2550 Barrow. Some people park two or three blocks away and all available police are on duty to handle traffic. The Gibson chain started in Abilene in 1958 when H.R. Gibson Sr. converted a wholesale store he owned to a discount store. Within two decades, Gibson's had about 700 stores and was second to Kmart among discount retailers.
Source: *Abilene Reporter-News* files
Note: Gibson’s no longer has a store in Abilene and that serves as a warning about making assumptions about the future. Who in 1965 would have assumed that Gibson’s would disappear from Abilene?

Fair Park gets new name (1968)

July 23, 1968 — Fair Park was renamed Oscar Rose Park in honor of the longtime parks board member and chairman. Rose has been involved with many area building projects through his company, Rose Construction.
Source: *Abilene Reporter-News* files

The site of the West Texas Fair and Rodeo was moved to the east side of Abilene on the south side of SH 36, occupying a portion of the area previously occupied by Abilene Municipal Airport, which was moved to a site further south and expanded to become the Abilene Regional Airport. The remainder of the former airport site north of SH 36 became the Abilene Zoo and Nelson Park. Oscar Rose Park has become a central location for senior citizens’ services along with numerous recreational activities and a community theater.

History of Abilene City Growth

The original area of development in Abilene was north and south of the railroad west of Cedar Creek. Prior to World War I the greatest growth was north as the city was drawn to the campus of what is now Hardin-Simmons University. The City also grew south to present-day S 14th St. and west to Catclaw Creek. The only significant development east of Cedar Creek was the Epileptic Colony, which became the Abilene State School.

The roaring twenties brought a surge of new growth founded on a booming economy and the introduction of a state highway system. The City grew southwest to Elm Creek, attracted by the new Mc Murry College, Fair Park (now Rose Park), and upscale residential development, such as The Boulevard (sic) on former Sayles family land. The city also extended north, south, and west along new highways. A residential outpost was established east of Cedar Creek when Abilene Christian College moved to a new location on a hill overlooking the city.

After minimal growth during the depression years, the city experienced a phenomenal period of growth from 1940 to 1960. World War II Army Camp Barkeley, new highways to the southeast and southwest, and the discovery of new oil fields contributed to a population boom that saw the city population almost double from 1940 to 1950. The introduction of Dyess AFB, growth in the petroleum industry, and massive highway construction projects caused the city population to almost double again from 1950 to 1960.

The World War II era growth was characterized by an increase in the density of residential development in older parts of the city and by relatively uniform outward growth. The establishment of Dyess AFB in the early 1950's pulled city development westward like a giant magnet. City development expanded westward in a broad north-south band. Isolated neighborhoods and mobile home parks appeared west of the main city expansion. Little eastward growth occurred except for continuing expansion of ACC neighborhoods and the beginnings of the Lytle Shores and Pasadena Heights neighborhoods.

This period of rapid growth and change created a legacy which continues to affect Abilene. The construction of the highway bypass which became the Winters Freeway rerouted traffic, and eventually retail trade, on three highways to the west side of Abilene away from the central business district. The furious pace of residential development during these years created a situation in which development occurred without regard to flooding problems and in which many housing units of poor quality were established, especially in the older, poorer areas of town. The entire Goodlow neighborhood was created in a flood prone area and would eventually be removed. Much of the area of the city which had been originally developed before World War I became filled with poor quality housing which was often overcrowded.

1960 introduced a period of population change, which still continues. The construction of Westgate Shopping Center at S 1st St. was a pivotal event in the shift of the focus of retail trade from central and west central Abilene to the west and southwest. The average number of persons per household began to decline, causing housing demand to increase faster than population growth. The older, deteriorating neighborhoods in the central and north central area of the city lost population while neighborhoods on the periphery grew. The 1960's were a period of no growth in total population, yet the city continued to expand.

By 1970, the city filled nearly all of the area between Cedar Creek and the Winters Freeway. Neighborhoods farther west near Dyess filled out and development began to extend southwest along Buffalo Gap Rd. In the east, neighborhood development extended south from ACU into Radford Hills; isolated developments appeared northeast of IH 20, but Pasadena Heights remained a lone outpost east of Judge Ely Bl. in the east central area.

Rising oil prices in the 1970's brought a new surge of growth to Texas and Abilene. Competition for housing temporarily halted population losses in all but the very oldest areas of the city as the urban area expanded. The city grew toward Dyess AFB along Hartford St. and Texas Av. Mobile homes and mobile home parks multiplied in the west and northeast. Apartment complexes sprang up in the southwest along Elm Creek and Southwest Dr. New neighborhoods along Buffalo Gap Rd. extended to the Wylie community.

Construction of the Frenchman's Creek Shopping Center at S 14th St. and the Mall of Abilene at Buffalo Gap Rd. established a major commercial corridor extending along the Winters Freeway from S 1st St. to Buffalo Gap Rd. In the east, residential development around Lytle Lake increased, and the Radford Hills neighborhood extended eastward across Judge Ely Bl., and the first shopping center east of Cedar Creek was built.

As the surge of growth continued in the early 1980's, city expansion engulfed the Wylie community and spread southward to FM 707. The area from Southwest Dr. to Buffalo Gap Rd. became checkered with apartment complexes, offices, and retail centers. Mobile home development continued on an axis along SH 351 – Judge Ely Bl. – Oldham Ln. with new residential and commercial areas.

The oil price collapse in the mid 1980's brought the rapid growth to an end. The economic downturn caused a corresponding downturn in population. Although Abilene lost only a few thousand people, the combined effect of sudden vacancies and a change in the tax structure produced a great shock to the housing market. Residential rents and home prices were forced down and marginal units became unmarketable. Many homes, especially mobile home units, were abandoned when owners could not maintain mortgage payments or sell for the remaining loan amount.

The late 1980's witnessed very high vacancy rates and population loss in the older central areas and in mobile home developments. A buyer's market in existing homes depressed

new development in all areas. By 1990 the city economy and population were turning up again, but growth was slow. Growth after 1990 is considered in the discussion of current growth trends.