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Wichita Falls Metropolitan Planning Organization

TUMP

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Wichita Falls MPO
Metropolitan Planning Organization
Wichita Falls | Pleasant Valley | Lakeside City

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What is the Wichita Falls Metropolitan Planning Organization?

The Wichita Falls Metropolitan Planning Organization is the regional transportation planning organization responsible for working with local, state and federal governments, the private sector, and the region's citizens to plan coordinated transportation systems designed to move people, goods and services affordably, efficiently and safely throughout the MPO area. The function of the Wichita Falls MPO is to coordinate regional transportation planning between the State of Texas, Wichita County and the cities of Wichita Falls, Pleasant Valley and Lakeside City. The major goal of the Wichita Falls MPO is to bring about regional planning under one voice while providing the greatest transportation benefit for all. Other goals include: supporting economic vitality, making transportation safer, providing greater access to mobility options, protecting the environment while promoting energy conservation, improving connectivity of the current transportation system, and preserving existing transportation infrastructure.

The Wichita Falls MPO was established by the federal government to ensure that transportation decisions within the MPO area are performed in a continuing, comprehensive and cooperative process. The MPO is responsible for creating, developing and reviewing transportation plans, which include the long-range, 25-year Metropolitan Transportation Plan, the short-range, 3-year Transportation Improvement Program, the annual Unified Planning Work Program, travel models, thoroughfare plans, transit plans, and bicycle/pedestrian plans. All of these documents work together to identify transportation programs and funding alternatives.

The Wichita Falls MPO provides a forum for local input into the expenditure of federal highway and transit dollars. Citizens and stakeholders can come together and share ideas and information with the two main bodies that make up the MPO. The first body is the Technical Advisory Committee or TAC, which makes recommendations and reports directly to the second body, the Transportation Policy Committee or TPC. The Technical Advisory Committee is a combination of TxDOT and City planning professionals. The Transportation Policy Committee is responsible for all policy decisions made by the MPO and is comprised of elected and appointed State, Local and City officials residing within the Wichita Falls Metropolitan Planning Organization's area of jurisdiction.

President Bush signed into law the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users, commonly called SAFETEA-LU, on August 10, 2005. SAFETEA-LU will provide funding for project construction, transit programs, and planning activities from 2005 to 2009. The Transportation Policy Committee approves the use of federal transportation funds within the Wichita Falls MPO area and operates under the SAFETEA-LU act.

The Wichita Falls MPO is responsible for the promotion of safe and efficient transportation modes that maximize the mobility of people, goods and services while minimizing energy consumption, air and water pollution and negative environmental justice impacts. The MPO works with the state on funding issues for transportation

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improvements, on project planning issues, and with local governments to coordinate land-use and transportation planning. Planning areas include portions of the region that are currently urbanized and are likely to be urbanized within the next 25 years. The MPO continues to work with public transportation providers and neighborhood groups, within the MPO boundaries, to ensure that our transportation system is at its best, now, and for future generations.

Prepared in cooperation with the Texas Department of Transportation, the Federal Highway Administration, and the Federal Transit Administration.

Wichita Falls Metropolitan Planning Organization

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EXECUTIVE SUMMARY

Background

Early in 2003, Governor Rick Perry instructed the Texas Transportation Commission (TTC) and the Texas Department of Transportation (TxDOT) to develop a scope of work for a statewide plan under the premise that current funding levels and mechanisms are not sufficient to address congestion in the large urban areas. This scope called for the development of analytical tools and procedures to measure traffic congestion in each region, to quantify the dollar amounts that are required to reduce congestion to a tolerable level, and to determine a set of potential strategies to address the current funding shortage. In the summer of 2003, TxDOT met with all eight Transportation Management Area (TMA) Metropolitan Planning Organization's (MPO's) responsible for the major metropolitan areas within the state. At that meeting, TxDOT discussed the processes for the Texas Metropolitan Mobility Plan (TMMP). It was agreed that each metropolitan area was to develop a regional plan that would address its own "needs-based" local issues. When aggregated, the eight plans would constitute the backbone of the TMMP.

Late in 2005, the TTC instructed TxDOT to meet with all seventeen Non-TMA MPO's to begin developing their own "needs-based" plan, a plan based on the TMMP's produced by the eight major metropolitan areas within the state. The name for this new plan would be the Texas Urbanized Mobility Plan.

The Texas Urbanized Mobility Plan (TUMP) is a state-based initiative designed to address growing traffic congestion in the seventeen (17) minor metropolitan areas in the State of Texas. Through a coordinated effort between the Texas Department of Transportation (TxDOT), the MPO's representing the seventeen Non-Traffic Management Areas (Non-TMA's), and the Texas Transportation Institute (TTI), TUMP will endeavor to develop locally conceived, comprehensive regional mobility plans to improve traffic flow, alleviate traffic congestion, improve quality of life and provide opportunities for enhanced economic development within the seventeen Texas metropolitan areas of less than 200,000 in population including Wichita Falls.

The Challenge of Traffic Congestion

Although the smaller metropolitan areas usually have much less congestion, they still share the same problems as their larger counterparts. Congestion in the larger metropolitan areas has typically been a result of the following combination of circumstances:

- Population growth in the urban areas has steadily increased.

- Urban patterns have promoted more travel within the region for each person (an increase in per capita Vehicle Miles Traveled or VMT). U.S. Census Bureau data show a generalized trend of population migrating from the central areas to the fringes (suburbs).

- The capacity of the transportation network has not increased at the same rate as either VMT or population, mainly because of funding limitations.

- Mobility challenges were not addressed for many years using a multi-modal approach. Congestion will not be resolved just by building more roads.

- The traditional funding sources for transportation projects have been a federal and a state gasoline tax. Both have not increased in more than a decade, thus falling behind with the demand for more transportation projects.

Purpose and Key Elements of the Texas Urbanized Mobility Plan

The scope of work for the TUMP called for the development of the following elements for each of the regional plans:

- **"Needs-Based" Scenario.** Under this scenario, the costs of implementing the necessary actions in the region to reduce congestion to a "tolerable" level were estimated. The difference between this dollar amount and the amounts that are available through the current traditional funding sources is referred to as the funding "gap". Traditional sources and amounts are those identified in the federally-mandated Metropolitan Transportation Plan for each region.

- **Texas Congestion Index (TCI).** The TCI is an innovative tool to measure regional congestion levels under different scenarios. The index shows how much longer it takes to make a trip under congested peak-period conditions compared to conditions where there is no traffic (free-flow).

- **Short-Term Mobility Strategies and Improvements.** The TUMP will identify strategies that address congestion and mobility concerns in the short term. Many of these strategies have identified funding through Category 2 funds. This is a current funding category that TxDOT uses to implement projects on the interstate and state highway system to enhance mobility in urban areas. The TTC is, for the first time, allowing and encouraging local participation in the programming of these projects into TxDOT's 10-year Unified Transportation Program (UTP). This will allow new projects with alternative funding, such as tolled facilities, to be integrated into the implementation schedule.

- **Alternative Funding Initiatives.** Having recognized that there is a funding gap, and having quantified its approximate magnitude, the challenge to find and select additional funding sources and mechanisms is left to each of the regions.

Goals of the Planning Process

The planning process for creating the Texas Urbanized Mobility Plan was developed through a coordinated effort between the Texas Department of Transportation (TxDOT) and the MPO's representing the seventeen Non-Transportation Management Areas, and the Texas Transportation Institute.

Based on the guidance issued by TxDOT and its commission, the specific elements of the Texas Urbanized Mobility Plan were identified. Detailed processes were then developed so that each MPO would be able to follow the exact same procedure thus providing a consistent level of analysis across the state. The Texas Urbanized Mobility Plan includes the following eight planning goals which serve as a guide for this Plan: (1) Relieve Congestion; (2) Improve Safety; (3) Improve Air Quality; (4) Improve Quality of Life; (5) Improve Opportunities for Enhanced Economic Development; (6) Enhance Infrastructure Maintenance; (7) Streamline Project Delivery; and (8) Texas Department of Transportation Strategic Goals.

Summary of Findings for the Wichita Falls Region

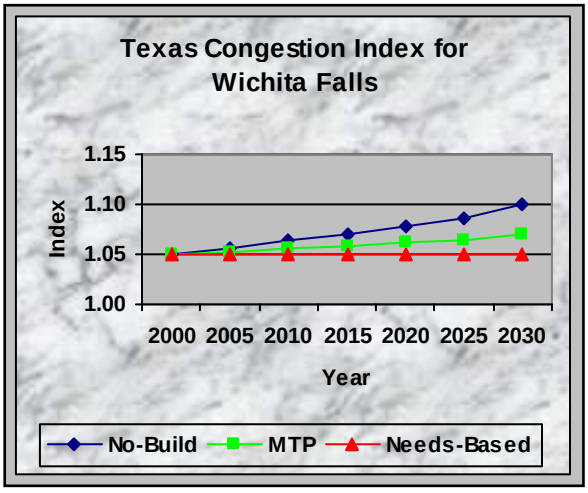
***Total Cost of Needs*.** The following table summarizes the costs that have been determined for the Needs-Based Plan. The costs of adding the capacity to achieve a tolerable degree of congestion (eliminate level-of-service F in the peak periods) were estimated, along with the costs associated with right-of-way acquisitions and reconstruction of the existing network. In addition to these, the TUMP plan contemplates other investments that are important to the region, such as preservation of the existing system and rehabilitation/reconstruction of on-system bridges within the MPO boundaries.

Needs-Based Plan (2006 dollars - $million)	
Eliminate Level-of-Service "F"	$ 56.0
Right-of-Way Acquisitions	$ 58.9
Reconstruction of Existing System	$ 1,088.6
MTP 2030	$ 36.0
On-System Bridges	$ 187.1
Total	$ 1,426.6

Source: Wichita Falls MPO, Texas Transportation Institute

TCI Analysis. The results for the TCI analysis for Wichita Falls are summarized in the following chart. This chart plots three scenarios in 2030 (forecast year) that show traffic congestion conditions under different amounts of transportation actions implemented starting in 2000 (base year).

The *No-Build Scenario* refers to having population grow according to accepted forecasts, but with no transportation projects implemented in this period. The *MTP Scenario* shows the effect of implementing the actions contemplated under current funding sources and levels. Although it reduces significantly the congestion from the No-Build, it



Source: Texas Transportation Institute

shows that congestion will get worse. The *Needs-Based Scenario* illustrates how congestion would be reduced significantly if all of the actions in this plan were implemented.

Regional Mobility Issues. The Wichita Falls MPO, in coordination with the Wichita Falls District of TxDOT, created a process for prioritizing projects within the MPO boundary. From this process, the Wichita Falls MPO 2006 Prioritized Roadway Projects list was developed and, subsequently, approved by the Transportation Policy Committee on November 16, 2005. Some of the HIGH priority projects on that list are:

- Completion of the Kell Freeway West Main Lanes from west of Fairway to west of FM 369.

- Maplewood Extension – Phase 1 and Phase 2, construction of a 4 lane street from the Kemp/Maplewood intersection going west through Lawrence and on into McNiel.

- Construction of a bicycle and pedestrian trail from East Scott Street to Hamilton Park.

- All final decisions regarding funding mechanisms in the region will be made by the Wichita Falls MPO's Transportation Policy Board.

Conclusions

The TUMP is:

- A recognition that congestion in the smaller metropolitan areas is a major barrier to the economic development of Texas, and a detriment to the quality of life for its people.

- An innovative approach to address the severe limitations in funding that prevents the smaller metropolitan areas from implementing the necessary transportation actions to reduce congestion.

- A successful integration of the 17 smaller, non-TMA, metro areas into a team that is working together, with TxDOT, in facing mobility and funding challenges.

- A major first step in the development of innovative analytical tools and procedures

The TUMP is *not:*

- Ready to become a vehicle for making policy or funding decisions statewide in its current developmental phase, given that there has to be much progress towards improving the technical analysis procedures and the data that is used, and towards standardizing the key assumptions for analysis among the metropolitan areas.

- An affirmation from the Wichita Falls region to the strategy that the TTC is currently proposing for the statewide implementation of the Texas Mobility Fund.

INTRODUCTION

Background

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Late in 2005, the TTC instructed TxDOT to meet with all seventeen Non-TMA MPO's to begin developing their own "needs-based" plan, a plan based on the TMMP's produced by the eight major metropolitan areas within the state. The name for this new plan would be the Texas Urbanized Mobility Plan. The Texas Urbanized Mobility Plan (TUMP) is a state-based initiative designed to address growing traffic congestion in the seventeen (17) minor metropolitan areas in the State of Texas. Through a coordinated effort between the Texas Department of Transportation (TxDOT), the MPO's representing the seventeen Non-Traffic Management Areas (Non-TMA's), and the Texas Transportation Institute (TTI), TUMP will endeavor to develop locally conceived, comprehensive regional mobility plans to improve traffic flow, alleviate traffic congestion, improve quality of life and provide opportunities for enhanced economic development within the seventeen Texas metropolitan areas of less than 200,000 in population including Wichita Falls.

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same rate as either VMT or population, mainly because of funding limitations.

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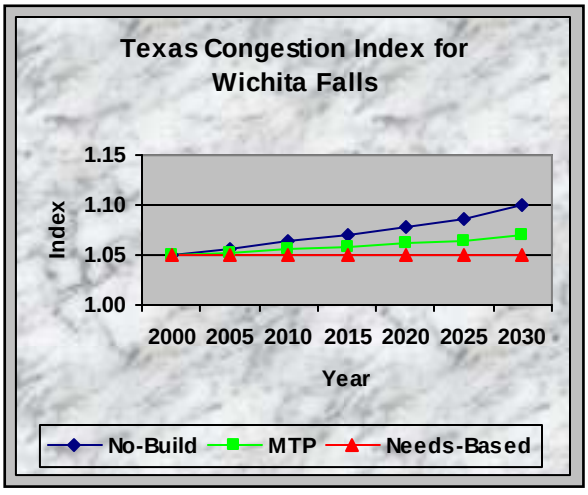

Source: Texas Transportation Institute

The *Needs-Based Scenario* illustrates how congestion would be reduced significantly if all of the actions in this plan were implemented.

Regional Mobility Issues. The Wichita Falls MPO, in coordination with the Wichita Falls District of TxDOT, created a process for prioritizing projects within the MPO boundary. From this process, the Wichita Falls MPO 2006 Prioritized Roadway Projects list was developed and, subsequently, approved by the Transportation Policy Committee on November 16, 2005. Some of the HIGH priority projects on that list are:

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- All final decisions regarding funding mechanisms in the region will be made by the Wichita Falls MPO's Transportation Policy Board.

Texas Urbanized Mobility Plan Charge and Definition

The Texas Urbanized Mobility Plan (TUMP) supports balanced transportation and land-use decisions that accommodate growth while minimizing any negative transportation, air quality, and community impacts. The TUMP balances the goals of the region through a diversified approach of short and long range modal strategies. It is a state-based initiative that will result in each of the metropolitan areas developing locally conceived, comprehensive regional mobility plans to improve traffic flow by using all modes of transportation.

Historically, all of the metropolitan areas across the state have experienced consistent growth trends without adequate funding to increase the capacity of the transportation system. This has affected productivity, air quality, cost of goods and services, and the quality of life for all Texans. The Texas Transportation Commission has indicated that it is time to change the way Texas plans, funds, and delivers transportation systems in metropolitan areas. It is imperative that regional solutions are developed at the local level: governments, partnerships, agencies, and elected officials. It is also important that these solutions are integrated into an overall plan that assures efficient implementation.

From a larger statewide perspective, the intrastate movement of people and goods is being addressed through the adoption of the Trans Texas Corridor System. This is a statewide initiative focused on improving safety, reducing regional congestion, diverting long-haul freight and hazardous materials from entering population centers, creating a comprehensive rail system, providing underdeveloped areas of the state access to competitive utility services, and improving air quality throughout the state. A similar approach is needed to solve the same needs within the state's metropolitan areas.

The TUMP presents a framework in each of the seventeen non-Transportation Management Areas (TMA's) in the state to provide for the remaining intra-city needs. It is based on the concepts of planning, funding, and streamlined project delivery.

Goal Attainment

Reduce Congestion

One of the underlying goals of this planning and programming exercise is to identify long-range needs in each metropolitan area to help solve transportation problems, with an ultimate goal being an increase in mobility and a decrease in the level of traffic congestion. To help in quantifying this goal and measuring progress over time, TxDOT will adopt a Texas Congestion Index (TCI) to aid metropolitan areas in setting goals for congestion reduction, and it will be based on the delay time experienced by drivers. As an example, a TCI index of 1.15 would indicate that a peak-period trip would take no more than 15% longer than a non-peak period trip on average. Additional measures assist in measuring congestion effects.

Enhance Safety

Another major goal of the Texas Urbanized Mobility Plan (TUMP) is to include safety considerations into the plan development process and to look for ways to provide a more safe and reliable transportation system. Each Regional Mobility Plan (RMP) will address specific goals which could include the following:

- Separation of truck and personal-vehicle traffic on high-speed metropolitan corridors;
- Reduction of fatal or injurious crashes, including at-grade railroad crossings;
- Improved safety in metropolitan areas with transit systems; and
- Reduction in vehicle/bicycle and vehicle/pedestrian fatalities and injuries.

Improve Air Quality

Air quality has steadily become a major concern for most of the larger metropolitan areas across the state. Through established procedures and future refinements, each of the metropolitan areas will assess the RMP for impact on air quality. It is a stated goal of the TUMP that air quality improvements, in conformance with established guidelines, will be a result of each RMP. If any of the MPO area is classified as non-attainment in the future, this Plan will be revised to include projects that will reduce vehicle emissions. Procedures for developing a conformity analysis will also be completed to determine if the projects in the Plan will succeed in reducing vehicle emissions. These procedures will then be evaluated periodically to determine the effectiveness in reducing those emissions.

As part of the TUMP effort, the Texas Transportation Institute provided assistance in the estimation of emissions of pollutants in all of the metropolitan areas. The analysis was done for ozone pollution levels for each of the scenarios that are part of the TUMP (Baseline, No-Build, MTP, and Needs-Based). It should be very clear

that this effort does not replace or interfere with the air quality and Conformity analysis that is mandated by the Clean Air Act Amendments for the non-attainment areas. The following table summarizes the results.

Scenario	Demographic Year	Emissions (tons)
Base Year	2000	3.9
No-Build	2030	0.6
MTP	2030	0.6
Needs-Based	2030	0.6

Source: Texas Transportation Institute

Improve Quality of Life

Beyond reducing congestion and improving air quality, each RMP will address the quality of life impacts of proposed projects and approaches. Regarding quality of life considerations, it is recognized that, while transportation investment directly impacts such things as urban mobility, air quality and economic development, there are less direct, but equally important impacts of transportation systems and services which address quality of life effect on proposed projects and approaches. The issues and goals identified below direct planning efforts to consider urban form and transportation's impact upon the economy and the environment, but also the provision of transportation services and infrastructure to those traditionally underserved.

- Promote the orderly economic development of the region.
- Encourage balanced land-use and transportation plans and programs which maximize the use of transportation investments.
- Provide transportation opportunities to the traditionally underserved.
- Encourage the preservation and revitalization of communities and neighborhoods and address policies to guide in-fill and new development with the Community.
- Support recreation and tourism.
- Encourage transportation investments that promote healthy and active lifestyles.
- Avoid, mitigate and enhance the environmental impacts of transportation improvements.
- Reduce energy consumption.
- Address the transportation of hazardous materials within and through the region.
- Strive to provide access to various modes of transportation.
- Consider the effects of noise and aesthetic assessments.

Expand Economic Opportunity

The way transportation is planned, programmed and constructed in this region must be responsive to regional trends in economic expansion, population growth, development, public health, and the environment in order to provide mobility and improve air quality. Promoting improved opportunities for enhanced economic development is a specific goal of this plan because of the direct link between land use, transportation, and air quality.

Increase the Value of Transportation Assets

A key component which must be considered during the development of the TUMP is not only what the future needs are for each region, but also what magnitude the infrastructure will have upon maintenance over time. This must include not only the existing

transportation system, but also future facilities. Once these future facilities are constructed, a dedicated source of funding must be available to support its maintenance. Without that support, degradation of service is possible.

Streamline Project Delivery

A final key concept to consider is a method to provide for a more streamlined process for delivery of these projects. Public/private partnerships and more efficient cash-flow management techniques are two possibilities to consider which could provide more timely delivery of improvements. Other innovative tools for project delivery could include the following:

- Improved environmental review to reduce project development and approval timelines;
- Unrestricted use of the authority in comprehensive development agreements (CDA's);
- Institute the concept of "pass through tolling" for the TxDOT portion of metropolitan projects;
- Institute the policies for allowing metropolitan areas to receive fund credits for their expenditures to construct off-state system projects; and,
- Streamline state and federal oversight roles for small off-state system projects.

Relationship to the Metropolitan Transportation Plan

Metropolitan Planning Organizations across the state have been preparing long-range Metropolitan Transportation Plans (MTP) in order to address and meet state and federal planning requirements. This needs-based TUMP is a new statewide requirement focused specifically on areas that utilize the MPO process. There are many similarities between the two planning documents and both are goal-oriented toward reducing congestion and improving mobility, safety and air quality.

The MTP is a comprehensive, multimodal blueprint for transportation systems and services aimed at meeting the mobility needs of the Wichita Falls Metropolitan area, and it serves as a statement of regional plans to invest in the transportation system over the 25 year period of this document. The 2005-2030 MTP includes both long and short term policies, strategies, and projects that lead to the development of an integrated inter-modal transportation system that facilitates the efficient movement of people and goods.

The MTP is required to be financially constrained and balanced to anticipate revenue streams over time. One of its most important aspects is the identification and analysis of the financial resources available to implement its recommendations. Because of the "financially constrained" requirement, the MTP does not address or quantify unmet funding needs. It also does not look beyond what can be achieved with the amount of available funding, which results in a realistic, yet constrained picture.

The TUMP is a state-based requirement intended to serve as a framework for identifying unmet transportation needs in the state's metropolitan areas. The

TUMP requires the state's Transportation Management Areas (TMA's) and non-TMA's to develop a comprehensive, locally developed, visionary, realistic and financially unconstrained plan to reduce congestion while improving mobility and air quality. While the MTP serves as a financially constrained plan identifying only projects that can be constructed or funded (given anticipated funding streams), the TUMP goes one step further and becomes a needs-based plan which quantifies transportation needs beyond the fiscal constraint barrier. Instead of taking a conservative approach and focusing only on what funding can be anticipated, the TUMP focuses on the magnitude of unmet needs and provides decision makers with a better understanding of the total transportation needs of each region.

Texas Congestion Index: Definition

In order to begin identifying the magnitude of unmet needs throughout the state, an innovative planning tool was created to serve as a single performance measure for calculating levels of congestion. This tool is called the Texas Congestion Index (TCI). This index will use current data and models that have been produced for other purposes to generate congestion-index statistics. This index will measure the mobility of people and goods in each Texas metropolitan area, with attention to the delay time experienced by drivers. For example, a possible target congestion index of 1.13 means that a peak-period trip would take no more than 13% longer than off-peak travel.

Because a single index can obscure some elements or characteristics, the TCI process creates several measures aimed at assessing various elements of metropolitan transportation services. The index will help evaluate the programs and strategies that should be pursued to accomplish mobility objectives. It is designed to complement existing tools, procedures, measures and practices to improve congestion relief analyses.

Key elements of the index include the following:

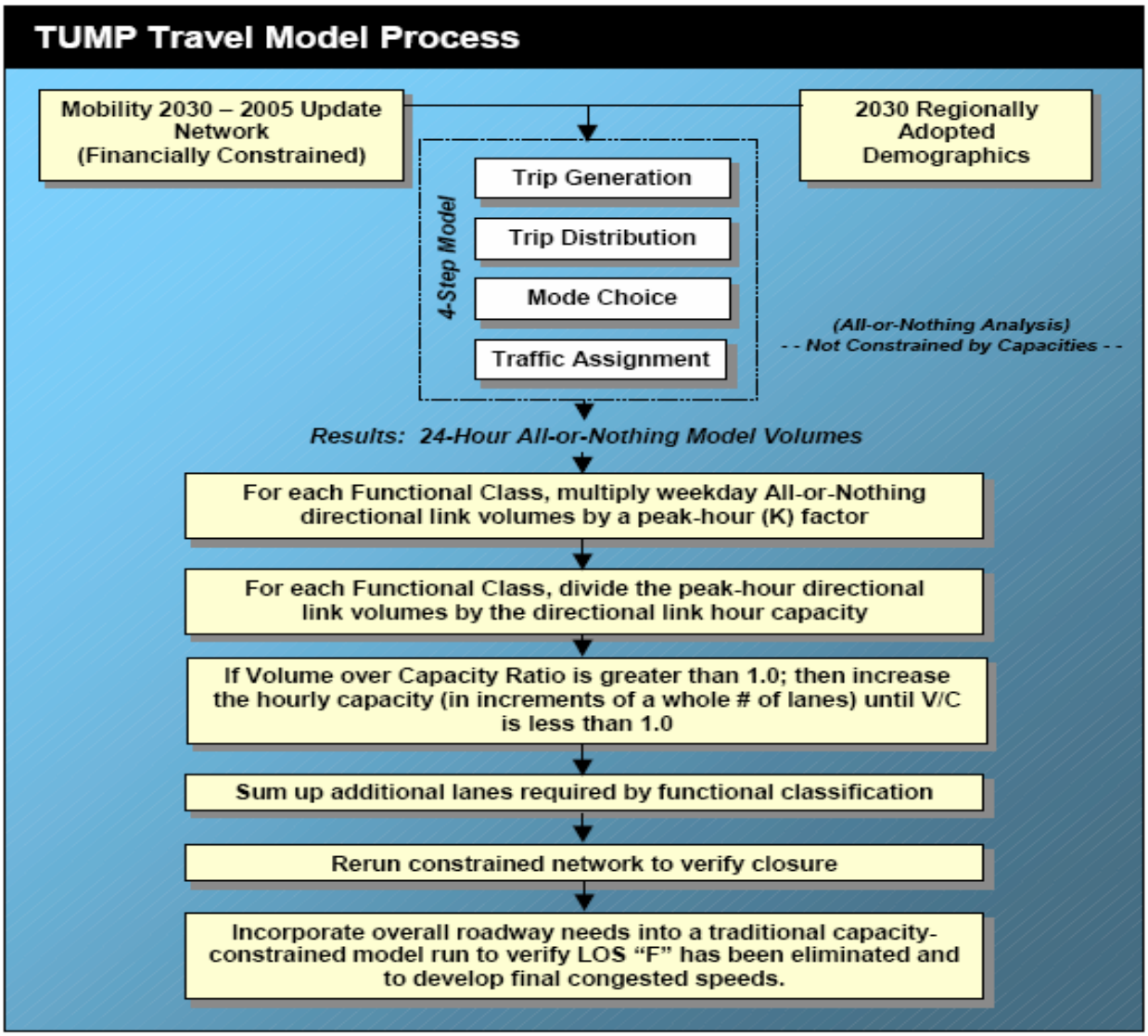
- Speed, travel rate (e.g. minutes per mile), or travel time
- Person-miles moved (to value passenger-carrying systems)
- Ton-miles moved (to value freight-carrying systems)
- Dollar value (to link the various components of congestion and mobility)
- Target speeds (to identify the beginning of undesirable congestion levels)
- Travel delay (the difference between desirable speeds or travel times) and the current or projected condition
- A method to include the full range of transportation improvements, land use, and other programs designed to yield transportation benefits
- Variation in speed or reliability of travel time
- Bicycles and pedestrians included

Optimum congestion is a term that seems very appropriate for use with the TCI. The working definition of *optimum congestion* is "the target speed of person density for a portion of transportation system that identifies the difference between slow or crowded traffic that is slightly inconvenient versus a congested situation that should be

remedied." The "optimum congestion" term would allow agencies to grade the system according to local targets that could be based on local values.

Basic Process for Development

The planning process that drives the Texas Urbanized Mobility Plan (TUMP) was developed through a joint coordinated effort between TxDOT; the MPO's representing the urbanized Transportation Management Areas (TMA), non-TMA, and the Texas Transportation Institute. Based on the guidance issued by TxDOT and its commission, the specific elements of the TUMP were identified and detailed processes were developed so that each MPO would be able to follow the exact same process, thus providing a consistent level of analysis across the state. From a technical standpoint, detailed travel demand models were used to help identify and solve for the various levels of congestion and were used as direct input into the calculation of the TCI values.



Non-Transportation Management Area (non-TMA)

Each of the eight TMA's, and seventeen non-TMA's, across the state have specific planning area boundaries related to their MPO functions. The Wichita Falls Metropolitan Planning Boundary includes the city limits of Wichita Falls, Lakeside City, and Pleasant Valley. The Metropolitan Area Boundary encompasses more than 150 square miles. The Wichita Falls MPO Transportation Policy Committee approved the Metropolitan Area and received approval from the Governor of the State of Texas in 1998. The boundary area can be seen below.

Demographics

Sound base year data is essential to establishing a firm foundation for transportation planning. Demographic data is used to project land-use patterns and transportation needs. This makes it possible to prepare travel forecasts and demands on the transportation system. The base year for this analysis is 2000.

The Wichita Falls MPO and the City of Wichita Falls Planning Division maintains its own demographic and land-use data. Demographic data includes population, households, income, and employment. Data is provided for the base year (2000) and the projected year (2030). Sources for determining the existing characteristics include: Census Bureau Reports, the Texas Employment Commission data, and City of Wichita Falls Planning data.

Projections are based upon historic trends modified by local knowledge. The five-year cycle provides for adequate revisions as the trends change. The City of Wichita Falls relies only on population for its projections rather than high, medium or low estimates. It is felt the range between the high and the low projections is too great for useful application.

Growth in population and employment is a primary reason for increased congestion in the Wichita Falls metropolitan area. According to the 2000 Census, the population in the Wichita Falls MPO area is projected to increase from 105,589 in 2000 to 128,230 in 2030. This correlates into a 21.38% increase in population for Wichita Falls, Pleasant Valley, and Lakeside City communities that comprise the Wichita Falls MPO. A portion of the workforce for Wichita Falls lives in Wichita, Archer, and Clay counties of North Texas, as well as Tillman, Cotton, and Jefferson counties in Southern Oklahoma. The following table illustrates these projections.

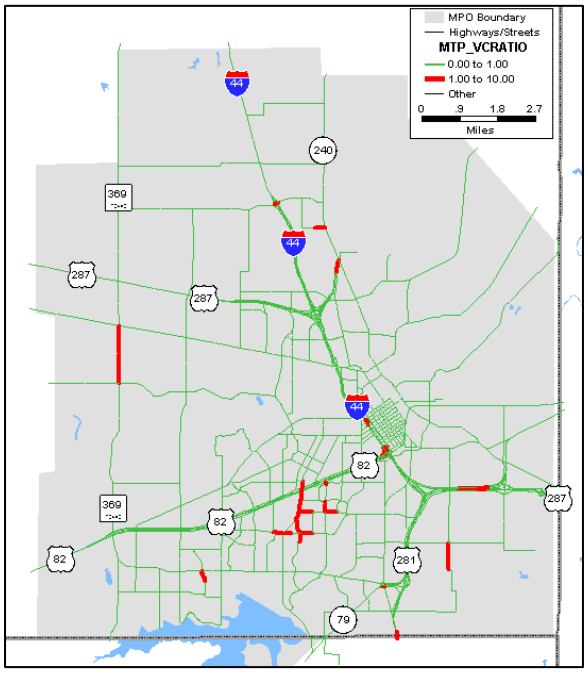
	2000	2005	2010	2015	2020	2025	2030
Population	105,589	109,069	112,657	116,363	120,192	124,146	128,230
Households	41,916	43,318	44,765	46,260	49,401	51,052	52,757
Employment	71,740	75,226	78,883	82,716	86,736	90,952	95,372

The Texas Transportation Institute has provided all of the MPO's with information concerning Volume-to-Capacity ratios on their local roadway systems. The V/C ratio for roadways is a measure of the amount of traffic that a roadway can handle during peak traffic periods. The higher the V/C ration, the more congested a road becomes. A roadway with a V/C ratio above 1.00 will start to become congested.

Based on the previous projections in population growth, the volume-to-capacity ratios for the roadways marked in red in the left map are predicted to exceed the V/C ratio of 1.00 unless new construction or reconstruction of those existing roadways is accomplished during the next 25 years.

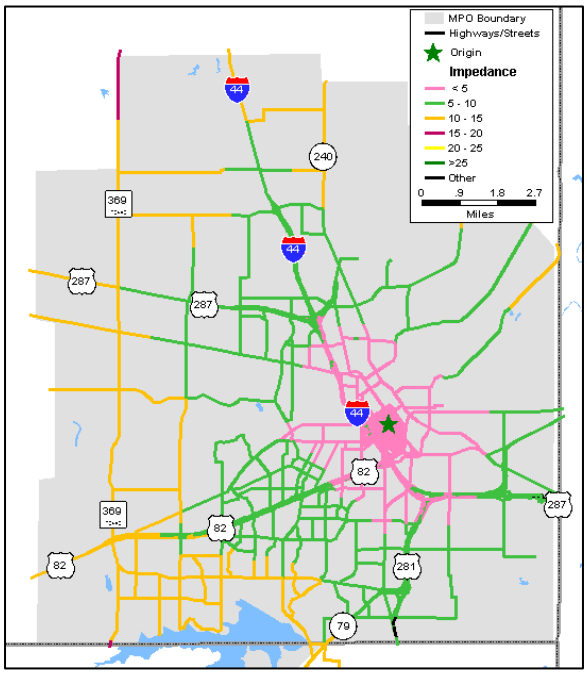
The map, below right, illustrates the typical daily (off-peak) travel time from a point of origin in the downtown area of the city. The result is a network that has been partitioned into average travel times from the point of origin. The legend indicates the amount of time it would take to travel from the point of origin to another location within the MPO's boundaries.

Volume-to-Capacity Ratio



Source: Texas Transportation Institute

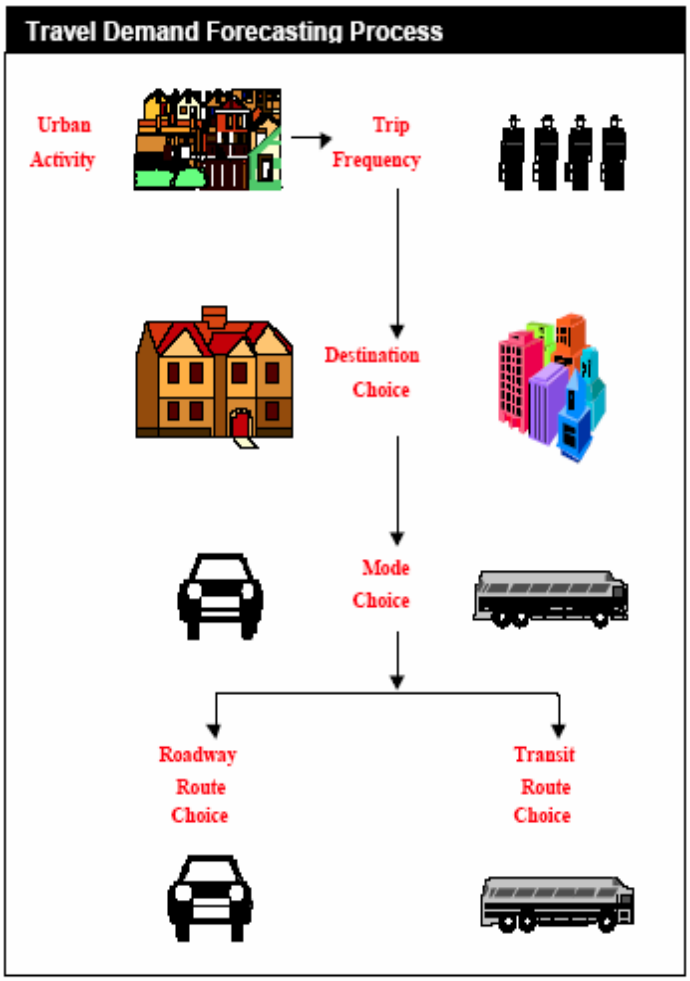
Travel Impedance



Source: Texas Transportation Institute

Travel Forecasting Process

The forecasting technique of the Wichita Falls Regional Travel Model is based on a four-step sequential process, as shown here, designed to model travel behavior and predict the level of travel



demand at regional, sub area, or small area levels. The travel modeling process begins with estimating trip frequency, or trip generation, which converts population and employment data to a total number of weekday person trips produced by and attracted to each zone. A regional zone system was developed to represent aggregations of population and employment activity and travel within the region. The trip distribution model uses roadway zone-to-zone travel time information to distribute the trip productions and attractions from trip generation to and from each zone to estimate the weekday travel patterns between each zone. The third step in the process is to estimate the share of trips between each pair of zones using the available travel modes. The final model step consists of roadway and transit users being allocated to transportation links in the network. A "feedback" approach is used in the financially-constrained Metropolitan Transportation Plan (MTP) to ensure full consistency for all modeling steps. The results of the travel model are input directly into the Texas Congestion Index (TCI) model to calculate a corresponding TCI value.

Target Mobility Level

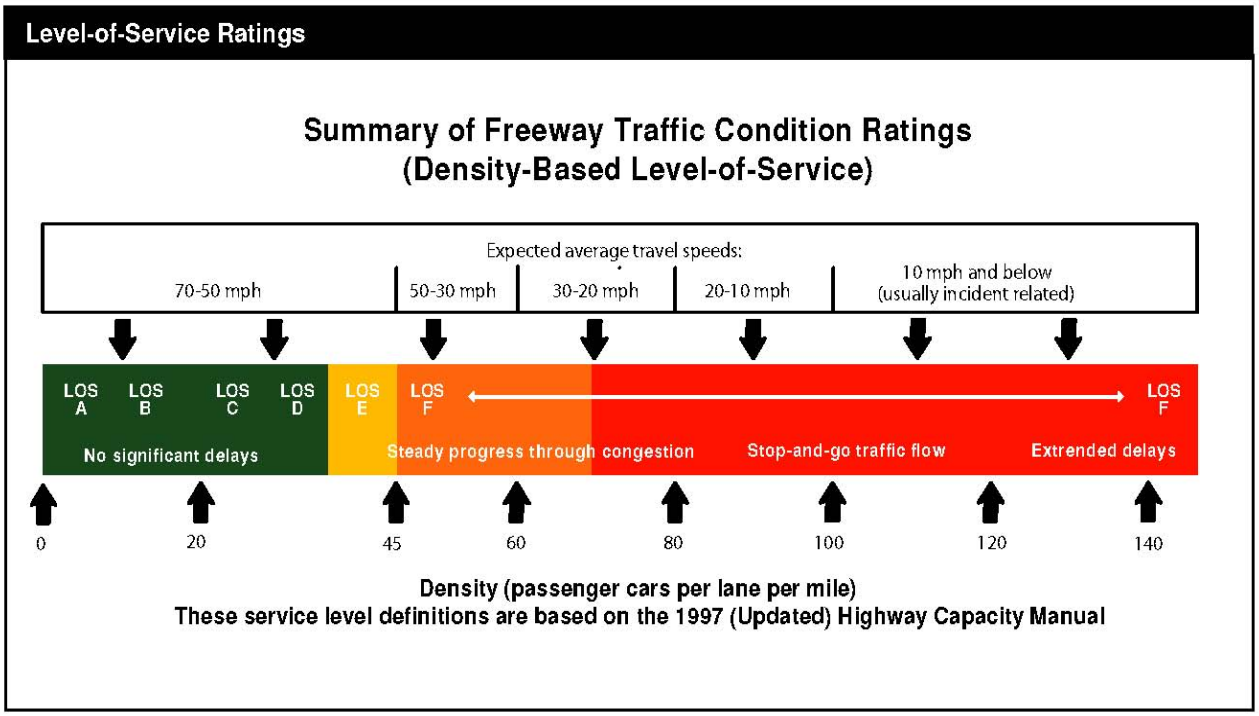
The Texas Congestion Index (TCI) is a variation of the Travel Time Index developed by the Texas Transportation Institute for the Annual Urban Mobility Report. This index compares the travel time in the peak period to the travel time that would be required for the same travel at free-flow (i.e., off-peak) speeds.

This formula identifies the travel time penalty for peak-period congestion. The value is a ratio with a practical minimum value of 1.0, which indicates that travel time is the same as it would be at free-flow conditions. A value of 1.3, for example, would indicate that a peak-period trip requires 30 percent more time than the same trip at free-flow speeds. In essence, a 20 minute off-peak trip would require 26 minutes in the peak period (20 minutes off-peak multiplied by 30% = 26 minutes peak-

period). The graph below shows the relationship between average travel speeds and levels of congestion, indicated by the colored shading. Level-of-service "F" conditions begin when freeway speeds enter a range between 50 to 30 miles per hour.

TUMP Scenario	TCI Value	Trip length (minutes)		
		Free-flow	Add	Total
Baseline	1.05	20	1	21
No-Build	1.10	20	2	22
MTP	1.07	20	1.5	21.5
Needs-Based	1.05	20	1	21

forecasts, but with no transportation projects implemented in this period. The *MTP Scenario* shows the effect of implementing the financially-constrained actions contemplated under current funding sources and levels. Although it reduces significantly the congestion from the No-Build Scenario, it shows that congestion will get worse. The *Needs-Based Scenario* illustrates how congestion would be reduced significantly if all of the actions in this plan were implemented. The goal of the Needs-Based plan is to achieve



Texas Congestion Index. The results for the TCI analysis for Wichita Falls are summarized in the following chart. This chart plots three scenarios in the 2030 forecast year that show traffic congestion conditions under different amounts of transportation actions implemented, starting in base year 2000.

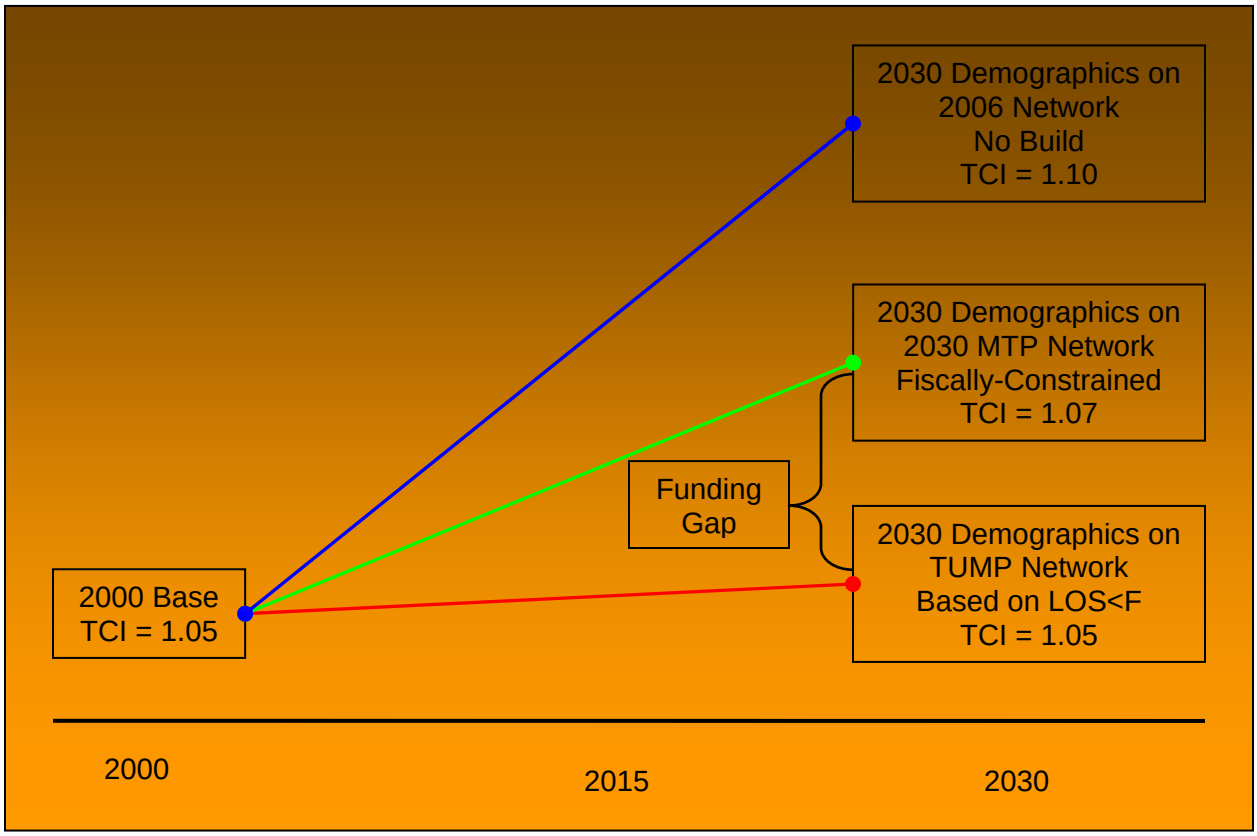
The *No-Build Scenario* refers to having population grow according to accepted *optimum congestion* or a level of congestion that is acceptable to the area inhabitants.

In the Wichita Falls region, our baseline value for congestion is 1.05 for year 2000. This number indicates, in that year, traffic congestion for our area was 5% above the practical minimum value of 1.00, which would be the travel time at free-flow conditions. The value 1.05 indicates that a peak-period trip would

require 5% more time to complete than the same trip at free-flow speeds. For example, a 20 minute off-peak trip at 12 midnight would require 21 minutes during the peak-period of an 8:00 a.m. morning commute to work (20 minutes off-peak multiplied by 5% = 21 minutes peak-period). Based on the recommendations in the $242 million 2005-2030 MTP, the TCI value in 2030 is expected to be 1.07. This reflects a worsening of congestion (21.4 minute peak-period trip) even after the financially-constrained MTP has been fully implemented, which indicates the need for additional funding to alleviate a greater level of congestion over time. The No-Build condition shows what our region's TCI value of 1.10 (22 minute peak-period trip) would be if none of the improvements in the MTP were implemented, representing an unacceptable level of congestion and delay time. This translates into slower and more frequent traffic bottlenecks, due to growth over time, if additional transportation improvements are not made.

The Texas Urbanized Mobility Plan is the tool to identify the needs which exist above and beyond those identified in the regions MTP. By implementing Needs-Based transportation improvements throughout our area, we will be able to maintain a TCI value, and possibly lower, of 1.05. This is the target level of improvement for the Wichita Falls region. Additionally, the Wichita Falls region should experience Level-of-Service "E" conditions and avoid Level-of-Service "F" conditions, altogether, for a very long time.

Three Scenarios of the Texas Congestion Index for WFMPO Area



Findings

Lane Miles Needed

From a financial standpoint, it is important to not only identify the long-term needs for this Plan, but to also identify the levels of funding needed to reach such a goal. The table below reflects the lane miles needed as a result of the financially-constrained Metropolitan Transportation Plan (MTP) and the needs-based Texas Urbanized Mobility Plan, along with estimated total costs for each scenario. The unit costs assumed for this report were developed by the Texas Transportation Institute and are representative of average lane mile construction costs specific to the Wichita Falls region in 2006 dollars.

The estimated cost of bridging the gap between the recommendations contained within the financially-constrained MTP and solving congestion levels to eliminate level-of-service "F" conditions is estimated to be approximately $92.4 million[1].

Lane Miles Needed and Cost Estimates

	Existing Lane Miles (2000 Baseline)	Mobility Plan 2030 Update (MTP)		Eliminate Level-of-Service "F"		
		Total Lane Miles Added	**Cost** (in millions of 2006 $)	**Additional Lane-Miles Needed**	**Additional Construction Costs** (in millions of 2006 $)	**Right-of-Way Costs** (in millions of 2006 $)
Freeways/Tollways	136	1	$3.0	4	$12.0	$0.0
Principal/Minor Arterials	558	30	$33.0	40	$44.0	$36.4
Freeway-to-Freeway Interchanges				None	$0.0	$0.0
TOTAL	694	31	$36.0	[2]44	$56.0	$36.4

[1]Total additional construction costs plus right-of-way costs to construct additional lane miles needed.
[2]Reflects an additional 8 lane-miles for the Loop 11 project not accounted for by TTI estimates.

Rehabilitation Needs

While accounting for the addition of new capacity to the system, it is important to also consider that most of the current facilities will be in need of some degree of partial or total rehabilitation over the next 25 years, as roadways continue to age and begin to fail at some point. In order to accurately reflect the total transportation needs for the next 25 years, the Texas Transportation Commission has asked all of the MPO's to estimate total rehabilitation and reconstruction needs for their region. The Wichita Falls MPO, working with the City of Wichita Falls and with the local TxDOT district, has calculated that it will cost $1billion to rehabilitate or reconstruct 63.3%, or 439 existing lane

miles within our region. This total includes all freeways, principal arterials and minor arterials, plus two major freeway-to-freeway interchanges, which were built prior to 1990 and will need to be replaced by the year 2030. This estimate is based on a 40-year cycle of utilization. Total cost for rehabilitation and reconstruction also includes $22.5 million for additional right-of-way acquisitions. The cost of reconstructing an estimated 439 existing lane miles adds an additional cost of $1.1 billion to the overall need.

Rehabilitation/Reconstruction Needs and Cost Estimates					
	% Lane Miles Needing Rehab in 2000 Baseline	**Existing Lane Miles to be Reconstructed**	[1] **Reconstruction** Costs (in millions of 2006 $)	**Right-of-Way Costs** (in millions of 2006 $)	**Unit Costs Used**
Freeways/Tollways	88.8%	120.8	$574.7	$5.3	TTI Estimates
Principal/Minor Arterials	57.0%	318.2	$357.9	$14.6	TTI Estimates
Freeway-to-Freeway Interchanges		2 Interchanges	$156.0	$2.6	TTI Estimates
TOTAL	[2]63.3%	439	$1,088.6	$22.5	
[1] Includes new capacity on existing right of way, new capacity and reconstruction, and reconstruction only.					
[2] Percent average of total lanes miles needing rehabilitation.					

Bridge Needs

In addition, bridge facilities are necessary for the long-term efficient and safe operation of the region's transportation system. The variety of facilities to achieve this goal includes the replacement of 150 On-System and 43 Off-System bridges. Furthermore, 11 On-System bridges and 3 Off-System bridges will need to be rehabilitated by 2030. The total long-term cost of these facilities is being developed as part of the regions Urban Transportation Study. The current estimate for replacement and rehabilitation of the region's bridge system can be seen in the table below.

Total Estimated Costs for Bridges			
	Rehabilitation (@ $48 per sq. ft.)	Replacement (@ $96 per sq. ft.)	**Total**
On-System	$10,268,736	$176,788,416	**$187,057,152**
Off-System	$634,848	$8,981,376	**$9,616,224**

Total Wichita Falls Additional Funding Needs

This table shows the total needs to eliminate Level-Of-Service "F", purchase additional right-of way for new and rehabilitation projects, and the cost to reconstruct or rehabilitate 63.3 percent of the total roadway system in the next 25 years. This table also shows what it will cost to rehabilitate or reconstruct 161 On-System bridges within the region. The Projected Local Funding for the Out-Years includes all street rehabilitation discretionary spending by the City of Wichita Falls. Therefore, only a small portion of it may be available for Needs-Based construction[1].

Total Wichita Falls Additional Funding Needs	
(2006 dollars - $millions)	
Eliminate Level-of-Service "F"	$56.0
Right-of-Way Acquisitions	$58.9
Reconstruction of Existing System	$1,088.6
MTP 2030	$36.0
On-System Bridges	$187.1
Subtotal	**$1,426.6**
Projected State Funding for Out-Years	$340.0
[1]Projected Local Funding for Out-Years	$40.0
Total Funding Gap	**$1,046.6**

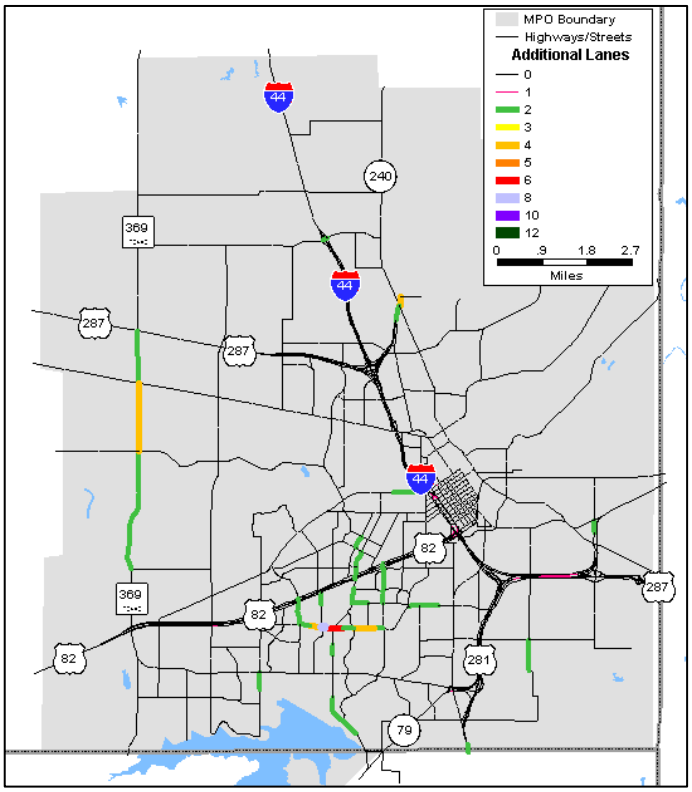
Strategies to Reduce Congestion & Improve Urban Mobility

One of the main purposes of developing a Texas Urbanized Mobility Plan (TUMP) is to identify the magnitude of long-range needs in each Transportation Management Areas (TMA) and non-TMA, and to quantify the amount of funding needed to achieve a targeted level of congestion. As mentioned in the previous section, the target level for each TMA and non-TMA is to reduce congestion so that all level-of-service "F" facilities are eliminated, thus providing greater mobility, improved air quality, and a more reliable transportation system. The analysis used to identify the additional 44 lane miles should be interpreted as an overall need which should be reached through a combination of freeway, toll roads, managed lanes, arterial street improvements, transit, freight, and operational system improvements.

The Wichita Falls region is pursing a wide range of improvements to the transportation network, and will look for a variety of ways to secure the funding necessary to promote these interests even further. Out of the 44 additional lane miles needed, it is not known exactly how many of these will be accommodated through other modes, but it is the region's intention to pursue a truly multimodal network of transportation alternatives. The map on the next page identifies, in general terms, the overall corridor needs in the next 25 years, including adding capacity, rehabilitation, and safety considerations. In the Wichita Falls

region, there is an unmet need which the TUMP process will attempt to address. Since the solution to this growing problem will need to be addressed through a variety of techniques involving numerous modes, it is important to identify the anticipated future transportation system that will serve as the starting place. Through the already required process of developing a financially-constrained Metropolitan Transportation Plan, the initial groundwork for this effort has already been accomplished.

Additional Lanes Needed



Source: Texas Transportation Institute

The following paragraphs discuss each of the specific modes or operational categories already being planned in this area and provide some idea of the magnitude of the future transportation system which has already been identified, adopted, and embraced.

A significant component of the Wichita Falls Transportation System is the freeway system. There is still considerable demand for improved and expanded capacity on the roadway system which will warrant continued network improvement and expansion. Inherent to the region's transportation network are high-cost improvements and maintenance. While there may be little operational costs once constructed, building, maintaining, and expanding freeway capacity is very expensive. Over the last few years, the concept of user-fee based roadways has been growing in popularity and acceptance, and recently, TxDOT adopted a policy that any controlled-access mobility projects, new location facilities, and increased capacity must be evaluated for tolling purposes.

The City of Wichita Falls and the Wichita Falls MPO are also working with TxDOT to study the current operations of the Wichita Falls Public Transit (WFPT) system. Specifically, one of the goals of the study is to examine underserved areas of the City, and adjust the routes accordingly. While it is not quite clear what the long-term effects of this study will play on reducing congestion, it is a goal of the study to increase the number of passengers who use the WFPT on a daily basis. As a result, an increase in the number of riders could equate into reduced local congestion.

The area's arterial street strategy includes improving operations of the existing and future arterial street system by adding capacity, improving traffic flow, reducing demand by providing adequate transit and bicycle/pedestrian facilities, and improving arterial connections within the Community.

Wichita Falls has a thoroughfare plan with associated requirements. Working with local and regional partners, as well as citizen input, keeps the plan updated and current. Identifying local money and developing private partnerships to fund an extension of a local thoroughfare has allowed for recent commercial property development in an underutilized portion of the City.

Land-Use and Travel Demand Management

Land-use and transportation are intricately linked. Managing land-use can help to manage the travel demand that leads to congestion. Certain land-use patterns tend to encourage a shift of trips to modes other than single-occupancy vehicle and can reduce overall trip lengths. Transportation investments can influence how land is developed. The Wichita Falls MPO, City of Wichita Falls, Wichita County, and other regional transportation partners should work together to develop programs that will help manage congestion and improve local quality-of-life. Strategies that could be implemented include the following:

- Work with local and regional partners to identify and designate regional pedestrian districts and to develop performance measures and strategies for implementing these districts, including allocation of additional resources towards infrastructure.
- Spend STIP/Metropolitan Mobility enhancements and other available funding on transportation infrastructure that supports development projects that help reduce vehicle miles traveled.
- Focus transportation infrastructure to support areas identified as growth areas by local/regional plans, and work collaboratively to support transit-oriented development.
- Identify and publicize land-use strategies that local government can implement to reduce travel demand, improve efficiency of the transportation system, and improve the relationship between land-use and transportation.

Travel Demand Management (TDM) refers to a strategy of limiting demand for the use of the existing transportation system. TDM strategies are designed to increase the efficiency of a transportation system without increasing its capacity, in particular roadway capacity. TDM strategies can be used to implement the goals of the TUMP and reduce regional congestion without increasing roadway capacities.

Transportation Systems Management

The Transportation System Management (TSM) approach to congestion mitigation attempts to identify improvements to the traffic control infrastructure. These techniques are designed to improved traffic flow and safety through better management and operation of this infrastructure. Compared to major roadway improvements to address capacity issues, TSM related projects are usually lower in cost and can be developed and implemented in less time. Some examples of traditional TSM improvements include traffic signal enhancements, removal of freeway and

arterial bottlenecks, and intelligent transportation system (ITS) deployment.

Improved traffic flow and reduction of delay can have positive air quality, public relations, and fuel consumption benefits. Improvements at intersections and in signal timing, which reduce delays at those locations, also reduce vehicle emissions. Reducing traffic congestion caused by incidents on the freeways through better traffic management also reduces the amount of pollutants by reducing the number of idling vehicles.

Along with addressing mobility and air quality goals, elements of TSM address community and quality-of-life goals by supporting sustainable development practices. Access management is one element of sustainable development that is impacted by TSM strategies, such as intersection improvements. Furthermore, bicycle and walking trips can be encouraged by a more safe intersection design and traffic signals that accommodate a timing cycle for bicycle and pedestrian movements. The Community's ITS program consists primarily of video monitoring locations, variable message boards, and a wireless traffic signal management system (ACTRA).

Arterial management is included in its role to complement and enhance the freeway and transit systems in order to provide the necessary support to and from businesses and neighborhoods. Since many major freeway corridors in the region are constrained from acquiring additional right-of-way, much of the additional traffic burden will likely be placed on the arterial system in Wichita Falls. The City of Wichita Falls and the Wichita Falls MPO have recently completed a traffic signal optimization study, assisted by the consulting firm of Kimley-Horn and Associates, to improve signal progression and to reduce travel times on two major arterials in the Community. The end result of this study gives the City of Wichita Falls the necessary tools to manage other arterials in the Community.

The City of Wichita Falls and TxDOT also work closely together to manage access from private development on to the area's arterial system. Access management is a process that provides or manages access for roadway users entering or exiting adjacent developed land without significantly impacting safety conditions, traffic capacity, and vehicle speeds for other roadway users. Access management strategies, including design and control of driveways, curb cuts, turn lanes, parking lot circulation, public street connections, and intersections, are most often applied to major urban roadways.

Transit

The City of Wichita Falls Public Transportation (WFPT) Division currently operates a Route Deviation system. Any of the systems six routes will deviate two blocks from its scheduled route to pickup/drop off eligible, mobility-impaired individuals. These routes operate from 5:30 a.m. to 7:30 p.m. from Monday through Saturday. Each route takes approximately an hour to run, and each route is serviced 13 times per day. In 2005, WFPT experienced a 28% increase from the previous year in its number of riders: 254,000 passengers.

The transit system is currently funded through Federal Transit Administration and TxDOT grants, as well as local tax dollars and WFPT revenues.

The Wichita Falls MPO is currently working with the City of Wichita Falls to evaluate consulting firms solicited to examine the WFPT. The goals of this study are to improve the overall operations of WFPT and increase the number of passengers using the system. This will be accomplished by examining the route structure of the current system, identifying areas of the Community that could be better served, considering multiple transfer points, and exploring local paratransit needs. Additional operating hours will also be considered.

WFPT and the Wichita Falls MPO work closely with the eleven county North Texas Regional Planning Commission (NORTEX) to develop and maintain a Regional Public Transportation Coordination Plan. Along with NORTEX, WFPT participates in 2-3 public meetings each year to exclusively address public transit needs.

Freight Movement

The Burlington Northern and Santa Fe Railway (BNSF) is the primary railroad company serving the Wichita Falls area. BNSF operates lines that pass through or terminate in Wichita Falls. Those lines that terminate within the community serve the various heavy-industrial factories located in the area. BNSF is considered a Class I railroad as defined by the Interstate Commerce Commission because it exceeds $96.1 million in operating revenue. The BNSF controls a single line that run along U.S. 287, and the number of trains varies per day. The primary cargo carried by BNSF through Wichita Falls is coal.

The abandonment of railroad "spurs" within the Wichita Falls MPO area has created opportunities for "hike and bike" trail expansion.

Hazardous materials currently travel throughout the Wichita Falls area. While no immediate plans have been developed to limit the flow of hazardous materials within the Community, the Wichita Falls Emergency Management Division will continue to monitor the need for such routes. The majority of hazardous materials traveling through the Wichita Falls area occur on I-44, U.S. 287 and U.S. 281.

Aviation

The City of Wichita Falls and the Wichita Falls MPO is committed to improving the aviation infrastructure within the Community. There are currently two airports owned and operated by the City of Wichita Falls: Municipal Airport and Kickapoo Downtown Airport. Municipal Airport is a "joint-use" commercial facility shared by both the City of Wichita Falls and Sheppard Air Force Base. Kickapoo Downtown Airport serves the general aviation community in the surrounding region. An Airport Master Plan, developed by the consulting firm of URS, will be completed by the summer of 2006 for Kickapoo Downtown Airport. The City of Wichita Falls is in the process of updating the Master Plan for Municipal Airport.

Municipal Airport experiences over 50,000 enplanements annually. Primarily served by one airline operating

daily scheduled arrivals/departures, Municipal Airport has seen a significant increase in the number of charter flights serving the community. In the past, these people would have had to travel via automobile, charter bus, or shuttle to Dallas/Fort Worth or Oklahoma City to enplane. The Municipal Airport currently has a 7,021 foot asphalt runway that serves the air carrier and general aviation operations. The City of Wichita Falls is pursuing a Military Airports Program grant through the Federal Aviation Administration (FAA) to fund $24.1 million in infrastructure improvements to this facility. These improvements include reconstruction of the primary runway, taxiway rehabilitation, and terminal improvements.

The Kickapoo Downtown Airport serves general aviation needs within the region. Housing over 75 business and recreational aircraft, Kickapoo Downtown Airport is the largest general aviation facility in the area with annual operations exceeding 25,000 aircraft movements. Since 1999, the City has invested over $7 million in infrastructure improvements at this facility. FAA Airport Improvement Program (AIP) and Non-Primary Entitlement grants have provided over 80% of the funding for these upgrades. A new 4,450 foot concrete runway was completed in December 2005. Future projects utilizing AIP funds are scheduled through 2009. Additional financial assistance has been provided through the TxDOT Aviation Division.

Pedestrian & Bicycle Facilities

In January 2005, the Wichita Falls MPO contracted with the consulting firm of Lockwood, Andrews & Newnam, Inc. (LAN) to assist in the development of a Bicycle Master Plan. The study promotes the safe use of bicycles as an alternative mode of transportation. The Master Plan identified who the users were and where they rode. LAN analyzed existing and proposed street and trail networks to determine the best routes for bicycles. In addition, LAN helped identify future “hike and bike” trail projects that would benefit both bicycle and pedestrian traffic.

On January 20, 2005 the Transportation Policy Committee adopted the Bicycle Master Plan as a planning tool to aid in the development of bicycle and pedestrian infrastructure within Wichita Falls. The plan identified a 26 mile trail system that loops through the City. Currently, 15 miles have been completed, and an additional 2.2 miles are planned for completion within the next two years. Once the loop system has been completed, additional trails will extend outward to service the remainder of the Community. Because Wichita Falls is the home of one of the largest bicycle “rides” in the United States, cycling group representatives have been instrumental in the development of this trail system. The City of Wichita Falls relies heavily on the TxDOT Enhancement Program to fund the construction of its trail system.

Pedestrian facilities in the Wichita Falls Metropolitan Area include sidewalks. The City of Wichita Falls Street Department maintains a list of sidewalks within the Community. While home

owners are responsible for sidewalk repair in front of their property, the Street Department has a Community Development Block Grant (CDGB) funded program that trains workers in the concrete construction trade. This program is used to repair many sidewalks in CDBG designated areas. Furthermore, this program has been used to build new sidewalks in parks that are located in CDBG designated areas. Walking and jogging is used primarily for recreational and fitness purposes rather than for transportation. This is visible in areas where pedestrians are more prevalent: residential neighborhoods, commercial areas, schools, parks and trail system.

The Wichita Falls MPO is currently in the process of hiring a consultant to review the Wichita Falls Public Transit System. One of the components of this study will be to integrate pedestrian and bicycle modes of transportation into the Transit System. This will be accomplished by identifying potential transit routes along the proposed "hike and bike" trail system, as well as working with local bicycle groups to get their input on how the transit system can better accommodate bicycle hardware. Finally, the completion of the trail loop system will allow the Community to promote an alternative to motorized vehicular travel. The Wichita Falls MPO also recognizes that walking and bicycling can improve the health and physical condition of area residents, and promotion of the completed trail system will facilitate this goal.

Trans Texas Corridor

Overview

The Trans-Texas Corridor (TTC) is a proposed multi-use, statewide network of transportation routes in Texas that will incorporate existing and new highways, railways and utility right-of-ways. Specific routes for the TTC have not been determined.

As envisioned, each route will include:

- separate lanes for passenger vehicles and large trucks freight railways
- high-speed commuter railways
- infrastructure for utilities including water lines, oil and gas pipelines, and transmission lines for electricity, broadband and other telecommunications services

Plans call for the TTC to be completed in phases over the next 50 years with routes prioritized according to Texas' transportation needs. TxDOT will oversee planning, construction and ongoing maintenance, although private vendors will be responsible for much of the daily operations.

Guiding Principles

The Trans-Texas Corridor concept was developed by state transportation planners using the following guiding principles:

- Efficient, reliable transportation is essential to public safety, economic vitality and quality of life.
- Transportation improvements in Texas must be completed faster.
- The planning and decision-making process must be open, with frequent and ongoing opportunities for public input.

- Separate lanes for cars and large trucks will improve safety and relieve congestion.
- Transportation routes for hazardous materials must avoid population centers whenever possible.
- Rail must play a more prominent role in improving mobility and safety in Texas.
- The Trans-Texas Corridor will be built in phases as transportation demands warrant.
- Government does not have all the answers to the transportation challenges facing Texas and needs the innovation of the private sector.
- Where feasible, the Trans-Texas Corridor should use existing infrastructure by aligning with existing highways, railways and utility corridors.
- Local officials should help determine how communities access the Trans-Texas Corridor.
- Trans-Texas Corridor planners must consider ways to minimize right of way needs.
- People who use the Trans-Texas Corridor must be treated as customers. State officials and contractors must work in concert with local entities to provide high-quality service to these customers.
- The Trans-Texas Corridor must be built with public/private partnerships in order to minimize costs to taxpayers.

Why Texas Needs the TTC

The TTC is a solution for today's congestion and tomorrow's transportation needs. Rapid population growth during recent years and a substantial increase in the number of vehicles using Texas highways have left many roadways overloaded. Sizable growth in both population and traffic are expected to continue indefinitely.

The TTC will move people and goods faster by providing:

- additional driving lanes
- options for different modes of travel, including rail
- routes to divert long-distance traffic from local roadways

In addition, the TTC will improve traffic safety and spur economic development.

Rapid Growth and Traffic Congestion

As futuristic as the interstate system was in its day, it had a planned life span of only 30 years. That was over 50 years ago. Today, there is not a single interstate highway in Texas you can travel, from end to end, without hitting congestion – unless you do it at night.

Rapid population growth during recent years and a substantial increase in the number of vehicles using Texas highways has caused many of our state roadways to become overloaded.

Some forecasts predict our population will increase to as many as 36 million by 2025. Today, nearly 9.5 million people – or about 45 percent of all Texans – live within 50 miles of I-35. That population group is projected to increase to more than 15 million, putting even more demands on this heavily congested interstate corridor.

Safety

Keeping you safe on our roadways is our top priority. We know that a

significant proportion of traffic crashes involves large trucks. Between 1998 and 2002, 24 percent of fatal crashes on I-35 involved a truck. These crashes killed 172 people.

Hazardous material transport is also an important safety consideration. Millions of people in Texas are vulnerable because the existing transportation system moves hazardous material through populous areas. We need to provide transportation alternatives to businesses that transport these hazardous materials.

Economic Growth

The economic well-being of people in Texas relies in part on an efficient transportation network. If a reliable transportation system is not available, employers may move to other states where such networks exist, taking jobs with them.

Although Wichita Falls is not within 50 miles of the I-35 buffer zone, the Trans Texas Corridor may still have an indirect affect on economic growth and development in years to come as an alternate route for people and freight.

Commuter Rail

Commuter Rail is long-haul rail passenger service operating between metropolitan and suburban areas, whether within or across the geographical boundaries of a state, usually characterized by reduced fares for multiple rides, and commutation tickets for regular, recurring riders. It is also known as "regional rail" or "suburban rail."

In the early 20th century, commuter rail was an important aspect of public transportation for Wichita Falls, as it was for many towns and cities of that era. However, with the advent of over-the-road freight lines and people choosing to purchase and drive their own vehicles, the demand for commuter rail in Wichita Falls became less and less until it reached a point where it became economically impracticable for rail providers to operate and make a profit.

Sadly, there has not been a commuter rail operation in Wichita Falls since the early 1960's. That may all change in the future as oil and gasoline prices continue to rise and people and businesses look for more economical ways to travel and to ship their goods. The MPO needs to plan accordingly for this eventuality.

Public Transportation Planning

Transportation Planning is more than just transportation planners drawing lines on maps, crunching numbers and presenting the results to local officials. Public Transportation Planning should involve the community as a whole by holding public meetings and roundtable discussions to find out where the real problems in local transportation lie.

With the passage of SAFETEA-LU and the coming required compliance issues, the MPO will be exploring different areas of "visual techniques" for communicating past, present and future growth trends and analyses to the public. These visual techniques will be essential in demonstrating how proposed construction or rehabilitation plans will impact a community or neighborhood. This process will be

especially important when a proposed project may have an adverse impact on a low-income or minority population thus creating an Environmental Justice issue that needs to be resolved before the project can go forward.

The Wichita Falls MPO will continue to utilize "best practices" to develop timely and appropriate transportation plans with help from local communities, agencies and stakeholders.

Mechanisms for Innovative Financing

Funding Options

With the passage of Proposition 15, the Texas Legislature and the citizens of Texas created very important tools to improve mobility: the use of Toll Equity, the Regional Mobility Authorities, and the Texas Mobility Fund (TMF). Through the Texas Department of Transportation's (TxDOT's) Strategic Plan 2003-2007, the Texas Transportation Commission (TTC) identified the following appropriation strategies: Plan It, Build It, Maintain It, Maximize It, and Manage It. The Texas Urbanized Mobility Plan (TUMP) has taken the step to identify and plan for needed future mobility needs, and now the Wichita Falls MPO needs to identify the means to fund it.

The process used to identify the out-year need of 44 additional lane miles of needed improvements and the maintenance of existing facilities also identified an estimated dollar amount that must be generated in order to make this possible: $1,046.6 million dollars. Between now and the year 2030, this region must develop partnerships and research every funding opportunity to generate this level of additional funding needed in excess of current funding streams. There will be substantial benefit derived from the implementation of this Plan, and from a cost standpoint, the benefits clearly outweigh the costs.

Under new policies being implemented by the TTC, TxDOT will allocate an annual, baseline amount of money to metropolitan areas to address congestion in their areas. Historically, TxDOT has awarded transportation funds on a project-by-project basis. The TUMP allows for a set, predictable allocation of funds to the state's most congested urban areas. This change, combined with new tools from recent legislation (HB 3588) and the secured TMF, empowers the urban areas of Texas to better address congestion. A recent state legislative session provided the ability to secure the TMF, a key component of this plan. The TMF will provide additional new money to help reduce congestion and advance needed transportation projects in the state. The benefits of the TUMP will result in more projects being constructed sooner.

Under the framework for this Plan, TxDOT has said that it will first determine what is needed to reduce congestion in each metropolitan area. Then TxDOT will utilize regional allocations of state funding, including the new TMF, along with locally generated and controlled user-pay funds, to implement projects to reduce congestion at the rate and on the timeframe appropriate to the individual metropolitan area. The result will be more local control, more local decision making, more realistic planning, and

more goal attainment based on reducing congestion.

Private Sector Partnerships - Funding the Partnership

As part of the TUMP, each metropolitan area will be given greater local ability to identify and set priorities for projects that improve mobility. As a starting point, each metropolitan area will be granted a baseline allocation of state metropolitan mobility funds. It is anticipated that this regional baseline allocation of state funding will not be sufficient to meet all of the mobility needs of the region, and as a result, local metropolitan areas will be given increased flexibility to generate user-pay system funds and public/private partnerships to fill the "gap" between the prioritized needs and the baseline state funding allocation. The ability to pursue gap-fund initiatives may require enabling legislation. Most importantly, under the TUMP, the "gap" funds which are generated within a particular metropolitan area will be for the exclusive use of that metropolitan area and will be used to supplement the baseline, regional allocation of state funding. Some of the potential methods of generating "gap" funding could include the following initiatives:

- Assess traffic impact fees for development;
- Issue local general obligation bonds;
- Toll added-capacity projects;
- Allocate a portion of a statewide gasoline tax increase for urban/metro areas;
- Manage truck utilization of the highway system through specific congestion-based pricing;
- Implement added vehicle registration fees designated for local mobility projects;
- Implement a toll system for projects that ease bottlenecks on existing freeway segments to improve system performance; and
- Implement a retro-toll system allowing for the tolling of existing congested freeways to improve system mobility.

Funding Strategies

<u>Spend Wiser</u>

- Reprioritize Category 3 Urban Area (Non-TMA) Corridor Projects
- Reprioritize Category 6 Structures Replacement and Rehabilitation (Bridges)
- Flex Category 7 STP Funds

<u>Be More Efficient</u>

- Support Comprehensive Development Agreements (CDA's)
- Plan Managed Lanes

<u>Borrow to Build</u>

- Use Toll Funds
- Apply Shadow Tolls

<u>Find Partners</u>

- Coordinate Congressional Funding
- Request TxDOT Category 12 Strategic Priority Funds
- Leverage Texas Mobility Funds for Critical Multimodal Projects
- Coordinate Local Resources

Goals of the TUMP: Conclusions

Texas Department of Transportation Strategic Goals

The Texas Department of Transportation (TxDOT) has adopted five strategic planning goals as part of the Strategic Plan 2003-2007. These goals address many of the previously mentioned goals adopted for the purposes of this report and planning exercise. TxDOT's five strategic planning goals are as follows:

Goal One – Reliable Mobility

- Enhance Texas urban and metropolitan area mobility and ensure that congestion is less than in comparable peer U.S. cities.

Goal Two – Improved Safety

- Reduce the fatality rate on Texas roadways by five percent within ten years.

Goal Three – Responsible Systems Preservation

- Ensure that 90 percent of Texas' roads and 80 percent of bridges will be in good or better condition within ten years.

Goal Four – Streamlined Project Delivery

- Improve project delivery from project conception to ribbon cutting, on average, by 15 percent within five years.

Goal Five – Economic Vitality

- Attract and retain businesses and industry with adequate transportation systems and services.

The five strategic planning goals previously identified are already generally covered in the other adopted goals for the Texas Urbanized Mobility Plan, and the ability to achieve these strategic goals is tied to the ability to generate additional funding through any and all strategies open for consideration. Because of the short-range nature of these strategic goals, it is imperative to begin identifying and securing alternative methods of funding major surface transportation projects within Texas' largest metropolitan areas.

Final Summation

In summary, the goals adopted as part of the Texas Urbanized Mobility Plan represent this region's commitment to a comprehensive, cooperative, and continuous transportation planning process that will provide for a balanced transportation system by recognizing the evolving transportation and air quality issues of the region. In addition, the goals reflect this region's consideration of the TEA-21 planning emphasis areas, consistent with the ongoing MTP process. The ability to implement regional projects and achieve these ambitious goals is closely tied to this region's ability to identify innovative financing methods and to work closely with the Texas Transportation Commission to pursue every available funding opportunity, whether that be through toll equity, Regional Mobility Authorities, or the Texas Mobility Fund.

Appendix A

RESOLUTION 2006-01

SUBJECT: APPROVAL OF THE TEXAS URBANIZED MOBILITY PLAN (TUMP)

WHEREAS, the Transportation Policy Committee, and the City of Wichita Falls has been designated as the Metropolitan Planning Organization (MPO) for the Wichita Falls Metropolitan Area by the Governor of Texas in Accordance with federal laws; and,

WHEREAS, the Wichita Falls Metropolitan Areas has a population less than 200,000 but greater than 50,000 and has, therefore, been designated as the agency for Transportation Planning in a Non-Transportation Management Area; and,

WHEREAS, the Texas Transportation Commission has instituted a new requirement for the seventeen Non-TMA's in the state to develop locally-based Texas Urbanized Mobility Plans, targeting and quantifying out-year funding needs; and,

WHEREAS, the MPO has the authority to approve its own Texas Urbanized Mobility Plan (TUMP) for the fiscal year 2006; and

WHEREAS, the MPO's adopted public involvement policy requires a 45-day public comment period; and

WHEREAS, the Technical Advisory Committee has discussed the TUMP and recommends that the Transportation Policy Committee approve the TUMP; and

NOW THEREFORE, BE IT RESOLVED:

Section 1. That the Transportation Policy Committee approves the Texas Urbanized Mobility Plan for the Wichita Falls Metropolitan Area.

Section 2. That the total transportation need in the Wichita Falls Metropolitan Area is $1.4 billion through the year 2030.

Section 3. That the Texas Urbanized Mobility Plan identifies needs beyond the financially-constrained Metropolitan Transportation Plan.

Section 4. That this process was conducted consistently and simultaneously with the other seventeen Non-Transportation Management Areas in Texas.

Section 5. That the Transportation Policy Committee requests the Texas Transportation Commission and the Texas Legislature to review and address the out-year funding needs for the Wichita Falls region and the State of Texas.

Section 6. That this resolution will be transmitted to the Texas Transportation Commission, the Texas Department of Transportation, and other impacted agencies or local governments.

Section 7. That this resolution shall be in effect immediately upon its adoption.

July 26, 2006
DATE OF APPROVAL

Larry Tegtmeyer, P.E.
TxDOT District Engineer

Mayor Lanham Lyne
Policy Board Chairperson

APPENDIX B: 2006 PRIORITIZED ROADWAY PROJECTS

Wichita Falls District MPO

ID#	ROADWAY	CSJ/MPO#	LIMITS	DESCRIPTION OF WORK	LETTING DATE	RANK
61	Maplewood Extension Ph 1	WF-11	From Kemp/Maplewood to Lawrence Road	Construction of 4 lane street	TBD	HIGH
49	Maplewood Extension Ph 2	WF-12	From Lawrence Road to McNiel	Construction of 4 lane street	TBD	HIGH
11	US 82	0156-04-080	0.7 Mi W of FM 369 to 0.2 Mi W of Fairway	Construction of mainlanes	9/1/2008	HIGH
54	Turtle Creek Road	WF-18	From Ridgemont to US 277 Business	Widening of existing street and drainage improvement	TBD	HIGH
70	Holliday Creek	WF-14	From East Scott Street to Hamilton Park	Construction of bicycle/pedestrian trail	TBD	HIGH
4	IH 44	0043-09-107	BUS 277A Exit Ramp to 6th Street	Rehab of existing roadway - concrete pvmt repair	3/1/2006	HIGH
6	LP 11	0043-14-020	IH 44 to US 287 Frontage Road	New location non-freeway facility (need property by 3/1/2006)	9/1/2007	HIGH
8	US 82	0044-01-924	At US 82/287 Under Windthorst Road	Rehabilitate bridge and approaches	9/1/2007	HIGH
3	US 287	0044-01-087	8th Street to 6th Street	Rehab of existing roadway - concrete pvmt repair	3/1/2006	HIGH
66	Rhea/Callfield/Lawrence	WF-6	From Rhea Road to Lawrence Road	Realignment of existing intersection	TBD	HIGH
7	IH 44	0156-07-101	At FM 890	Replace bridge and approaches	4/1/2009	HIGH
1	US 277A	0156-14-024	Baylor Street to US 287/IH 44	Rehab of existing roadway - mill and overlay	3/1/2006	HIGH
2	Spur 479	0156-13-001	US 287/IH 44 to Broad Street	Rehab of existing roadway - mill and overlay	3/1/2006	HIGH
35	Seymour Highway	EJ-3	Exit at 5th Street from IH 44 South	Realign off ramp from IH 44 S to 5th Street/Seymour Hwy	TBD	HIGH
65	Lawrence Road	WF-7	Kell Freeway to Call Field Road	Construction of continuous left turn lane	TBD	MED
64	Kemp Boulevard	WF-8	From Callfield to FM 369	Reconstruction of existing road with drainage improvement	TBD	MED
5	BUS 287J	0043-17-023	LP 11 to 0.3 miles west of IH 44	Miscellaneous work - widen structures	6/1/2006	MED
55	Taft Boulevard	WF-17	From FM 369 to FM 2380	Widening of existing street and drainage improvement	TBD	MED
59	Gregg Road	WF-13	From FM 369 to Lake Wichita	Widening of existing street and drainage improvement	TBD	MED
14	BUS 287J	0044-10-015	Old Windthorst Road to SH 240	Rehabilitate pavement	1/1/2009	MED
23	FM 369	0802-02-053	In Wichita Falls near McNiel Street	Enclose drainage	9/1/2009	MED
19	US 287	0043-09-945	IH 44 (NB) to US 287 at NB connector	Repair riprap slopes	2/1/2009	MED
18	IH 44	0156-07-907	Near Maurine Street/FM 890	Repair riprap slopes	2/1/2009	MED
17	IH 44	0156-07-947	IH 44 (NB)/US 287 (NB) at connector	Repair riprap slopes	2/1/2009	MED
16	Spur 325	0685-01-946	Near SH 240 and FM 890	Repair concrete riprap at overpass location	2/1/2009	MED
36	Kell and Fairway	EJ-2	Exit ramp	Ramp too close to Fairway	TBD	MED
50	Wellington Lane	WF-22	From US 287J Business to US 287	Widening of existing street	TBD	MED
51	Wellington Lane	WF-21	From FM 367 to US 287 Business	Widening of existing street	TBD	MED
10	FM 890	2582-01-016	IH 44 to Spur 325	Non-freeway facility - widen to 4-lane divided facility	4/1/2009	MED
15	US 82	0044-01-923	At US 281	Rehabilitate bridge and approaches	1/1/2012	MED
39	Wenonah Street	EJ-12	From US 82/277 to Maplewood Ext. Ph. 1&2	Extend from US 82/277 EB frontage road S to Maplewood Ext.	TBD	MED
42	Airport Road	EJ-8	City View to Loop 11	Road falling apart, needs repair	TBD	MED
26	US 82	0044-01-073	432' N to 264' S of SB overpass of SH 79	Rehabilitate bridge and approaches	1/1/2010	MED
13	CS	0903-03-083	On Maplewood Ave SB at drainage ditch	Replace bridge and approaches	1/1/2011	MED
9	FM 890	2582-01-015	Spur 325 to SH 240	Non-freeway facility - widen to 4-lane divided facility	4/1/2009	MED
12	CS	0903-03-084	On Maplewood Ave NB at drainage ditch	Replace bridge and approaches	1/1/2009	MED
27	US 287	0043-09-915	Near Loop 11 and Maurine Street	Relocate entrance ramp	9/1/2008	MED
22	FM 369	0802-02-054	In Wichita Falls near Kemp Street	Enclose drainage	9/1/2009	MED
24	FM 369	0802-02-052	In Wichita Falls near Hughes Street	Enclose drainage	9/1/2009	MED

Date of ranking:
November 16, 2005

NUMBER OF VOTING MEMBERS: 9

APPENDIX B: 2006 PRIORITIZED ROADWAY PROJECTS

Wichita Falls District MPO

ID#	ROADWAY	CSJ/MPO#	LIMITS	DESCRIPTION OF WORK	LETTING DATE	RANK
29	US 287	0043-09-921	Near Iowa Park C/L to 8th Street (NB lane)	HMAC overlay and underseal	9/1/2011	MED
20	BUS 277A	0156-14-909	Loop 11/IH 44	Overlay	9/1/2009	MED
31	US 287	0044-01-921	8th Street to Clay C/L (SB lane)	Full-depth CRCP overlay	9/1/2012	MED
33	Webster Street	CTY-0	From Webster N on Jefferson to Conoco Gate	24-hour a day truck traffic; vehicles drive on damaged shoulder	TBD	MED
63	Midwestern Parkway	WF-9	From US 281 to Hammon Road	Construction to Wichita Falls Business Park	TBD	MED
30	US 287	0043-09-922	Near Iowa Park C/L to 8th Street (SB lane)	HMAC overlay and underseal	9/1/2011	MED
32	US 287	0044-01-922	8th Street to Clay C/L (NB lane)	Full-depth CRCP overlay	9/1/2012	MED
43	North to South Barrier	EJ-13	(No roads to use for reference)	No N to S connector between NW and SW part of city	TBD	MED
57	Rathgeber Road	WF-15	From SH 79 to Stonelake Boulevard	Widening of existing street (phase 1)	TBD	MED
44	Bridge Street	EJ-6	North end of street	Repair the bridge	TBD	MED
45	Jefferson Street	EJ-5	Scott Street Bridge	Unsafe for pedestrians/vehicles; needs lighting & landscaping	TBD	MED
67	N. Beverly Drive	WF-5	From Loop 11 to Old Iowa Park Road (BUS 287)	Reconstruct and widen to 4 lanes	TBD	LOW
37	Kell Access Road	EJ-1	From Fairway west to the railroad track	Provide access to the Bel Air Addition	TBD	LOW
58	Langford Drive	WF-0	From Barnett Rd (FM 1634) to Gregg Rd	Widen and install curb and gutter	TBD	LOW
41	FM 368 & FM 367	EJ-10	From Loop 11 to FM 369	Shoulders need to be widened	TBD	LOW
69	Covington Lane	WF-3	From Old Iowa Park Rd (BUS 287) to US 287	Reconstruction of existing road	TBD	LOW
52	Lakeshore Drive	WF-20	From Fairway to Barnett	Widening of existing street and drainage improvement	TBD	LOW
28	BUS 287J	0043-17-020	Near Loop 11 and FM 368	Widen and extend structure	1/1/2007	LOW
56	Reilly Road	WF-16	From IH 44 to John Tower	Widening of existing street	TBD	LOW
25	FM 171	0156-10-001	0.25 Miles E of BUS 287/Loop 370	Replace existing railroad underpass (Lincoln St)	1/1/2012	LOW
40	Old Burkburnett Rd/Hwy 240	EJ-11	From Spur 327 to Missile Road	Left turn lanes needed	TBD	LOW
34	Sunset, Duty & Landon Lanes	EJ-7	Bar ditches hard to maintain	Make street improvements (programmed and financed)	TBD	LOW
62	Puckett Road	WF-10	From IH 44 to Hooper Drive	Widening of existing street/extension	TBD	LOW
21	US 287	0043-09-090	Near Wellington Lane and City View Drive	Construct frontage roads	9/1/2009	LOW
48	Hatton Road	WF-2	From US 281 to Hammon Road	Widen existing street	TBD	LOW
53	Rathgeber Road	WF-19	From Stonelake Blvd to FM 2380	Widening of existing street (phase 2)	TBD	LOW
46	Taft Boulevard	EJ-0	From Hampstead to Kell Freeway	Convert to 4-lane street with center turn lane	Not Feasible	LOW
47	Old Iowa Park Road	EJ-9	Eastbound	Signage for left turn lane onto Central Frwy service road	Complete	LOW
38	Bonny Homes Access	EJ-4	SB on Henry S. Grace Freeway	Limited access in and out of Bonny Homes addition	TBD	LOW
60	Bacon Switch Road	WF-1	From .25 miles W of IH 44 to SH 240	Widen to 4 lanes	TBD	LOW
68	Cypress Avenue	WF-4	From North Shore Drive to Lake Shore Drive	Construction of 2 lane street	TBD	LOW

Date of ranking:
November 16, 2005

NUMBER OF VOTING MEMBERS: 9

Appendix C
New Construction, Rehabilitation and Reconstruction Methodologies

New Construction Needs and Cost Estimates

Freeways/Tollways	Highway	Description	Miles	Existing Lanes	Proposed Lanes	Total Lane Miles	Existing Lane Miles	Additional Lane Miles Needed	$Cost/Lane Mile (millions)	Total New Construction Costs (millions)	ROW Costs (millions)	Total Project Costs (millions)
Freeway	SS 447	New Freeway Elevated Lanes	1	0	4	4	0	4	3.00	12.00	0.00	12.00
		Total				**4**	**0**	**4**	**N/A**	**12.00**	**0.00**	**12.00**

Principal/Minor Arterials	Highway	Description	Miles	Existing Lanes	Proposed Lanes	Total Lane Miles	Existing Lane Miles	Additional Lane Miles Needed	$Cost/Lane Mile (millions)	Total New Construction Costs (millions)	ROW Costs (millions)	Total Project Costs (millions)
PA	US 82	New Construction - Proposed 4 lane divided	1.5	4	4	6	6	0	1.10	0.00	4.75	4.75
PA	Proposed NE Loop	New Construction - US 82 at SH 79 to Interchange - to FM 890/FM 171- to Loop 11	10	0	4	40	0	40	1.10	44.00	31.68	75.68
		Total				**46**	**6**	**40**	**N/A**	**44.00**	**36.43**	**80.43**

Appendix C
New Construction, Rehabilitation and Reconstruction Methodologies

Rehabilitation/Reconstruction Needs and Cost Estimates

Freeways/Tollways	Highway	Description	Miles	Existing Lanes	Proposed Lanes	Total Lane Miles	Existing Lane Miles	Additional Lane Miles Needed	$Cost/Lane Mile (millions)	Existing Lanes Reconstruction Costs (millions)	Additional Lanes New Construction (millions)	ROW Costs (millions)	Total Project Costs (millions)
Freeway	IH-44	Added Capacity - Reconstruction	2.2	6	8	17.6	13.2	4.4	$3.50	$46.20	$15.40	$1.95	$63.55
Freeway	IH-44	Added Capacity - Rehab	7	4	6	42	28	14	$3.50	$98.00	$49.00	$0.00	$147.00
Freeway	US 82 -Holliday Crk to Clay Co Line	Added Capacity - Reconstruction	3.8	8	12	45.6	30.4	15.2	$3.50	$106.40	$53.20	$3.37	$162.97
Freeway	SH 79	Reconstruction	0.7	8	8	5.6	5.6	0	$3.50	$19.60	$0.00	0.00	$19.60
Freeway	US 281	Reconstruction	4	6	6	24	24	0	$3.50	$84.00	$0.00	$0.00	$84.00
Freeway	US 287	Added Capacity - Reconstruction	4.9	4	6	29.4	19.6	9.8	$3.50	$68.60	$34.30	$0.00	$102.90
		Total				164.2	120.8	43.4	N/A	$422.80	$151.90	$5.32	$580.02

Principal/Minor Arterials	Highway	Description	Miles	Existing Lanes	Proposed Lanes	Total Lane Miles	Existing Lane Miles	Additional Lane Miles Needed	$Cost/Lane Mile (millions)	Existing Lanes Reconstruction Costs (millions)	Additional Lanes New Construction (millions)	ROW Costs (millions)	Total Project Costs (millions)
MA	IH-44	Added Capacity - Rehabilitation	6.3	4	6	37.8	25.2	12.6	1.00	$25.20	$12.60	5.66	$43.46
PA	US 82	Added Capacity - Rehabilitation	1.5	4	4	6	6	0	0.90	$5.40	$0.00	4.75	$10.15
PA	US 82	Reconstruction	3.4	4	4	13.6	13.6	0	0.90	$12.24	$0.00	0.00	$12.24
PA	US 82	Main Lanes Added Capacity - Reconstruction	3.4	6	8	27.2	20.4	6.8	0.90	$18.36	$6.12	0.00	$24.48
PA	US 82	Reconstruction	0.8	6	6	4.8	4.8	0	0.90	$4.32	$0.00	0.00	$4.32
PA	US 277 Broad & Holliday	Reconstruction	0.7	6	6	4.2	4.2	0	0.90	$3.78	$0.00	0.00	$3.78
PA	BU 277A Seymour Hwy	Added Capacity - Reconstruction - Widen to 4 Lanes	2.2	2	4	8.8	4.4	4.4	0.90	$3.96	$3.96	0.00	$7.92
PA	BU 277A Seymour Hwy	Reconstruction - Widen Median - Improve Drainage - Curb and Gutter, Sidewalks, etc.	1.1	4	4	4.4	4.4	0	0.90	$3.96	$0.00	0.00	$3.96
PA	BU 277A Seymour Hwy	Reconstruction - Widen Median - Improve Drainage - Curb and Gutter, Sidewalks, etc.	0.7	4	5	3.5	2.8	0.7	0.90	$2.52	$0.63	0.78	$3.93
PA	BU 287J	Reconstruction	7	5	5	35	35	0	0.90	$31.50	$0.00	0.00	$31.50
PA	BU 287J - Scott St.	Reconstruction	4.4	5	5	22	22	0	0.90	$19.80	$0.00	0.00	$19.80
PA	BU 287J - Scott St.	Added Capacity - Reconstruction	3.5	2	4	14	7	7	0.90	$6.30	$6.30	0.00	$12.60

Appendix C
New Construction, Rehabilitation and Reconstruction Methodologies

Principal/Minor Arterials	Highway	Description	Miles	Existing Lanes	Proposed Lanes	Total Lane Miles	Existing Lane Miles	Additional Lane Miles Needed	$Cost/Lane Mile (millions)	Existing Lanes Reconstruction Costs (millions)	Additional Lanes New Construction (millions)	ROW Costs (millions)	Total Project Costs (millions)
PA	SH 79	Added Capacity - Reconstruction	1.3	2	4	5.2	2.6	2.6	0.90	$2.34	$2.34	0.27	$4.95
PA	SH 79	Reconstruction	1.4	6	6	8.4	8.4	0	0.90	$7.56	$0.00	0.00	$7.56
PA	SH 79	Added Capacity - Reconstruction	2.3	2	4	9.2	4.6	4.6	0.90	$4.14	$4.14	0.49	$8.77
PA	SH 240	Added Capacity - Reconstruction - Widen to 4 Lanes	4	2	4	16	8	8	0.90	$7.20	$7.20	0.84	$15.24
PA	SH 240	Proposed 6 Lane Reconstruction - add Parking Lanes/Left Turn Lanes/Curb & Gutter/Sidewalks	1.6	4	6	9.6	6.4	3.2	0.90	$5.76	$2.88	0.00	$8.64
PA	SH 240	Added Capacity - Reconstruction - Widen to 6 Lanes	2.2	2	6	13.2	4.4	8.8	0.90	$3.96	$7.92	0.98	$12.86
PA	SH 240	Reconstruction	3.6	4	4	14.4	14.4	0	0.90	$12.96	$0.00	0.61	$13.57
PA	SL 473	Reconstruction	3.6	5	5	18	18	0	0.90	$16.20	$0.00	0.00	$16.20
MA	SS 325	Reconstruction	1.5	8	8	12	12	0	1.00	$12.00	$0.00	0.00	$12.00
MA	FM 171	Reconstruct 4-12ft Lanes/8ft Parking Lanes/Curb & Gutter/Storm Sewer	1.4	2	4	5.6	2.8	2.8	1.00	$2.80	$2.80	0.21	$5.81
MA	FM 369	Rehabilitation of Existing Roadway	13.8	2	2	27.6	27.6	0	1.00	$27.60	$0.00	0.00	$27.60
PA	FM 369	Rehabilitation of Existing Roadway	1	4	4	4	4	0	0.90	$3.60	$0.00	0.00	$3.60
PA	FM 369	Rehab Add - Width/Curb & Gutter/Sidewalk/4-12ft Lanes, 2-10ft Shldrs & Storm Sewer	0.5	4	4	2	2	0	0.90	$1.80	$0.00	0.00	$1.80
PA	FM 369	Rehabilitation of Existing Roadway	5.4	6	6	32.4	32.4	0	0.90	$29.16	$0.00	0.00	$29.16
MA	FM 890 Airport Dr.	Reconstruct - Widen to 4 Lane Divided	1.4	2	4	5.6	2.8	2.8	1.00	$2.80	$2.80	0.00	$5.60
MA	FM 1634 Barnett Rd.	Rehab/Added Capacity - Proposed 6 Lanes	2	4	6	12	8	4	1.00	$8.00	$4.00	0.00	$12.00
PA	FM 2360 Kemp	Rehabilitation of Existing Roadway	2	5	5	10	10	0	0.90	$9.00	$0.00	0.00	$9.00
		Total				**386.5**	**318.2**	**68.3**	**N/A**	**$234.22**	**$53.63**	**$14.55**	**$372.50**

Freeway to Freeway Interchanges	Highway	Description	Additional Lane Miles Needed	$Cost/Lane Mile (millions)	Total Construction Costs (millions)	ROW Costs (millions)	Total Project Costs (millions)
	IH-44 - Spur 325	Interchange Reconstruction - Reconfiguration			78.00	1.58	79.58
	US 82 - Spur 447	Added Capacity - Reconstruction (This is the current Falls Flyover)			78.00	1.00	79.00
		Total	**N/A**	**N/A**	**156.00**	**2.58**	**158.58**

Appendix C
New Construction, Rehabilitation and Reconstruction Methodologies

On-System Bridges

Bridge #	Replace	Str. Length (ft)	Deck Width (ft)	Sq Ft of Deck	Cost
32430004309064	Replace	188	45.3	8517	$ 817,632.00
32430004309065	Replace	200	45.3	9060	$ 869,760.00
32430004309074	Replace	39	284	11076	$ 1,063,296.00
32430004309084	Replace	195	30.5	5948	$ 571,008.00
32430004309085	Replace	67	207	13869	$ 1,331,424.00
32430004309086	Replace	128	41.7	5338	$ 512,448.00
32430004309087	Replace	128	41.7	5338	$ 512,448.00
32430004309088	Replace	195	30.5	5948	$ 571,008.00
32430004309089	Replace	33	167	5511	$ 529,056.00
32430004309090	Replace	195	30.5	5948	$ 571,008.00
32430004309091	Replace	122	41.7	5088	$ 488,448.00
32430004309092	Replace	122	41.7	5088	$ 488,448.00
32430004309093	Replace	35	292	10220	$ 981,120.00
32430004309094	Replace	195	40.2	7839	$ 752,544.00
32430004309095	Replace	188	43.5	8178	$ 785,088.00
32430004309159	Replace	195	40.2	7839	$ 752,544.00
32430004314048	Replace	344	102	35088	$ 3,368,448.00
32430004314160	Replace	526	48.4	25459	$ 2,444,064.00
32430004314161	Replace	514	48.4	24878	$ 2,388,288.00
32430004317034	Replace	25	72	1800	$ 172,800.00
32430004317038	Replace	33	67	2211	$ 212,256.00
32430004317046	Replace	22	67	1474	$ 141,504.00
32430004317049	Replace	36	67.3	2423	$ 232,608.00
32430004401084	Replace	5482	56.6	310282	$ 29,787,072.00
32430004401085	Replace	5419	53.5	289917	$ 27,832,032.00
32430004401086	Replace	200	36.2	7240	$ 695,040.00
32430004401087	Replace	200	36.2	7240	$ 695,040.00
32430004401091	Replace	240	62.2	14928	$ 1,433,088.00
32430004401092	Replace	240	54.2	13008	$ 1,248,768.00
32430004401093	Replace	276	64.5	17802	$ 1,708,992.00
32430004401094	Replace	278	54.4	15124	$ 1,451,904.00
32430004401095	Replace	20	674	13480	$ 1,294,080.00
32430004401096	Replace	182	42.2	7681	$ 737,376.00
32430004401097	Replace	60	85	5100	$ 489,600.00
32430004401098	Replace	60	107	6420	$ 616,320.00
32430004401099	Replace	52	107	5564	$ 534,144.00

Appendix C
New Construction, Rehabilitation and Reconstruction Methodologies

Bridge #	Replace	Str. Length (ft)	Deck Width (ft)	Sq Ft of Deck	Cost
32430004401100	Replace	275	42.3	11633	$ 1,116,768.00
32430004401101	Replace	195	42.3	8249	$ 791,904.00
32430004401102	Replace	260	41.4	10764	$ 1,033,344.00
32430004401103	Replace	144	42.3	6092	$ 584,832.00
32430004401104	Replace	144	42.3	6092	$ 584,832.00
32430004401105	Replace	64	85	5440	$ 522,240.00
32430004401106	Replace	23	97	2231	$ 214,176.00
32430004401107	Replace	32	87	2784	$ 267,264.00
32430004401108	Replace	235	33.4	7849	$ 753,504.00
32430004401109	Replace	207	28	5796	$ 556,416.00
32430004401114	Replace	39	59	2301	$ 220,896.00
32430004401116	Replace	34	70	2380	$ 228,480.00
32430004401119	Replace	329	42.3	13917	$ 1,336,032.00
32430004401120	Replace	308	44.3	13645	$ 1,309,920.00
32430004410002	Replace	27	68.5	1850	$ 177,600.00
32430004410061	Replace	79	78.5	6202	$ 595,392.00
32430004410062	Replace	85	83	7055	$ 677,280.00
32430004410063	Replace	276	53	14628	$ 1,404,288.00
32430013702002	Replace	40	22.7	908	$ 87,168.00
32430013702005	Replace	38	41.3	1570	$ 150,720.00
32430013702006	Replace	25	41.3	1033	$ 99,168.00
32430013702040	Replace	53	45.3	2401	$ 230,496.00
32430013703009	Replace	32	37.3	1194	$ 114,624.00
32430015603005	Replace	22	46.3	1019	$ 97,824.00
32430015603006	Replace	22	47.5	1045	$ 100,320.00
32430015603007	Replace	43	45.4	1953	$ 187,488.00
32430015603020	Replace	44	45.4	1998	$ 191,808.00
32430015603021	Replace	43	45.4	1953	$ 187,488.00
32430015603022	Replace	40	27.3	1092	$ 104,832.00
32430015603023	Replace	255	65	16575	$ 1,591,200.00
32430015603026	Replace	29	126.5	3669	$ 352,224.00
32430015603071	Replace	256	44.2	11316	$ 1,086,336.00
32430015603072	Replace	256	44.3	11341	$ 1,088,736.00
32430015604059	Replace	23	66	1518	$ 145,728.00
32430015604060	Replace	415	44.3	18385	$ 1,764,960.00
32430015604061	Replace	415	44.3	18385	$ 1,764,960.00

Appendix C
New Construction, Rehabilitation and Reconstruction Methodologies

Bridge #	Replace	Str. Length (ft)	Deck Width (ft)	Sq Ft of Deck	Cost
32430015604073	Replace	27	97	2619	$ 251,424.00
32430015604074	Replace	27	60	1620	$ 155,520.00
32430015604075	Replace	22	70.5	1551	$ 148,896.00
32430015607028	Replace	172	41.5	7138	$ 685,248.00
32430015607029	Replace	172	41.5	7138	$ 685,248.00
32430015607030	Replace	312	41.5	12948	$ 1,243,008.00
32430015607031	Replace	312	41.5	12948	$ 1,243,008.00
32430015607032	Replace	154	41.5	6391	$ 613,536.00
32430015607033	Replace	154	41.5	6391	$ 613,536.00
32430015607034	Replace	218	36.3	7914	$ 759,744.00
32430015607035	Replace	218	36.3	7914	$ 759,744.00
32430015607036	Replace	226	40.5	9153	$ 878,688.00
32430015607037	Replace	193	41.4	7991	$ 767,136.00
32430015607038	Replace	193	50.9	9824	$ 943,104.00
32430015607039	Replace	227	43.5	9875	$ 948,000.00
32430015607064	Replace	254	40.2	10211	$ 980,256.00
32430015607076	Replace	220	40	8800	$ 844,800.00
32430015607077	Replace	220	40	8800	$ 844,800.00
32430015607096	Replace	376	43.8	16469	$ 1,581,024.00
32430015610019	Replace	41	40.5	1661	$ 159,456.00
32430015612067	Replace	260	42.3	10998	$ 1,055,808.00
32430015612068	Replace	1198	42.2	50556	$ 4,853,376.00
32430015612069	Replace	419	32.3	13534	$ 1,299,264.00
32430015612070	Replace	1030	42.3	43569	$ 4,182,624.00
32430015614065	Replace	300	46.3	13890	$ 1,333,440.00
32430024901034	Replace	200	66.3	13260	$ 1,272,960.00
32430024901044	Replace	60	190	11400	$ 1,094,400.00
32430024901047	Replace	59	61	3599	$ 345,504.00
32430024901048	Replace	79	204	16116	$ 1,547,136.00
32430024901049	Replace	85	74	6290	$ 603,840.00
32430024901050	Replace	205	42	8610	$ 826,560.00
32430024901051	Replace	205	42	8610	$ 826,560.00
32430024901052	Replace	46	59	2714	$ 260,544.00
32430024901053	Replace	44	71	3124	$ 299,904.00
32430024901054	Replace	63	117	7371	$ 707,616.00
32430024901055	Replace	38	99	3762	$ 361,152.00

Appendix C
New Construction, Rehabilitation and Reconstruction Methodologies

Bridge #	Replace	Str. Length (ft)	Deck Width (ft)	Sq Ft of Deck	Cost
32430024901056	Replace	193	42	8106	$ 778,176.00
32430024901057	Replace	193	42	8106	$ 778,176.00
32430024901058	Replace	29	74	2146	$ 206,016.00
32430024901059	Replace	190	42	7980	$ 766,080.00
32430024901060	Replace	190	42	7980	$ 766,080.00
32430024901061	Replace	35	48.3	1691	$ 162,336.00
32430024901062	Replace	35	132	4620	$ 443,520.00
32430024901063	Replace	31	49	1519	$ 145,824.00
32430024901064	Replace	168	42	7056	$ 677,376.00
32430024901065	Replace	168	42	7056	$ 677,376.00
32430024901067	Replace	310	41	12710	$ 1,220,160.00
32430024911035	Replace	34	86.3	2935	$ 281,760.00
32430024911036	Replace	23	94	2162	$ 207,552.00
32430028204009	Replace	290	44.2	12818	$ 1,230,528.00
32430028204010	Replace	290	44.2	12818	$ 1,230,528.00
32430028204011	Replace	231	44.2	10211	$ 980,256.00
32430028204012	Replace	206	44.3	9126	$ 876,096.00
32430028204013	Replace	52	58.3	3032	$ 291,072.00
32430028204014	Replace	46	138	6348	$ 609,408.00
32430028204121	Replace	402	44.2	17769	$ 1,705,824.00
32430028204122	Replace	402	44.2	17769	$ 1,705,824.00
32430028306068	Replace	354	36.5	12921	$ 1,240,416.00
32430028306069	Replace	383	38.4	14708	$ 1,411,968.00
32430028306070	Replace	173	42	7266	$ 697,536.00
32430068101020	Replace	38	48	1824	$ 175,104.00
32430068101021	Replace	27	29.3	792	$ 76,032.00
32430068101024	Replace	25	50	1250	$ 120,000.00
32430068104009	Replace	34	33.3	1133	$ 108,768.00
32430068104015	Replace	90	27.7	2493	$ 239,328.00
32430068501003	Replace	337	40.2	13548	$ 1,300,608.00
32430068501004	Replace	337	40.2	13548	$ 1,300,608.00
32430068501005	Replace	190	40	7600	$ 729,600.00
32430080201006	Replace	30	46.3	1389	$ 133,344.00
32430080202010	Replace	235	46	10810	$ 1,037,760.00
32430080202011	Replace	25	46	1150	$ 110,400.00
32430080202012	Replace	303	89.8	27210	$ 2,612,160.00

Appendix C
New Construction, Rehabilitation and Reconstruction Methodologies

Bridge #	Replace	Str. Length (ft)	Deck Width (ft)	Sq Ft of Deck	Cost
32430080202013	Replace	65	124.3	8080	$ 775,680.00
32430080202014	Replace	39	106.3	4146	$ 398,016.00
32430161501006	Replace	31	32.7	1014	$ 97,344.00
32430258201001	Replace	65	51.3	3335	$ 320,160.00
32430307401001	Replace	101	42.3	4273	$ 410,208.00
32430307401002	Replace	240	42.3	10152	$ 974,592.00
	Total			**1841546**	**$ 176,788,416.00**

Bridge #	Rehabilitation	Str. Length (ft)	Deck Width (ft)	Sq Ft of Deck	Cost
32430015604079	Rehab	359	89	31951	$ 1,533,648.00
32430015604080	Rehab	359	58	20822	$ 999,456.00
32430015604081	Rehab	380	26	9880	$ 474,240.00
32430015604082	Rehab	275	58	15950	$ 765,600.00
32430015604083	Rehab	275	58	15950	$ 765,600.00
32430015604086	Rehab	288	70	20160	$ 967,680.00
32430015604087	Rehab	288	70	20160	$ 967,680.00
32430015604088	Rehab	297	89.3	26523	$ 1,273,104.00
32430015604089	Rehab	297	70	20790	$ 997,920.00
32430015604097	Rehab	796	26	20696	$ 993,408.00
32430015604098	Rehab	425	26	11050	$ 530,400.00
	Total			**213932**	**$ 10,268,736.00**

Appendix C
New Construction, Rehabilitation and Reconstruction Methodologies

Off-System Bridges

Bridge #	Replace	Str. Length (ft)	Deck Width (ft)	Sq Ft of Deck	Cost
03243AA0162001	Replace	22	25.5	561	$ 53,856.00
03243AA0228001	Replace	22	24.2	533	$ 51,168.00
03243AA0228002	Replace	22	23.6	520	$ 49,920.00
03243AA0339001	Replace	22	27.4	603	$ 57,888.00
03243AA0464001	Replace	38	21.5	817	$ 78,432.00
03243AA0464002	Replace	32	21.3	682	$ 65,472.00
03243AA0488001	Replace	32	21.3	682	$ 65,472.00
03243B00115001	Replace	26	41.8	1087	$ 104,352.00
03243B00525001	Replace	25	48.6	1215	$ 116,640.00
03243B00705012	Replace	28	104	2912	$ 279,552.00
03243B01140002	Replace	430	41.3	17759	$ 1,704,864.00
03243B01150002	Replace	35	29.7	1040	$ 99,840.00
03243B01575001	Replace	39	38.2	1490	$ 143,040.00
03243B01750001	Replace	28	64.3	1801	$ 172,896.00
03243B01810001	Replace	22	41.5	913	$ 87,648.00
03243B01895001	Replace	21	60	1260	$ 120,960.00
03243B01955002	Replace	39	50	1950	$ 187,200.00
03243B01955003	Replace	34	41.7	1418	$ 136,128.00
03243B02470008	Replace	21	64.3	1351	$ 129,696.00
03243B02626001	Replace	25	299.9	7498	$ 719,808.00
03243B02626002	Replace	31	54.3	1684	$ 161,664.00
03243B02626005	Replace	32	72	2304	$ 221,184.00
03243B03020001	Replace	22	50	1100	$ 105,600.00
03243B03270002	Replace	29	60.7	1761	$ 169,056.00
03243B03460001	Replace	25	35	875	$ 84,000.00
03243B03550001	Replace	21	25.3	532	$ 51,072.00
03243B03550002	Replace	34	25.8	878	$ 84,288.00
03243B03690008	Replace	26	55.6	1446	$ 138,816.00
03243B03825001	Replace	21	25.5	536	$ 51,456.00
03243B03915001	Replace	31	60	1860	$ 178,560.00
03243B03915002	Replace	53	37.2	1972	$ 189,312.00
03243B03915003	Replace	66	38.2	2522	$ 242,112.00
03243B03990008	Replace	39	61.8	2411	$ 231,456.00
03243B03990011	Replace	48	64.5	3096	$ 297,216.00
03243B03990013	Replace	160	32	5120	$ 491,520.00
03243B03990014	Replace	160	32	5120	$ 491,520.00
03243B04131013	Replace	25	27.1	678	$ 65,088.00
03243B04700003	Replace	53	97.6	5173	$ 496,608.00
03243B04700004	Replace	23	115	2645	$ 253,920.00
03243B05215001	Replace	26	45	1170	$ 112,320.00
03243B05245001	Replace	26	44.4	1155	$ 110,880.00
03243B06186001	Replace	37	48	1776	$ 170,496.00
03243F00025001	Replace	62	26.6	1650	$ 158,400.00
	Total			93556	$8,981,376.00

Bridge #	Rehabilitation	Str. Length (ft)	Deck Width (ft)	Sq Ft of Deck	Cost
03243B01955001	Rehab	21.6	42	908	$ 43,584.00
03243B02450001	Rehab	200	55.5	11100	$ 532,800.00
03243B04870001	Rehab	29	42	1218	$ 58,464.00
	Total			13226	$634,848.00

Appendix D
System Performance Indicators

Wichita Falls -- Updated Summary April 06 Future Year 2030

Summary of Congestion Index for All Area Types in the 6 peak hours

Scenarios	VMT			VHT			Lane Miles			Emissions (Tons)
	Arterial	Freeway	Total	Arterial	Freeway	Total	Arterial	Freeway	Total	
2000 Base	292,958	258,561	551,518	6,523	4,005	10,528	558	136	695	3.9
	53%	47%		62%	38%		80%	20%		
2030 No Build	378,814	374,228	753,043	8,591	5,891	14,482	558	136	695	0.6
	50%	50%		59%	41%		80%	20%		
2030 MTP	401,326	368,928	770,254	9,153	5,726	14,879	588	137	725	0.6
	52%	48%		62%	38%		81%	19%		
2030 Needs GT 1.00	396,983	384,725	781,708	8,921	5,977	14,898	623	138	761	0.6
	51%	49%		60%	40%		82%	18%		

Wichita Falls -- Updated Summary April 06

Scenarios	Total Delay (Pers-Hrs)			Total Travel Time (Pers-Hrs)			Texas Congestion Index			Emissions Index
	Arterial	Freeway	Total	Arterial	Freeway	Total	TCI	Arterial	Freeway	
2000 Base	344	258	603	8,144	5,128	13,272	1.05	1.04	1.05	100%
	57%	43%		61%	39%					
2030 No Build	851	787	1,638	10,925	7,832	18,757	1.10	1.08	1.11	10%
	52%	48%		58%	42%					
2030 MTP	851	342	1,192	11,610	7,289	18,898	1.07	1.08	1.05	10%
	71%	29%		61%	39%					
2030 Needs GT 1.00	542	379	921	11,174	7,625	18,799	1.05	1.05	1.05	10%
	59%	41%		59%	41%					

Note: All the information except the lane miles can be obtained from the summary table on the index tab of TCI spreadsheets. Lane miles information can be obtained from travel model link data.

Source: Texas Transportation Institute