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A Park Bench Located in a Commons





Figure 4.1: Wichita Falls is Fortunate to have Numerous Grand Avenues that Embody the Vision of this Plan



INTRODUCTION

In Chapter one, the discussion on the Transportation Equity Act for the Twenty-First Century (TEA-21) provided the seven basic principles upon which Metropolitan Transportation Planning should be based. These seven basic principles outline what is important to planning for the transportation needs of any community, great or small. However, when they are examined, it becomes clear that at their cores they seek to improve the conditions for members of communities. Therefore, these principles, repeated below, were used as the starting point for developing the Wichita Falls Metropolitan Transportation Plan (MTP) vision, goals, objectives, and strategies.

TEA-21 PRINCIPLES

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

VISION

The vision for the Wichita Falls MTP is to provide, for this community, real transportation options that service the needs of its people and visitors, recognizing diversity of need for multiple modes that support economic vitality, protect cherished resources, maximize efficiencies, but do not jeopardize achievements in safety or compromise quality of life.

GOALS

These goals expand on the theme of the vision statement. Because the Metropolitan Planning Organization (MPO) envelops several communities and unincorporated areas, the goals needed to address regional issues and needs, but they also should provide ways to facilitate the aspirations of a diverse area. Therefore, the goals outline the regional perspective of the MTP, supporting the economic, cultural, and environmental priorities of the metropolitan region.

To enable the pursuit of the goals. each one is accompanied by objectives that are based on the TEA-21 principles. The seven goals listed below are intended to be dependent vistas of the overall vision, windows on the themes acknowledged by the vision. More than being the headlines for supporting objectives, the goals point back to the TEA-21 principles and the vision statement. The objectives within each are then the vehicles to meet the goals. These goals are not in any order and all have equal weight. They should each be considered when making transportation-planning decisions.



Figure 4.2: Traffic on Iowa Park Road at IH 44

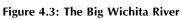
OBJECTIVES

Goal 1: Ensure that people and goods can move in, through, and around Wichita Falls without negative delays.

> Goal 1 enabling objectives are:

- Achieving a level of mobility throughout Wichita Falls that lets people and freight that need to stay and those that need to leave or pass through the metropolitan region do so successfully; and,
- Developing a system of roads and that minimize negative interaction between freight and personal travel

transportation corridors





Goal 2: Work to avoid a transportation facility in Wichita Falls that could hurt the environment, damage our historic and cultural resources, or weaken our quality of life

Goal 2 enabling objectives are:

- Concentrating on transportation improvements and solutions that reduce or prevent damage to the environment, heritage properties and areas, and neighborhoods;
- Prioritizing projects that respect the unique identities and qualities of the neighborhoods, communities, and rural areas of the metropolitan region;
- Pursuing transportation programs that enhance local beauty, viewscapes, and/or areas of potential awe and wonder; and,
- Finding ways to have people and organizations become partners in

making Wichita Falls metropolitan region transportation planning and implementation successful

Goal 3: Bring to our roads a safe and comfortable atmosphere of travel for all users.

Goal 3 enabling objectives are:

- Taking on a thought process that sees safety as a critical element in developing Wichita Falls metropolitan region's transportation system; and,
- Working with concerned groups and individuals to target and improve areas of risk for pedestrians, bicyclists, and other non-motorized forms of transportation so that free movement is accessible to all

Goal 4: Make sure that the money that goes into taking care of existing roads and building new roads in Wichita Falls is well spent and properly prioritized.

Goal 4 enabling objectives are:

- Recommending improvements and solutions that meet or foresee needs; and,
- Looking at long-term costs, benefits, and cumulative impacts, to social and environmental receptors, of immediate decisions



Figure 4.4: Graceful Streets Instill Pride in Residents



Figure 4.5: Sikes Senter is a Major Employer in Wichita Falls



Goal 5: Provide for the people and businesses of Wichita Falls, as well as those who travel through the metropolitan region, a system of movement that seamlessly integrates for various needs.

Goal 5 enabling objectives are:

- Remembering that some of the trips that use Wichita Falls' roads and highways are not to benefit Wichita Falls, and sometimes these trips can create congestion and sometimes they can be made to benefit Wichita Falls metropolitan region;
- Remembering also that a comprehensive transportation program invests equitably in all types of transportation, maintenance, and new strategies throughout the metropolitan region;
- Enhancing connectivity to outside commercial centers by improving intermodal access to ports, rail, airport, and truck facilities;
- Developing a transportation system that minimizes the time and total cost of moving people and goods, allowing the metropolitan region's economy to thrive;
 - Influencing land use policies to improve access to jobs, services and housing to everyone in the metropolitan region;
 - Improving access to goods, jobs, services, housing, and other destinations; provide mobility for people and goods throughout the region, in a safe, affordable, efficient and convenient manner; and,
 - Finding methods to improve transportation system efficiency before increasing transportation capacity

Goal 6: Develop excellent transportation links with our surrounding communities and rural areas.

Goal 6 enabling objectives are:

- Cooperating with other communities on transportation priorities;
- Adopting congestion management and mitigation programs; and
- Keeping maintenance a high priority in transportation planning

Goal 7: Make our Wichita Falls a place whose appearance we can be proud of and visitors will envy

Goal 7 enabling objectives are:

- Using design elements to improve the aesthetic quality of the metropolitan region, particularly urbanized areas;
- Finding ways to encourage redevelopment and infill development with mixed land uses and higher densities to enhance transportation alternatives:
- Recommending that new development projects feature compact, pedestrian-oriented land uses:
- Consciousness to reduce the impacts it has on environmental, social, and cultural resources;
- Implementing a public information and education program teaches – from youth to elderly – the consequences of travel choices and care of transportation facilities.



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GOAL AND OBJECTIVE INCORPORATION

The goals that appear in this chapter are reflective of local and regional needs. Projects that were included in this MTP were balanced against these needs and were prioritized to meet the requirements of a growing metropolitan region. All of the projects in this MTP were also evaluated for how they perform in cost effectiveness and whether they improve or degrade Wichita Falls' air quality; Wichita Falls is a near nonattainment area for some types of air pollution, so it is important that projects either improve, or have little to no affect on, air quality in the metropolitan region.

Figure 4.6: Finishing the Kell Interchange would Improve Connectivity with Surrounding Communities and Major International Trucking and Transportation Routes





- ✓ New and Expanded Planning Factors.
- ✓ Support Economic Vitality
- ✓ Increase Transportation Safety

SAFETEA-LU ADDENDUM

Additional Planning Factors

 Support Economic Vitality: TEA-21 legislation required metropolitan planning organizations to consider seven specific factors when developing transportation plans. One of those factors was to support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency. SAFETEA-LU requires an expanded definition concerning this factor.

> The WFMPO Metropolitan Transportation Plan calls for an interconnected system of wellmaintained interstate highways, state highways, major arterials, public transportation facilities, and bicycle and pedestrian facilities to provide regional access to jobs, airports, intermodal transportation facilities, and other economic generators, and to support efficient freight mobility. All transportation projects and programs should support efforts to improve the economy in Texoma.

Objectives:

- Support regional cooperation and collaboration in the promotion and operation of economic assets in the WFMPO area.
- Encourage all economic

- development organizations to continuously promote the economic attributes of the region.
- Continue to promote transportation programs and projects that support economic development initiatives, with particular emphasis on Intermodal facilities.
- Subscribe to efforts that encourage the development of tourism in the region.
- Give priority to transportation programs that retain existing businesses and attract new businesses to the area.
- Develop a high capacity transit system that will support the economic vitality of the core city structure.
- Construct the final phase of the Kell Freeway System; the Kell West Main Lanes.
- Upgrade regional roadways to accommodate additional vehicle trips that will come from high levels of population and economic growth in the region
- Finish constructing the regional bicycle network.
- Increase Transportation Safety:

 One of the new stand-alone planning factors to come out of SAFETEA-LU is the requirement to "increase the safety of the transportation system for motorized and non-motorized



- ✓ Incorporate Strategic Highway Safety Plan Elements
- ✓ Increase Transportation Security

SAFETEA-LU ADDENDUM

users." Public safety is a major concern for all residents in the WFMPO area. Every effort is made to ensure that the safety of the public is improved whenever possible. In that regard, WFMPO has incorporated the following elements of the Texas Strategic Highway Safety Plan (SHSP) into this planning factor.

SHSP Elements:

- Work to reduce human and societal costs of highway traffic crashes, deaths and injuries.
- Integrate the 4-E's of traffic safety into the transportation planning process: engineering improvements, traffic law enforcement, public education, and emergency medical services (EMS).
- Focus on the key traffic issues of serious crash types, high risk drivers, and areas of concern or safety concerns.
- Incorporate traffic safety countermeasures where possible.
- Improve the efficiency of existing traffic safety countermeasures.
- 3. Increase Transportation Security: The other new stand-alone planning factor in SAFETEA-LU is to "increase the security of the transportation system for

motorized and non-motorized users." A security strategy lays out the actions that are necessary to move toward an integrated transportation security system. An effective strategy is comprehensive and dynamic, with the flexibility to respond to any type or level of security threat. Accordingly, developing a security strategy is an iterative process that involves initial assessment, planning, implementation, and constant evaluation. It may include a combination of actions that counter possible threats and vulnerabilities: policies and procedures, access management measures, communications systems and technologies, and systems integration practices.

A transportation or transit agency may develop a security strategy proactively to meet the predefined requirements of its security plan, or reactively to address a particular security breach or deficiency.

Transit agency managers should consider prioritizing risks through threat and vulnerability assessments and select sets of countermeasures that provide the best overall risk reduction for the system as a whole. Since funding for security efforts is limited, agencies must strive to ensure that protective security measures for each asset are



- ✓ Develop Security Strategy
- ✓ Assess Threat and Vulnerability
- ✓ Identify Countermeasures

SAFETEA-LU ADDENDUM

equal to the threats and vulnerabilities of that particular asset and the potential consequences of an attack.

The basis for a well developed security strategy is a comprehensive security plan takes an overall approach for mitigating potential threats and vulnerabilities throughout the system.

A threat and vulnerability assessment (TVA) identifies the sources and types of threats and the vulnerabilities within a transportation or transit agency's system. A TVA helps decision makers evaluate risks, identify priorities, and select solutions.

Designing security into the system is easier and cheaper than patching it on later - security managers should be involved in the planning for all new construction and retrofit projects.

Although there is no prescriptive approach to developing a security strategy, WFMPO shall consider the following four phase, iterative approach:

- Consider options
- Evaluate and select countermeasures
- Develop implementation approach for countermeasures
- Implement strategy

WFMPO shall consider all options during the planning process when looking at the security goals of transportation projects.

If security goals are not being met then WFMPO shall determine what options along with countermeasures should be considered for adding additional levels of security. Once identified, WFMPO will need to:

- Determine the appropriate levels of protection
- Establish functional requirements
- Analyze the necessary balance between cost, effectiveness, and efficiency while providing high quality service then identify and select countermeasures

Security countermeasures can be technological or procedural and operational, and cover a wide range of sophistication, cost, and level of integration. The MPO should consider measures that are feasible, that address the identified problems, and that work within the existing security framework. It should be kept in mind that many countermeasures exist, and that a complete feasibility assessment of all alternatives can generate solutions that best fit the MPO's needs. Measures such as staff training, appropriate facility de-



- ✓ Avoid or Mitigate Impacts to the Environment
- ✓ Promote Alternative Modes of Transportation
- ✓ Support Energy Conservation Plan

SAFETEA-LU ADDENDUM

sign, and well-planned procedures may prove more effective and economical in some circumstances than high-tech admission control or vehicle control systems.

Environmental Mitigation

The transportation system and how we use it affects the environment and is a major factor in how much energy we consume as a region. A greater reliance on alternative modes of transportation can reduce transportation-related energy consumption and can manage our demand for added road capacity. The programs and projects outlined in this plan support a shift of trips from single-occupancy vehicle to carpooling, public transportation, walking, and bicycling. Where transportation projects are being proposed, the plan indicates which regional environmental resources may be impacted so that any impacts can be appropriately avoided or mitigated during the planning, design and construction phases of the facility.

Federal Requirements

The Transportation Equity Act for the 21st Century (TEA-21) required that the Metropolitan Transportation Plan promote transportation systems that protect and enhance the environment and promote energy con-

servation. The National Environmental Policy Act (NEPA) of 1969, the Federal-Aid Highway Act of 1970, and specific standards of the Federal Highway Administration provide additional guidance related to limiting the noise impacts of highways on adjacent land uses and activities.

Fuel Supply and Mobility

Currently, fuels derived from petroleum account for over 96% of the energy used in transportation worldwide. While theories about when we will run out of oil vary, there is agreement on the fact that our rising demand for crude oil cannot be satisfied indefinitely. A decrease in petroleum availability could affect future travel behavior by encouraging a shift to alternative modes of transportation; however, any future gas shortage will also likely encourage a shift to personal vehicles that rely on alternative fuels, including natural gas, liquid propane gas, hydrogen fuel cells, and gaselectric hybrid engines.

Energy Conservation Plan

A plan that supports energy conservation through a mix of projects and programs designed to improve the efficiency of the transportation network and to reduce the overall vehicle miles traveled can be implemented.



✓ Reduce Noise Pollution

SAFETEA-LU ADDENDUM

In particular, the plan would:

- Encourage a shift to alternative modes of transportation such as public transportation, carpooling, biking, and walking through projects that provide facilities for these activities.
- Reduce wasted energy by implementing a Congestion Management System that increases system efficiency and reduces vehicle delay.
- Work toward other energy conservation measures, such as more fuel efficient vehicles, through a regional air quality program described under the plan.

Noise

Noise, defined as unwanted or excessive sound, is particularly difficult to avoid in today's mobile, industrialized world. Controlling noise along highways and high capacity transit lines requires a broad-based effort that balances regional mobility needs with mitigation of the noise impacts on adjacent properties and others. The Federal Highway Administration advises that effective control of highway traffic noise requires that land uses near highways be controlled so that noise-sensitive land uses are not located adiacent to highways, that vehicles be guieted through improved technology and regulatory measures, and that mitigation of

noise be undertaken as part of certain highway construction and upgrade projects.

Impact Avoidance and Mitigation

Local governments can use their authority to prohibit noise sensitive land uses from locating adjacent to a highway, or can require that the developments be planned, designed, and constructed to minimize noise impacts. The Environmental Protection Agency sets noise emission standards for motor vehicles used in interstate commerce, and has the authority, under the Noise Control Act of 1972, to establish a range of regulations to control the major sources of transportation-related noise.

Based on guidance from the National Environmental Policy Act of 1969 and the Federal-Aid Highway Act of 1970, the Federal Highway Administration (FHWA) maintains regulations that include traffic noise-level criteria and abatement criteria that represent the upper limit of acceptable highway traffic noise for different types of land uses and human activities. The regulations do not require that the abatement criteria be met in every instance. The regulations do require that every reasonable and feasible effort be made to



- ✓ Protect Water Quality
- ✓ Mitigate Impacts on Resource Areas

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provide noise mitigation when the criteria are approached or exceeded.

Retrofitting vs. Incorporating Noise Abatement in New Projects

The FHWA regulations distinguish between projects for which noise abatement is being included as a feature in a new or expanded highway (Type I projects) and projects for which noise abatement would be a retrofit feature on an existing highway (Type II projects). Type I projects require consideration of noise abatement as part of the highway construction project if federal-aid funds are to be used and if a noise impact is expected to occur. FHWA regulations do not allow for implementation of Type II noise abatement projects unless the state has a Type II noise abatement program. It is left up to the states to determine if they wish to develop a Type II program, and the State of Texas does not have a Type II program.

Water Quality

Roadway expansion and other transportation projects have the potential for affecting the quality of surface and ground water resources. Sediment from construction sites during clearing and grading operations may negatively affect the quality of adjacent surface waters and

reduce the capacity of streams and reservoirs. In addition, after construction is complete, roadways may continue to affect adjacent water resources with pollutants that drain from roadway surfaces during rainstorms.

Vehicles are a significant source of trace metals, oil and grease, nitrates, sulfates, and phosphorous which are deposited on roadways and can be flushed off during storm events. Dust-fall deposited on roadway surfaces can also be a major contributor to runoff pollution, particularly in urban areas. Trash and spills of chemicals and fuels can also contribute to runoff pollution from roadways.

The impervious surfaces of roadways also increase storm water runoff volume and peak discharges, which can increase downstream flooding and stream bank erosion. The potential environmental impacts from storm water runoff are more significant in certain resource areas, such as aquifer recharge zones and flood plains.

Impact Avoidance and Mitigation

The impacts of a potential transportation project on a water quality resource area, such as an aquifer recharge zone or flood plain, can be avoided en-



✓ Mitigation Measures

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tirely by moving the facility so that it does not affect the resource, or by eliminating the need for the project through transportation demand management or other means. Where avoidance or elimination is not practical or possible, effective mitigation measures have been established by regulatory agencies. The environmental sensitivity notations included in the project list of this plan are intended to provide information about the location of resource areas early enough in the planning, design, and construction process to allow for impacts to be avoided as appropriate.

Multiple local, state, and federal regulations require mitigation measures during the design and construction of roadways, particularly in resource areas. Mitigation measures are required by the Clean Water Act Section 404 requirements pertaining to dredge and fill in surface waters; Federal Emergency Management Agency (FEMA) 100-year flood plain regulations; and the Texas Commission on Environmental Quality (TCEQ) Texas Pollution Discharge Elimination System Storm Water Phase II Regulations. Additional water quality regulations that affect the design and construction of roadways are contained in various local regulations including the municipal ordinances of cities

throughout the region. Additional mitigation measures can also be included in projects to further reduce storm water runoff and degradation of water resources during all phases of roadway development.

Mitigation Examples

Examples of mitigation measures that may be required by a particular regulation, or may be incorporated in the design or construction of a roadway include:

- Temporary sediment control structures and storm water pollution prevention plans throughout the construction process, including complete stabilization and revegetation of all disturbed areas at the end of construction;
- Post-construction controls such as vegetated filter strips and grass swales; detention, extended detention, sand filtration, and wet ponds; infiltration methods:
- Adjustments to the alignments of transportation facilities to avoid flood hazards;
- Minimizing impacts to surface waters at all stream crossings through bridge and culvert designs that minimize construction in the floodplain and/or allow



- ✓ Identify Degree of Environmental Sensitivity
- ✓ Establish Policies

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greater unimpeded passthrough flows, as well as directing roadway runoff adjacent to streams through ponds or vegetation before final discharge;

- Use of permeable surfaces to reduce impacts on ground water recharge;
- Establishing or reestablishing roadside landscaping or tree canopy feasible in conformance with relevant safety clear zone criteria;
- Utilization of native landscape species to minimize maintenance needs;
- Minimizing the use of pesticides and fertilizers in roadside maintenance; and
- Reducing roadside trash and litter through appropriate routine maintenance, public education, and adopt-a-road programs.

Environmental Sensitivity

On a regional scale, those geographic areas that support regional water quality because they allow for recharge of aquifers and lakes, provide critical natural habitat, or are prone to flooding bring with them a special set of conditions and challenges that need to be considered when locating or designing new transportation facilities. WFMPO will work with TxDOT and other area agencies during the planning phase of transportation projects to identify environmental sensitivity criteria for each roadway facility indicated and whether the facility passes through an area with a low, medium or high degree of environmental sensitivity. Notations to the project list will be made indicating whether a particular project is likely to affect area lakes and streams, or their contributing zones, designated wildlife habitat area, park land, or natural conservation land. Because of the pervasiveness of floodplain areas in the region, specific notations are not provided indicating whether facilities affect the floodplain.

Impacts to the identified resources will be avoided or mitigated as appropriate during the process of selecting an alignment for the facility, and during the design or construction phases of the project. Additional characteristics of the geographic area, including steep slopes and particular development patterns, are not inventoried by this plan, but would be addressed during the process of selecting an alignment, designing, and constructing the facility.

Policies

1. Conserve energy by imple-



- ✓ Review Programs
- √ Take Action

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menting projects and programs to reduce per capita vehicle miles traveled, increase the fuel efficiency of all vehicles, and improve the overall energy efficiency of the transportation system.

- 2. Develop a transportation system that minimizes impacts on the 100-year flood plain, area lake and stream recharge and contributing zones, and other environmentally sensitive areas while providing for adequate regional mobility.
- 3. Incorporate contextsensitive design principles into the design of transportation projects. Context collaborative, tion interdisciplinary approach to design that can be used to develop a transportation facility that fits its physical setting and preserves scenic, aesthetic, historic, environmental and resources, while maintaining safety and mobility. Refer to http:// www.fhwa.dot.gov/csd/ for more information.

Programs

WFMPO will be collecting existing geographic data on the location of key environmental resource areas and developing and implementing a method for consistently evaluating the environmental sensitivity and impacts of transportation projects that are proposed in the long range plan and the TIP.

Actions

Include appropriate noise abatement features in all new transportation projects in accordance with state and federal guidelines. Incorporate appropriate mitigation in all transportation projects in accordance with federal, state, and local guidelines to protect regional water quality and other environmental resources. Implementers will be TxDOT, counties, cities and transit providers.

sensitive design (CSD) is a Consultation and Coordina-

As outlined in the January 2007 Public Participation Plan, WFMPO shall coordinate the Public Participation Process with statewide Public Participation Processes wherever possible to enhance public consideration of the issues, plans and programs, and to reduce redundancies and costs. Consultation and coordination with Federal, State, Tribal and Local agencies and all interested parties concerning the new transportation planning factors for increased safety and security of the transportation system for motorized



✓ Consult with Federal, State, Tribal, Wildlife, Land Management and Regulatory Agencies

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and non-motorized users will be considered during plan development. Elements from the Texas Strategic Highway Safety Plan have been incorporated into WFMPO's Metropolitan Transportation Plan.

WFMPO shall solicit input from all interested parties concerning safety/security goals, objectives, performance measures, and strategies. Adequate safety and security data will be made available to support development of a safety and security element in the Metropolitan Transportation Plan. The development of security goals and appropriate strategies will be done in consultation with all interested parties.

Section 6001(g)(3)οf SAFETEA-LU encourages the MPO to consult with other planning officials responsible for other types of planning activities that are affected by transportation in the area including State and local planned growth, economic development, environmental protection, airport operations, and freight movements. In addition, the MPO's metropolitan planning process will serve to promote consistency between transportation improvements and State and local planned growth and economic development patterns as part of the Metropolitan Transportation Plan update. WFMPO shall

identify State and Local agencies responsible for growth and economic development and will include these entities in the development of the MTP and TIP.

As part of the development of a Metropolitan Transportation Plan update, SAFETEA-LU requires that types of mitigation shall be discussed within the 20-year planning document along with potential sites to carry out the activities, including activities that may have the greatest potential to restore and maintain the environmental functions affected by the plan. (Please see previous section for a detailed discussion concerning **Environmental Mitigation**).

WFMPO shall identify and consult, as appropriate, with Federal, State Tribal, wildlife, land management and regulatory agencies responsible for land use management, natural resources, environmental protection, conservation and historic preservation concerning the development of the Metropolitan Transportation Plan and TIP under Section 6001(i)(4)(A) of SAFETEA-LU. The consultation shall involve as appropriate - (i) comparison of the long-range transportation plans with State conservation plans or maps, if available; or (ii) comparison of long-range transportation plans to inventories of natural or his-



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toric resources, if available per Section 6001(i)(4)(B) of SAFETEA-LU.