

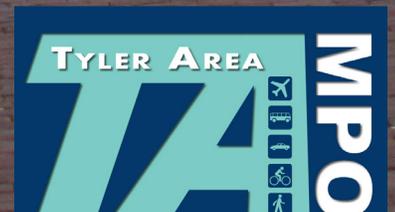
2040

METROPOLITAN TRANSPORTATION PLAN

December 4, 2014



Prepared for





I. INTRODUCTION

Regional transportation planning efforts have been conducted for the Tyler Urbanized Area since the early 1960's, when the first comprehensive transportation plan was completed.

2040 METROPOLITAN TRANSPORTATION PLAN

The Metropolitan Transportation Plan (MTP) provides a framework for analyzing the current and future travel demand and creating a blueprint for addressing the future transportation needs of the Tyler Urbanized Area. With a focus on the creation of a safe, accessible, equitable, and multi-modal transportation network, the MTP recommendations will help improve congestion, support economic development, and enhance the quality of life for those living in or near Tyler, Texas. As an update to the Tyler Area Metropolitan Transportation Plan 2035, this plan will guide transportation decision-making through the year 2040.

The MTP is a long-range planning document, which is reviewed and updated every five years. Each iteration provides a chance to reassess conditions and ensure that the plan remains consistent with the desires and needs of the region as it changes over time.

Development of the MTP requires the collaboration of regional stakeholders, including local, state and federal agencies and governing bodies, public and private transportation providers, the business community, as well as extensive public input. All of these stakeholders must work together so that the community's visions and goals coalesce into defined principles that will guide transportation policy and investment decisions within the Tyler Urbanized Area. The resulting recommendations and proposed improvements will impact all aspects of transportation, including:

- ▶ Transportation Efficiency;
- ▶ Safety;
- ▶ Network Continuity;
- ▶ Improved East-West Connections;
- ▶ Improved Access;
- ▶ Security;
- ▶ Environmental Stewardship;
- ▶ Public Transportation;
- ▶ Cycling;
- ▶ Walking;
- ▶ Rail Preservation;
- ▶ Airport Access; and
- ▶ Land Use Goals.

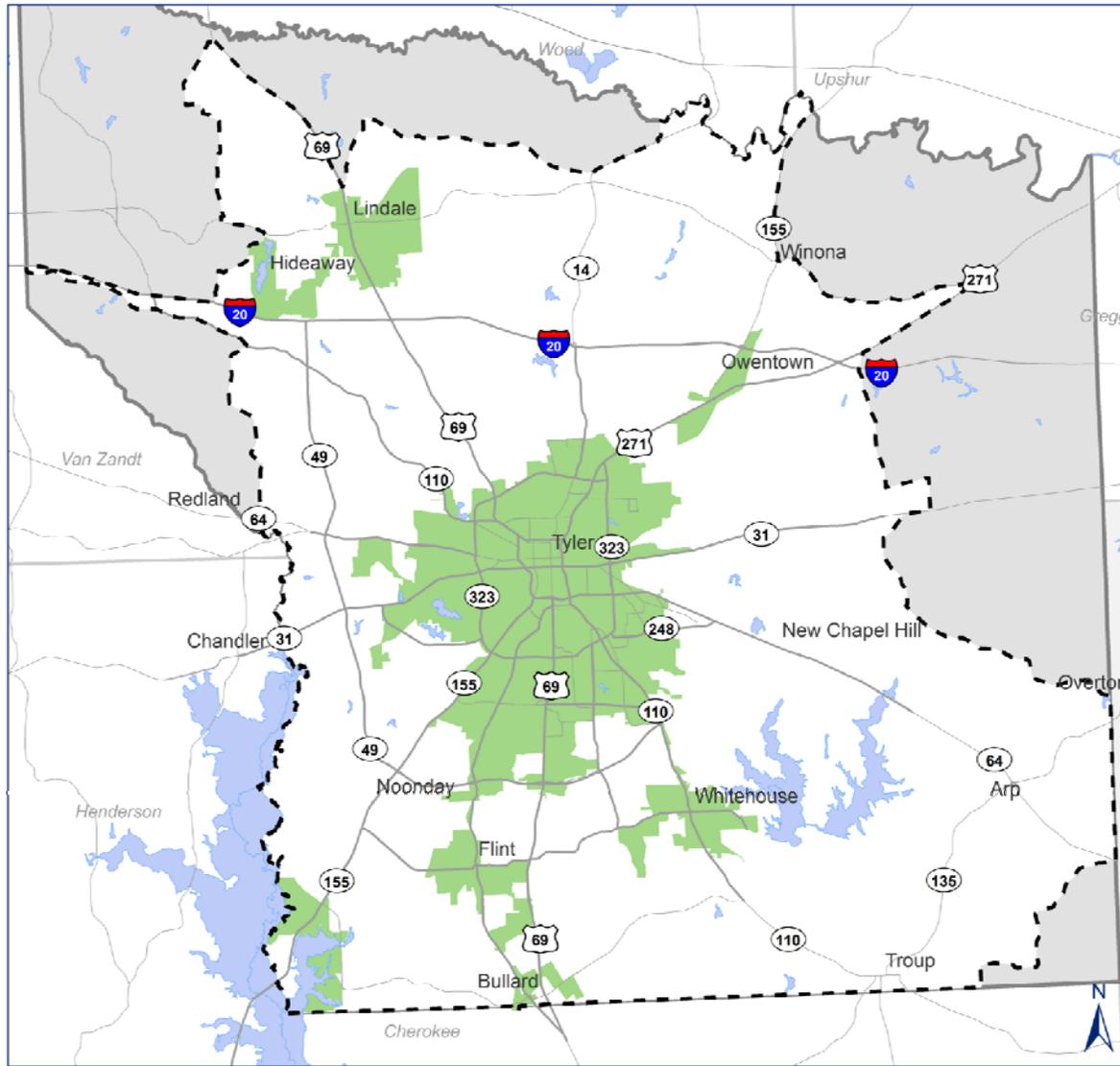
Metropolitan transportation planning is the process of examining travel and transportation issues and needs. In urbanized areas with a population of 50,000 or more, the responsibility for transportation planning lies with the designated Metropolitan Planning Organization.

LEGISLATIVE AUTHORITY

MAP-21

The 2040 Metropolitan Transportation Plan was developed in compliance with the federal surface transportation law - Moving Ahead for Progress in the 21st Century (MAP-21), which was signed into law in July 2012 and became effective on October 1, 2012. MAP-21 authorizes funds for highway, transit, bike, and pedestrian, as well as transportation-related safety programs. The law replaced the previous bill - Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU).

Figure I-1: Tyler Area MPO Boundary



0 5 10 Miles

Tyler Area MPO - 2040 MTP

- Tyler Area MPO**
- MPO Boundary
- Major Transportation Corridors
- Urbanized Area
- Smith County
- Counties





USING THE PUBLIC INVOLVEMENT RESULTS

Establishing the vision and goals for the MTP planning process is meaningless unless a method is put in place to evaluate whether the chosen transportation improvements meet the community's goals.

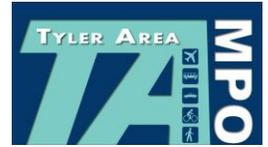
MTP Project Scoring Criteria

A final criteria ranking was chosen for the evaluation of the transportation system, which complies not only with federal and state mandates, but also includes local values based on the public outreach and stakeholder consultation. Table III-7 shows this final ranking of the criteria, which combined the group and individual scores.

Table III-7: Criteria Listed in Order of Importance to the Community

Criteria	Rank
Reduce Congestion	1
Improve Safety	2
Improve Quality of Life	3
Increase Connections	4
Connect Modes of Travel	5
Support Economic Goals	6
Increase Multi-modal Options	7
Conserve Energy	8
Improve Access	9
Preserve Right-of-Ways	10
Support Land Use Goals	11
Promote Efficiency	12
Protect Environment	13
Improve Security	14

Based on these criteria, the study team created a set of weighted performance measures that were used to assess how well the community's vision and goals are being met by the proposed transportation improvements.



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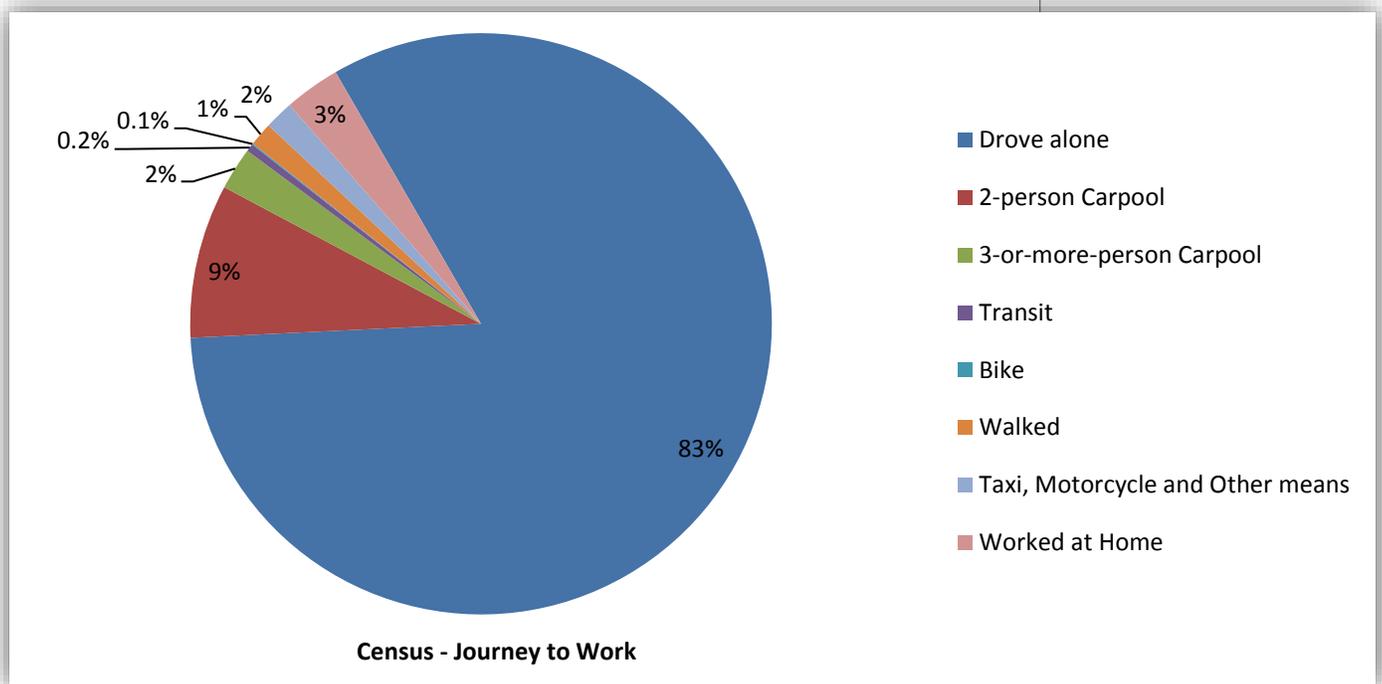
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V. ROADWAYS

INTRODUCTION

The predominant mode of transportation for people living in the study area is accomplished by single-occupancy vehicle (SOV). Figure V-1 shows the primary mode of transportation for all commuters within Smith County. A large majority of commuters traveled alone in their automobile, while 11 percent carpooled. The remaining 6 percent of workers walked, biked, rode transit, or used other means of transportation, or simply worked from home.

Figure V-1: Smith County Commuter Modes of Travel



Source: 2010-2012 American Community Survey - At Place of Work

In addition to providing for the movement of automobiles, regional roadways also offer right of way and infrastructure for bus, bicycle, and pedestrian travel, making the roadway network an integral part of the community. Despite the existence of a multi-modal transportation system, roadways remain the primary component in addressing the region’s transportation needs.

Planning for future transportation system improvements starts with evaluating the existing transportation system and its needs. This chapter analyzes the existing conditions of the streets and highways and describes system issues, with a particular focus on congestion and crashes.

EXISTING CONDITIONS

The Tyler Area is served by Interstate Highway 20 (IH 20) and several U.S. and State highways that provide the basic framework of higher capacity transportation facilities in the area. The



Texas Department of Transportation (TxDOT) maintains the Interstates, U.S., and State highways located in the study area, the North East Texas Regional Mobility Authority (NET RMA) maintains Toll 49, while the respective incorporated cities and Smith County maintain roadways not part of the TxDOT system.

Existing Roadway Facilities

The existing roadways consist of Interstate highways, U.S. and State highways, a toll road, as well as farm-to-market roads, and local streets. The following section discusses existing roadways.

Interstate Highways

IH 20 is the only interstate facility serving the area. It is a controlled access facility, which extends east and west, traversing the northern part of Smith County. IH 20 connects the study area westward to Dallas and eastward to Shreveport, Louisiana. Access to and from IH 20 is provided by grade-separated interchanges and intermittent frontage roads on both sides of the freeway. IH 20 is a four-lane divided highway with a posted speed limit of 70 mph. The frontage roads are one-way with 2 to 3 lanes in each direction.

U.S. Highways

US 69 (also known as Broadway Avenue within the City of Tyler) and US 271 are the two U.S. highway facilities serving the study area. US 69 traverses Smith County north-south and US 271 originates within the City and extends northeast. Within the City of Tyler, both roadways are surrounded by commercial development.

US 69 is a major arterial that ranges from four lanes in the northern part of the study area to six lanes with a continuous center turn lane (CTL). The posted speed limit along US 69 ranges from 55 mph (outer study area) to 30 mph in the City center.

Within the City of Tyler, US 271 is a divided four-lane principal arterial that extends northeast from Gentry Parkway. Outside of the City limits, US 271 is a two-lane roadway.

State Highways

There are many State highways (SH) located within the study area – SH 323 (Loop 323), SH 64, SH 31, SH 155, SH 110, SH 124, SH 164, SH 147, SH 235, SH 57, Spur 364, and Spur 248. TxDOT maintains these roadways, and each is discussed below.

Texas 323 – Loop 323 serves as the study area’s inner loop. It is surrounded by retail and commercial development along its southern, eastern, and western portions. Areas neighboring the northern segment of Loop 323 are less built-out, but have seen recent development. The speed limit along Loop 323 varies from 45 mph to 55 mph. The roadway varies from a four to six lanes with either a median or a continuous center turn lane.

Texas 64 – SH 64 traverses the study area from the northwest to southeast. SH 64 changes names to 5th Street and Glenwood as it passes through the City of Tyler. The roadway varies from a two-lane to a four-lane roadway with speed limits ranging from 35 mph to 45 mph. Within the City of Tyler, the roadway is surrounded by a mixture of commercial, retail, and residential properties.

Texas 31 – SH 31 traverses the study area from the west to east. This highway is also called Chandler Highway west of the SH 235 exchange and Front Street within Tyler city limits. To the west of Loop 323, this roadway varies from four to six lanes with a continuous center turn lane along urban sections. However, to the east this roadway is an undivided two-lane roadway. Development along this corridor consists of a mixture of residential and commercial uses.



Texas 155 – Also known as Frankston Highway, SH 155 extends southwest from the City of Tyler toward Palestine. The roadway varies from four to six-lanes and is surrounded by a mixture of retail and residential land uses. The speed limit varies from 35 mph to 55 mph.

Texas 110 – Also known as Troup Highway, SH 110 is the southeastern extension of US 271. This roadway segment is a six-lane road with a continuous center turn lane within the City of Tyler, but changes to a four- and then two-lane roadway moving southeast from the City center. The speed limit varies from 45 to 50 mph, and the adjacent properties consist of a mixture of commercial and residential land uses.

Texas 124 – SH 124, also called Old Henderson Highway, extends from E Erwin Street southeast to SH 64. The roadway is a two-lane roadway that is surrounded by a mixture of commercial establishments and residences. The speed limit on this segment of roadway is 40 mph.

Spur 164 – SS 164 connects SS 364 in the south with SH 31 in the north, but beyond these limits the roadway becomes FM 1125, also known as Greenbriar Road. SS 164 is a 2-lane road with speed limits set at 45 mph. It is lined with open space and low density residential developments.

Texas 147 – SH 147, better known as the Gentry Parkway, is a six lane urban arterial with a continuous center turn lane. It is the extension of SH 110 in the west, and continues to US 271 in the east. It has a speed limit of 45 mph and is surrounded by urban residential and commercial properties.

Spur 235 – SS 235 is a short road segment connecting SH 64 (Erwin Street) to SH 31 on the west side of the City of Tyler. It is a two-lane roadway with a posted speed limit of 40 mph.

Texas 57 – SH 57, also known as Grande Boulevard, is a four-lane roadway with a continuous center turn lane. It extends from SH 155 southwest of the City of Tyler to SH 110 to the southeast.

Spur 364 – SS 364 serves as the primary access route to Lindsay Park. SS 364 is a four-lane road at Loop 323, transitioning to a three-lane road with one westbound lane and two eastbound lanes. As the roadway extends westward, the pavement transitions again to a two-lane road. A continuous center turn lane is provided in front of Lindsay Park. The speed limit is 60 mph.

Spur 248 – SS 248, also known as University Boulevard, is one of the primary access routes to the University of Texas at Tyler. The road varies from a four-lane roadway to a two-lane road further east, both with a continuous center turn lane, and the speed limit ranges from 45 mph to 60 mph.

Toll Road

Toll 49 (Loop 49) serves as the study area's new outer loop, which, when completed, will form a 32-mile loop around the west, south, and east sides of the City of Tyler. Toll 49 currently connects to IH 20 northwest of the City of Tyler to SH 110 southeast of central Tyler. A future segment (Segment 6) will extend from SH 110 to IH 20, completing the eastern portion of the Outer Loop. The north extension of Toll 49 (Segment 4) will extend the current west terminus from IH-20 to U.S. 69, just north of Lindale; Segment 4 is currently in the environmental review stage.

Farm-to-Market Roadways

There are several Farm-to-Market (FM) roads serving the study area. The facilities primarily provide connections between major highway facilities, residential and commercial centers, and access to recreational areas. TxDOT maintains the Farm-to-Market thoroughfares, including FM



2493 (Old Jacksonville Highway) and FM 14 (State Park Highway). These Farm-to-Market roadways are generally two-to four-lane facilities.

FM 2493 provides a link into the study area for many people living in the unincorporated part of southwestern Smith County, whereas FM 14 provides access to the nearby Tyler State Park

County Roads and Local Streets

County Roads (CR) and the local street network¹ consist of residential and neighborhood streets. These streets are primarily two-lane facilities and typically have a speed limit of 30 mph within municipal city limits and 40-55 mph within the unincorporated areas of Smith County, where a few also have four-lane cross sections.

Roadway Classification

Functional classification is the process by which streets and highways are grouped into categories according to the characteristics of the vehicular traffic they are intended to serve. All streets and highways are grouped into one of these classes, depending on traffic character (i.e., local or long-distance trips) and the degree of land access allowed. These classifications may change over time as roadway functions change to serve new land uses, increased or decreased traffic volumes, or roadway network modifications.

The functional classification system is a hierarchical organization of streets and highways that facilitates the safe and efficient operation of vehicles along different types of roadways and expressways. The study area's functional classification system is based on the City's Master Street Plan (MSP), which was originally developed in 1985, and updated in 1999, 2005, and 2012. The current functional classification system² divides the roadway network into the following four general categories:

Freeways/Expressways

These facilities include Interstate highways, freeways, tollways, expressways, parkways and loops. They provide for the rapid and efficient movement of large volumes of traffic between and within regions. Design characteristics support the function of traffic movement by providing multiple travel lanes, a high degree of access control, and limited at-grade intersections. Direct access to properties is limited in the Tyler Study area. TxDOT develops and maintains these facilities, with the exception of Toll 49, which is maintained by NET RMA.

Arterial Streets

Arterials offer efficient, higher speed traffic movements, but also provide direct access to abutting properties. Major arterials typically serve as connections between large traffic generators and other community activity centers and facilitate large volumes of through traffic. Minor arterials typically serve as connectors between local and collector streets and major arterials, and facilitate the movement of smaller traffic volumes over short distances within the community.

Collector Streets

Collector streets provide for a balance of traffic movement and property access functions. Traffic movement is often internal to local areas and connects residential neighborhoods,

¹ The local streets are mentioned for completeness. However, they fall under the jurisdiction of the respective local entity and are generally not eligible to receive Federal transportation funding.

² The City of Tyler's functional classification differs slightly from the Federal Functional Classification, which determines a roadway's eligibility for Federal funding. All projects, which are proposed to receive Federal funding, have been determined to be federally functionally classified and are therefore eligible.



parks, churches, etc., with the arterial street system. Compared to arterial streets, collector streets accommodate smaller traffic volumes over shorter distances.

Local Streets

Local streets function to provide direct access to abutting properties and to collect and distribute traffic between parcels of land and collector streets.

Traffic Control

Facilitation of traffic flow on the roadway network is provided through the application of traffic control devices such as traffic signals, traffic signs, and pavement markings. Of these, traffic signals have the greatest impact on the traffic flow and roadway capacity. There are over one hundred fifty signalized intersections within the study area. The majority of these signals are located at major intersections along arterial and collector streets within Loop 323. There are 31 signals along Loop 323, 19 signals along South Broadway Avenue (south of Front Street), and 19 signals in Tyler's central area (North of Front Street, South of Locust, between Palace Avenue and Fannin Avenue).

Since 2009, the City of Tyler Traffic Engineering Department has completed the following traffic control projects:

- ▶ Installation of adaptive traffic control systems at several intersections on Loop 323;
- ▶ Completion of traffic signal installation and control system upgrades at key locations;
- ▶ Completion of the downtown signal upgrade project; and
- ▶ Upgrade of school flasher timing systems.

PLANS AND STUDIES

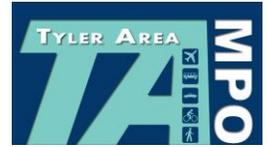
2012 Master Street Plan

The updated City of Tyler Master Street Plan was adopted in September 2012. The main function of the document is to provide guidelines for ensuring access to and mobility on the region's transportation network, based on the following objectives:

- ▶ Pursuing the preservation of existing roadway alignments and adequate right-of-way (ROW) for future long-range transportation improvements;
- ▶ Minimizing the amount of land required for street and highway purposes;
- ▶ Identifying the functional role that each street should be designed to serve, in order to promote and maintain the stability of traffic and land use patterns;
- ▶ Ensuring continuity of the thoroughfare system and connectivity for all east-west and north-south traffic patterns;
- ▶ Maximizing mobility while minimizing the negative impacts of street widening and construction on nearby neighborhoods and the overall community as a whole by recognizing where future improvements may be needed; and
- ▶ Making efficient use of available resources by designating and recognizing the corridors that will likely require improvements.

Functional Classification and Complete Streets

As mentioned earlier, the streets within the study area are functionally classified based on traffic characteristics and functionality. The functional roadway system, however, is neither static, nor exclusive to vehicle and truck traffic.



Because of this, the 2012 update to the Master Street Plan introduced Complete Streets design concepts. Complete Streets consider flexible design elements to provide for multiple modes of transportation, including: transit, bicycles, pedestrians, and automobiles. Complete Streets utilize different designs based on land use and density context, as described below:

- ▶ **Urban Core** – Typically the densest area of a city, and offers opportunities for walkable mixed-use developments and multi-modal transportation options;
- ▶ **General Urban** – Less dense than the Urban Core, but includes a mix of housing types and commercial properties;
- ▶ **Suburban** – Largely consists of single-family housing with primarily automobile traffic as well as recreational pedestrian and bicycle use; and
- ▶ **Rural** – The least dense areas, with large-lot single-family housing and open space.

Bicycle and Pedestrian Facilities

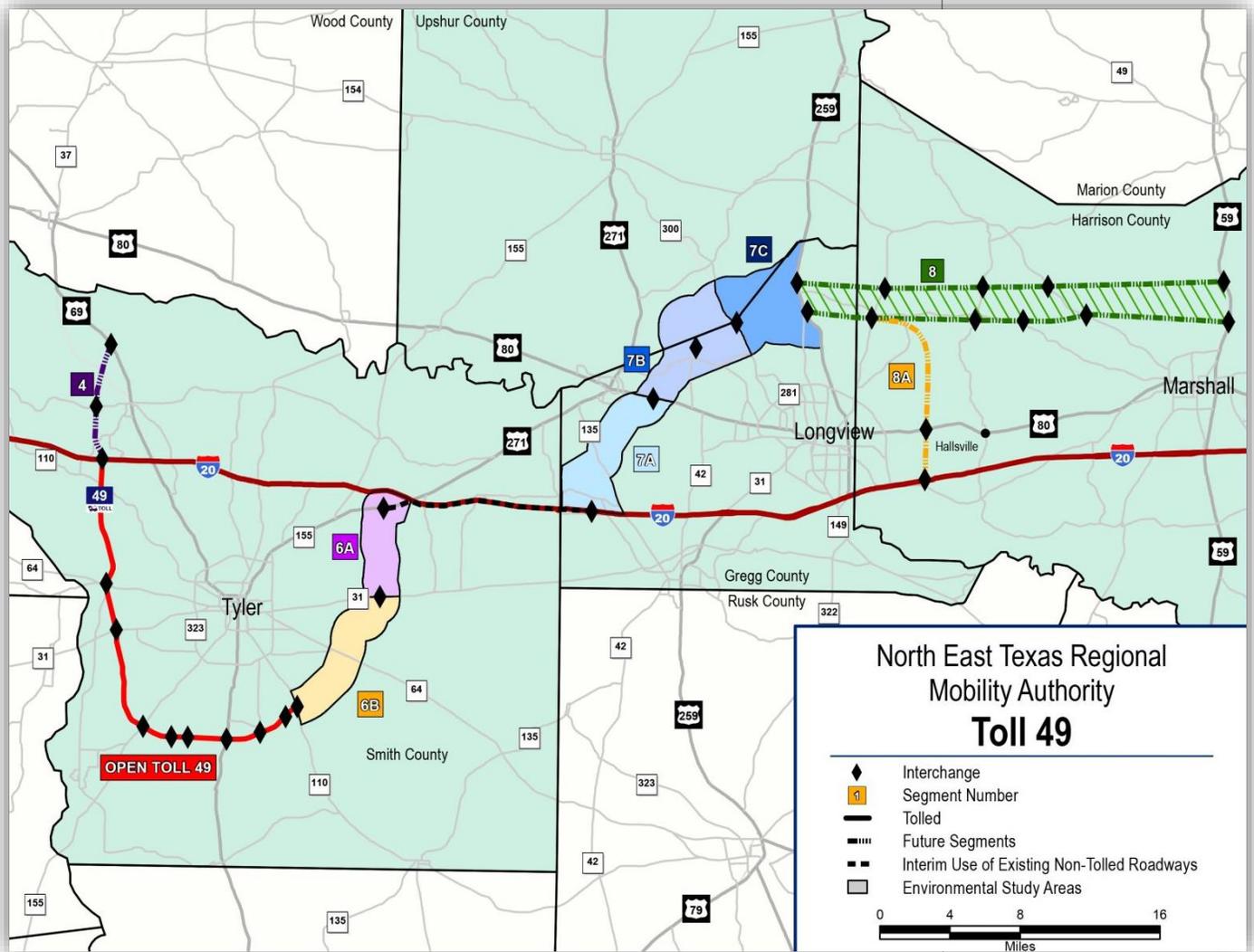
The Master Street Plan also provides recommendations for better connections between minor and arterial roads and on-street or off-street bike facilities. Furthermore, bike plan recommendations were made in accordance with facilities proposed in the Tyler Regional Trail Plan, which is discussed in greater detail in the *Bicycle and Pedestrian – Chapter VII*.

PROGRAMMED IMPROVEMENTS

The 2012 Master Street Plan does not contain a program of projects. However, it offers recommendations and design protocols to be considered for those roadways identified for improvement.

The North East Texas Regional Mobility Authority (NET RMA) is an independent government entity created to facilitate the development of transportation projects in northeast Texas. NET RMA undertakes various projects, including the planning and implementation of Toll 49, shown in the map below. Currently planned improvements, include the extension of Toll 49 past IH 20 to US 69 just north of Lindale (Segment 4), as well as a future Toll 49 extension (Segment 6 – A and B) from SH 110 to IH 20 on the east side of the City of Tyler, as shown in Figure V-2.

Figure V-2: North East Texas Regional Mobility Study - Toll 49



Source: NET RMA, 2014

NEEDS AND ISSUES

Under the guidance of the Moving Ahead for Progress in the 21st Century (MAP-21) Act, outlined in the introduction of the 2040 Metropolitan Transportation Plan, Metropolitan Planning Organizations (MPO) are required to develop long-range transportation plans and transportation improvement programs through a performance-driven, outcome-based approach to planning, using data to identify, evaluate, and prioritize strategies to achieve desired outcomes.

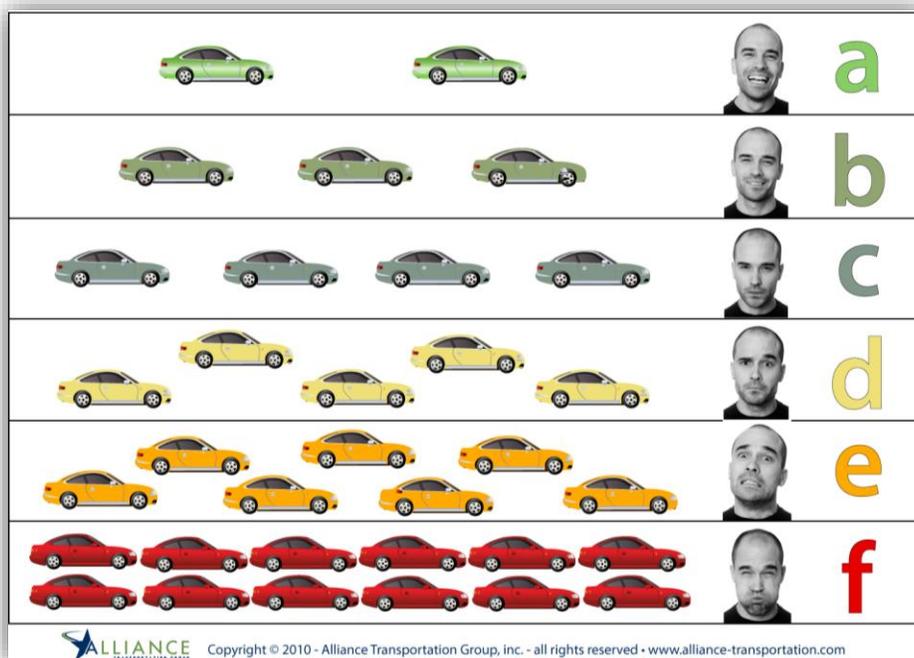
In establishing a baseline for overall system and subsequent performance evaluation, certain performance measures are particularly helpful in identifying the needs and issues on roadways within the study area. Congestion affects businesses and residents alike, creates inefficiencies and wastes time, while crashes threaten the safety of all roadway users within the study area. Traffic congestion and crash data is therefore reviewed in greater detail in the following sections.

Congestion

During the public involvement activities, congestion was identified as one of the most important transportation issues among residents and stakeholders alike. A common measurement of operational traffic performance and congestion on a roadway corridor is Level of Service (LOS). In its simplest form, LOS can be compared to a grading scale from “A” to “F”, where “A” represents excellent performance and “F” indicates failure. LOS can be explained in terms of vehicular traffic flow, maneuverability, delays, driver comfort, average speed, and the ratio of traffic volume to a roadway’s maximum traffic capacity. It is generally reported for the peak period of a typical weekday. Figure V-3 provides an illustration of the various levels of service as experienced by a driver.

Communities aim to maintain a LOS of D or better on roadway systems, although it is acceptable for some locations - such as a busy downtown area - to operate at a lower level of service, often resulting in reduced speeds. Many communities use LOS standards to develop and prioritize projects to improve transportation facilities and services, as well as to regulate growth and development.

Figure V-3: Level of Service Illustration



Level of service is often approximated with volume to capacity ratios such as the travel demand model analysis results described in the *Modeling and Roadway Deficiency Analysis - Chapter X*, which speaks more to roadway design capacity than actual driver experience.

Therefore, roadway performance data was obtained from Texas A&M’s Transportation Institute’s (TTI) - Most Congested Roadways in Texas website (TTI, 2014). This data is updated yearly and offers insight into congestion on urban roadways. TTI obtains hundreds of data points on almost all major road segments in U.S. urbanized areas.

The Texas Transportation Institute uses several metrics to analyze roadway segment performance, two of which were selected to analyze congestion within the study area:



- ▶ Texas Congestion Index (TCI) – the ratio of the peak period average travel time to the free-flow travel time; and
- ▶ Annual Delay per Mile (DelayAPH) – the annual hours of delay divided by the segment length.

These measures seek to provide a better understanding of roadway performance as experienced by the roadway user. Therefore, an analysis of the current state of thoroughfare congestion was completed using TCI and DelayAPH data. The roadway segments with the top ten congestion index values are listed in the table below.

Table V-1: Most Congested Corridors

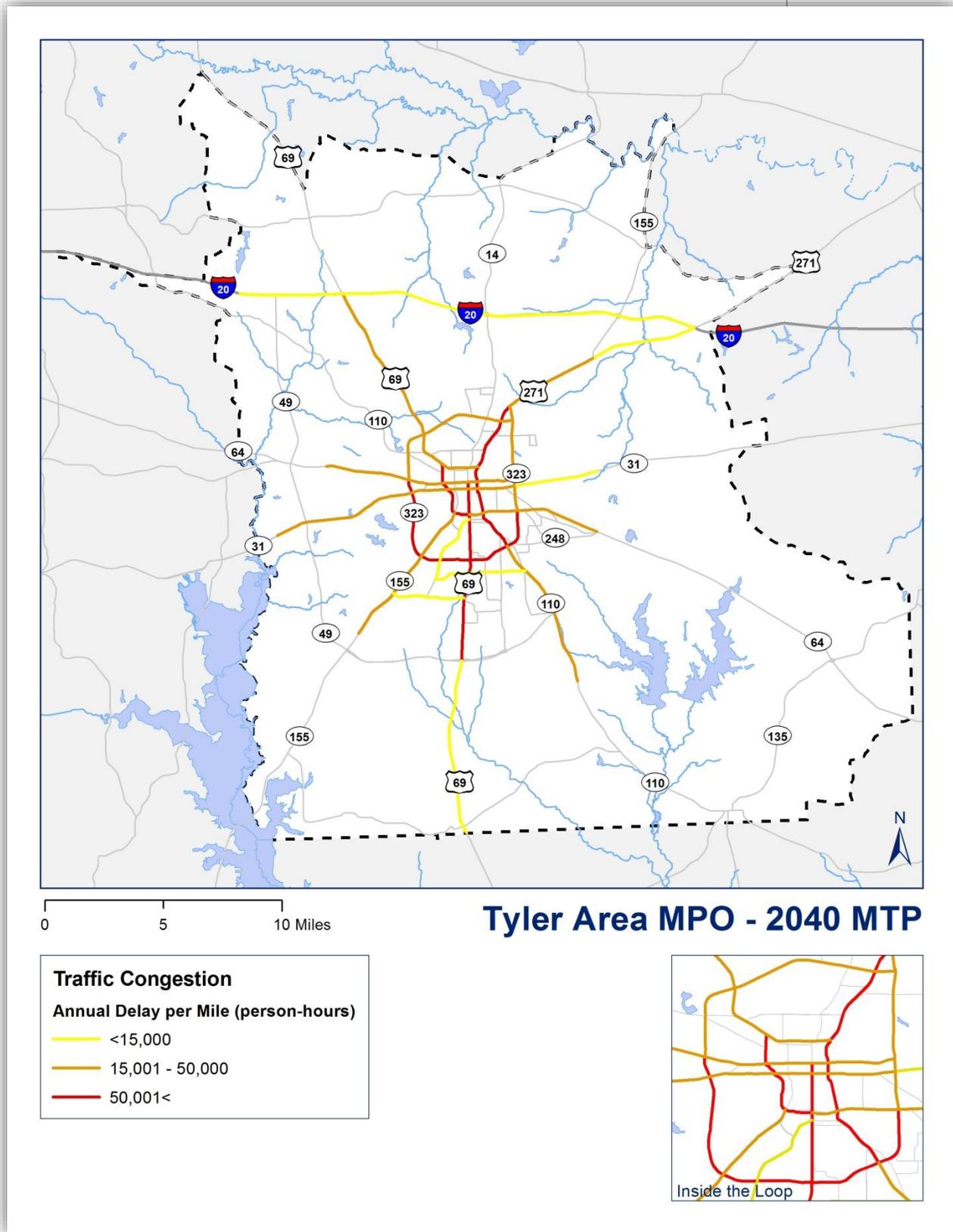
Road Name	Extent	Texas Congestion Index
Rice Road / Shiloh Road	FM 2493 to SH 110	1.38
S Broadway Avenue (US 69)	Loop 323 W to Toll 49	1.34
Loop 323 S	SH 64 to S Broadway Avenue	1.33
S Broadway Avenue (US 69)	Ervin Street to Loop 323 W	1.31
Old Jacksonville Highway	S Broadway Avenue to Rice Road	1.30
Glenwood Boulevard	W Gentry Parkway to S Broadway Avenue	1.28
Ervin Street	Chandler Highway to Loop 323 S	1.27
S Beckham Avenue (SH 155)	SH 31 to Loop 323 E	1.27
W Grande Boulevard (SH 57)	SH 155 to S Broadway Avenue	1.26
Gentry Parkway	SH 110 to US 271	1.25

Source: 2014 Texas A&M Transportation Institute - Most Congested Roadways in Texas (TTI)

The maps on the following pages show the annual delay per mile for the most congested roads for both vehicle and truck traffic in the Tyler study area.

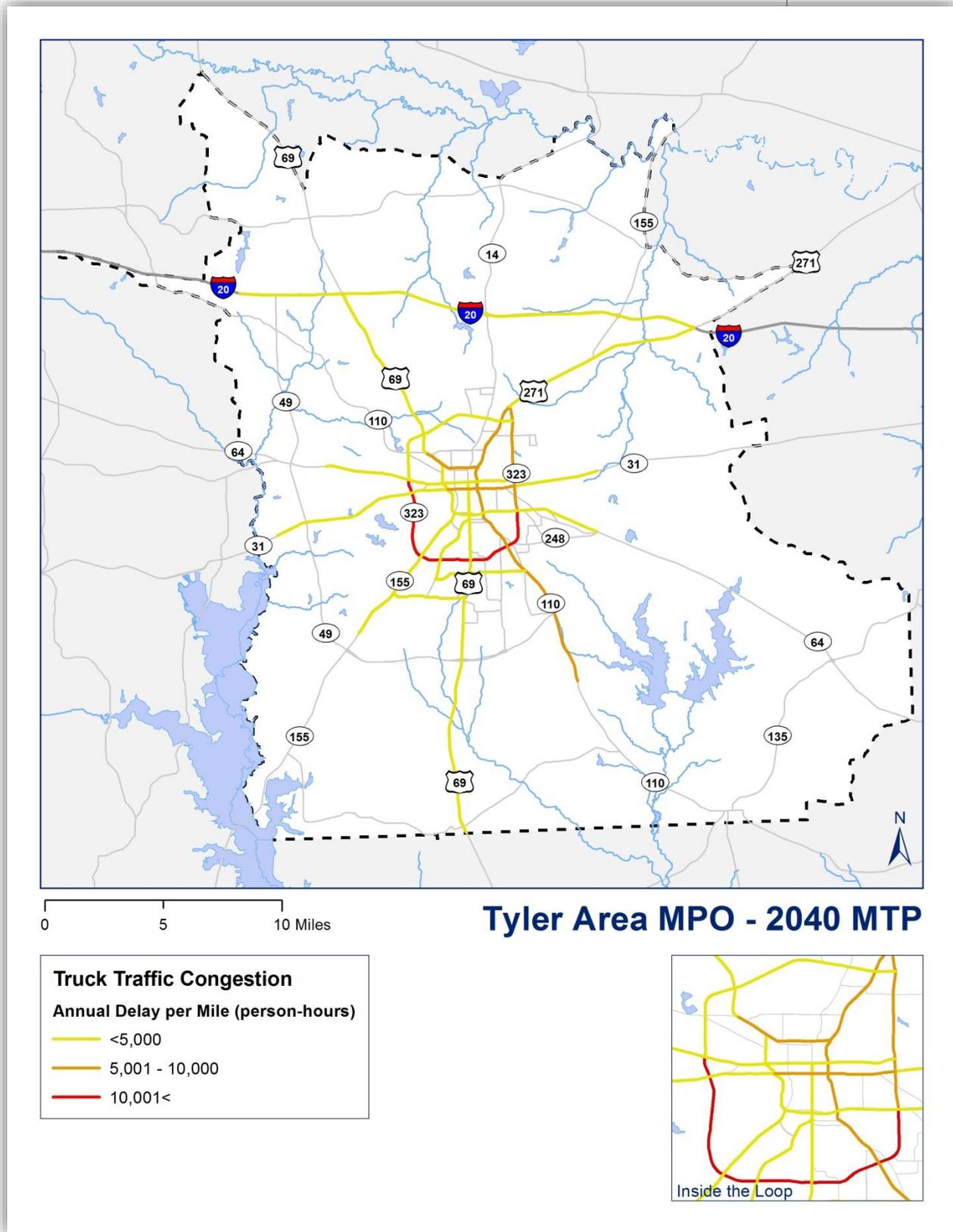
Vehicle congestion, based on annual hours of delay per mile, was worst along S Broadway Avenue, south of Front Street, and north of Toll 49. South of SH 64, Loop 323 SW and Loop 323 SE also experienced heavy vehicle congestion, as well as the highest truck congestion. Vehicle and truck congestion was relatively light on IH 20, Rice Road, W Grande Boulevard, and Old Jacksonville Highway.

Figure V-4: Annual Traffic Congestion

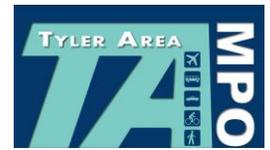


Source: 2014 Texas A&M Transportation Institute - Most Congested Roadways in Texas (TTI)

Figure V-5: Annual Truck Congestion



Source: 2014 Texas A&M Transportation Institute - Most Congested Roadways in Texas (TTI)



The analysis of average delay per mile shows that congestion is particularly significant along the following corridors:

- ▶ S Broadway Avenue (US 69) - from Loop 323 to Toll 49
- ▶ Loop 323 E - from E 5th Street (SH 64) to S Broadway Avenue (US 69)
- ▶ S Beckham Avenue (SH 155) - from E Front Street (SH 31) to Loop 323 E
- ▶ Loop 323 W - from W Ervin Street (SH 64) to S Broadway Avenue (US 69)
- ▶ S Broadway Avenue - from Ervin Street to Loop 323 W

Truck congestion was worst along the following corridors:

- ▶ Loop 323 E - from E 5th Street (SH 64) to S Broadway Avenue (US 69)
- ▶ Loop 323 S - from W Ervin Street (SH 64) to S Broadway Avenue (US 69)
- ▶ S Beckham Avenue (SH 155) - from E Front Street (SH 31) to Loop 323 E
- ▶ US 271 (SH 155) - from Loop 323 E to E Front Street (SH 31)
- ▶ Front Street (SH 31) - from S Glenwood Boulevard to Loop 323 E

Congestion Reduction Strategies

Roadway capacity expansion is only one way to address existing congestion. The promotion of alternative modes of transportation can help reduce overall travel demand. Traffic control improvements, signal interconnects along major corridors, and the implementation of access management strategies can significantly reduce congestion delays.

Associated Travel Demand Management, Transportation System Management and Operations, and Complete Streets principles and strategies are described in greater detail in the *No-Build Strategies - Chapter XI*. Based on a review of the most congested corridors within the study area, the following measures and strategies could be considered for implementation in the Tyler Urbanized Area:

- ▶ Signal timing changes;
- ▶ Channelization modifications;
- ▶ Corridor-wide, interconnected signalization; and
- ▶ Application of access management measures along major thoroughfares.

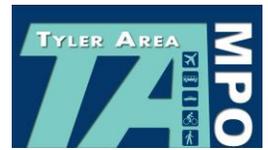
Roadway Safety

Safety was identified as the second most significant transportation concern by study area residents and stakeholders. As mentioned, MAP-21 introduced national performance goals³ to assist with the transportation planning process, including a provision for the assessment and the monitoring of transportation safety. The objective of the safety goal is to “significantly reduce the number of traffic fatalities and serious injuries on public roads.”⁴

Examining where traffic accidents have occurred in the Tyler Urbanized Area, helps to guide needed safety improvements. The 2010-2012 crash data for the Tyler Area shows "failure to control speed" as the primary contributing factor for vehicle collisions within the study area. "Failure to yield the right of way" - while turning left, at a private drive, or at a stop sign - were also prevalent contributors, along with driver inattention and unsafe lane changes.

³ The Federal Highway Administration has proposed to use a five-year rolling average for fatality and serious injuries, and fatality and serious injury by 100 million VMT (vehicle miles traveled). However, the performance measure has not yet been formally promulgated, and therefore, performance targets have not yet been adopted by the Texas Department of Transportation or the Tyler Area MPO.

⁴ MAP-21 §§1106, 1112-1113, 1201-1203; 23 USC 119, 134-135, 148-150



Furthermore, 52.5% of all crashes in 2012 occurred at an intersection. Figure V-6 shows which intersections have had the most accidents in the study area from 2010-2012.

The table below lists which locations had the highest number of accidents from 2010 to 2012. During this period, the intersection of Broadway and Loop 323 experienced the highest number of accidents overall, as well as the highest single year total (93) which occurred in 2010.

**Table V-2: Number of Crashes
at Hotspot Locations - 2010-2012**

Location ⁵	Crashes
Broadway / Loop 323	252
Broadway / Fifth Street	234
Loop 323 / Old Bullard	128
Loop 323 / Paluxy	121
Loop 323 / Troup Highway.	119
W Front / Loop 323 S SW	117
Broadway / Shiloh / Rice	107
Loop 323 / Copeland Road	102
Loop 323 / Old Jacksonville	98
Loop 323 / Frankston Highway	51
S Beckham / E Front	49
Loop 323 / W Erwin	45
Beckham / Fifth Street	44
Glenwood / Vine	40
Loop 323 / E Front	38
Broadway / New Grande	36
Broadway / Independence	35

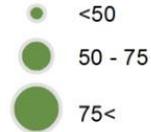
⁵ Total only includes Intersections with the top ten highest number of accidents in each analysis year. If a location was not in the top ten for a given year, accidents at that location were not counted in the total.

Figure V-6: Number of Crashes at Hotspot Locations - 2010-2012

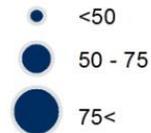


Tyler Area MPO 2040 MTP

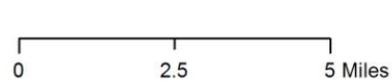
Number of Crashes at Top Ten Intersections 2010



Number of Crashes at Top Ten Intersections 2011



Number of Crashes at Top Ten Intersections 2012





Crash Reduction Strategies

The following measures and strategies help reduce collisions at intersections and decrease the potential for crashes associated with unsafe travel speeds or driver behavior. Based on the review of the 2010-2012 accident data, these could be considered for implementation in the Tyler Urbanized Area:

- ▶ Speed Control
 - Work with local law enforcement to increase and sustain high visibility enforcement of speed-related laws;
 - Provide community training on speed related issues; and
 - Increase public information and education concerning speed-related issues.
- ▶ Driver Education and Behavior
 - Implement and evaluate measures to reduce the incidence of distracted driving;
 - Develop and implement public information and education efforts on traffic safety issues and distracted driving; and
 - Work with local law enforcement to improve the recording of distracted driving as a contributing factor on crash reports
- ▶ Intersection-related
 - Reduce the number and types of conflict points created by an intersection
 - Eliminate driveways within the functional area of an intersection
 - Limit left-turn movements at intersections
 - Reduce intersection density along roads with high traffic volumes

RECOMMENDATIONS

Congestion and safety are often closely related, as highly congested corridors can significantly increase the potential for crashes, while crashes are often a major source of non-recurring congestion. The following recommendations aim to address both transportation issues:

- ▶ Work with state and local transportation partners to identify and monitor the performance of highly congested corridors and bottlenecks within the study area;
- ▶ Work with state and local transportation partners and law enforcement to identify the cause of crashes at hotspot locations within the study area;
- ▶ Prepare a local congestion mitigation and crash avoidance strategies, and identify and monitor related performance measures;
- ▶ Assist transportation partners with the implementation of operational improvements and, if necessary, capital improvements, and monitor effectiveness of implemented strategies and progress made towards locally defined targets.
- ▶ Conduct a feasibility study for US 69 (South Broadway Avenue) between SL 323 and Toll 49 to analyze potential congestion improvement plans.
- ▶ Conduct a feasibility study for the intersection of FM 2493 (Old Jacksonville Highway) and US 69 (South Broadway Avenue) to analyze potential intersection improvement plans.



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XIII. PROJECT PRIORITIZATION

Funding for regional transportation projects is limited. It is therefore important to have a project prioritization process in place that implements the community's vision and incorporates both a quantitative and qualitative assessment of the proposed improvements.

For the development of the 2040 Metropolitan Transportation Plan for the Tyler Urbanized Area, a project scoring tool was designed and used. To assess the community benefits of proposed transportation projects, the tool combined various key planning components:

- ▶ Input gathered from the public during the Visioning Workshop;
- ▶ Outputs obtained from the regional travel demand model; and
- ▶ The expertise of the Technical Advisory Committee (TAC) members.

The resulting product is a prioritized list of short-term transportation improvements - planned for implementation between 2015 and 2024, and a prioritized list of long-term transportation improvements - planned for implementation between 2025 and 2040. Based on this multi-faceted prioritization process, the listing of transportation projects is not only reflective of the community's vision, responsive to mobility needs, as well as technically sound, but it also complies with federal requirements for metropolitan transportation planning.

PLANNING FACTORS AND PROJECT CRITERIA

The most recent federal surface transportation bill - Moving Ahead for Progress in the 21st Century (MAP-21) - requires the transportation planning process for metropolitan areas to consider strategies and projects that address the following planning factors:

- ▶ Support the **economic vitality** of the metropolitan area, especially by enabling global competitiveness;
- ▶ Increase the **safety** of the transportation system for motorized and non-motorized users;
- ▶ Increase **security** of the transportation system for motorized and non-motorized users;
- ▶ Increase **accessibility and mobility** of people and freight;
- ▶ Protect and enhance the **environment**, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns;
- ▶ Enhance the **integration and connectivity** of the transportation system, across and between modes, for people and freight;
- ▶ Promote **efficient system** management and operation; and
- ▶ Emphasize the **preservation** of the existing transportation system.

Based on these eight MAP-21 planning factors, a set of project scoring criteria was developed to ensure each aspect of the factors was taken into consideration in assessing the merits of the proposed projects. The project scoring criteria, which are listed below, are the same criteria used during the public Visioning Workshop to gather input regarding the community's priorities.

- | | |
|----------------------------|---------------------------------------|
| ▶ Improve safety; | ▶ Support economic development goals; |
| ▶ Improve security; | ▶ Support land use goals; |
| ▶ Protect the environment; | ▶ Increase connections; |
| ▶ Reduce congestion; | ▶ Improve access; |
| ▶ Promote efficiency; | ▶ Connect modes of travel; |



- ▶ Conserve energy;
- ▶ Increase multi-modal options; and
- ▶ Improve quality of life;
- ▶ Preserve right-of-ways.

For a detailed description of each of the 14 project scoring criteria, please refer to the *Public Involvement - Chapter III*.

VISIONING WORKSHOP AND DEVELOPMENT OF EVALUATION CRITERIA

During the March 2014 Visioning Workshop, the public was asked to rank the criteria based on each participant’s values. The ranking of the criteria was undertaken twice - once as a group exercise, and then, individually weighted.

For the group ranking of the criteria, each participant was provided with 24 sticky dots. The workshop participants were then asked to rank the criteria by distributing the dots among the 14 project scoring criteria according to the participant’s personal preferences for the future of the transportation system. Participants were given the option to place as many or as few dots next to each of the 14 project scoring criteria as the participant deemed appropriate.

For the individually weighted ranking of the criteria, participants were asked to assess each of the project scoring criteria on a scale from 1 to 5 in the individual’s participant workbook according to the level of importance perceived by the participant - with five representing an "extremely important" and one representing an "unimportant" criterion.

The results of both exercises were tabulated and a weight was assigned to each of the 14 project scoring criteria based on the participants' expressed preferences. The results are summarized in Table XIII-1.



Table XIII-1: Project Scoring-Criteria Weighting

Public Ranking	Criteria	Weighting
1	Reduce Congestion	2.0
2	Improve Safety	1.9
3	Improve Quality of Life	1.8
4	Increase Connections	1.7
5	Connect Modes of Travel	1.6
6	Support Economic Development Goals	1.5
7	Increase Multi-modal Options	1.4
8	Conserve Energy	1.3
9	Improve Access	1.2
10	Preserve Right-of-Ways	1.1
11	Support Land Use Goals	1.0
12	Promote Efficiency	0.9
13	Protect the Environment	0.8
14	Improve Security	0.7
Total Weighting Points		18.9

CRITERIA	5	4	3	2	1
Improve Safety	5	4	3	2	1
Improve Security	5	4	3	2	1
Protect the Environment	5	4	3	2	1
Reduce Congestion	5	4	3	2	1
Promote Efficiency	5	4	3	2	1
Support Economic Development Goals	5	4	3	2	1
Support Land Use Goals	5	4	3	2	1
Increase Connections	5	4	3	2	1
Improve Access	5	4	3	2	1
Connect Modes of Travel	5	4	3	2	1
Conserve Energy	5	4	3	2	1
Improve Quality of Life	5	4	3	2	1
Increase Multi-modal Options	5	4	3	2	1
Preserve Right-of-Ways	5	4	3	2	1

The project scoring tool used the final list of prioritized criteria in its qualitative and quantitative evaluation process.



DEVELOPMENT OF PROPOSED PROJECT LIST

The list of proposed projects was developed iteratively in consultation with state and local transportation partners. The initial list of projects to be considered for inclusion in the 2040 Metropolitan Transportation Plan was developed from the following sources:

- ▶ For continuity purposes, the project selection process used in the previous MTP was reviewed and its validity was confirmed. Those projects that had been identified by the previous MTP, but had not yet been implemented were moved forward for prioritization and consideration in the 2040 Metropolitan Transportation Plan.¹
- ▶ In June 2013, the Tyler Area MPO released an official call for projects to municipalities and transportation stakeholders within the Tyler Urbanized Area. One project was submitted by the North East Texas Regional Mobility Authority (NET RMA), which has been included, but does not require inclusion in the prioritization, as the project is expected to be fully funded by NET RMA. No other projects were submitted as a result of the call for projects.
- ▶ Through coordination with the Texas Department of Transportation district, additional projects were identified for prioritization and possible inclusion in the 2040 Metropolitan Transportation Plan.

The complete list of projects for evaluation and prioritization is shown in Table XIII-2.

Table XIII-2: Projects Proposed for Consideration

Project	Extent	Description	Source	Included in Scoring
FM 756 (Paluxy)	FM 346 to FM 344	Widen to 4-lane principal arterial	2035 MTP – State Long-term	Long-term
FM 2964 (Rhones Quarter)	CR 2167 to FM 346	Upgrade to a 4-lane principal arterial	2035 MTP – State Long-term	Long-term
SH 31, East	Loop 323, East to FM 850	Widen to a 4-lane divided principal arterial	2035 MTP – State Long-term	Long-term
SH 110	5th Street to Golden Road	Widen to 6-lane divided principal arterial	2035 MTP – State Long-term	Long-term
SS 364	SH 31 to Loop 323	Widen to 4 lanes	2035 MTP – State Long-term	Long-term
FM 2493	Loop 323 to FM 2813	Widen to 6-lane divided principal arterial	TxDOT	Long-term
Loop 323 Extension	Loop 323 NE to US 271	Upgrade to a 4-lane principal arterial	TxDOT	Long-term
SH 155 N	US 271 N to IS 20 E	Upgrade to a 4-lane principal arterial	TxDOT	Long-term
SH 110 N	Loop 323 to FM 2016	Upgrade to a 4-lane principal arterial	TxDOT	Long-term
Lake Placid Rd	Old Jacksonville Hwy to SH 155	Widen to 4-lane with bike, raised median	2035 MTP – Local Short-term	Locally funded – no need to score
Towne Park	Loop 323 to SH 155	Construct in new location, 4-lane with bike, raised median	2035 MTP – Local Short-term	Locally funded – no need to score

¹ Please note that the locally funded projects will not be prioritized, as these projects are anticipated to be funded with only local dollars and have already been ranked through the City's Capital Improvement Program.



Project	Extent	Description	Source	Included in Scoring
Shiloh Rd	Rhones Quarter Rd to Copeland Rd	Widen to a 4-lane minor arterial with CTL	2035 MTP – Local Short-term	Locally funded – no need to score
	W Erwin Street at Glenwood	Widen intersection to eliminate split phase operations	2035 MTP – Local Short-term	Locally funded – no need to score
Roy Road	Paluxy Dr to Rhones Quarter Rd	Widen to 2-lane major collector with CTL	2035 MTP – Local Short-term	Locally funded – no need to score
Rice Road	Old Bullard Rd to Jacksonville Hwy	Widen to 4-lane minor arterial with CTL	2035 MTP – Local Short-term	Locally funded – no need to score
Earl Campbell Parkway	SL 323 to SH 31W	Construct divided 4-lane minor arterial	City of Tyler	Locally funded – no need to score
Loop 49 Segment 6	SH 110 to 0.35 mi E of US 271/ FM 2908 intersection	Construct New 2 Lane Controlled Access Toll Road as Extension of Loop 49	2040 MTP – Project Call	NET RMA funded – no need to score
IH 20	At US 69	Ramp improvements at US 69	TxDOT	Short-term
FM 2493	FM 346 in Flint, S to 0.3 mi S of FM 344 (Cherokee C/L)	Widen from 2 Lanes to 4 Lanes with Flush Median	TxDOT	Short-term
FM 16	Loop 49 Extension (2.4 miles W of US 69) to US 69 in Lindale	Widen from 2 to 4 lanes	TxDOT	Short-term
FM 2493 ²	1.75 Mi W of FM 848 (Old Omen Rd), E to SH 64 SE of Tyler	Widen to 4 lanes with flush median	TxDOT	Short-term
SS 248	1.75 Mi W of FM 848 (Old Omen Rd), E to SH 64 SE of Tyler	Widen to 4-lane divided roadway with flush median	TxDOT	Short-term
Railroad ROW Acquisition	Hagen Road in Whitehouse to FM 346 in Troup	Purchase 7.25 miles of abandoned Union Pacific Railroad corridor	TxDOT	Short-term
FM 756 (Paluxy)	Jeff Davis Drive to FM 346	Upgrade to a 4-lane principal arterial	TxDOT	Short-term
FM 2964 (Rhones Quarter)	Grande Blvd to CR 2167	Upgrade to a 4-lane principal arterial	TxDOT	Short-term

² The following projects - FM 2493 [north of FM 346] and SS 248 - were moved from the list of programmed to the list of proposed projects based on project readiness. Since these projects were not included in the original list of proposed projects ranked by the Technical Advisory Committee (TAC) on October 8, 2014, the projects were scored by TAC members during their November 6, 2014 meeting.



TRAVEL DEMAND MODEL QUANTITATIVE SCORING

Once the list of potential transportation projects was developed, the travel demand model was used to develop traffic data to assess the proposed improvements. The first step in this process was to update the future year population and employment demographic estimates within the model. A model run was then performed to estimate deficiencies on the existing-plus-committed (E+C) network in 2040. The existing-plus-committed network refers to all existing roadways, as well as transportation projects that are already funded and scheduled for construction either in the Tyler Area MPO's short-term Transportation Improvement Program (TIP) or the Tyler Area MPO's member jurisdictions' Capital Improvement Programs (CIPs). The data from this E+C run was used to establish a No-build baseline for use in comparing the impact of proposed projects on the regional transportation system.

Following the E+C deficiencies analysis, each of the projects was coded into the network in order to determine how well each proposed improvement addressed the identified deficiencies. The travel demand model is designed to report on several performance measures that quantify each project's impacts. The model outputs, which are discussed in detail below, were used to determine the score for each project's impact on reducing congestion - one of the 14 project scoring criteria.

Volume

For each of the roadways for which improvements were proposed, points were awarded based on the forecasted volumes on the roadway prior to any improvements (E+C data). Volume is measured as the number of vehicles per day traveling on a specific roadway. Roadways with higher forecasted volumes prior to any improvements being made were awarded a greater number of points, as high volumes indicate the roadway is a significant regional corridor, used by a large number of vehicles. Therefore, roadways that exhibited high forecasted volumes prior to any improvements were awarded more points than roadways with low volumes prior to any improvements.

Increase in Volume

The travel demand model was used to also estimate the volumes along the roadways after the proposed improvement was made in order to determine whether or not the number of vehicles per day using the roadway would increase if additional capacity is added. If investments are made to add capacity to a roadway, it is important that the number of cars using that roadway does not decrease after additional lanes have been added, which would indicate that traffic is now using an alternative route and an investment into a capacity improvement might not be necessary. Project improvements that resulted in a decrease in the number of vehicles using the roadway per day were awarded no points and projects that showed an increase were awarded points commensurate with the change.

Decrease in Volume to Capacity Ratio

The volume to capacity ratio, or V/C ratio (also referred to as volume over capacity [VOC]), measures the number of vehicles using a roadway as compared to the number of vehicles that the roadway is designed to accommodate. For example, if a roadway is designed to accommodate 100 vehicles and the actual volume on the roadway is 50 vehicles, the V/C ratio would be 0.5. On the other hand, if a roadway is designed to accommodate 100 vehicles and the actual volume on the roadway is 200 vehicles, the V/C ratio would be 2.0. A V/C ratio greater than 1 indicates that the roadway is operating with a vehicle volume above the design capacity of the roadway. The higher the V/C ratio, the more likely it is that the roadway is congested and vehicles are experiencing delay.



The travel demand model was used to analyze the change in the V/C ratio - before and after the proposed improvements. Points were awarded to projects based on how much the V/C ratio decreased after the construction of the proposed transportation improvement.

Volume to Capacity Ratio

Also taken into account was the starting V/C ratio. If a project had a significant drop in V/C ratio, but the "before" V/C ratio was already low, meaning the roadway's existing capacity still had room to accommodate more vehicles without any improvements, the project received fewer points than a project with a high "before" V/C ratio.

Change in Speed

The travel demand model is also capable of reporting average, congested vehicle speeds along roadways. Vehicle speeds were forecasted both before and after the introduction of proposed improvements. Roadways with significant increases in vehicle speeds were awarded more points than roadways that showed little to no increase in congested vehicle speeds.

Vehicle Hours Traveled

Vehicle hours traveled (VHT) is defined as the total vehicle hours expended traveling on the roadway network in a specified area during a specified time period. VHT is a good indicator of changes in overall delay along a segment of a roadway - the higher the VHT, the more time people are spending in their vehicles along the roadway segment being evaluated. The lower VHT the less time people are spending to travel the roadway segment and are, therefore, getting to their destination faster.

VHT along roadways with proposed improvements were forecasted for the year 2040, and before and after values were compared. A greater number of points was awarded to projects that decreased VHT versus those that showed little to no decrease in VHT, which indicated that the proposed project did not improve travel time.

Vehicle Miles Traveled

Vehicle miles traveled (VMT) are defined as the total number of miles traveled by vehicles in a specified area for a specified time period. For this project, VMT for existing roadways was calculated as the number of miles traveled for a 24-hour period within the limits of the proposed project improvements. VMT was used to determine the intensity of the use of the existing roadways being considered for improvement. Points were awarded to projects along roadways that exhibited a high VMT before any improvements. Similar to overall volumes, a high VMT indicates a roadway is regionally-significant.

Quantitative Scores

The results from the travel demand model analysis, as shown in Table XIII-3, were used to award points to projects based on each project's impact on the reduction of congestion as described above. This quantitative analysis was only one portion of the evaluation process.

Table XIII-3: Tyler Area MPO Travel Demand Model Results

Project Number and Name of Roadway		Project Scoring - Future Project Analysis																						
		2040 E+C Vol WAvG	2040 Built Vol WAvG	Increase in Vol WAvG	Increase in Volume Points	2040 E+C LOS Avg	2040 Built LOS Avg	Improvement VC Ratio WAvG	Improved V/C Ratio WAvG	2040 E+C Speed WAvG	2040 Built Speed WAvG	Improvement Speed WAvG	Increase in Speed WAvG	2040 E+C VHT	2040 Built VHT	Improvement in VHT	VHT Points	2040 E+C VMT	2040 Built VMT	Increase in VMT	VMT Points	Average Score (Model)		
1	IH 20 -- 1.0 mi W of US 69 to CR 496	47,643	44,992	(2,651)	0	4	0.85	0.55	0.30	2	2	51.7	55.4	3.6	3	4,463	4,134	329.0	1	232,735	228,169	(4,566.0)	4	2.3
2	FM 2493 -- FM 346 to S of FM 344 (Cherokee C/L)	11,553	13,844	2,291	0	2	1.32	0.65	0.67	4	4	31.1	42.6	11.6	4	1,337	1,315	22.0	0	46,785	58,548	11,763.0	2	2.3
3	FM 16 -- 0.3 mi W of FM 849 (CR 481) E to US 69 (Lindale)	13,602	11,692	(1,910)	0	2	1.74	0.77	0.97	4	4	19.1	42.4	23.3	4	585	253	332.0	1	12,792	10,862	(1,930.0)	1	2.3
4	FM 14 -- LP 323 to IH 20	11,759	16,423	4,664	0	2	1.52	1.06	0.47	3	4	24.9	37.1	12.3	4	2,007	1,972	35.0	0	51,048	73,348	22,300.0	3	2.3
5	SS 364 -- SH 31 to LP 323	10,614	14,561	3,947	0	2	1.14	0.94	0.20	1	3	32.7	39.3	6.6	4	1,825	1,768	57.0	0	48,579	63,752	15,173.0	2	1.7
6	FM 14 -- MLK Jr Blvd to LP 323 E	8,276	8,782	506	0	1	0.77	0.35	0.42	3	1	34.1	36.4	2.2	2	349	349	0.0	0	11,887	12,631	744.0	1	1.1
7	FM 756 (Paluxy) -- Jeff Davis Drive to FM 346	13,466	18,459	4,994	0	2	1.49	0.83	0.66	4	4	22.8	35.5	12.7	4	2,089	1,816	273.0	1	47,049	64,908	17,859.0	2	2.4
8	SH 31 E -- LP 323 E to FM 850	13,745	26,313	12,568	1	2	1.23	0.98	0.25	2	3	28.3	35.9	7.5	4	1,388	2,087	(699.0)	0	38,888	74,424	35,536.0	2	2.0
9	SH 110 -- 5th Street to Golden Road	33,903	37,565	3,663	0	3	1.08	0.80	0.28	2	3	28.1	32.0	3.9	3	1,944	1,852	92.0	0	53,016	58,720	5,704.0	3	2.0
10	FM 16 -- US 69 to 2.4 mi E of US 69	11,900	15,266	3,366	0	1	1.53	0.99	0.53	4	4	25.3	37.1	11.9	4	998	777	221.0	1	23,381	29,315	5,934.0	2	2.3
11	FM 2493 -- from FM 2813 in Gresham to FM 346 in Flint	12,704	15,229	2,525	1	2	1.44	0.86	0.58	4	4	27.3	36.2	8.9	4	919	867	52.5	0	26,310	31,779	5,469.0	2	2.4
12	SS 248 -- 1.75 Mi W of FM 848 (Old Omen Rd), E to SH 64 SE of Tyler	12,252	15,683	3,431	1	2	1.01	0.59	0.43	3	3	30.5	40.4	10.0	4	850	835	15.2	0	25,701	33,736	8,035.0	2	2.1
13	Purchase 7.25 miles of abandoned railroad corridor	0	0	0	1	1	0.00	0.00	0.00	1	1	0.0	0.0	0.0	1	0	0	0.0	1	0	0	0.0	1	1.0



TECHNICAL ADVISORY COMMITTEE QUALITATIVE SCORING

For the remaining qualitative project scoring criteria, as developed from the public Visioning Workshop, the technical expertise and local knowledge of the Tyler Area MPO's Technical Advisory Committee (TAC) was used to score each of the proposed projects. The TAC scored the projects according to how well each of the projects aligned with, and contributed towards, achieving the community's vision as defined in the *Metropolitan Transportation Planning Process - Chapter II* of this document.

For each of the projects, TAC members were asked to assign one, two, or three points based on the degree to which the project addressed the project scoring criteria.

- ▶ Projects with a high direct correlation to the criteria were assigned three points;
- ▶ Projects with medium influence on the criteria were assigned two points, and
- ▶ Projects with minimal to no impact on the criteria were assigned one point.

As an example, if a project was thought to have a significant impact on safety, the project would be assigned three points. On the other hand, if a project did nothing to increase multi-modal options, it would be assigned one point for that criterion. The short-term and long-term projects were scored and ranked separately. Table XIII-4 shows the average score for the projects as they relate to each criterion, which was based on the average of all input received from the Technical Advisory Committee members.

Table XIII-4: Tyler Area MPO Qualitative Assessment by TAC Members

Project Number and Name of Roadway		Project Scoring - Future Project Analysis													
		Average Score (Model)	Improves Safety	Supports Econ. Dev. Goals	Conserves Energy	Promotes Efficiency	Protects the Environment	Improves Access	Improves Quality of Life	Supports Connections	Improves Land Use Goals	Increase Multi-modal Options	Connect Modes of Travel	Preserves ROW	
1	IH 20 -- 1.0 mi W of US 69 to CR 496	2.3	2.375	2.25	1.875	2.125	1.5	2.75	1.875	2.25	2.5	1.5	1.375	1.25	2.125
2	FM 2493 -- FM 346 to S of FM 344 (Cherokee C/L)	2.3	2.75	2.75	2.375	2.625	1.75	2.625	2.5	2.125	2.5	1.5	2.125	1.75	1.75
3	FM 16 -- 0.3 mi W of FM 849 (CR 481) E to US 69 (Lindale)	2.3	1.875	2	1.75	2	1.375	2	2	1.75	2	1.125	1.125	1.125	1.625
4	FM 14 -- LP 323 to IH 20	2.3	2.5	2.375	2	2	1.375	2.125	1.75	2.125	2.125	1.25	1.375	1.375	1.5
5	SS 364 -- SH 31 to LP 323	1.7	2.25	2.375	2.25	2.25	1.5	2.25	2.125	1.75	1.875	1.125	1.125	1.25	1.5
6	FM 14 -- MLK Jr Blvd to LP 323 E	1.1	2.25	2	1.875	1.875	1.25	2	1.75	2	1.875	1.375	1.375	1.5	1.375
7	FM 756 (Paluxy) -- Jeff Davis Drive to FM 346	2.4	2.5	2.75	2.5	2.125	1.5	2.625	2.25	2.125	2.5	1.25	1.875	1.5	1.625
8	SH 31 E -- LP 323 E to FM 850	2.0	2.5	2	1.75	2.25	1.25	1.875	2	2	1.875	1	1.125	1.125	1.375
9	SH 110 -- 5th Street to Golden Road	2.0	2.5	2.125	2	2	1.25	2.125	2	1.75	2	1.125	1.5	1.5	1.375
10	FM 16 -- US 69 to 2.4 mi E of US 69	2.3	1.5	1.625	1.25	1.75	1.25	1.875	1.5	1.625	1.625	1	1.25	1.25	1.375
11	FM 2493 -- from FM 2813 in Gresham to FM 346 in Flint	2.4	2.857	2.857	2.286	2.429	2	2.571	2.714	3	2.714	1.857	2.429	2.286	2.143
12	SS 248 -- 1.75 Mi W of FM 848 (Old Omen Rd), E to SH 64 SE of Tyler	2.1	2.714	2.286	2.143	2.286	2	2.429	2.571	2.714	2.429	1.714	2.143	2.286	2
13	Purchase 7.25 miles of abandoned railroad corridor	1.0	1.25	2	1.5	1.75	2.25	1.75	2.5	1.875	2.625	1.125	2.5	1.875	3



FINAL PROJECT SCORES

The following table depicts the combined results of the project scoring process. Table XIII-5 shows the final scores derived from the publicly weighted criteria, the quantitative travel demand model analysis, and the qualitative analysis by the Technical Advisory Committee, based on the TAC members' local knowledge and expertise.

Table XIII-5: Short- and Long-term Projects in Order of Priority

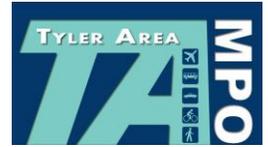
Project Ranking	Name of Roadway	Project Description	Final Score
Short-Term Projects (2015-2024)			
1	FM 2493 -- from FM 2813 in Gresham to FM 346 in Flint	Widening from 2 to 4 lanes	2.53
2	SS 248 -- 1.75 Mi W of FM 848 (Old Omen Rd), E to SH 64 SE of Tyler	Widening from 2 (and 3) to 4 lanes	2.33
3	FM 2493 - FM 346 to S of FM 344 (Cherokee C/L)	Widening from 2 to 4 lanes	2.29
4	IH 20 - At US 69	Ramp improvements at US 69	2.03
5	FM 756 (Paluxy) - Jeff Davis Drive to FM 346	Widening from 2 to 4 lanes	2.05
6	Railroad ROW Acquisition - Hagen Road in Whitehouse to FM 346 in Troup	Purchase 7.25 miles of abandoned Railroad corridor	1.89
7	FM 2964 (Rhones Quarter) – Grande Blvd to CR 2167	Widening from 2 to 4 lanes and Center Turn Lane	2.03
8	FM 16 - 0.3 mi W of FM 849 (CR 481) E to US 69 (Lindale)	Widening from 2 to 4 lanes	1.76
Long-Term Projects (2025-2040)			
1	FM 756 (Paluxy) - FM 346 to FM 344	Widening from 2 to 4 lanes	2.05
2	FM 2964 (Rhones Quarter) – CR 2167 to FM 346	Widening from 2 to 4 lanes and Center Turn Lane	2.03
3	SH 31 E - LP 323 E to FM 850	Widening from 3 to 4 lanes	1.92
4	SH 110 -- 5th Street to Golden Road	Widening from 4 to 6 lanes	1.91
5	SS 364 -- SH 31 to LP 323	Widening from 2 to 4 lanes	1.85
6	FM 2493 -- LP 323 to FM 2813	Widening from 4 to 6 lanes	1.79
7	Loop 323 Extension -- LP 323 NE to US 271	Widening from 2 to 4 lanes	1.73
8	SH 155 N -- US 271 N to IH 20 E	Widening from 2 to 4 lanes	1.69
9	SH 110 N -- LP 323 to FM 2016	Widening from 2 to 4 lanes	1.69



APPROVAL OF THE PRIORITIZED PROJECT LIST

On November 20, 2014, the Policy Committee reviewed the prioritized project list prior to its formal action on the 2040 Metropolitan Transportation Plan.

On October 13, 2016, the Policy Committee reviewed the amended prioritized project list prior to its formal action to amend the 2040 Metropolitan Transportation Plan.



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XIV. FINANCIAL PLAN

According to federal regulations, transportation improvement projects included in a metropolitan transportation plan (MTP) must fall within the financial capabilities of the community. The final project list included in the MTP must therefore be fiscally constrained, i.e. the amount of revenues available for projects must be greater than or equal to the anticipated cost of the projects.

This chapter includes a list of the funding sources and dollar amounts anticipated to be available to fund the Tyler Area 2040 Metropolitan Transportation Plan projects. Historical trends in funding were assessed and reasonably expected funding levels were forecast to determine the funds available.

As federally required, the revenues and costs contained in this chapter were calculated in year-of-receipt and year-of-expenditure dollars, respectively. Year-of-receipt or -expenditure means that the revenues and costs calculations correlate with the year the funds will be received or spent.¹

ROADWAY FUNDING SOURCES

Historically, there have been several funding streams available for transportation improvement projects, including Federal, state, and local sources, which will be discussed in the following sections. For ease of overview, the funding for roadway and transit improvements is included in separate subchapters.

Federal Highway Administration

MAP-21 authorizes the Federal surface transportation programs for highways, highway safety, and transit for the two-year period 2013-2014. MAP-21 builds on the firm foundation of three previous landmark transportation bills – the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA), the Transportation Equity Act for the 21st Century (TEA 21), and the Safe, Accountable, Flexible, Efficient Transportation Equity Act – Legacy for Users (SAFETEA-LU).

Funds for roadway construction are made available by the Federal Highway Administration (FHWA) on a formula basis to each state.² The funding includes several categories, under which many of the projects in the financially constrained plan will be eligible for Federal funding assistance. These categories are as follows:

National Highway System (NHS)

This category covers all Interstate routes and a large percentage of urban principal arterials. The Federal/state funding ratio for arterial routes is 80/20, meaning 80 percent of the funding is provided from this federal source and requires a 20 percent state match. The Interstate system, although a part of NHS, will retain its separate identity and receive separate funding at a 90/10 ratio. The U.S. Congress passed the NHS bill in 1996.

¹ For example, a roadway project included on the list is scheduled for 2015 at a cost of \$500,000 to complete. If the project is delayed or rescheduled for a later year (like 2016), the cost of the project will increase by the yearly inflation rate. If the inflation rate for this scenario is 3.5%, the project cost in 2016 becomes \$517,500 ($\$500,000 \times 3.5\% = \$17,500 + \$500,000$).

² During the economic downturn at the end of the previous decade, additional Federal funds had been made available for transportation infrastructure. However, as the American Recovery and Reinvestment Act provided a one-time allocation, it was not considered in the forecast of reasonably expected revenues.



Surface Transportation Program (STP)

The STP is a block grant funding program with subcategories for states and urban areas. The funding ratio is 80/20. These funds can be used for any road, including NHS, that is not functionally classified as a local road or rural minor collector. The state portion can be used on roads within an urbanized area, whereas the urban portion can only be used on roads within an urbanized area.

Subcategories of the STP funds are:

- ▶ STP greater than 200,000 population (STP>200K)
- ▶ STP less than 200,000 population (STP<200K)
- ▶ STP less than 5,000 population (STP <5K)
- ▶ STP Flexible (STP-FLEX)
- ▶ STP Hazard Elimination (STP-HAZ)

Bridge Replacement and Rehabilitation Program (FBR)

Federal Bridge Replacement and Rehabilitation funds can be used to replace or repair any bridge on a public road. The Federal/state funding ratio is 80/20.

Congestion Mitigation and Air Quality (CMAQ)

Urban areas which do not meet ambient air quality standards are designated as nonattainment areas by the U.S. Environmental Protection Agency (EPA). CMAQ funds are apportioned to nonattainment urban areas for use on projects that contribute to the reduction of mobile source air pollution through reducing vehicle miles traveled, fuel consumption, or other identifiable factors. Starting in fiscal year (FY) 2013 all CMAQ projects require a 20 percent local match, with the exception of carpool & vanpool projects, which remain 100 percent Federal. The eligibility of projects under these funding categories is based on the functional classification system mandated by SAFETEA-LU. Please note that the study area is currently an attainment area for monitored air quality pollutants, and the Tyler Urbanized Area does not receive funds under this category at this time.

System Maintenance and Operation

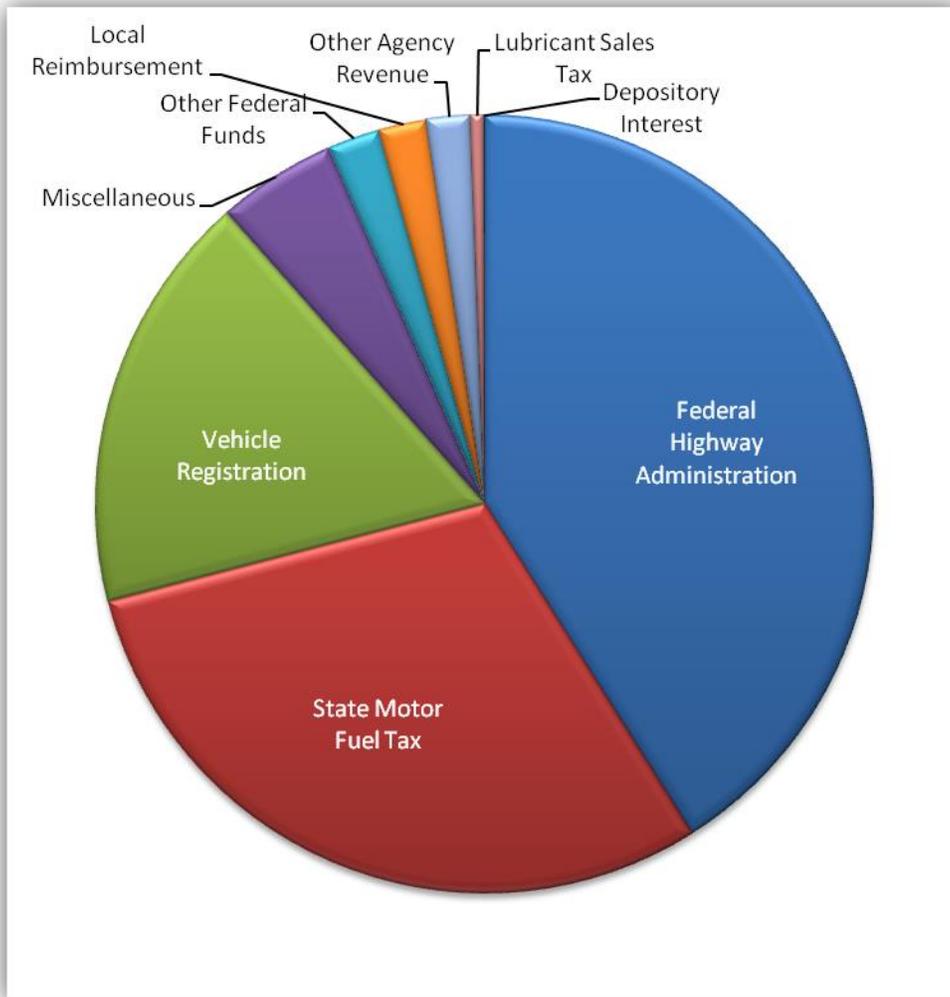
The maintenance and operation of the transportation system was considered in the development of the plan and staged program. Typically, maintenance costs are applicable to the system as a whole. Where possible, maintenance projects are identified individually; however, it is not possible to develop project specific maintenance schedules beyond the near term. The maintenance costs identified in this plan are the responsibility of various governmental jurisdictions.

The balancing act of meeting identified transportation improvement needs and maintaining the present transportation system will continue to place local decision makers and revenue forecasts somewhat at odds. (Recommendations included in this plan are conservative, because they factor in the impact of maintenance costs into the determination of available funding.)

State of Texas and Texas Department of Transportation

To fund needed transportation improvements, the State of Texas not only receives federal transportation funds from federal programs that the State then passes through to the metropolitan areas, but also revenues from the State motor fuel tax, vehicle registration fees, lubricant sales tax, and other federal and local sources that are used to fund transportation improvement projects. The Texas Department of Transportation (TxDOT) was estimated to have just over \$8 billion available for transportation projects in FY 2014. Figure XIV-1 shows the breakdown by funding source.

Figure XIV-1: State of Texas – Transportation Revenue



Source: Texas Transportation Plan 2040 – FY 2014 Estimates

Traditional Funding Sources

TxDOT distributes both Federal and State transportation funds on select projects based on the following funding categories:³

1. Preventive Maintenance and Rehabilitation
2. Metropolitan and Urban Area Corridor Projects
3. Non-Traditionally Funded Transportation Projects
4. Statewide Connectivity Corridor Projects
5. Congestion Mitigation & Air Quality Improvement
6. Structures Replacement and Rehabilitation
7. Metropolitan Mobility and Rehabilitation
8. Safety

³ Based on its size and air quality attainment status, the Tyler Area MPO has not been eligible for project funding under the following categories: 2, 5, and 7.



- 9. Transportation Enhancements
- 10. Supplemental Transportation – i.e. State Park Roads, Railroad (RR) Grade Crossing, RR Signals, Landscaping and Environmental
- 11. District Discretionary
- 12. Strategic Priority

Table XIV-1 provides a general overview of the categories and breakdown of funding sources.

Table XIV-1: TxDOT Funding Categories

Funding Category	Starting Point	Project Selection By	Summary	General Funding Breakdown			
				Fed	State	Local	
1	Preventive Maintenance and Rehabilitation	TxDOT District	TxDOT Districts	Preventive maintenance and rehabilitation of the existing state highway system including interstate main lanes, structures, signs, markings, striping.	90%	10%	0%
					80%	20%	0%
					0%	100%	0%
2	Metro and Urban Area Corridor Projects	TxDOT District	MPOs in consultation w/ TxDOT	Mobility and added capacity projects for TMA MPOs	80%	20%	0%
					0%	100%	0%
3	Non-Traditionally Funded Transportation Projects	TxDOT District	MPOs in consultation w/ TxDOT	Mobility and added capacity projects for non-TMA MPOs	80%	20%	0%
					0%	100%	0%
4	Statewide Connectivity Corridor Projects	TxDOT District	TxDOT Commission	Mobility and added capacity projects which serve the mobility needs of statewide connectivity	80%	20%	0%
					0%	100%	0%
5	Congestion Mitigation & Air Quality Improvement	TxDOT District	MPOs in consultation w/ TxDOT	Addresses attainment of air quality standards in non-attainment areas	90%	10%	0%
					80%	0%	20%
					80%	20%	0%
6	Structures Replacement and Rehabilitation	TxDOT District	TxDOT Bridge Division	Rehab of bridges on and off the state system, replacement of existing highway-railroad grade crossing or railway underpass	90%	10%	0%
					80%	20%	0%
					80%	10%	10%
7	Metropolitan Mobility and Rehabilitation	TxDOT District	MPOs in consultation w/ TxDOT	Transportation needs within MPOs with populations of 200,000 or greater	80%	20%	0%
					80%	0%	20%
					0%	100%	0%
8	Safety – Federal Hazard Elimination Program	TxDOT District	TxDOT Commission / Federal Safety Indices	Safety related projects	100%	0%	0%
					90%	0%	10%
					90%	10%	0%
					0%	100%	0%
	Safety – Federal Railroad Signal Safety Program	TxDOT District	TxDOT Commission / Federal Safety Indices	Installation of automatic RR warning devices	100%	0%	0%
90%					0%	10%	
90%					10%	0%	
0%					100%	0%	
9	Transportation Enhancements	TxDOT District	TxDOT Commission	Projects that enhance the traveling experience	80%	20%	0%
					80%	0%	20%



Funding Category	Starting Point	Project Selection By	Summary	General Funding Breakdown			
				Fed	State	Local	
10	Supplemental Transportation Projects - State Park Roads	TxDOT District or TPWD	Tx Parks & Wildlife	Construction and rehabilitation of roadways within or adjacent to state parks	0%	100%	0%
	Supplemental - RR Grade Crossing Replanking Program	TxDOT District	Traffic Operations Division	Replacement of rough railroad crossing surfaces	0%	100%	0%
	Supplemental - RR Signal Maintenance Program	TxDOT District	Traffic Operations Division	Contributions to RR Companies based on number of crossings	0%	100%	0%
	Supplemental - Construction Landscape Programs	TxDOT District	TxDOT District	Landscape, aesthetic, and environmental improvements	0%	100%	0%
	Supplemental - Landscape Cost Sharing Program	TxDOT District	TxDOT District	Allows the department to execute joint landscape improvement projects through partnerships	0%	100%	0%
	Supplemental - Landscape Improvement Program	TxDOT District	TxDOT District	Landscape projects for non-attainment air quality or near non-attainment areas	0%	100%	0%
	Supplemental - Supplemental (Federal)	Federal allocations	Varies	Federal programs such as Forest Highways, Indian Reservation Highways, Federal Land Highways and Ferry Boat Discretionary	100% 80% 0%	0% 20% 100%	0% 0% 0%
11	District Discretionary	TxDOT District	TxDOT District	Projects selected at district's discretion	80%	20%	0%
					80%	0%	20%
					0%	100%	0%
12	Strategic Priority	TxDOT Commission	TxDOT Commission	Projects must promote economic development, provide system continuity with adjoining states, increase efficiency on military deployment routes	80%	20%	0%
					0%	100%	0%

Non-Traditional Funding Sources

There are several non-traditional sources of funding that have been successfully used to provide funds for transportation improvements within the Tyler Urbanized Area.

Texas Mobility Fund

Voters authorized the creation of the Texas Mobility Fund (TMF) in 2001. To accelerate completion of TxDOT projects and improvements, the TMF provides a method of financing the construction, reconstruction, acquisition, and expansion of state highways, including the costs of any necessary design and costs of acquisition of rights-of-way. The TMF may also be used to provide participation by TxDOT in the payment of all or a portion of the costs of constructing and providing publicly-owned toll roads and other public transportation projects. The fund allows the State to issue bonds backed by dedicated revenue sources. The Texas Transportation Commission administers the fund as a revolving fund program to advance projects by spending, granting, or loaning funds for highway improvements including toll roads.



Proposition 14

In 2003, voters approved Constitution Proposition 14 to authorize the state to borrow money for the implementation of transportation projects on a short term basis of two years or less. On October 30, 2008, the Texas Transportation Commission directed TxDOT to issue an additional \$2.9 billion in Proposition 14 bonds, or revenue bonds backed by the State Highway Fund, to advance the construction of several much needed projects across the state. The projects selected for accelerated implementation using these bond proceeds include:

- ▶ Projects previously delayed due to funding limitations;
- ▶ Priority projects, including the last phase of multiple-phased projects as well as projects of statewide significance;
- ▶ Projects to address congestion problems in regions previously not addressed; and
- ▶ Projects that provide safety improvements in areas with high accident rates. (TxDOT, 2014)

\$2.2 million of Proposition 14 funds were allocated to the construction of additional lanes for State Highway 64 within the study area.

Proposition 12

In 2007, voters approved Constitution Proposition 12 authorizing the state to borrow up to \$5 billion in general revenue bonds for highway improvements. The Texas Transportation Commission has approved distribution of \$5 billion in Proposition 12 bond funding to address congested highways, rehabilitate bridges and improve connectivity between the State's metropolitan areas. \$1.4 billion were directed to TxDOT's 25 districts and \$600 million were directed to the 25 Metropolitan Planning Organizations (MPOs) around the state according to existing formulas. Proposition 12 also provided \$200 million for statewide highway connectivity improvements, \$500 million for bridges and \$300 million for relief in the four most congested regions of the State: Houston, Dallas-Fort Worth, Austin and San Antonio.

\$4.4 million of Proposition 12 funds were allocated to the study area to date for the widening of State Highway 31. Of the \$1.4 billion set aside for rehabilitation and safety projects for all of TxDOT's districts, the Tyler District's portion amounts to nearly \$32.6 million.⁴

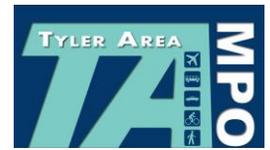
Proposition 1 (Potential Funding Source)

On August 5, 2013 legislators approved House Bill (HB) 1 and Senate Joint Resolution (SJR) 1, which could provide an estimated \$1.7 billion to the State Highway Fund in the first year of implementation. Texas voters approved this proposed amendment on Nov. 4, 2014, as stated:

The constitutional amendment providing for the use and dedication of certain money transferred to the state highway fund to assist in the completion of transportation construction, maintenance, and rehabilitation projects, not to include toll roads.

With this recent approval of the proposition, the implementation process will begin shortly. However, since funding allocations had not been determined at the time this MTP was developed, any potential funds from this source were not yet included in the available revenue totals.

⁴ It is important to note that the TxDOT Tyler District encompasses not only Smith County, but also covers Anderson, Cherokee, Gregg, Henderson, Rusk, Van Zandt, and Wood counties, consequently, the portion of the money that will be spent in the study area will be smaller than the amount listed.



Local Roadway Funding

Any costs not covered by Federal and State programs will be the responsibility of the local governmental jurisdictions. Local funding can come from a variety of sources including property taxes, sales taxes, user fees, special assessments, and impact fees. Each of these potential sources is important and warrants further discussion.

Municipalities

Local funding is received primarily from sales and property taxes. The City of Tyler is the only local agency in the study area with annual construction dollars dedicated to roadway projects. Smith County has also provided local matching funds for past projects. The majority of its funds for transportation improvement projects are received from road and bridge fees.

General Sales Taxes

The general sales tax is an important revenue source for local governments. The most commonly known form of the general sales tax is the retail sales tax. The retail sales tax is usually a uniform percentage of the selling price of a commodity.

General sales taxes play an important role within the study area, where a half-cent sales tax was approved by Tyler voters in 1995. The tax annually provides approximately \$9.5 million for the City's capital projects. The Tyler City Council and One Half Cent Sales Tax Corporation Board of Directors determine how the funds are spent. Since 1995, the half-cent sales tax has funded multiple projects, including drainage, public safety, the construction of several buildings and amenities, as well as various transportation improvements. (Tyler, 2014)

Property Taxes

Property taxation has historically been the primary source of revenue for local governments in the United States. Property taxes account for more than 80 percent of all local tax revenues. Property is not subject to Federal government taxation, and state governments have, in recent years, shown an increased willingness to leave this important source of funding to local governments.

User Fees

User fees are fees collected from those who utilize a service or facility and draw direct benefits from their provision. The fees are collected to pay for the cost of a facility, finance the cost of operations, and/or generate revenue for other uses. User fees are commonly charged for public parks, water and sewer services, transit systems, and solid waste facilities.

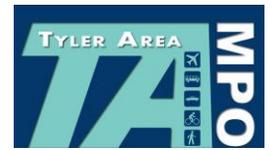
Special Assessments

Special assessment is a method of generating funds for public improvements, where the cost of a public improvement is collected from those who directly benefit from the improvement. In many instances, new streets are financed by special assessment, where the owners of property located adjacent to the new streets are assessed a portion of the cost of the new streets, based on the amount of frontage they own along the new streets.

Special assessments have also been used to generate funds for general improvements within special districts, such as central business districts. In some cases, these assessments are paid over a period of time, rather than as a lump sum payment.

Toll Roads

A non-traditional method of funding transportation improvements for the construction of controlled access roadways is to construct the roadway as a tolled facility and sell revenue bonds to build the toll road based on the premise that anticipated toll revenues are used to



repay the bonds. Toll roads can be built by the state or through an agreement with a private contractor.

A toll road has the ability to generate project revenue, which means projects can be fully or partially financially self-sufficient. As toll roads are generally funded by revenue bonds backed by the anticipated toll revenues, toll road projects have the ability to be started sooner and completed quicker than projects relying on the incremental allocation of federal funding

Toll equity allows state funds to be combined with other funds to build toll roads. Toll Conversion allows the commission to transfer segments of any non-tolled state highway to a county or regional toll authority for operation and maintenance, which provides local authorities another option that can accelerate maintenance and expansion improvements.

Toll 49 is the only tolled facility within the study area. Expansions to the current extent are planned and are anticipated to be funded by the North East Texas Regional Mobility Authority.

North East Texas Regional Mobility Authority (NET RMA)

A regional mobility authority (RMA) is a political subdivision formed by one or more counties to finance, acquire, design, construct, operate, maintain, expand or extend transportation projects. RMAs have considerable authority over transportation decisions within their communities, and may also seek grants or loans from TxDOT.

To support RMA operations, revenue can be generated from various sources, including tolls, fares, or other charges from transportation projects; proceeds from the sale or lease of the project; and proceeds from the sale or lease of adjoining property.

NET RMA encompasses a total of twelve counties, including Bowie, Cass, Cherokee, Gregg, Harrison, Panola, Rusk, Smith, Titus, Upshur, Van Zandt, and Wood counties. It is anticipated that NET RMA will contribute funding for the construction of Toll 49 Segments 4 and 6 over the life of the 2040 Metropolitan Transportation Plan.

Pass-Through Toll Agreements

The Pass-Through Toll Financing program was created by the Texas legislature as a means to allow local areas to accelerate the construction of transportation improvements in mobility and safety on the state highway system. It is a partnership between a developer and TxDOT where roadway construction is funded with a per-vehicle or per-vehicle mile fee paid to the developer by TxDOT. A local government or private entity makes a transportation improvement and is reimbursed from the state based on the number of vehicles using the highway. This allows the local area to implement projects quicker while providing for project repayment under TxDOT's funding Category 12.

The Pass-Through Toll Financing program terminology is statutory and does not imply that each proposed project must have a physical toll collection component. A proposed project may or may not have this component.

State Infrastructure Bank

State Infrastructure Banks (SIB) were authorized in 1995 as a part of the National Highway Designation Act to help accelerate needed mobility improvements through a variety of financial assistance options made to local entities through state transportation departments. SIB allows TxDOT to offer various loans and credit enhancement products for highway projects to accelerate the construction time and reduce construction costs for transportation improvements.



The SIB program allows borrowers to access capital funds at or below market interest rates, and operates as a revolving loan fund, where the account balance grows through the monthly interest earned and repaid principal and interest payments. In Texas, SIB financial assistance can be granted to any public or private entity authorized to construct, maintain or finance a transportation project, which must be eligible for funding under the existing federal highway rules. This usually requires a project to be on a state's highway system and included in the statewide Transportation Improvement Plan, as well as the MTP.

Eligible activities include planning and preliminary studies, feasibility, economical and environmental studies, right of way acquisition, surveying, appraisal and testing, utility relocation, engineering and design, construction, inspection and construction engineering.

Since 2006, two SIB loans for a total amount of \$3.12 million were given to study area entities and have enabled a \$9.32 million investment in transportation projects within Smith County. (TxDOT, 2014)

Comprehensive Development Agreements

Comprehensive Development Agreements enable private investments into the Texas transportation system. In other areas of the State, TxDOT has successfully used this tool to share the risk and responsibilities of design and construction with a private developer. This project delivery method combines design and construction into one comprehensive contract, instead of the traditional method of having individual contracts for separate phases of a project, which results in faster delivery of the project, and often, greater cost certainty due to lump sum pricing.

This type of public-private partnership is particularly useful for accelerated financing, design, construction, operation and/or maintenance of a project. (TxDOT, 2014)

TRANSIT FUNDING SOURCES

The following funding sources are available for transit related improvements and services.

Federal Transit Administration

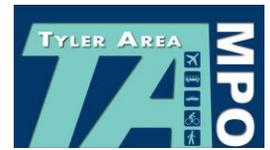
The Federal Transit Administration (FTA) administers all of the following programs to fund services by Tyler Transit.

Please note that Section 5316 - New Freedom and Section 5317 - Job Access and Reverse Commute programs available in the past were absorbed into Section 5307, 5310, and 5311 programs with the passage of MAP-21.

Section 5307 Urbanized Area Formula Program

Section 5307, the Urbanized Area Formula program (49 U.S.C. 5307), makes Federal resources available to urbanized areas for transit capital and operating assistance in urbanized areas, and for transportation related planning. An urbanized area is an area with a population greater than 50,000 as designated by the US Census Bureau. Funding for the formula based program is determined based on the level of transit service provision, population, and other factors. Section 5307 funds are the main source of Federal revenue for Tyler Transit.

Activities previously eligible under the Job Access Reverse Commute (JARC) program, which focused on providing transportation to low-income individuals for job or job-related activities, are now eligible under Section 5307.



Section 5309 Capital Investment Program

Section 5309, the transit capital investment program (49 U.S.C. 5309), is administered by the FTA, and provides capital assistance for the replacement of buses and facilities, as well as the implementation or modernization of fixed guideway systems.

Section 5310 Transportation for Elderly Person and Persons with Disabilities

The Section 5310 program (49 U.S.C. 5310) provides formula funding to states to assist private, nonprofit groups in meeting the transportation needs of the elderly and persons with disabilities when the transportation service provided is unavailable, insufficient, or inappropriate to meeting these needs.

Activities previously eligible under the New Freedom program and projects that provided transportation services to individuals with disabilities that went above and beyond the requirements of the Americans with Disabilities Act (ADA) are now eligible activities under Section 5310.

Section 5311 Formula Grants for Rural Areas

Section 5311 is a formula-based grant program that provides funding for the purpose of supporting public transportation in rural areas, with a population of less than 50,000. The goal of the program is to provide the following services:

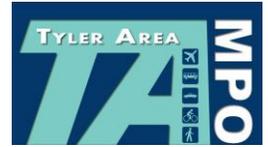
- ▶ Enhance the access of people in non urbanized areas to health care, shopping, education, employment, public services, and recreation.
- ▶ Assist in the maintenance, development, improvement, and use of public transportation systems in non urbanized areas.
- ▶ Encourage and facilitate the most efficient use of all transportation funds, used to provide passenger transportation in non urbanized areas, through the coordination of programs and services.
- ▶ Assist in the development and support of intercity bus transportation.
- ▶ Provide for the participation of private transportation providers in non urbanized transportation.

Activities previously eligible under the JARC program are now eligible for funding using Section 5311 funds, with no threshold on the amount of funds that can be spent on JARC activities.

Section 5324 Public Transportation Emergency Relief Program

The Public Transportation Emergency Relief (ER) program allows FTA to provide grants to public transportation agencies that have experienced serious damage to transit assets as a result of an emergency. An emergency is defined as a natural disaster which affects a wide area, such as a flood, hurricane, tidal wave, earthquake, severe storm, or landslide, or a catastrophic failure from an external cause, resulting in the governor of a state declaring an emergency concurrence from the Secretary of Transportation or the President has declared a major disaster.

Grants are provided for capital projects and may reimburse operating expenses that are outside the scope of an affected recipient's normal operations, including but not limited to evacuations; rescue operations; bus, ferry, or rail service to replace inoperable service or to detour around damaged areas; additional service to accommodate an influx of passengers or evacuees; returning evacuees to their homes after the disaster or emergency; and the net project costs related to reestablishing, expanding, or relocating public transportation service before, during, or after an emergency or major disaster.



Section 5337 State of Good Repair Formula Program

The State of Good Repair Formula Program provides funding to urbanized areas with fixed guideway systems and high intensity motorbus systems. The program helps maintain these public transportation systems in a state of good repair by financing replacement and rehabilitation projects for existing fixed guideway systems and high intensity motorbus systems that have been operating for at least seven years.

Section 5339 Bus and Bus Facilities Formula Program

The Bus and Bus Facilities Program provides funding to states and urbanized areas for bus-related capital projects. A portion of the funds are allocated through an initial national distribution to states, while the remaining funds are apportioned by formula based on population, vehicle revenue miles, and passenger miles.

Texas Department of Transportation

In the past, the State of Texas has occasionally used Section 5304 – Statewide Transportation Planning funds for select transit projects

Local Transit Funding

Local matching funds are provided through transit fare revenues and transfers from the City of Tyler's general fund.



HISTORICAL AND PROJECTED FUNDING

Historically, transportation improvement projects in the Tyler Area MPO have been funded through a combination of Federal, State, or local dollars, with NET RMA contributing funding towards select Toll 49 segments. Historical funding from 1995 to 2014 is summarized in Table XIV-2,⁵ with a particular breakout of currently programmed Fiscal Year 2015 through 2018 funding.

Over the past ten years, state and federal funding in the region totaled almost \$231 million. For the “Maintain It” funding categories (Categories 1 and 6), approximately \$63.8 million were received, equivalent to 27.6 percent of total funding. A review of the “Build It” funding categories showed that just over \$167 million, a 72.4 percent share of the total amount, had been expended within the study area.

Through 2009, the Tyler Area MPO had seen a trend of upward revenue for roadways. However, since 2010, and particularly in light of the recent strain on the National Highway Trust Fund from which Federal transportation funding is expended, a continued upward trends is not anticipated:

- ▶ Based on the analysis of rolling averages, it was determined that the more recent historical funding figures (2011 or later) provided a better base line for the revenue projections, as special earmarks for Toll 49 in earlier years would otherwise have created unrealistic, future revenue expectations.
- ▶ Based on a trend analysis of the funding received over the last 20 years, a downward trend of -2 percent per year was assessed for Federal and State roadway funding.
- ▶ Recent year inflation was used to determine an average inflation rate of 2 percent per year to account for the year-of-receipt growth adjustment.
- ▶ Combining the downward funding trend and the year-of-expenditure growth adjustment, Federal and State roadways funding is not expected to grow annually.
- ▶ The project-level year-of-expenditure cost associated with the respective implementation phase (short- or long-term) was based on the phase's mid-term inflation factor.
- ▶ City of Tyler half-cent sales tax funding for transportation improvements was considered in the revenue forecast, albeit at a lower limit (25 percent) that what can be drawn done according to City code.

Transit funding has steadily increased over the past 20 years. To assume a more conservative growth trend, a trend analysis was conducted for funds received since 2005:

- ▶ Annual transit funding grew by 0.15 percent per year between 2005 and 2014.

Based on these assumptions, projections were developed for expected Federal, State, and local funding for the 10-year short-term (2015-2024) and the 15-year long-term (2025-2040) implementation phases. Table XIV-2 also contains the projected revenues, which were broken out by mobility and non-mobility projects for planning purposes, as well as for allowing a direct comparison with historical revenue information.

⁵ For an exact breakdown of Federal, State, and local shares, this funding data was compiled from project-level information contained in historical Transportation Improvement Programs (TIPs) for the Tyler Urbanized Area, as well as Statewide Transportation Improvement Programs (STIPs), provided the project was implemented within the Tyler Metropolitan Area.

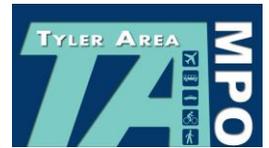


Table XIV-2: Historical and Projected Revenue

Revenue Projection	Historical	Historical	Historical	Historical	Currently Programmed	Short-term	Long-term
	1995-1999	2000-2004	2005-2009	2010-2014	2015-2018	2015-2024	2025-2040
Streets and Highways							
Build It	\$49,781,925	\$56,772,403	\$149,241,411	\$17,915,000	\$16,922,755	\$ 124,510,000	\$ 186,765,000
Maintain It (Cat 1 & 6)	\$53,067,396	\$65,966,856	\$31,168,623	\$32,641,481	\$12,580,513	\$59,885,413	\$118,262,250
Total Federal & State	\$102,849,321	\$122,739,259	\$180,410,034	\$50,556,481	\$29,503,268	\$184,395,413	\$305,027,250
Gov't Earmarks (TxDOT/MPO/City)			\$37,900,000	\$9,814,146	\$0	\$0	\$0
NET RMA (Toll Revenue, Bonds)			\$0	\$29,000,000	\$0	\$137,521,960	\$0
Local	\$42,530,000	\$52,376,974	\$42,075,978	\$79,730,701	\$412,081	\$23,750,000	\$35,625,000
Combined Roadway Funds	\$145,379,321	\$175,116,233	\$260,386,012	\$169,101,328	\$29,915,349	\$264,536,941	\$220,029,283
Transit							
Tyler Transit Federal	\$1,760,000	\$3,335,789	\$5,673,808	\$6,603,943	\$5,935,326	\$14,615,504	\$27,814,834
Tyler Transit State	\$1,300,000	\$1,802,662	\$1,448,279	\$1,464,698	\$1,089,289	\$2,842,837	\$5,619,084
Tyler Transit Local	\$350,000	\$605,172	\$2,148,001	\$1,935,269	\$2,655,771	\$5,826,238	\$10,159,469
Toll Credits (Transit)	\$0	\$0	\$659,125	\$0	\$0	\$0	\$0
Total Transit	\$3,410,000	\$5,743,623	\$9,929,213	\$10,003,910	\$9,680,386	\$23,284,579	\$43,593,388



COST ESTIMATION FOR PROPOSED PROJECTS

Fiscal constraint is a key component of the MTP. Developing the financial plan for the 2040 Metropolitan Transportation Plan did not only include the estimation of reasonably expected funding, but it also considered the cost of the proposed transportation improvements. The following assumptions guided the development of cost figures for the proposed projects, as well as the cost estimation for maintenance and operation of the already existing transportation system.

- ▶ Since Federal regulations do not require that the cost of maintenance and operations activities be broken out into individual project costs, the funding needed for maintenance and operations of the transportation infrastructure was accounted for on a system-wide level.
- ▶ The funding required for an individual project does not only encompass the cost of construction, therefore, the cost estimates used to determine fiscal constraint also included engineering cost and right-of-way related expenses.
- ▶ Whenever a detailed engineering estimate for a particular project was not available, planning-level, generalized unit cost figures were used to assess the cost of each of the project's components. These generalized unit cost figures were based on the analysis of roadway projects constructed between 2004 and 2014.
- ▶ In the absence of detailed, local inflation information for construction related activities, an annual inflation rate of four percent was used for project cost estimation. (FHWA, 2014)

The table on the following page lists the proposed roadway projects and associated cost estimates in current year (\$2014) and year-of-expenditure dollars.



Table XIV-3: Cost Estimates for Proposed Projects

Rank	Project Roadway	From	To	Description	Project Length	Estimated Construction	Estimated Engineering	Estimated ROW/Utility	Total Project Cost (\$2014)	Year-of Expenditure 2015-2024 Cost	Year-of Expenditure 2025-2040 Cost
Short-term 1	FM 2493	FM 2813 In Gresham	FM 346 in Flint	Widen to 4 lanes with flush median	2.2	\$12,928,957	\$1,862,206	\$3,640,000	\$18,431,163	\$22,868,417	\$37,338,154
Short-term 2	SS 248	1.75 Mi W of FM 848 (Old Omen Rd), E	SH 64 SE of Tyler	Widen to 4-lane divided roadway with flush median	2.2	\$9,109,470	\$1,312,072	\$0	\$10,421,542	\$12,930,501	\$21,112,132
Short-term 3	FM 2493	FM 346 in Flint, S	0.3 Mi South of FM 344 (Cherokee C/L)	Widen from 2 Lanes to 4 Lanes with flush median	5.0	\$13,975,272	\$1,956,538	\$2,973,462	\$18,905,272	\$23,456,667	\$38,298,612
Short-term 4	IH 20	At US 69		Ramp improvements at US 69		\$5,000,000	\$550,000	\$0	\$5,550,000	\$6,886,148	\$11,243,282
Short-term 5	FM 756	Jeff Davis Drive	FM 346	Widening from 2 to 4 lanes	4.3	\$12,012,325	\$1,681,726	\$6,815,504	\$20,509,554	\$25,447,176	\$41,548,594
Short-term 6	Railroad ROW Acquisition	Hagen Road in Whitehouse	FM 346 in Troup	Purchase 7.25 miles of abandoned Union Pacific Railroad corridor	7.25	\$0	\$0	\$400,000	\$500,000	\$500,000	\$0
Short-term 7	FM 2964	East Grande Blvd	CR 2167	Widening from 2 to 4 lanes	1.9	\$8,632,183	\$1,243,326	\$2,430,292	\$12,305,801	\$15,268,390	\$24,929,294
Short-term 8	FM 16	Loop 49 Extension (N of IH 20)	US 69 in Lindale	Widen from 2 to 4 lanes	2.6	\$7,234,822	\$1,012,875	\$4,104,863	\$12,352,560	\$15,326,407	\$25,024,020
Long-term 1	FM 756	FM 346	FM 344	Widening from 2 to 4 lanes	3.2	\$14,416,757	\$2,076,499	\$4,058,873	\$20,552,129	\$25,500,000	\$41,634,842
Long-term 2	FM 2964	CR 2167	FM 346	Widening from 2 to 4 lanes		\$8,763,127	\$1,262,186	\$2,467,158	\$12,492,471	\$15,500,000	\$25,307,453
Long-term 3	SH 31, East	Loop 323, East	FM 850	Widen to a 4-lane divided principal arterial	3.0	\$16,750,090	\$2,345,013	\$4,800,000	\$23,895,102	\$29,647,785	\$48,407,093
Long-term 4	SH 110	5th Street	Golden Road	Widen from 4 to 6-lane divided principal arterial	1.5	\$5,579,300	\$781,102	\$2,386,866	\$8,747,269	\$10,853,151	\$17,720,362
Long-term 5	SS 364	SH 31	LP 323	Widen from 2 to 4 lanes	4.3	\$14,168,463	\$1,983,585	\$6,868,632	\$23,020,680	\$28,562,848	\$46,635,674
Long-term 6	FM 2493	Loop 323	FM 2813	Widen from 4 to 6 lanes	5.1	\$19,222,342	\$2,768,666	\$5,411,831	\$27,402,839	\$34,000,000	\$55,513,123
Long-term 7	Loop 323 extension	Loop 323 NE	US 271	Widen from 2 to 4 lanes	0.6	\$1,583,016	\$228,008	\$445,680	\$2,256,704	\$2,800,000	\$4,571,669
Long-term 8	SH 155 N	US 271 N	IH 20	Widen from 2 to 4 lanes	2.1	\$6,501,675	\$936,460	\$1,830,472	\$9,268,607	\$11,500,000	\$18,776,497
Long-term 9	SH 110 N	Loop 323	FM 2016	Widen from 2 to 4 lanes	2.7	\$9,045,808	\$1,302,902	\$2,546,744	\$12,895,453	\$16,000,000	\$26,123,822
(NETRMA funded - not ranked)	Toll 49 Segment 4	IH 20 SW of Lindale	US 69 N of Lindale	Construct 2-lane controlled access toll road on new location	5.76	\$54,893,000	\$5,216,000	\$24,072,000	\$119,473,000	\$75,619,000	\$0
(NETRMA funded - not ranked)	Toll 49 Segment 6	SH 110 (appr. 1.2 miles north of Whitehouse)	0.35 miles east of US 271/FM 2908 intersection	Construct 2-lane controlled access toll road on new location	12.5	\$76,739,133	\$10,743,479	\$23,355,388	\$110,838,000	\$137,521,958	\$224,537,451
(Locally funded - not ranked)	Lake Placid Rd	Old J'ville Hwy	SH 155	Widen to 4-lane with bike, raised median	1.1	\$6,644,229	\$930,192	\$4,392,879	\$11,967,300	\$14,848,396	\$24,243,555
(Locally funded - not ranked)	Towne Park	Loop 323	SH 155	Construct new location, 4-lane with bike, raised median	0.5	\$3,219,084	\$450,672	\$2,553,984	\$6,223,740	\$7,722,089	\$12,608,155
(Locally funded -	Shiloh Rd	Rhones Quarter Rd	Copeland Rd	Widen to a 4-lane minor arterial	1.7	\$16,762,497	\$2,346,750	\$2,672,003	\$21,781,250	\$27,025,029	\$44,124,816



not ranked)				with CTL							
(Locally funded - not ranked)	W Erwin Street at Glenwood			Widen intersection to eliminate split phase operations		\$505,000	\$101,000	\$0	\$606,000	\$751,893	\$1,227,645
(Locally funded - not ranked)	Roy Road	Paluxy Dr	Rhones Quarter Rd	Widen to 2-lane major collector with CTL	1.3	\$4,451,236	\$623,173	\$2,110,216	\$7,184,625	\$8,914,305	\$14,554,732
(Locally funded - not ranked)	Rice Road	Old Bullard Rd	Old Jacksonville Hwy	Widen to 4-lane minor arterial with CTL	1.4	\$7,875,000	\$1,102,500	\$2,240,000	\$11,217,500	\$13,918,084	\$22,724,597



BALANCING OF FUNDING AND COST

Stagnant funding levels and rising project construction cost considerably limit the number of projects that can be implemented within each phase of the 2040 Metropolitan Transportation Plan.

- ▶ For short-term implementation, the following funding is expected to be available: -
 - \$ 124,510,000 Federal and State "Build It" funding
 - ♦ The funding is sufficient to implement the widening of FM 2493, FM 16, SS 248, FM 756, and FM 2964 as well as upgrades to the US 69/IH 20 ramp and railroad ROW purchase, leaving \$1,826,294 to be used during the long-term implementation phase.
 - \$59,885,413 Federal and State funding for maintenance activities
 - \$137,521,958 NET RMA funding
 - ♦ The funding is sufficient to implement the eastward extension of Toll 49 (Segment 6).
 - \$23,750,000 local funding (City of Tyler)
 - ♦ The funding is sufficient to implement the Lake Placid and Towne Park projects, leaving \$1,179,515 to be used during the long-term implementation phase.
 - \$23,284,579 Federal, State, and local funding for Tyler Transit
 - ♦ The amount is expected to be sufficient to sustain current transit services provided.
- ▶ For long-term implementation, the following funding is expected to be available: -
 - \$ 186,765,000 Federal and State "Build It" funding, plus \$1,826,294 balance from the previous phase
 - ♦ The funding is sufficient to implement the widening of FM 756, FM 2964, SH 31E, SH 110, SS 364, FM 2493, Loop 323 extension, SH 155N, and SH 110N, leaving a balance of \$14,227,510.
 - \$118,262,250 Federal and State "Maintain It" funding for maintenance activities
 - \$35,625,000 local funding (City of Tyler), plus \$1,179,515 balance from the previous phase
 - ♦ The funding is sufficient to implement the intersection widening at Erwin Street and Glenwood and the widening of Roy Road, leaving a balance of \$21,022,138.
 - \$43,593,388 Federal, State, and local funding for Tyler Transit
 - ♦ The amount is expected to be sufficient to sustain current levels of transit services.



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XV. PLAN RECOMMENDATIONS

The development of the 2040 Metropolitan Transportation Plan was based on a planning process that examined travel and transportation issues and needs within the Tyler Urbanized Area. The process involved valuable input and feedback from planning partners, local stakeholders, and the public. It further included the analysis of socioeconomic characteristics of the study area and a demographic analysis of the community's growth. In addition, a regional travel demand model was used to examine travel patterns, assess roadway deficiencies, and evaluate transportation improvements.

The resulting plan discussed proposed projects, which were subsequently ranked in terms of how they address congestion, safety, and efficiency concerns and travel demand, and in terms of how well they address other community needs and support the community's vision for its transportation future.

Most importantly, the 2040 Metropolitan Transportation Plan analyzed all modes of transportation. Therefore, the following chapter lists not only the recommended roadway improvement, but also the multi-modal recommendations, which were discussed in each individual modal chapter.

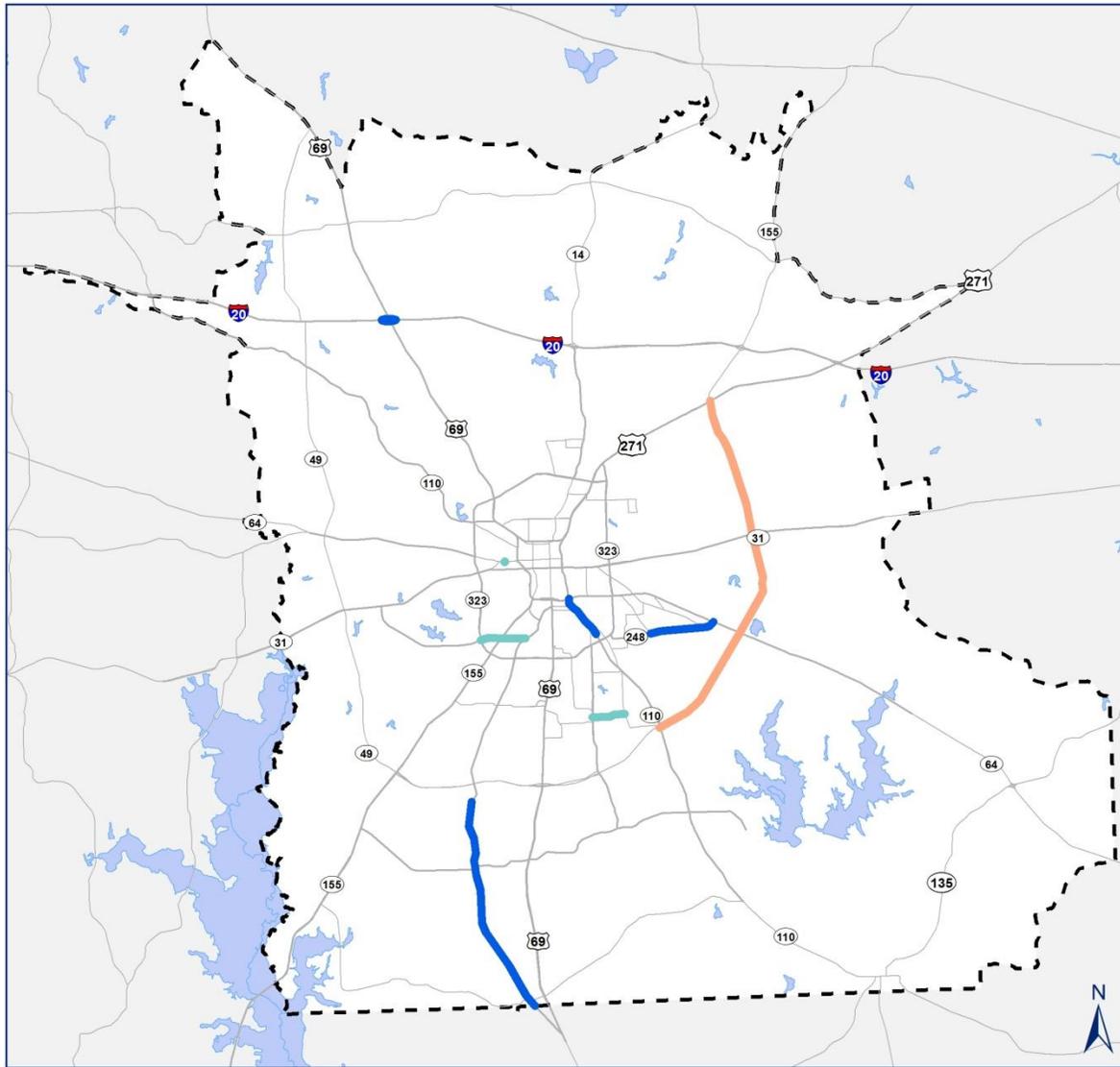
ROADWAY PROJECTS

Based on the ranking of the proposed projects, which is detailed in the *Project Prioritization - Chapter XIII*, and the application of fiscal constraint, which is described in the *Financial Plan - Chapter XIV*, the 2040 Metropolitan Transportation Plan includes a short-term implementation plan (2015-2024) and a long-term implementation plan (2025-2040) for State-sponsored, NET RMA, and locally funded roadway projects.

For overview purposes, both short-term and long-term mobility projects are shown in Figure XV-1.



Figure XV-1: Tyler Area Recommended Projects



0 2.5 5 Miles

Tyler Area MPO - 2040 MTP Projects

- Funded Mobility Projects**
- State Sponsored Projects
 - Locally Funded Projects
 - NET RMA Funded Project
 - - - MPO Boundary
 - Major Transportation Corridors





Short-term Implementation

The following projects are recommended for implementation during the short-term phase (2015-2024). They are broken out into mobility and non-mobility projects and are listed by project sponsor:

Table XV-1: Roadway Projects Short-Term Implementation Plan

Project Roadway	From	To	Description	Total Project Cost
Short-term Mobility Projects				
State-Sponsored				
FM 2493	FM 2813 in Gresham	FM 346 in Flint	Widen from 2 to 4 lanes	\$22,868,417
SS 248	1.75 Mi W of FM 848 (Old Omen Rd), E	SH 64 SE of Tyler	Widen to a 4-lane divided roadway with flush median	\$12,930,501
FM 2493	FM 346 in Flint, S	0.3 Mi South of FM 344 (Cherokee C/L)	Widen from 2 Lanes to 4 Lanes with flush median	\$23,456,667
IH 20	At US 69		Ramp improvements at US 69	\$6,886,148
FM 756	Jeff Davis Drive	FM 346	Widening from 2 to 4 lanes	\$25,447,176
Railroad ROW Acquisition	Hagen Road in Whitehouse	FM 346 in Troup	Purchase 7.25 miles of abandoned Union Pacific Railroad corridor	\$500,000
FM 2964	East Grande Blvd	CR 2167	Widening from 2 to 4 lanes	\$15,268,390
FM 16	Loop 49 Extension (N of IH 20)	US 69 in Lindale	Widen from 2 to 4 lanes	\$15,326,407
NET RMA Funded				
Toll 49 Segment 6	SH 110 (1.2 miles north of Whitehouse)	0.35 miles east of US 271/ FM 2908 intersection	Construct 2-lane controlled access toll road on new location	\$137,521,958
Locally Funded				
Lake Placid Rd	Old Jacksonville Hwy	SH 155	Widen to 4-lane with bike, raised median	\$14,848,396
Towne Park	Loop 323	SH 155	Construct new location, 4-lane with bike, raised median	\$7,722,089
Short-term Non-Mobility Projects				
Categories 1 and 6 - Preventative Maintenance, Replacement and Rehabilitation				\$59,885,413
Total Short-term Expenditure				\$282,776,149
Expected Short-term Funds Available				\$284,602,443



Long-term Implementation

The following projects are recommended for implementation during the long-term phase (2015-2024). They are broken out into mobility and non-mobility projects and are listed by project sponsor:

Table XV-2: Roadway Projects Long-Term Implementation Plan

Project Roadway	From	To	Description	Total Project Cost
Long-term Mobility Projects				
State-Sponsored				
FM 756	FM 346	FM 344	Widening from 2 to 4 lanes	\$25,500,000
FM 2964	CR 2167	FM 346	Widening from 2 to 4 lanes	\$15,500,000
SH 31, East	Loop 323, East	FM 850	Widen to a 4-lane divided principal arterial	\$29,647,785
SH 110	5th Street	Golden Road	Widen from 4 to 6-lane divided principal arterial	\$10,853,151
SS 364	SH 31	LP 323	Widen from 2 to 4 lanes	\$28,562,848
FM 2493	Loop 323	FM 2813	Widen from 4 to 6 lanes	\$34,000,000
Loop 323 extension	Loop 323 NE	US 271	Widen from 2 to 4 lanes	\$2,800,000
SH 155 N	US 271 N	IH 20	Widen from 2 to 4 lanes	\$11,500,000
SH 110 N	Loop 323	FM 2016	Widen from 2 to 4 lanes	\$16,000,000
Locally Funded				
W Erwin Street at Glenwood			Widen intersection to eliminate split phase operations	\$1,227,645
Roy Road	Paluxy Dr	Rhones Quarter Rd	Widen to 2-lane major collector with CTL	\$14,554,732
Long-term Non-Mobility Projects				
Categories 1 and 6 - Preventative Maintenance, Replacement and Rehabilitation				\$118,262,250
Total Long-term Expenditure				\$190,146,161
Expected Long-term Funds Available				\$202,547,377

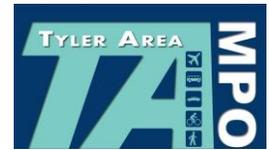


Unfunded Needs

Although additional projects had been scored for potential inclusion in the financially constrained plan, funding limitations required that they be moved to an unfunded needs list. The following list shows State-sponsored projects that could be considered for implementation if additional funds become available.

Table XV-3: State-Sponsored - Unfunded Needs

Location	From	To	Description
FM 14	IH 20	Loop 323	Widen from 2 to 4 lanes
SH 31, East	Loop 323, East	FM 850	Widen to a 4-lane divided principal arterial
FM 14	Loop 323 East	MLK Jr, Blvd	Widen to 4-lane minor arterial with CTL
FM 16	US 69	2.4 mi E of US 69	Widen from 2 to 4 lanes
IH 20 Frontage Roads	Toll 49	1 mile W of US 69	Add frontage roads to interstate
US 69, North	Loop 323	IH 20, West	Widen from 4 to 6-lane divided principal arterial
SH 155, North	US 271 North	IH 20, East	Widen to a 4 lane principal arterial
SH 110, North	FM 849	IH 20	Widen from 2 to 4 lanes
SH 64, West	FM 724	FM 2661	Widen to a 4-lane divided principal arterial
SH 31, West	FM 206	FM 2661	Widen from 4 to 6 lanes
SH 64, West	FM 2661	County Line	Widen to a 4-lane divided principal arterial
SH 31, East	FM 850	CR 236	Widen to a 4-lane divided principal arterial
SH 31, West	FM 2661	County Line	Widen from 4 to 6 lanes
SH 64, East	CR 220, East	FM 3226	Widen to a 4-lane divided principal arterial
SH 110, North	FM 2016	FM 849	Widen from 2 to 4 lanes
SH 110	Hagan Road	Troup City Limits	Widen to a 4-lane divided principal arterial
US 271	Loop 323	IH 20, East	Widen from 4 to 6-lane divided principal arterial
IH 20	SH 110	US 271	Widen from 4 to 6 lanes
SH 155, North	IH 20 East	County Line	Widen to a 4-lane principal arterial
SH 64, East	FM 3226	County Line	Widen to a 4-lane divided principal arterial
Airport Spur	Toll 49 West	Tyler Airport	Construct new 2-lane spur to regional airport



Local Illustrative

Locally funded projects that were not identified in the short-term or long-term implementation plans are considered illustrative projects. As additional funds become available, these projects could be considered for implementation as part of the 2040 Metropolitan Plan.

Table XV-4: Locally Funded - Illustrative Projects

Location	From	To	Description
Shiloh Rd	Rhones Quarter Rd	Copeland Rd	Widen to a 4-lane minor arterial with CTL
Rice Road	Old Bullard Rd	Old Jacksonville Hwy	Widen to 4-lane minor arterial with CTL
Shiloh Road	SH 110	Broadway	Upgrade to a 4-lane divided arterial
Bellwood Lake Drive	Bellwood Lake Drive	Briarwood Road	Extend road as a 2-lane collector
Bellwood Road	Bellwood	SH 31 / Pioneer Drive	Extend road as a 2-lane collector
Big Eddy Road	FM 2868	SH 155 / CR 168	Upgrade east portion to a minor arterial
Cambridge Road	Broadway Ave	Jeff Davis Drive	Widen to 2-lane major collector with CTL
Charlotte Drive	Van Highway	Loop 323 Northwest	Widen to a 2-lane collector with CTL
Copeland Rd	Grande Blvd	Jeff Davis Drive	Construct new location, 4-lane minor arterial
Copeland Rd	Old Troup Hwy	Shiloh Road	Widen to 2-lane major collector with CTL
Copeland Rd	Jeff Davis Drive	Cumberland Rd	Construct new location, 4 lanes
CR 493 / CR 4196	US 69, North	CR 431	Add roads as a 2-lane collector
Crow Road	SH 155	Old Jacksonville Hwy	Widen to 2-lane major collector with CTL
Cumberland Rd	Broadway Ave	Paluxy Drive	Widen to 4-lane minor arterial with CTL
Dawson Street	Clinic Drive	Fleishel Drive	Widen to 2-lane major collector with CTL
Donnybrook Avenue	Shiloh Road	Rieck Road	Widen from 32 to 40 ft urban street
E. Erwin Street	Spring Street	Beckham Ave	Widen to 4-lane minor arterial with CTL
E. Erwin Street	Beckham Ave	E. Loop 323	Widen to 4-lane minor arterial with CTL
East-West Whitehouse Arterial	FM 346	East-West Whitehouse Arterial	(Phase 1) Upgrade county roads to a 2-lane minor arterial with CTL
East-West Whitehouse Arterial	FM 346 West	Includes Wildwood, Fowler, Dudley Rds	(Phase 2) Extend road as a 2-lane minor arterial
Elm Street	Beckham Ave	Saunders	Widen to 2-lane major collector with CTL
Fleishel Ave	E. Houston Street	E. Front Street	Widen to 2-lane major collector with CTL
Grande Blvd	SH 155	Toll 49	Extend 4-lane divided minor arterial and add an interchange at Toll 49
Grande Blvd	Toll 49	FM 2661	Extend 4-lane divided minor arterial
Grande, Phase III	SH 110	Old Omen Road	Extend road as a 4-lane minor arterial with CTL



Location	From	To	Description
Indian Creek Road	South of Spur 364	Lake Placid Road	Extend road as a 2-lane collector
Jim Hogg Road	IH 20	FM 16	Widen to a 4-lane minor arterial
Lake Placid Extension	SH 155	CR 1141	Extend road as 2-lane collector
Lyons Ave	W. Front Street	W. Erwin Street	Widen to 4-lane minor arterial with CTL
N. Broadway Ave	Blackfork Creek	N. Loop 323	Widen to 4-lane minor arterial with CTL
New Omen Road	Shiloh Road	Grande Boulevard	Extend road as a 4-lane divided minor arterial
North Whitehouse Arterial	South Point Road	SH 110	Extend road as a 2-lane minor arterial
Old Henderson	E. Front Street	E. Erwin Street	Widen to 4-lane minor arterial with CTL
Porter Street	Front Street	Devine	Widen to 2-lane major collector with CTL
Rice Road	SH 155	Old Jacksonville Hwy	New location, 4-lane minor arterial with CTL
Sunnybrook Ave	Loop 323, West	SH 31, West	Construct new location, 4 lanes
W Erwin Street	Bonner Ave	Glenwood Blvd	Widen to a 4-lane minor arterial

ADDITIONAL ROAD AND HIGHWAY RECOMMENDATIONS

Congestion and safety are often closely related, as highly congested corridors can significantly increase the potential for crashes, while crashes are often a major source of non-recurring congestion. The following recommendations aim to address both transportation issues:

- ▶ Work with state and local transportation partners to identify and monitor the performance of highly congested corridors and bottlenecks within the study area;
- ▶ Work with state and local transportation partners and law enforcement to identify the cause of crashes at hotspot locations within the study area;
- ▶ Prepare a local congestion mitigation and crash avoidance strategies, and identify and monitor related performance measures;
- ▶ Assist transportation partners with the implementation of operational improvements and, if necessary, capital improvements, and monitor effectiveness of implemented strategies and progress made towards locally defined targets.



PUBLIC TRANSPORTATION PROJECTS

According to the funding presented in the *Financial Plan - Chapter XIV*, \$23,284,579 will be available for short-term and \$43,593,388 for long-term implementation, available for operating and capital expenditures.

Currently Tyler Transit is in the process of updating the Strategic Plan to determine additional future projects. Upon completion, inclusion of potential projects in the 2040 Metropolitan Transportation Plan should be considered - as unfunded needs - to be considered for implementation if additional funds become available.

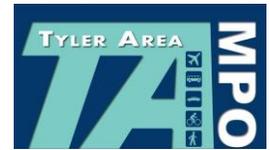
PUBLIC TRANSPORTATION RECOMMENDATIONS

In order to progress toward the goal of an expanded and improved transit system, the following recommendations have been developed based on identified issues and needs. They are presented in no particular order:

- ▶ As planned, it is recommended that Tyler Transit pursues grant funding for a route study in the near future. This may provide strategies for the agency to improve routes, headways, and overall performance of the transit system.
- ▶ Close coordination between Tyler Transit, the MPO, and local entities ahead of major commercial or residential developments would provide for the planning of transit routes and placement of stops and passenger amenities as an integral part of the transportation network.
- ▶ In order to help increase levels of service and coverage areas, public and private transportation providers should consider enhanced coordination and collaboration efforts.

Furthermore, several regional short-, mid-, and long-term strategies should be considered, as recommended in ETCOG's Regional Transportation Coordination Plan:

- ▶ Short-Term Strategies
 - Increase public transportation education and promotion of services
 - Interconnectivity Day
 - One-stop regional transportation call center
 - Campaign stressing time/monetary value of riding transit
 - Seek funding to extend transportation network service hours
 - Expand agency participation
 - Regional Transportation Marketing Plan
- ▶ Mid-Term Strategies
 - Adhere to needs of growing senior population
 - Transit-friendly amenities
 - Ensure multiple transportation providers serve transfer points and key activity centers
 - Online regional transit trip planner
 - Regional vehicle maintenance
 - Volunteer driver program
 - Shared-use vehicles
- ▶ Long-Term Strategies
 - Administer a regional vanpool program
 - Consolidation of scheduling service into one system
 - Collaborate future public transit planning with multi-modal efforts



BICYCLE AND PEDESTRIAN RECOMMENDATIONS

The following recommendations, listed in no particular order, are proposed to enhance the bicycle and pedestrian networks, making these non-motorized modes of transportation more viable for Tyler MPO area residents.

- ▶ Develop the trail system in accordance with the Regional Trail Plan and the City of Tyler Parks & Open Space Master Plan.
- ▶ Complete upgrade of sidewalk and ramp projects to become fully compliant with ADA and TAS requirements.
- ▶ Prioritize projects that connect existing bicycle and pedestrian infrastructure whenever possible to take advantage of cost benefits.
- ▶ Prioritize projects that provide connection to neighborhood services and employment centers.
- ▶ Add bicycle lanes to roadways as outlined in the Tyler Unified Development Code.
- ▶ Mark on-street bike lanes along designated bicycle routes.
- ▶ Create educational materials for motorists and cyclists.
- ▶ Adopt smart land-use and growth patterns to keep the built environment at a 'human' scale, creating a more bicycle- and pedestrian-friendly environment.

INTERMODAL AND INTERREGIONAL RECOMMENDATIONS

As an increasingly globalized economy and interconnected world raises the demand for business and personal interaction, it is necessary for the region to maintain and improve upon its interregional passenger transport options. Recommendations include:

- ▶ Continue to partner with Amtrak, and other partner agencies, to ensure residents and visitors are aware of available passenger rail, station resources, and connectivity options.
- ▶ Continue to promote the use of the nearby Amtrak stations for passenger rail access to metropolitan areas outside of the region and encourage expansion of GoBus service to Mineola and Longview.
- ▶ Continue coordination with NET RMA and regional planning partners to advance the planning and potential implementation of the proposed Multi-Modal Facility.

In the past decade, the airport has undergone considerable changes and flight enplanements are expected to continue to grow in the future:

- ▶ Encourage exploration of airport upgrades, including access and parking.
- ▶ Continue coordination with regional transportation partners to implement a public transportation link to the airport.
- ▶ Encourage consideration and planning of innovative financing mechanisms to maintain the competitiveness of the Tyler Pounds Regional Airport and the connectivity to other parts of the state and the U.S.



SAFETY AND SECURITY RECOMMENDATIONS

Under MAP-21, state and metropolitan planning organizations are required to adopt a performance- and outcome-based approach to transportation planning that relies heavily on existing and projected data to evaluate the effectiveness of strategies in addressing goals and objectives, including those related to safety.

The following recommendations, shown in no particular order, are designed to prepare the Tyler Urbanized Area for the final rulemaking in regard to safety performance management:

- ▶ Identify measurable safety goals and objectives;
- ▶ Transition to a more data-driven, strategic approach to safety planning;
- ▶ Collaborate with key safety stakeholders;
- ▶ Coordinates closely with the State in the development, evaluation, and reporting of performance targets that support the statewide safety goals and objectives, as well as regional and local safety goals; and
- ▶ Provide training opportunities for MPO staff to increase their knowledge related to transportation safety planning.

The following recommendations, shown in no particular order, are designed to strengthen transportation security planning in the Tyler Urbanized Area:

- ▶ Create a local definition of security;
- ▶ Continue to assess the most significant threats, high-potential targets, and least hardened infrastructure elements within the Tyler Urbanized Area;
- ▶ Work with federal, state, regional, and local jurisdictions and transportation providers to develop evacuation plans for the "transportation disadvantaged;"
- ▶ Collaborate with security and emergency response professionals and organizations on an ongoing basis;
- ▶ Adopt a Continuity of Operations Plan (COOP); and
- ▶ Provide training opportunities for MPO staff to increase their knowledge related to transportation security planning.

NO-BUILD STRATEGY RECOMMENDATIONS

The following recommendations are listed in no particular order:

- ▶ Encourage continued coordination of the metropolitan transportation planning process with the development of local transportation and comprehensive plans to promote the inclusion of facilities and systems related to transit, biking, and walking.
- ▶ Encourage transportation planning partners to consider cost-effective, no-build strategies, such as Travel Demand Management, Transportation Systems Management & Operations, and Complete Streets design prior to investing in roadway capacity improvements.
- ▶ Work with large area employers to explore and implement employer-based travel demand management tools and Incentives.
- ▶ Consider giving funding preference to projects that incorporate Travel Demand Management and Transportation System Management & Operations strategies, reflect Complete Streets design principles, or set regional multi-modal transportation goals and community priorities through a robust public involvement process.