

Section 6: Revenue Forecasts

Federal law requires projects identified within the Metropolitan Transportation Plan to be constrained by a reasonable projection of funds governments within McLennan County anticipate receiving during the planning period. Project costs beyond the anticipated revenues are unfunded and cannot be identified as a recommended priority within the MTP. This section outlines the anticipated revenues for the Waco Metropolitan Area through the year 2035.

6.1 Highways and Bridges

6.1.1 Federal and State Revenue Projections

The State of Texas divides its federal and state highway dollars into 12 separate categories of funding. Each category contains both state and federal dollars. Table 6.1 identifies each category and their intended use. The Waco Metropolitan Area is not eligible to receive funds from categories 2, 5 or 7. The Waco District of TxDOT receives funds from seven of the remaining categories based on allocation formulas adopted by the Texas Transportation Commission. Category 3 funds are allocated specifically for the Waco Metropolitan Area. Category 4 funds are project specific and are determined by the Texas Transportation Commission. Category 10 includes all federal earmarks as well as funds for landscaping projects.

In 2009, TxDOT and the Texas Association of MPOs developed a model to estimate future state & federal highway revenues based upon user defined assumptions. The model, called 'TRENDS' (Transportation Revenue Estimation and Needs Determination System), forecasts revenues by TxDOT funding categories and by year through the year 2035. In addition to requiring the user to estimate the magnitude and timing of various tax and revenue changes, the model also requires users to estimate possible population growth and fuel economy scenarios. To estimate revenues available for the Waco Metropolitan Area through the MTP planning period, the MPO utilized this model and identified 5 possible funding scenarios: Baseline, Low, Low Medium, Medium and High. The baseline scenario assumes no changes in tax rates or revenues through 2035 and is provided as a point of comparison. Similarly, the high scenario identifies the tax rates and revenues required to fully fund all priorities identified within the MTP regardless of political reality. As such, the high scenario is intended only to provide a point of comparison. The 'Low', 'Low Medium' and 'Medium' scenarios provide the most politically realistic estimates of future revenues. The assumptions for each scenario are identified in table 6.2.

Table 6.1 – TxDOT Highway Funding Categories

Category	Purpose	Waco MPO Eligibility
1	Preventative Maintenance & Rehabilitation	Yes
2	Metropolitan Mobility Projects (Urban Pop > 200,000)	No
3	Urban Mobility Projects (Urban Pop between 50,000 and 200,000)	Yes
4	Statewide Mobility Projects	Conditional*
5	Congestion Mitigation & Air Quality (Air Quality Non-Attainment Areas)	No
6	Structures Replacement & Rehabilitation	Yes
7	Surface Transportation Program Metropolitan Mobility & Rehabilitation	No
8	Surface Transportation Program – Safety	Yes
9	Transportation Enhancements	Yes
10	Miscellaneous, Congressional Earmarks and Landscaping	Yes
11	District Discretionary	Yes
12	State Strategic Priority	Conditional*

*Conditional based upon project specific approval from the Texas Transportation Commission.

Table 6.2 – TRENDS Revenue Model Assumptions by Scenario

	Baseline	Low	Low Medium	Medium	High
State Population Growth Rate*	Low	Low	Low	Medium	Medium High
Fuel Efficiency Scenario**	High	High	High	Medium	Low
State Gas Tax	No Increases	\$0.05 increase in 2012	+\$0.07 in 2012 and +\$.05 in 2025	\$0.10 increase in 2012 and 2025	\$0.25 increase in 2012
State Diesel Tax	No Increases	\$0.05 increase in 2012	+\$0.07 in 2012 and +\$.05 in 2025	\$0.10 increase in 2012 and 2025	\$0.25 increase in 2012
Federal Gas Tax	No Increases	\$0.10 increase in 2011	+\$0.10 in 2011 and +\$.05 in 2025	\$0.10 increase in 2011 and 2025	\$0.25 increase in 2012
Federal Diesel Tax	No Increases	\$0.10 increase in 2011	+\$0.10 in 2011 and +\$.05 in 2025	\$0.10 increase in 2011 and 2025	\$0.25 increase in 2012
Texas Rate of Return on Federal Funds	85%	85%	87%	90%	93%
Indexing State Gas Tax	No	No	No	2020	2012
Percent of State Gas Tax Increase to Transportation	74%	74%	74%	74%	100%
Vehicle Registration Fees	No Increases	10% increase in 2014	+10% in 2014 and +15% in 2025	+20% in 2014, +30% in 2025	50% increase in 2014 and 2025
State Vehicle Mile Traveled Tax	No	No	No	\$0.01 per mile in 2030	\$0.015 per mile in 2025
Eliminate Gas Tax	No	No	No	2035	2030
Eliminate State Gas Tax Diversions	None eliminated	50% eliminated by 2018	75% eliminated by 2018	75% eliminated by 2014	100% eliminated by 2012
Prop 12 Bonds***	None	\$2 billion over 3 years	\$2 billion over 3 years	\$4 billion over 5 years	\$10 billion over 10 years
Prop 14 Bonds****	None	\$3 billion over 5 years	\$3 billion over 5 years	\$5 billion over 5 years	\$10 billion over 10 years
Local Option Gas Tax	No	No	\$0.03 increase in 2012	\$0.05 increase in 2012	\$0.10 increase in 2012
Local Option Diesel Tax	No	No	\$0.03 increase in 2012	\$0.05 increase in 2012	\$0.10 increase in 2012
Local Option Vehicle Registration Fee	No	No	\$10 per vehicle	\$10 per vehicle	\$20 per vehicle
Local Option Vehicle Mile Traveled Tax	No	No	No	No	\$0.0025 per mile in 2030

*Follows the following projections from the Texas Data Center: UT San Antonio – Low equals “0.5 scenario”, Medium equals “2000 to 2004 scenario”, Medium High equals “2000 to 2007 scenario”.

**Follows estimates generated by Cambridge Systematics in study titled “Accounting for Fuel Efficiency in Texas Fuel Tax Revenue Estimations” – January, 2007

***Payback through State General Fund. Assumes availability beginning in 2012.

****Payback through future transportation revenues. Assumes availability beginning in 2020 and payback beginning in 2021.

Revenue Distribution Assumptions

The TRENDS model provides revenue estimates for the State of Texas by TxDOT Funding Category and local option revenues by County. To estimate state and federal funds for the Waco Metropolitan Area, the MPO needed to make several assumptions on how funds would be distributed to Waco.

Maintenance, bridge replacement and safety funds (categories 1, 6 and 8 respectively) are generally distributed based upon need. Since it is impossible to estimate the precise location of need for the entire state over a 25 year period, the MPO made the assumption that over time, the amount of funds received by a region will generally equal the amount if distributed based upon population. For the period of 2010 to 2020, the population of McLennan County was estimated to be 0.93944% of the state population. Thus the Waco Metropolitan Area is estimated to receive this percentage of the estimated statewide total for categories 1 and 6. As the state population is estimated to grow at a much faster rate than the population of McLennan County, it is estimated that this percentage will decrease to 0.65482% for the period of 2021 to 2035.

To estimate mobility funds, the MPO first subtracted funds which are committed to Categories 5, 7, 9 10 and 12 which are statutorily determined by formulas or distributions from either the State Legislature or Congress. The MPO assumed that these amounts would increase each year by the standard inflation rate accepted for the MTP, 4% per year. The MPO also assumed that each district would continue to receive \$2.5 million per year from Category 11 and that this amount would not change. The MPO assumed that the remaining funds (if any) would be distributed to Categories 2, 3 and 4 based upon previously accepted formulas: 65% to category 2, 10% to category 3 and 25% to category 4.

Of the 3 mobility categories (2, 3 and 4) Waco receives distributions of mobility funds only through category 3. The Texas Transportation Commission has adopted a formula which generally provides the Waco Region approximately 9.5% of category 3 funds. Although this level may fluctuate some based upon traffic and population levels, the MPO assumed that the average distribution would remain relatively constant near the 9.5% level.

Table 6.3 identifies the estimate revenues by scenario the Waco region can expect during the MTP planning period.

Table 6.3 – Estimated Highway Revenues by Scenario in Millions

Short Range Revenues (2010 to 2020)					
Category	Baseline	Low	Low Medium	Medium	High
Maintenance	\$380.4	\$380.4	\$380.4	\$380.4	\$380.4
Mobility	\$39.4	\$99.3	\$121.2	\$253.7	\$841.1
Local Option	\$0.0	\$0.0	\$61.7	\$103.4	\$172.3
Total	\$419.8	\$479.7	\$563.3	\$737.5	\$1,393.8
Long Range Revenues (2021 to 2035)					
Category	Baseline	Low	Low Medium	Medium	High
Maintenance	\$30.6	\$104.0	\$416.8	\$670.1	\$670.1
Mobility	\$0.0	\$0.0	\$0	\$51.5	\$1,342.3
Local Option	\$0.0	\$0.0	\$88.3	\$135.9	\$430.6
Total	\$30.6	\$104.0	\$505.1	\$857.5	\$2,443.0
Total (2010 to 2035)					
Category	Baseline	Low	Low Medium	Medium	High
Maintenance	\$411.0	\$484.4	\$797.2	\$1,050.5	\$1050.5
Mobility	\$39.4	\$99.3	\$121.2	\$305.2	\$2,183.4
Local Option	\$0.0	\$0.0	\$150.0	\$239.3	\$602.9
Total	\$450.4	\$583.7	\$1,068.4	\$1,595.0	\$3,836.8

The MPO Technical Committee determined that the most reasonable financial scenario for the Waco Region would be the ‘Low Medium’ scenario. When compared to previous inflation-adjusted spending, this scenario produces a somewhat lower level of spending for highways than the historical trend.

Congressional Earmarks

The Waco Metropolitan Area has been the recipient of federal earmarks in the past in order to construct / improve highways such as Loop 574, FM 1637 or Ritchie Rd. As with other earmarks, the amount was only a fraction of the amount necessary to complete these projects. It is expected that even with the anticipated increase in Congressional earmarks that these projects will by and large remain unfunded through the year 2035 unless funds from another source are identified. As a result of the increase in earmarking, it is anticipated that the Waco area will be the recipient of additional earmarks to partially fund important projects. The MPO estimates that this increase will

be between 100% to 200% of the amount seen previously. It is anticipated that earmarks in the future will be provided for projects that have identified funds from other sources, thus reducing the potential of tying funds to projects with little or no chance of being constructed.

Table 6.4 – Current Federal Highway Earmarks – Waco Metropolitan Area

Project	Extent	Scope of Work	Earmark	Total Cost*	Earmark Percentage
FM 1637**	FM 185 to FM 3051	Widen to 4 lanes divided	\$1,600,000	\$28,300,000	5.7%
Ritchie Rd	US 84 to FM 1695	Widen to 4 lanes divided	\$2,400,000	\$19,000,000	12.6%
Loop 574	IH-35 to BU 77	Construct 4 lane divided highway	\$1,600,000	\$24,300,000	6.6%
		Total	\$5,600,000	\$71,600,000	7.8%

*Includes all phases of work – Engineering, Utility Relocation, Right of Way and Construction.

6.1.2 Local Revenue Projections

Most local revenue for highway construction and significant rehabilitation projects come from the various capital improvement programs (CIP) of the individual cities and McLennan County. Some cities do dedicate general fund revenues primarily for highway maintenance purposes. In instances where local governments must provide local match for state or federal highway projects, the local governments usually provide funds from one of these two sources to meet the match requirements.

At the time of publication, no major bond measures for highway construction were being considered by the MPO member cities or McLennan County. It is anticipated that only revenues through the CIP programs, general funds, or revenues to meet local match requirements for state or federal projects will be available for local highway projects.

Spending by local governments on transportation has been consistently flat or with extremely modest increases over the past decade. The City of Waco and many suburban cities have increased their spending at a rate fractionally higher than that of other municipal governments or McLennan County. For forecasting future revenues, an annual inflation rate of 1.0% has been used for spending by the City of Waco and suburban cities. For all other government entities, an annual rate of 0.5% per year has been used. The estimated revenues local and county governments are projected to spend for highway maintenance can be found in Sections 7.1.1 and 7.2.1.

6.1.3 Engineering & Right of Way Costs

Statewide, engineering costs for any given highway project are typically between 8% and 12% of the construction cost. For budgeting purposes, TxDOT typically uses 10% of the construction cost to estimate engineering costs. Actual engineering costs for highway projects let within the past 10 years within the Waco District are reasonably close to this estimate. In addition, TxDOT has typically only funded engineering costs for projects which have sufficient funds for construction. For these reasons, the MPO has estimated engineering costs to be 10% of the construction cost and that if sufficient funds exist for construction, then sufficient funds will exist to provide for the engineering costs.

Right of way costs, unlike engineering costs, are highly variable and dependent upon factors such as land usage, location, accessibility, and zoning. Statewide, right of way costs average 12% of the construction costs. This figure, however varies from no right of way costs for certain projects to as much as 100% or more of the construction cost for projects in the Dallas or Houston districts. Similar to engineering costs, however, TxDOT has typically only funded right of way costs for projects which have sufficient funds for construction. For these reasons, the MPO has assumed that for federally and state funded projects, if sufficient funds exist for construction, then sufficient funds will exist to provide for the right of way costs. For locally funded projects, however, the total available revenues must also cover all necessary right of way & engineering costs.

6.1.5 Toll Revenue

In an effort to increase the funding for highway mobility, in 2003 the Texas Legislature passed House Bill 3588 which permits the State and Local areas to exercise the option of tolling certain highways. Individual counties, with the permission of the Texas Transportation Commission, may form Regional Mobility Authorities (RMA) to construct, operate and maintain toll facilities within their specific county. In order to form an RMA, at least one toll feasible corridor must be identified. Feasibility has been defined as a facility that can at least fund through toll revenue the annual cost of operating and maintaining the facility and preferable at least one-third of the construction cost plus interest. In addition to HB 3588, the Texas Transportation Commission also implemented rules stating that all expressway projects adding capacity as well as certain other types of added capacity projects must be studied for toll feasibility. This requirement impacts 5 corridors within the Waco Metropolitan Area which are listed within table 6.6.

Table 6.6 - Corridors for Which Toll Feasibility must be studied

Corridor	From	To
US 84	SH 317	SH 6 / Loop 340
SH 6 / Loop 340	FM 185	IH-35
Loop 574	IH-35	Spur 484
FM 185 Extension	SH 6	IH-35
IH-35	Falls County	Hill County

6.2 – Public Transportation

6.2.1 Projected Urban Public Transportation Revenues

The 'TRENDS' model, which the MPO used to estimate future highway revenues, also provides an estimate of federal funds available to the State of Texas for Public Transportation. These funds are distributed to the various urban transit operators by formula. The MPO assumed that this formula would remain unchanged during the MTP planning period. Table 6.8 identifies the assumptions used to estimate future revenues by scenario for Waco Transit.

Table 6.8 – Urban Public Transportation Revenue Assumptions by Scenario

	Baseline	Low	Low Medium	Medium	High
'TRENDS' estimate of Federal Transit Funds to TX (\$Billions)*	\$1.73	\$2.37	\$2.43	\$3.19	\$5.04
Federal Gas / Use Taxes Dedicated to Transit	Same as current	Same as current	Same as current	10% increase to transit	30% increase to transit
Year of Gas / Use Taxes Increases to Transit	N/A	N/A	N/A	2015	2011
Increase in State Transit Funds	None	None	1% per year	1% per year	4% per year
Farebox Revenues	Change at same percentage change of combined federal / state / local revenues				
Local Revenues	4% per year	4% per year	4% per year	4% per year	4 % per year plus increase to meet additional match obligations
Earmarks	\$6.2 million short range, \$5.0 long range (\$11.2 million total)				

*Does not include any changes to the percentage of federal gas / use taxes dedicated to transit. See table 6.2 for assumptions used within the 'TRENDS' model.

Similar to highway scenarios, the MPO identified 5 possible funding scenarios: Baseline, Low, Low Medium, Medium and High. The baseline scenario assumes no changes in tax rates or revenues through 2035 and is provided as a point of comparison. Similarly, the high scenario identifies the tax rates and revenues required to fully fund all priorities identified within the MTP regardless of political reality. As such, the high scenario is intended only to provide a point of comparison. The most politically realistic scenarios are the 'Low', 'Low Medium' and 'Medium' scenarios.

Table 6.9 – Estimated Urban Public Transportation Revenues by Scenario in Millions

Short Range Revenues (2010 to 2020)					
Category	Baseline	Low	Low Medium	Medium	High
Federal	\$27.8	\$31.3	\$32.1	\$36.2	\$67.5
State	\$3.3	\$3.3	\$3.5	\$3.5	\$4.0
Farebox	\$5.2	\$5.7	\$6.9	\$7.7	\$11.4
Local	\$9.1	\$9.1	\$9.1	\$9.1	\$18.1
Total	\$45.4	\$49.4	\$51.6	\$56.5	\$101.0
Long Range Revenues (2021 to 2035)					
Category	Baseline	Low	Low Medium	Medium	High
Federal	\$25.1	\$36.5	\$43.9	\$67.4	\$133.6
State	\$4.5	\$4.5	\$5.4	\$5.4	\$9.3
Farebox	\$6.9	\$8.7	\$9.7	\$14.2	\$24.3
Local	\$20.7	\$20.7	\$20.7	\$20.7	\$36.6
Total	\$57.2	\$70.4	\$79.7	\$106.3	\$203.8
Total (2010 to 2035)					
Category	Baseline	Low	Low Medium	Medium	High
Federal	\$52.9	\$67.8	\$76.0	\$103.6	\$201.1
State	\$7.8	\$7.8	\$8.9	\$8.9	\$13.3
Farebox	\$12.1	\$14.4	\$16.6	\$21.9	\$35.7
Local	\$29.8	\$29.8	\$29.8	\$29.8	\$54.7
Total	\$102.6	\$119.8	\$131.3	\$164.2	\$304.8

Similar to highway revenues, the MPO Technical Committee selected the 'Low Medium' scenario as the most reasonable future financial scenario for public transportation. Table 6.10 identifies the spending necessary by Waco Transit to maintain the same level of service provided during FY 2009 through the MTP planning period. When compared to the 'Low Medium' scenario of revenues, it is apparent that future state and federal revenues will be insufficient to maintain FY 2009 levels of service beyond 2020. Section 7.2.4 discusses the MPO recommendations to offset these projected shortfalls in revenues in order to maintain existing levels of service for Waco Transit.

Table 6.10 – Public Transportation Operating Expenses to maintain 2009 service levels (millions)

	Preventative Maintenance	ADA Expenses	Operating	Planning	Total
Short Range (2010 to 2020)	\$9.4	\$3.4	\$29.7	\$1.4	\$43.9
Long Range (2011 to 2035)	\$21.6	\$7.7	\$67.8	\$3.1	\$100.2
Total	\$31.0	\$11.1	\$97.5	\$4.5	\$144.1

Table 6.11 – Funding Gap: Urban Expenses vs. Revenues by Scenario (Millions)*

	Baseline	Low	Low Medium	Medium	High
Short Range (2010 to 2020)	-\$4.7	-\$0.7	+\$1.5	+\$6.1	+\$50.9
Long Range (2011 to 2035)	-\$48.0	-\$35.0	-\$25.7	+\$1.1	+\$98.6
Total	-\$52.7	-\$35.7	-\$24.2	+\$7.2	+\$149.5

*Revenues do not include Congressional earmarks which are assumed to be used only for capital expenses (see Table 6.4).

6.2.2 Projected Rural Public Transportation Revenues

The same scenarios used for urban public transportation were also used to estimate revenues for the rural public transportation services. As with their urban counterparts, the revenues for rural services identified with the 'Low Medium' scenario are projected to fall short of the amounts necessary to maintain FY 2009 levels of service beyond 2020. Section 7.2.4 discusses the MPO recommendations to offset these projected shortfalls in revenues in order to maintain existing levels of service for Waco Transit.

Table 6.8 – Estimated Rural Public Transportation Revenues by Scenario

Short Range Revenues (2010 to 2020)					
Category	Baseline	Low	Low Medium	Medium	High
Section 5310	\$464,000	\$540,000	\$690,000	\$778,000	\$1,318,000
Section 5311	\$611,000	\$711,000	\$909,000	\$1,025,000	\$1,738,000
Total	\$1,075,000	\$1,251,000	\$1,599,000	\$1,803,000	\$3,056,000
Long Range Revenues (2021 to 2035)					
Category	Baseline	Low	Low Medium	Medium	High
Section 5310	\$433,000	\$678,000	\$943,000	\$1,448,000	\$2,763,000
Section 5311	\$570,000	\$893,000	\$1,244,000	\$1,908,000	\$3,642,000
Total	\$1,003,000	\$1,571,000	\$2,187,000	\$3,356,000	\$6,405,000
Total (2010 to 2035)					
Category	Baseline	Low	Low Medium	Medium	High
Section 5310	\$897,000	\$1,218,000	\$1,633,000	\$2,226,000	\$4,081,000
Section 5311	\$1,181,000	\$1,604,000	\$2,153,000	\$2,933,000	\$5,380,000
Total	\$2,078,000	\$2,822,000	\$3,786,000	\$5,159,000	\$9,461,000

Table 6.9 – Funding Gap: Rural Expenses vs. Revenues by Scenario*

	Baseline	Low	Low Medium	Medium	High
Short Range (2010 to 2020)	-\$328,000	-\$152,000	+\$197,000	+\$400,000	+\$1,653,000
Long Range (2011 to 2035)	-\$2,203,000	-\$1,635,000	-\$1,019,000	+\$150,000	+\$3,200,000
Total	-\$2,531,000	-\$1,787,000	-\$822,000	+\$550,000	+\$4,853,000

*Combined Sections 5310 and 5311

6.3 Rail Transportation

The State of Texas has little to no history in providing public funding for either passenger or freight rail services outside of the large metropolitan areas such as Dallas / Fort Worth or Houston. Additionally, the federal government has traditionally provided few resources for the rail mode outside of 'Amtrak', the national passenger rail service. Although recent discussions have proposed to provide substantial revenues to fund

various passenger rail services, at the time of publication of this document it is unclear as to what funding levels, if any, are realistic for passenger rail beyond the normal appropriations for Amtrak. As a result, the MPO has chosen to identify rail projects as unfunded needs until a more clearly defined state and national role for passenger rail is identified.