

# connections 2040

## the waco metropolitan transportation plan amendment 1



developed by the waco metropolitan planning organization  
in cooperation with the following agencies:



Adopted June 23, 2016

# amendment 1: july, 2016

## purpose and need for amendment

MPO staff anticipate new resources being made available as a result of the approval of Proposition 7 by the voters of Texas in November, 2015. These resources should be sufficient to fund a number of important highway mobility projects which could not have become reality without Prop 7. While specifics regarding the distribution of Prop 7 will not be known until summer 2017, MPO staff produced a worst case scenario of Prop 7 distribution as a baseline for planning purposes.

The priorities identified within this amendment were determined to be of sufficient importance that these projects should begin development work as soon as possible. This work includes preliminary engineering, environmental review and right of way acquisition, if necessary. Once this work is complete, these projects would be able to proceed to construction using Prop 7 funds when they become available and without delays due to incomplete work from the development process. It is important to note that even with development work beginning expeditiously, these priorities might not proceed to construction for another 15 to 20 years due to funding limitations.

## revenue forecasts

Federal law requires projects identified within the Metropolitan Transportation Plan to be constrained by a reasonable projection of funds which 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 significant changes anticipated to transportation revenues through 2040 as a result of Legislative action that have taken place since adoption of the MTP in January, 2015.

## highways and bridges

### changes to state revenue projections

Texas voters approved Proposition 7 in November, 2015 which authorizes the Legislature to transfer sales taxes collected from the sale of motor vehicles from the general fund into the state transportation fund (Fund 6). After 2020, Proposition 7 also authorizes the Legislature to begin transferring a portion of revenues from the general sales tax into Fund 6. Using amounts specified within the Legislation and current TxDOT distribution formulas, and initial assessment suggests that up to \$19 million per year could be available to the Waco MPO through TxDOT Category 2 for mobility purposes beginning in 2018. In addition, increases for preventative maintenance and statewide connectivity likely will also be available for projects within the Waco MPO region. An important limitation with Prop 7 funds is that they can only be expended for highway projects.

The challenge with Proposition 7 is that as of the drafting of this amendment, both the Texas Legislature and the Texas Transportation Commission are reviewing how funds are distributed for various tasks by TxDOT and the formulas used within each category to distribute funds to TxDOT Districts and MPOs. Although there are several possible scenarios under consideration that may significantly increase funds coming to Waco for mobility, there are some being discussed that could instead significantly decrease those amounts. As a result, for this amendment, the MPO staff has chosen to recommend a conservative estimate of future revenues resulting from Proposition 7.

### recommended amendments to state revenue projections

The recommended scenario takes into account that revenues from Proposition 1, incorporated into the fiscal constraint for the adopted MTP, have significantly declined since 2015 as a result of decreases in state oil & gas severance tax collections. Thus this scenario anticipates that much of Prop 7 revenues for mobility between 2018 and 2025 will be used to offset decreases in Prop 1 for projects already identified within the MTP. As a result, no new mobility projects are proposed during this time period.

Beyond 2025, the MPO staff estimates that Prop 1 funds will recover somewhat as a result of oil and gas prices returning to long-

term averages. As a result, this scenario anticipates that revenues from Prop 7 will be sufficient to fund some additional mobility projects not currently identified within the MTP. Table A1-2 provides the estimated new revenues for the period beyond 2025 which is identical to that for the entire planning horizon. Following the conservative approach, MPO staff estimates that mobility funds for this period will be about half of what current distribution formulas for Category 2 would otherwise suggest.

The forecast for preventative maintenance and rehabilitation, however, is slightly different with MPO staff anticipating some additional revenue available for these activities in both short and long term time horizons.

table A1-1 – estimated additional state highway revenues in millions: 2018 through 2025

Funding Category	Prop 7 Funds
Maintenance	\$25.0
Cat 2U – MPO Mobility	\$0
Cat 4 – Connectivity*	\$0
Total Additional Mobility	\$0
New MTP Mobility Total	\$73.6

\*For use outside of Waco Urbanized Area only

table A1-2 – estimated additional state highway revenues in millions: 2026 through 2040

Funding Category	Prop 7 Funds
Maintenance	\$195.5
Cat 2U – MPO Mobility	\$130.1
Cat 4 – Connectivity*	\$30.0
Total Additional Mobility	\$160.1
New MTP Mobility Total	\$243.3

\*For use outside of Waco Urbanized Area only

**table A1-3 – estimated additional state highway revenues in millions: mtp planning horizon: 2015 through 2040**

Funding Category	Prop 7 Funds
Maintenance	\$220.5
Cat 2U – MPO Mobility	\$130.1
Cat 4 – Connectivity*	\$30.0
Total Additional Mobility	\$160.1
New MTP Mobility Total	\$316.9

\*For use outside of Waco Urbanized Area only

**data analysis: traffic level of service and crashes**

With even additional revenues being modest, MPO staff reviewed traffic and crash data with the goal of moving forward the most important priorities. Facilities with the worst levels of service, both current and future and the highest number of serious crashes were considered as the highest priorities for this amendment. Table A1-4 shows data for these metrics for each project identified within this amendment.

The goal with each facility is to attain a traffic level of service of D or better. Level of service F is considered beyond the carrying capacity of the facility and results in an unstable flow of traffic during peak periods and the possibility of significant delays. Table 6.1 in the adopted MTP (page 53) provides a definition of level of service.

Additionally the goal of each facility is to eliminate all preventable serious injury crashes. It is important to note that many of the crashes identified in Table A1-4 are the result of driver error and not necessarily due to any perceived defect in roadway design or condition.

**table A1-4 – data metrics for project recommendations**

Project	2014 Traffic Level of Service	2040 Traffic Level of Service	2013 Serious Injury Crashes*
East Loop 340 SH 6 to Williams Rd	C	F	5
FM 1695 US 84 to FM 2063	E	F	6
East Loop 340 @ SH 6	B	D	1
FM 2113 FM 2063 to FM 1695	D	F	4
SH 6 / W Lp 340 IH-35 to US 84	C	E	11
US 84 Tx Central to Lp 340	C	E	2

\*Defined as crashes resulting in either a Fatality, an Incapacitating Injury, or a Non-Incapacitating Injury.

**strategy 1: strategic highway expansions to address increases in mobility demand**

**additional long term priorities (2026 to 2040)**

**Priority 8**

**Project ID: S-001A**

Facility: East Loop 340  
 Extent: SH 6 / Loop 484 (Marlin Hwy) to Williams Rd  
 Current: 2 lane rural arterial  
 Scope of Work: Widen to 4 lanes divided  
 Purpose and Need: Provide long-term relief route for IH-35 traffic around Waco  
 Fiscal Constraint: Long-term mobility funds identified in Section 7

Work Phase	Cost*
Engineering	\$1.0**
Right of Way	\$0.0
Construction	\$17.0
Total	\$18.0

\*In Millions

\*\*Phase complete or underway

**Priority 9**

**Project ID: S-004**

Facility: FM 1695 (Hewitt Dr)  
 Extent: US 84 (Woodway Dr) to FM 2063 (Sun Valley Dr)  
 Current: 4 lane arterial with center turn lane and open drainage  
 Scope of Work: 1) Widen to 6 travel lanes  
 2) Construct underground drainage and curb and gutter  
 3) Construct continuous sidewalks on both sides and enhanced pedestrian crosswalk in vicinity of Midway Middle School  
 Purpose and Need: 1) Address congestion resulting from suburban development  
 2) Address pedestrian safety concerns in vicinity of Midway Schools  
 Fiscal Constraint: Long-term mobility funds identified in Amendment 1

Work Phase	Cost*
Engineering	\$2.1
Right of Way	\$0.0
Construction	\$21.1
Total	\$23.2

\*In Millions

**Priority 10**  
**Project ID: S-036B**

Facility: East Loop 340 at SH 6 / Loop 484 (Marlin Hwy)

Extent: Highway Interchange

Current: 2 level diamond interchange with Loop 340 intersecting at grade with Loop 484 frontage roads

Scope of Work: Construct main lane overpass for Loop 340

Purpose and Need: Provide long-term relief route for IH-35 traffic around Waco

Fiscal Constraint: Long-term mobility funds identified in Amendment 1

Work Phase	Cost*
Engineering	\$3.4
Right of Way	\$0.6
Construction	\$30.0
Total	\$34.0

\*In Millions

**Priority 11**  
**Project ID: S-011**

Facility: FM 2113 (Spring Valley Dr)

Extent: FM 2063 (Sun Valley Dr) to FM 1695 (Hewitt Dr)

Current: 2 lane rural farm to market road with open drainage

Scope of Work: 1) Construct center turn lane and bicycle lanes  
 2) Construct underground drainage and curb and gutter  
 3) Construct continuous sidewalks on both sides and enhanced pedestrian crosswalk in vicinity of Spring Valley Elementary School

Purpose and Need: 1) Address congestion resulting from suburban development  
 2) Address pedestrian safety concerns in vicinity of Spring Valley Elementary School

Fiscal Constraint: Long-term mobility funds identified in Amendment 1

Work Phase	Cost*
Engineering	\$1.6
Right of Way	\$2.5
Construction	\$15.2
Total	\$19.3

\*In Millions

**table A1-5 – additional total costs\* for strategy 1**

Mode	Short-Term Cost	Long-Term Cost	Total Cost
Highways	\$0	\$90.5	\$90.5
Bicycle	\$0	\$2.0	\$2.0
Pedestrian	\$0	\$2.0	\$2.0
Total All Modes	\$0	\$94.5	\$94.5
Total MTP Strategy 1	\$466.9	\$188.4	\$655.3

\*In Millions

**strategy 2: maintain existing infrastructure in state of good repair**

**table A1-6 – additional highway preventative maintenance and rehabilitation categorical projects**

Category	System	Project ID	Short-Term Cost*	Long-Term Cost*	Total Cost*
Maintenance & Rehab	State	S-PMR	\$20.8	\$162.3	\$183.1
Bridge Replacement & Rehab	State	S-BRI	\$4.2	\$33.2	\$37.4

\*In Millions

**table A1-7 – total additional costs\* for strategy 2**

Mode	Short-Term Cost	Long-Term Cost	Total Cost
Highways	\$25.0	\$195.5	\$220.5
Total All Modes	\$25.0	\$195.5	\$220.5
Total MTP Strategy 2	\$324.6	\$677.8	\$1,002.4

\*In Millions

**strategy 4: reduce transportation related injuries and fatalities**

**long term priorities (2026 to 2040)**

**Priority 7**

**Project ID: S-034A**

Facility: SH 6 / West Loop 340

Extent: IH-35 to US 84 (West Waco Dr)

Current: 4 lane expressway with discontinuous frontage roads

Scope of Work: 1) Extend frontage roads  
 2) Realign on & off ramps to 'X' configuration

- Purpose and Need:
- 1) Provide additional storage on frontage roads for exiting traffic
  - 2) Address safety concern from exiting traffic stopping on main lanes
  - 3) Eliminate insufficient existing weave distance between US 84 & FM 3223 and FM 3223 & Beverly Dr
  - 4) Shift weave movements from main lanes to frontage roads

Fiscal Constraint: Long-term mobility funds identified in Amendment 1

Work Phase	Cost*
Engineering	\$1.6
Right of Way	\$1.0
Construction	\$16.0
Total	\$18.6

\*In Millions

### Priority 8

Project ID: S-048D

Facility: US 84 EB Frontage Rd and Main Lanes

Current: Texas Central Pkwy to SH 6 / West Loop 340

Scope of Work: Realign on & off ramps to 'X' configuration

- Purpose and Need:
- 1) Provide additional storage on frontage roads for exiting traffic
  - 2) Address safety concern from exiting traffic stopping on main lanes

Fiscal Constraint: Long-term mobility funds identified in Amendment 1

Work Phase	Cost*
Engineering	\$0.2
Right of Way	\$0.0
Construction	\$2.0
Total	\$2.2

\*In Millions

table A1-8 – total additional costs\* for strategy 4

Mode	Short-Term Cost	Long-Term Cost	Total Cost
Highways	\$0.0	\$20.8	\$20.8
Total All Modes	\$0.0	\$20.8	\$20.8
Total MTP Strategy 4	\$29.4	\$61.2	\$90.6

\*In Millions

### summary of recommendations

Proposition 7 is anticipated to provide additional resources for the Waco Region for both mobility and highway maintenance, primarily after the year 2025. Prop 7, however, is legislatively restricted to highway projects and may be used for other modes only if facilities, such as sidewalks, are ancillary to the primary purpose of highway mobility. The mix of projects identified within this amendment are highway projects necessary to accomplish the following:

- 1.) Maintain a state of good repair for the State Highway System
- 2.) Address the most important mobility and safety needs remaining unfunded after the January, 2015 adoption of the MTP

table A1-9 – total additional costs\* of plan recommendations by strategy

Strategy	Short-Term Cost	Long-Term Cost	Total Cost	Percent of Amendment
1 - Highway Mobility	\$0.0	\$94.5	\$94.5	28.1%
2 - Maintenance	\$25.0	\$195.5	\$220.5	65.7%
3 - Access to Opportunity	\$0.0	\$0.0	\$0.0	0.0%
4 - Safety	\$0.0	\$20.8	\$20.8	6.2%
5 - Efficiency	\$0.0	\$0.0	\$0.0	0.0%
6 - Livability	\$0.0	\$0.0	\$0.0	0.0%
Total Plan	\$25.0	\$310.8	\$335.8	100.0%

\*In Millions

table A1-10 – total additional costs\* of plan recommendations by transportation mode

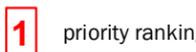
Mode	Short-Term Cost	Long-Term Cost	Total Cost	Percent of Amendment
Highway	\$25.0	\$306.8	\$331.8	98.8%
Public Transportation	\$0.0	\$0.0	\$0.0	0.0%
Bicycle	\$0.0	\$2.0	\$2.0	0.6%
Pedestrian	\$0.0	\$2.0	\$2.0	0.6%
Passenger Rail	\$0.0	\$0.0	\$0.0	0.0%
Total Plan	\$25.0	\$310.8	\$335.8	100.0%

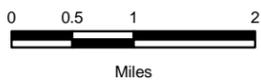
\*In Millions

table A1-11 – total costs\* of plan recommendations by strategy after amendment

Strategy	Short-Term Cost	Long-Term Cost	Total Cost	Percent of Plan
1 - Highway Mobility	\$466.9	\$188.4	\$655.3	30.7%
2 - Maintenance	\$324.6	\$677.8	\$1,002.4	47.0%
3 - Access to Opportunity	\$134.7	\$187.0	\$321.7	15.1%
4 - Safety	\$29.4	\$61.2	\$90.6	4.2%
5 - Efficiency	\$12.2	\$3.0	\$15.2	0.7%
6 - Livability	\$16.0	\$31.4	\$47.4	2.2%
Total Plan	\$983.8	\$1,148.8	\$2,132.6	100.0%

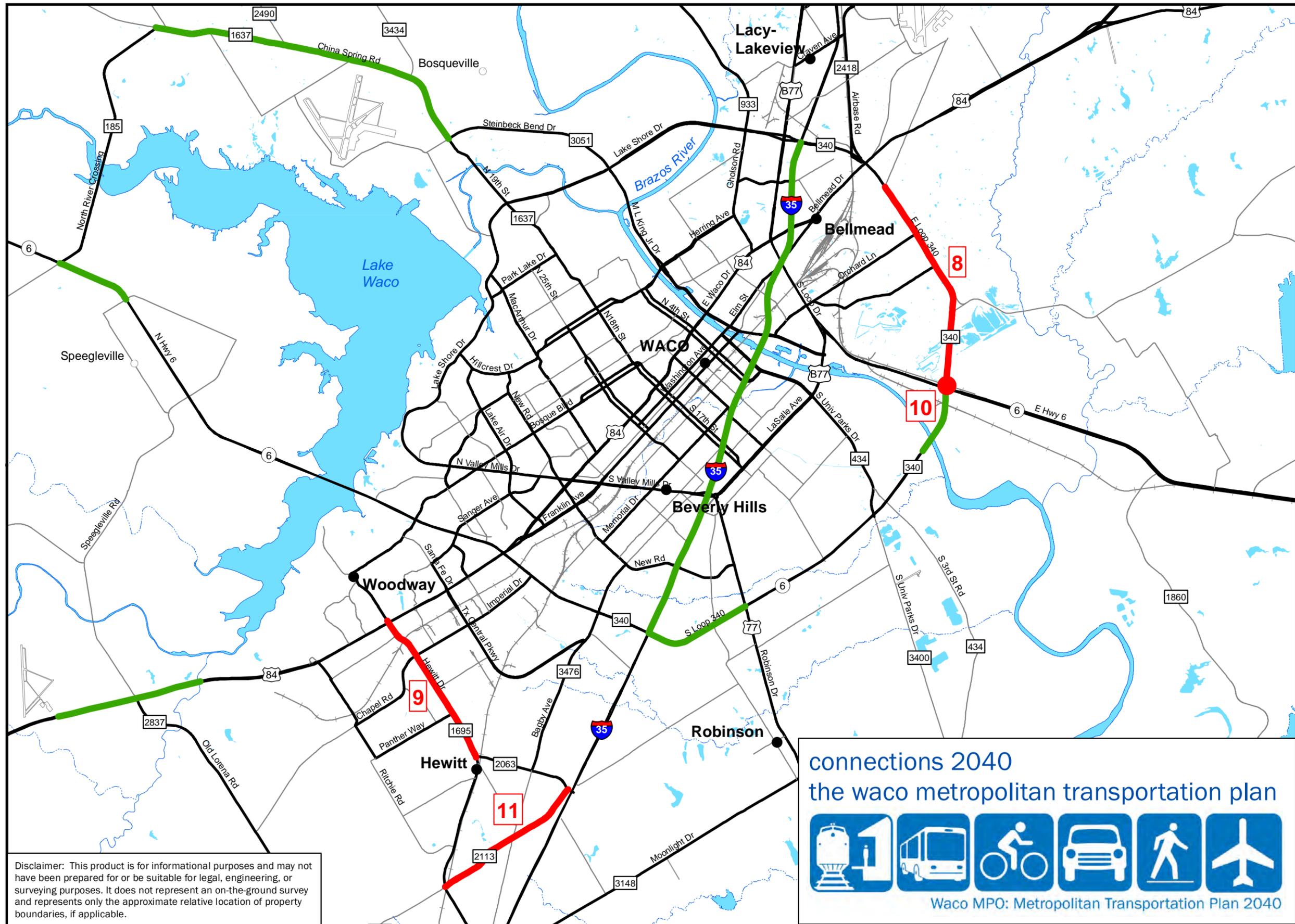
\*In Millions

-  current priorities
-  new additions
-  waco metropolitan area
-  priority ranking



april, 2016

map A1.1  
 amendment 1  
 strategy 1: additional highway mobility  
 project recommendations

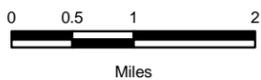


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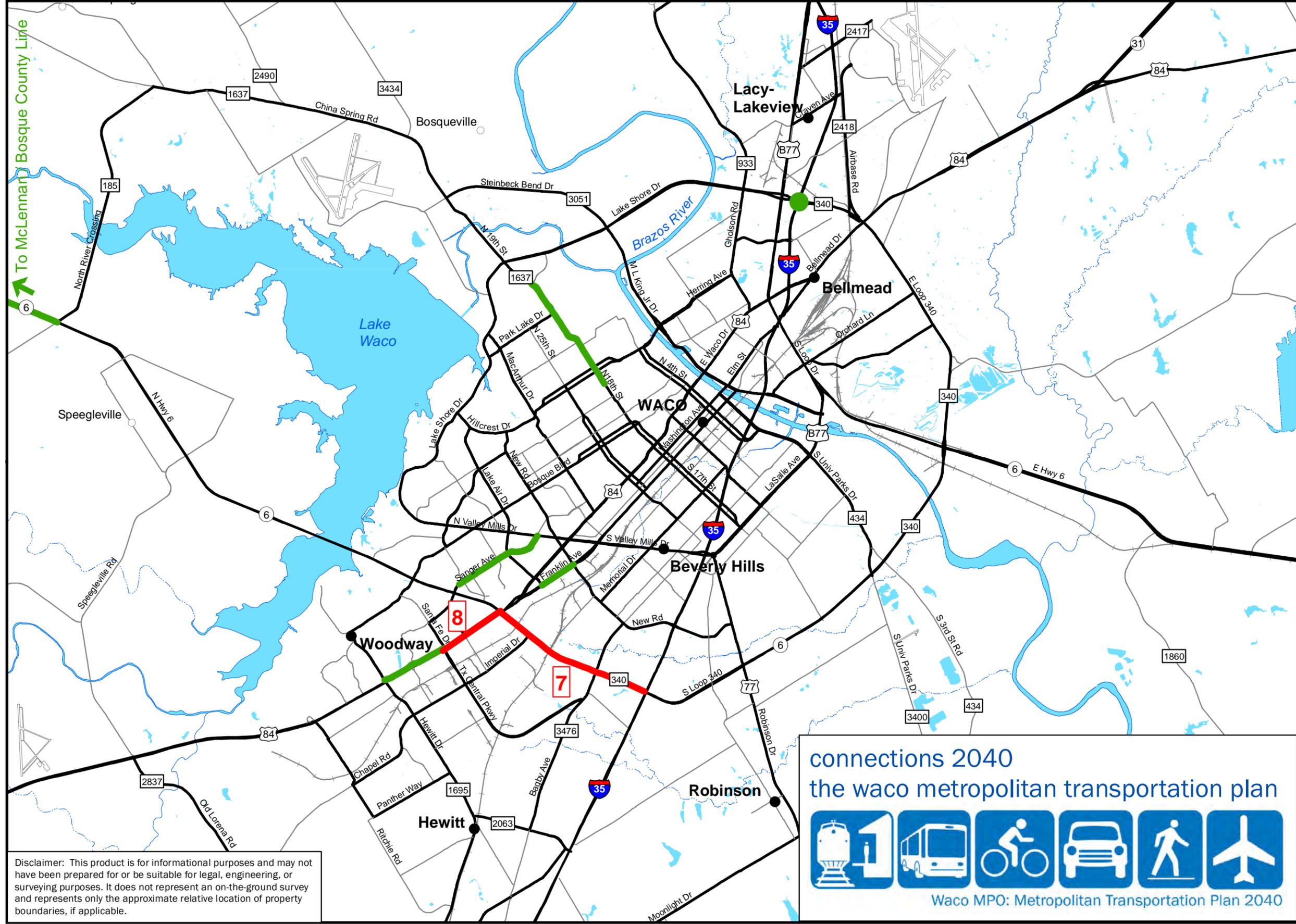
Waco MPO: Metropolitan Transportation Plan 2040

-  current priorities
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-  waco metropolitan area
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april, 2016

map A1.2  
 amendment 1  
 strategy 4: additional safety  
 project recommendations



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