

# PERFORMANCE INDICATORS REPORT -2015

DEVELOPED BY EL PASO MPO



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# Section 1 - Introduction

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## 1.1 Overview

The purpose of this report is to convey the status of congestion in the El Paso Metropolitan Planning Organization (EPMPO) region to policy makers and transportation agencies, the general public, and the Federal Highway Administration (FHWA). The report is organized into four sections: Introduction, Measuring Local Traffic Congestion, Analysis of Congested Data, and Program Implementation. The Analysis of Congested Data section presents a semi-annual travel time analysis that provides information about the EPMPO travel performance on a sample of five key freeway segments. This report supplements the 2013 Congestion Management Process (CMP) Report, which identifies the Federal Requirements and a plan to implement the elements of the CMP.

## 1.2 Introduction to Transportation Performance Management

Transportation Performance Management is a new approach of the Moving Ahead for Progress in the 21<sup>st</sup> Century Act (MAP-21) to establish a performance-based Federal program that will achieve national performance goals. Understanding how the transportation system is operating through monitoring and measuring performance is a vital aspect of performance management (FHWA, 2014 Urban Congestion Trends, April 2014).

MPOs with State and public transportation operators are required to develop long-range transportation plans (MTP) and transportation improvement programs (TIP) through a performance-driven, outcome-based approach. Each MPO shall establish performance targets for tracking progress towards attainment of critical outcomes for the region.



### **National Performance Goals**

Safety – Reduce fatalities and serious injuries on all public roads

Infrastructure condition – Maintain a state of good repair

Congestion reduction – Significantly reduce congestion on the National Highway System (NHS)

Freight movement & economic vitality – Improve the national freight network, access of rural communities to markets, and economic development

Environmental sustainability – Enhance system performance while protecting and enhancing the environment

Reduced project delivery delays – Accelerate project completion by eliminating delays in the project delivery process

### 1.3 Regional Indicators

Although the EPMPO area is not considered one of the most congested cities in the nation, the area is vulnerable to be designated as non-attainment (not within the standard limits) for ozone in the next few years due to the revised ozone standard. The current Ozone standard is 75 parts per billion by volume (PPB) but is anticipated to fall between the ranges of 65-70 PPB. The EPMPO was determined to be non-attainment of Particle pollution (PM10) and is currently on a maintenance plan for carbon monoxide (CO). In regions designated as ozone or CO non-attainment areas, the CMP takes on a greater significance. Federal guidelines prohibit transportation projects that increase capacity for single occupant vehicles unless the project comes from a CMP.

Region statistics in the last decade (2004 – 2014) listed below provides an insight of the region's transportation performance. The annual hours of delay per auto commuter have actually decreased in the last decade. The average citizen in El Paso spends 33 hours stuck in traffic each year compared to 37 hours in 2004. Table 1 compares El Paso's congestion measures with other medium urban areas (over 500,000 and less than 1 million residents) and national data. (Texas A & M Transportation Institute (TTI), Urban Mobility Scorecard, August 2015).



**El Paso metropolitan region statistics in the last decade (2004-2014) are listed below:**

- ↑ **13% increase – Daily Freeway Vehicle Miles Traveled**
- ↓ **5% reduction – Daily Arterial Vehicle Miles Traveled**
- ↑ **10% increase – Annual Excess Fuel Consumed**
- ↑ **10% increase – Total Annual Delay**
- ↓ **12% reduction – Annual Congestion Cost per Auto Commuter (Dollars)**
- ↓ **11% reduction – Annual Hours of delay per auto commuter**
- ↓ **2% reduction – Travel Time Index (Time penalty for a trip on an average day)**

*The information is reported by the Texas A&M Transportation Institute (TTI) 2015 Urban Mobility Scorecard.*

Congestion trends in the U.S. based on 52 urban areas in the U.S. for January through March 2015 show an increase on two of the congested measures reported – Travel Time Index (TTI), and Planning Time Index (worst-trip time penalty). However, an overall improvement of 31 minutes in daily congestion hours is shown (FHWA and Texas A&M Transportation Institute, Urban Capacity Report (UCR)). After two consecutive years of showing an increase for all three congestion measures the latest trends provide expectation on the effectiveness of transportation management strategies.

Nevertheless, the 2015 Urban Mobility Scorecard data from 1982 to 2014 show that congestion will continue to increase if projects, programs and policies are not expanded. The U.S. economy is recovering from the recession and if economic growth continues, drivers can expect more delays and longer commute times on roads in the next years. There is no building our way out of congestion.

Table 1. Comparison of Congestion Measures  
Source: 2015 Urban Mobility Scorecard

<b>Congestion Measure</b>	<b>El Paso TX</b>	<b>Albuquerque NM</b>	<b>Tucson AZ</b>	<b>Medium Area Average</b>	<b>National Average</b>
Annual Hours of delay per auto commuter (2004)	37	39	43	34	41
Annual Hours of delay per auto commuter (2012)	34	37	46	36	41
Annual Hours of delay per auto commuter (2014)	33	36	47	37	42
Travel Time Index (2004)	1.18	1.17	1.20	1.17	1.21
Travel Time Index (2012)	1.17	1.16	1.21	1.18	1.21
Travel Time Index (2014)	1.16	1.16	1.22	1.18	1.22

Travel Time Index (TTI) – The ratio of travel time in the peak period to travel time at free-flow conditions. A Travel Time index of 1.30 indicates a 20-min free-flow trip takes 26 minutes in the peak period.

## Section 2 – Measuring Local Traffic Congestion

Traffic congestion is a condition on a given facility characterized by slower speeds, longer trip times, and increased queueing. When traffic demand is high enough that the interaction between vehicles slows the speed of the traffic stream, congestion is incurred. Congestion is relative to local concerns and perceptions. Locally, the EPMPO has seen an increase in congestion within the study area mostly due to construction along major corridors.

### 2.1 Congested Corridors in El Paso MPO area

The EPMPO employs a travel demand model (TDM) and other available sources to develop performance measures. Model based performance measures are used to study congested locations and extent of congestion over time.

Based on the region's travel demand model (TMD) networks and traffic counts (saturation counts) from TxDOT's five year count program; congested corridors were defined as facilities with segments over one mile that have more than one link showing a volume over capacity (v/c) ratio greater than 1.25. Volume over capacity ratio maps for years 2007 and 2012 are shown in the appendix. There are some important assumptions to note with MPO's TDM and the calculation of the v/c ratio. The model output is heavily influenced by the model input. Capacities for this analysis were determined based on area type and facility type. This measure assumes that areas which have more dense development and therefore slower travel speeds, will have a higher roadway capacity than areas with spread-out or no development and higher travel speeds.



For the purposes of congestion calculations in this regional analysis, congestion levels are defined as:

- V/C Ratio greater than 1.25= Severe Congestion
- V/C Ratio of 1.0 to 1.25 = Heavy Congestion
- V/C Ratio of 0.85 to 1.0 = Moderate Congestion
- V/C Ratio of less than 0.85= Low or No Congestion

The following sections provide a summary of the congested corridors identified based on v/c ratios as well as the percent of Vehicles Miles Traveled (VMT) traveled under congested roadway conditions for each year.

## 2.2 Year 2007 Congested Corridors

Using the 2007 base year network 24 hour capacities and the 2007 saturation traffic counts, the volume over capacity ratios for year 2007 were calculated for every link with available count data. Below is the list of the identified corridors that showed severe congestion levels for year 2007.

Table 2. 2007 Congested corridors with severe congestion

	LENGTH (MILES)	ROADWAY	FROM	TO	AVG V/C
1	1.21	MESA AVE	RESLER	I-10	2.46
2	2.27	SB AMERICAS AVE. (LOOP 375)	ALAMEDA AVE.	I-10	1.78
3	3.64	SB PATRIOT FREEWAY (US 54)	TRANSMOUNTAIN AVE. (LOOP 375)	FRED WILSON AVE.	1.74
4	4.41	NB JOE BATTLE BLVD. (LOOP 375)	I-10	ZARAGOZA AVE.	1.69
5	4.41	SB JOE BATTLE BLVD. (LOOP 375)	ZARAGOZA AVE.	I-10	1.68
6	4.40	SOCORRO RD.(FM 258)	AMERICAS AVE. (LOOP 375)	PASSMORE RD.	1.67
7	2.39	SB PATRIOT FREEWAY (US 54)	MARTIN LUTHER KING BLVD.	TRANSMOUNTAIN AVE. (LOOP 375)	1.50
8	2.27	NB AMERICAS AVE. (LOOP 375)	I-10	ALAMEDA AVE.	1.37
9	1.79	MONTANA AVE	YARBROUGH DR.	GEORGE DIETER DR.	1.34
10	2.00	FABENS ST. (FM 793)	I-10	SH-20	1.33

A few other locations with severe congestion shown in the v/c map were considered short bottlenecks since they are single links with severe congestion along one mile segments. Among these are: Several locations along I-10; Cesar Chavez Hwy (Loop 375) near Zaragoza Ave.; Country Club Rd. near Upper Valley Rd. and North Loop Dr. near Old Hueco Tanks Rd.

## 2.3 Year 2012 Congested Corridors

Using the 2012 base year network 24 hour capacities and the 2012 saturation traffic counts, the volume over capacity ratios for year 2012 were calculated for every link with available count data. Table 3 shows the list of congested corridors identified for this year. Overall the corridors are the same with a few additions to the 2007 list. Country Club Rd. is now shown as a congested corridor rather than just a bottle neck, Purple Heart Freeway (Loop 375) is now shown as severe instead of heavily congested and the congestion along the Patriot Freeway (US 54) was extended all the way to Pershing Dr. On the contrary, Montana Ave. and Mesa Ave. are no longer shown as congested corridors although some bottlenecks are shown along Mesa Ave.



Table 3. 2012 Congested corridors with severe congestion

	LENGTH (MILES)	ROADWAY	FROM	TO	AVG V/C
1	1.81	SB PATRIOT FREEWAY (US 54)	FRED WILSON AVE.	PERSHING DR.	2.41
2	3.64	SB PATRIOT FREEWAY (US 54)	TRANSMOUNTAIN AVE. (LOOP 375)	FRED WILSON AVE.	2.12
3	2.39	SB PATRIOT FREEWAY (US 54)	MARTIN LUTHER KING BLVD.	TRANSMOUNTAIN AVE. (LOOP 375)	2.08
4	2.27	NB AMERICAS AVE. (LOOP 375)	I-10	ALAMEDA AVE.	1.99
5	4.41	NB JOE BATTLE BLVD. (LOOP 375)	I-10	ZARAGOZA AVE.	1.87
6	4.52	SB JOE BATTLE BLVD. (LOOP 375)	EDGEMERE	PELLICANO	1.83
7	4.51	NB PURPLE HEART (LOOP 375)	MONTANA AVE	SPUR 601	1.67
8	4.51	SB PURPLE HEART (LOOP 375)	SPUR 601	MONTANA AVE	1.57
9	4.40	SOCORRO RD.(FM 258)	AMERICAS AVE. (LOOP 375)	PASSMORE RD.	1.56
10	2.00	COUNTRY CLUB RD.	UPPER VALLEY DR.	DONIPHAN DR.	1.54
11	2.27	SB AMERICAS AVE. (LOOP 375)	ALAMEDA AVE.	I-10	1.53
12	2.00	FABENS ST. (FM 793)	I-10	SH-20	1.32

The improvements along Country Club Rd. from Doniphan Rd. to River Run St. just completed early this year (April 2015), will be evaluated when the 2015 traffic counts underway are available and results will be presented in future performance reports. The improvements include a three lane road, one lane in each direction and a center lane for left turns. In addition, a roundabout at the intersection of Memory Ln. and right turn lanes at Montoya Rd. were constructed to improve traffic flow. Other improvements for instance, the aesthetics along US-54 (See page 13) and programmed improvements to be completed before 2017 will also be evaluated in future reports.

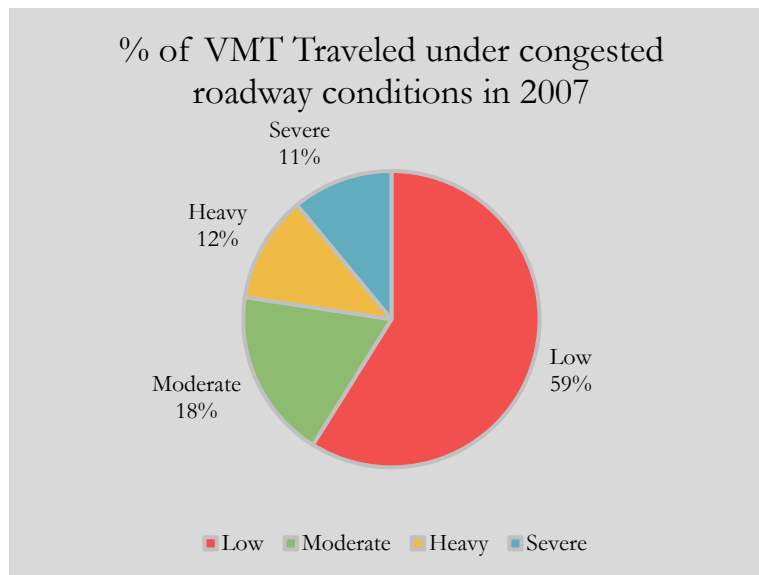


[www.elpasotexas.gov](http://www.elpasotexas.gov)

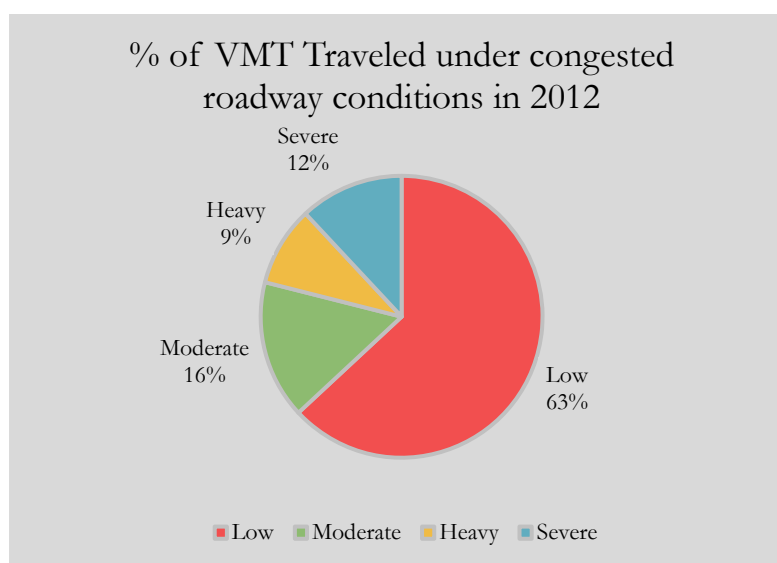


## 2.4 Percent of VMT Traveled under congested conditions

The average daily percent of Vehicle Miles Traveled (VMT) under congested conditions is another model base performance measure that indicates the portion of daily traffic on freeway and other principal arterials in the EPMPO area that moves at less than free-flow speeds.



As reflected in both pie diagrams, the change in congestion level over the five year period was only one percent. In 2007, 11 percent of freeway and arterial VMT in the region had a severe level of congestion. Increasing only to 12 percent in 2012. In 2012, 9 percent of freeway and arterial VMT in the region was approaching congestion status.



## 2.5 Top 100 congested roads

A more extensive collection of congestion measures is presented each year by the Texas A&M Transportation Institute's "100 Most Congested Roadways in Texas". Table 4 summarizes the most congested road sections in EPMPO, listed in rank order from the analysis conducted for the 2014 edition.

Table 4. Top 10 Most Congested Road Sections in El Paso MPO area.

Rank	Segment	Truck Rank	Annual delay per mile (person-hours)	Annual truck delay per mile (person-hours)	Annual congestion cost	Annual truck congestion cost	Texas Congestion Index	Planning Time Index
33	Gateway Blvd/IH 10 from Hawkins Blvd to Lee Trevino Dr	38	287,815	21,638	\$25,217,409	\$6,521,347	1.48	4.06
65	Gateway Blvd/IH 10 from Patriot Fwy/US 54 to Hawkins Blvd	88	187,893	10,519	\$15,845,928	\$3,219,220	1.27	4.31
73	Gateway Blvd/IH 10/US 180 from N Mesa St/SH 20 to Patriot Fwy/US 54	62	181,943	13,287	\$14,626,741	\$3,725,869	1.33	5.71
97	George Dieter Dr from Montwood Dr to N Zaragoza Rd/FM 659	133	156,469	4,464	\$9,971,564	\$1,060,521	1.44	24.67
102	N Mesa St/SH 20 from Executive Center Blvd to N Cotton St	124	155,259	8,248	\$12,941,721	\$2,368,159	1.37	21.05
105	Lee Trevino from Montana Ave/US 180/US 62 to Gateway Blvd/IH 10	281	154,854	4,959	\$13,864,706	\$1,629,842	1.47	28.27
108	Gateway Blvd/IH 10 from Lee Trevino Dr to Joe Battle Blvd/TX 375 Loop	55	154,413	14,408	\$14,640,710	\$4,498,166	1.42	5.39
119	N Yarbrough Dr from Montana Ave/US 180/US 62 to Gateway Blvd/IH 10	302	147,255	4,716	\$10,582,019	\$1,241,399	1.5	28.14
125	Zaragoza Rd from Cesar Chavez Border Hwy/SL 375 to Gateway Blvd/IH 10	239	144,644	5,485	\$14,592,448	\$1,988,365	1.5	16.62
128	N Mesa St/SH 20 from Canam Hwy/IH10/US 180/US 85 to Executive	173	140,521	6,575	\$21,950,448	\$3,659,012	1.39	20.52



State improvements are identified for each segment in the Texas Department of Transportation's web site (<http://txdot.gov/inside-txdot/projects/100-congested-roadways.html>), below is a summary for the first three segments.

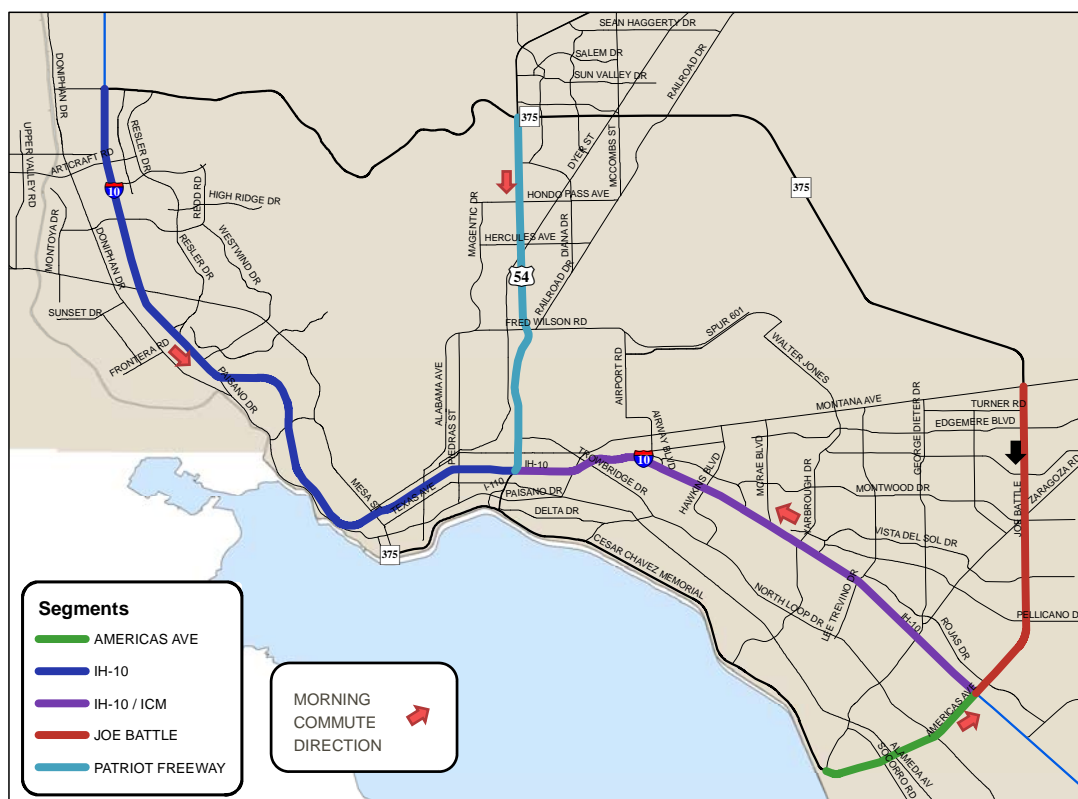
<p><b>Rank 33</b>  <b>IH-10 between Hawkins Boulevard and Lee Trevino Drive.</b></p>	<p><b>Currently in the Metropolitan Transportation Plan:</b></p> <p>Corridor Specific:  <b>Capacity Expansion</b>  Expand IH 10 from a 2-lane to a 3-lane expressway in both directions.  <b>Operation Improvements (CSJ 2121-04-093)</b>  Interchange improvements and the construction of direct connectors at IH 10 and Loop 375.</p> <ul style="list-style-type: none"> <li>• Cost Estimate: Low Bid: \$31.5 Million</li> <li>• Project Let: August 2014</li> <li>• Completion Date: FY 2017 (Fall) Construction to begin: April 2015.  Estimated Duration: 2.5 YRS</li> </ul> <p><b>Operational Improvements: I-10 Westbound Braided Ramps Interchange Improvements (CSJ 2121-04-092)</b></p> <ul style="list-style-type: none"> <li>• Cost Estimate: Low Bid: \$24.9 Million</li> <li>• Project Let: October 2012</li> <li>• Completion Date: Summer 2015</li> </ul> <p><b>Interchange Improvements (CSJ 2121-04-088)</b> Direct connectors at IH 10 and Loop 375 (Phase II)</p> <ul style="list-style-type: none"> <li>• Cost Estimate: Low Bid: \$42.6 Million</li> <li>• Project Let: October 2012</li> <li>• Completion Date: Summer 2015</li> </ul> <p><b>Capacity Expansion/Operation Improvements (CSJ 2121-03-151)</b>  Add one main lane in each direction from Viscount Boulevard to Loop 375 in addition to operational improvements from Viscount Boulevard to Zaragoza.</p> <ul style="list-style-type: none"> <li>• Cost Estimate: Low Bid: \$18.1 Million</li> <li>• Project Let: July 2014</li> <li>• Completion Date: December 2015</li> </ul>
	<p><i>Updated May 2015</i></p>
<p><b>Rank 65</b>  <b>IH-10 between US 54 and Hawkins Boulevard</b></p>	<p><b>Currently in the Metropolitan Transportation Plan:</b></p> <p>Corridor Specific:  <b>Capacity Expansion/Operation Improvements (CSJ 2121-03-151)</b>  Add one main lane in each direction from Viscount Boulevard to Loop 375 in addition to operational improvements from Viscount Boulevard to Zaragoza.</p> <ul style="list-style-type: none"> <li>• <b>Cost Estimate:</b> Low Bid: \$18.1 Million</li> <li>• <b>Project Let:</b> July 2014</li> <li>• <b>Completion Date:</b> December 2015.</li> </ul> <p><b>Operation Improvements (CSJ 2121-03-154)</b>  Add auxiliary lanes and a braided ramp 0.3 miles east of Hawkins Boulevard.</p> <ul style="list-style-type: none"> <li>• <b>Cost Estimate:</b> \$12 Million</li> <li>• <b>Let Year:</b> FY 2017</li> </ul> <p><b>Capacity Expansion</b>  Add one main lane in each direction from Airway Boulevard to Raynor St.</p> <ul style="list-style-type: none"> <li>• <b>Cost Estimate:</b> \$25 Million</li> <li>• <b>Project Let:</b> In project preliminary engineering phase, not yet programmed.</li> </ul>
	<p><i>Updated May 2015</i></p>

<b>Rank 73</b> <b>IH-10 between SH 20 and US 54</b>	<p><b>Currently in the Metropolitan Transportation Plan:</b></p> <p>Corridor Specific:</p> <p><b>Capacity Expansion (CSJ 2121-02-137)</b>  Collector/distributor lanes from Mesa to Executive Center Boulevard.</p> <ul style="list-style-type: none"> <li>• <b>Cost Estimate:</b> Low Bid: \$158.8 Million</li> <li>• <b>Project Let:</b> October 2014</li> <li>• <b>Completion Date:</b> Fall 2019 Construction to begin April 2015. Estimated Duration: 4.5 YRS</li> </ul> <p><b>Capacity Expansion/Operation Improvements (CSJ 2121-02-150)</b>  Mesa Park interchange and frontage roads from future Mesa Park to Executive Center Boulevard.</p> <ul style="list-style-type: none"> <li>• <b>Cost Estimate:</b> \$25 Million</li> <li>• <b>Let Year:</b> FY 2016</li> <li>• <b>Completion Date:</b> FY 2018</li> </ul> <p><b>Capacity Expansion</b>  Add one main lane in each direction from Airway Boulevard to Raynor St.</p> <ul style="list-style-type: none"> <li>• <b>Cost Estimate:</b> \$25 Million</li> <li>• <b>Let Year:</b> In project preliminary engineering phase, not yet programmed.</li> </ul> <p><b>Operation Improvements (CSJ 0167-01-113)</b>  Provide connections from IH 10 to Loop 375 at US 54/IH 110.</p> <ul style="list-style-type: none"> <li>• <b>Cost Estimate:</b> \$25 Million (Partially funded)</li> <li>• <b>Let Year:</b> FY 2019</li> <li>• <b>Completion Date:</b> <i>Unknown</i></li> </ul> <p style="text-align: right;"><i>Updated May 2015</i></p>
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## Section 3 – Analysis of Congested Data

### 3.1 Travel time changes: January-June 2014 vs. 2015

This semi-annual travel time analysis provides up-to date information about the El Paso MPO travel performance, ongoing congestion relief strategies and projects to manage congestion. The performance measures described in this summary result from a comparison of travel times in the first six months of 2014 to those from the same time periods in 2015. For this report I-10 is divided into east/west sections and Loop 375 into north/south sections due to the distinctive traffic patterns during morning and afternoon commute periods. Specifically, this report focuses on a sample of five key freeway segments shown below. The morning commute direction of each freeway route is also identified.



## 3.2 Travel Time Index

Travel Time Index (TTI) is the main measure used every year by the Texas A&M Transportation Institute to produce *The Urban Mobility Report* and *Congested Corridors Report* because it offers an overview of congestion levels and facilitates comparison between similarly sized cities or states. The TTI compares peak period travel time to free-flow travel time. The index includes both recurring and incident conditions and is, therefore, an estimate of the conditions faced by urban travelers.

This measure considers the peak-hour periods (7am to 9am and 4pm to 6pm) during the weekdays and measures separately for (morning) inbound and (evening) outbound directions of each freeway segment. The travel time data source is the National Performance Management research Data Set (NPMRDS) that Federal Highway Administration (FHWA) is making available to States and MPOs as a tool for performance measurement. The data includes travel times for passenger and freight vehicles and are reported by road direction. The table below (Table 5) shows the comparison of Travel Time Indices of freeway segments between the years 2014 and 2015. Travel conditions on each segment are examined below in detail.

Table 5. Travel Time Indices for Morning and Evening Commutes.

### Morning Commute

Freeway	Segment	Inbound (7 am - 9 am)				
		Dir	Length (Miles)	2014 TTI	2015 TTI	% Change
IH-10 (East Section)	US 54 to Loop 375 (Americas Ave.)	WB	10.82	1.24	1.22	-1.3%
IH-10 (West Section)	Loop 375 (Transmountain Rd.) to US 54	EB	15.09	1.09	1.14	4.8%
US-54	IH-10 to Loop 375 (Transmountain Rd.)	SB	7.67	1.04	1.03	-0.5%
Loop 375 (Americas Ave.)	FM 659 (Zaragoza Rd.) to IH-10	NB	2.42	1.01	1.08	7.1%
Loop 375 (Joe Battle Blvd.)	Montana Ave to IH-10	SB	6.81	1.02	1.02	-0.8%

### Evening Commute

Freeway	Segment	Outbound (4 pm - 6 pm)				
		Dir	Length (Miles)	2014 TTI	2015 TTI	% Change
IH-10 (East Section)	US 54 to Loop 375 (Americas Ave.)	EB	10.28	1.60	1.62	1.4%
IH-10 (West Section)	Loop 375 (Transmountain Rd.) to US 54	WB	15.43	1.25	1.20	-4.0%
US-54	IH-10 to Loop 375 (Transmountain Rd.)	NB	7.8	0.99	1.05	5.7%
Loop 375 (Americas Ave.)	FM 659 (Zaragoza Rd.) to IH-10	SB	2.4	1.26	1.32	4.4%
Loop 375 (Joe Battle Blvd.)	Montana Ave to IH-10	NB	6.75	1.08	1.09	1.8%



### 3.3 I-10 (East Section)

The I-10 westbound morning commute from Americas Ave. to US 54 showed an improvement of 1.3% in 2015. Although, travel times were affected during the first half of 2014 due to the Airway at I-10 beautification project (CSJ 2121-03-153); the completion of the project in early 2015 resulted in a reduction in TTI as observed. The I-10 aesthetic project required alternate ramp closing at different times during construction as well as closing one lane and the Texas U-turn at the intersection of Gateway Blvd West and Airway Boulevard for most of the time during construction.



In addition an auxiliary lane connecting Lomaland Drive entrance ramp to Yarbrough Drive exit ramp was added as part of the on-going project along I-10 (CSJ; 2121-03-151) to improving mobility at this section of I-10. Also, the exit and entrance ramps at Yarbrough and Lomaland drives were adjusted to allow traffic to move swiftly in and out of the freeway. These improvements were also completed early 2015 thus the observed reduction in travel times.

On the other hand, the travel time index showed an increase on the eastbound evening commute at this segment. Eastbound travel was also affected by the I-10 aesthetic project during 2014 however, despite the addition of the auxiliary lane there were no improvements during the first half of 2015 for the east direction primarily due to current construction projects that initiated on June 2015.

#### **Current Projects along I-10 East:**

The segment of I-10 between Viscount Blvd. and Joe Battle Blvd. (Loop 375) is currently under construction (CSJ; 2121-03-151) to add one main lane in each direction of the interstate. The work consists of narrowing the width of the main lanes from 12 feet to 11 feet, and the shoulders will go from 10 feet wide to about 2 feet wide. Consequently, I-10 west and eastbound right shoulders are closed between the Zaragoza Overpass and the Viscount/Hunter Overpass and alternate left and right lanes are being closed at off peak hours from 9am to 4pm. This project is part of the work that began in mid-September 2014 with the addition of the auxiliary lanes and is expected to be completed by spring 2016.

In addition, an Integrated Corridor Management (ICM) is underway along this segment of I-10. ICM is an approach supported by the USDOT where the freeway network and the arterial network are integrated together to manage and move traffic as safely and efficiently as possible as well as to address congestion and travel time reliability issues within specific travel corridors. A kick off

meeting was conducted on June 16, 2015 for the El Paso ICM proposed corridor. The El Paso ICM team is a collaborative effort between the El Paso MPO, the City of El Paso, the Texas Department of Transportation and Sun Metro. The El Paso ICM Team is complemented by the technical expertise of the Texas A&M Transportation Institute and the University of Texas at El Paso (UTEP).

### 3.4 I-10 (West Section)



In general, travel times in this segment were affected near the University of Texas at El Paso (UTEP) due to construction of the Spur 1966 project. The Spur 1966 is a new connection between Schuster Avenue on the UTEP campus and Paisano Drive via a bridge over I-10. During construction, portions of I-10 had only one lane open in each direction at off peak hours and multiple lane closures affecting overall travel times.

Construction started in April 2013 and the Spur opened on May 2015 enhancing traffic flow to the University and nearby medical facilities.

Westbound evening commute showed an improvement of 4% between years 2014 and 2015 regardless of traffic being affected by the Spur 1966 construction. Another project that might have had an influence in the travel trends at this segment was the decorative fencing installed at the eleven overpasses/bridges that cross I-10 downtown. Shoulder and lane road closures were conducted in 2014



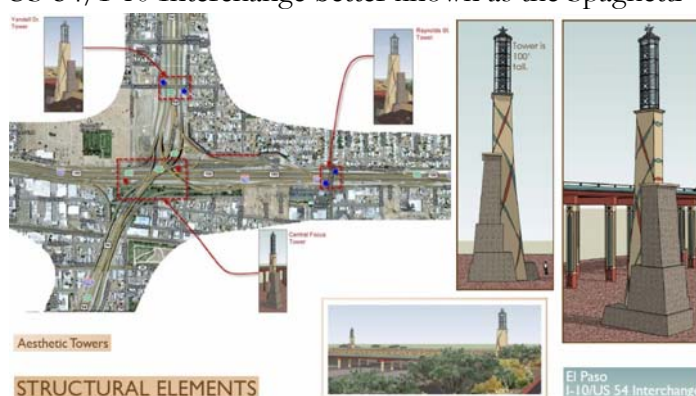
during this beautification project. Since travel time indices were calculated only for the first half of year 2014 it is hard to determine if the project had an effect on traffic. The project initiated in June of 2014 and was completed by the end of year 2014 therefore commuters might have experienced an improvement in travel times early 2015 once the project was completed. Next year's performance indicators report will provide better information in determining the travel time changes along this segment.

## Current Projects along I-10 West:

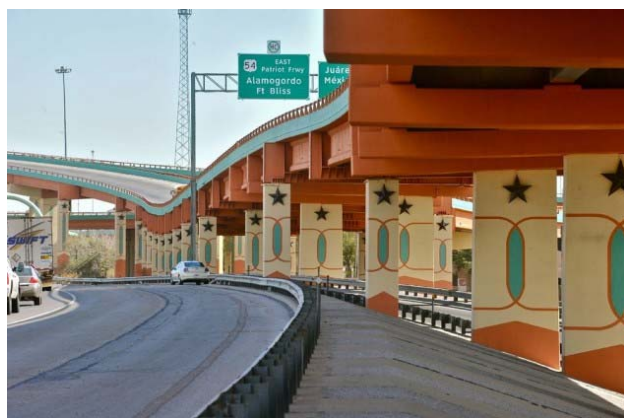
The I-10 Collector-Distributor lanes (CD Lanes) construction initiated in April 2015 (CSJ: 2121-02-137). The CD lanes will create a buffer for the main lanes by “collecting” and “distributing” traffic to and from on- and off-ramps between Executive Center Blvd. and Mesa St. The number of lanes will vary along the five mile stretch of I-10. Currently, the right lane and right shoulder are closed as well as the entrance ramp at I-10 westbound at Executive Blvd. and will remain closed until Feb 2016. This project will also provide an improved connection to US 85 (Paisano) and the proposed Border Highway West project.

### 3.5 Patriot Freeway (US 54)

US 54 experienced an increase in travel time of 5.7% for the northbound evening commute in 2015. The aesthetics improvement project for the US-54/I-10 Interchange better known as the Spaghetti Bowl, might have had an impact on traffic during construction. The project limits along US 54 were from Yandell Dr. to Alameda Ave. Improvements consisted of cleaning and repainting the bridge structures; lead paint and asbestos abatement; high mast, accent and underpass lighting; riprap repairs and improvements; landscape improvements; installation of a landscape/aesthetic wall along the northeast boundary; installation of aesthetic towers; and railing upgrade along US-54. The three phase work started in January of 2014 and completion was planned for August 2015.



### Future Projects along US-54:



The Texas Department of Transportation (TxDOT) proposed improvements (CSJs: 0167-01-095 and 0167-01-098) to US 54 between Hondo Pass Ave. and Transmountain Rd. will include the addition of one main lane in each direction and reversal of northbound and southbound on-off ramps within the project limits. Currently, the traffic merges into a two lane freeway in each direction north of Hondo Pass Ave. The additional lane would create a total of three main lanes in each direction, and the roadway would be

widened to accommodate the new capacity. The project is programmed in the 2040 Horizon Metropolitan Transportation Plan (MTP) for year 2020.

### **3.6 Americas Ave./Loop 375 (South Section)**

Both north and southbound traffic showed an increase in travel times between years 2014 and 2015. The I-10/Loop 375 direct connectors project (Americas Interchange, CSJ; 2121-04-093) might have played a big role in the impact on travel times for this segment. The first phase of the Americas Interchange was completed in January 2013 with the construction of three direct connectors (DCs): eastbound I-10 to northbound Loop 375; southbound Loop 375 to westbound I-10; and northbound Loop 375 to westbound I-10. The second phase was let in October 2012 and is at its final stages which will add three more DCs; westbound I-10 to northbound Loop 375; westbound I-10 to southbound Loop 375 and eastbound I-10 to southbound Loop 375.

The last phase initiated in April 2015 and its expected duration is 2.5 years. When finished, the ultimate design will include the construction of eight proposed DCs which are expected to make the commute for El Paso residents much easier and more efficient.



#### **Future Projects along Americas Ave.:**

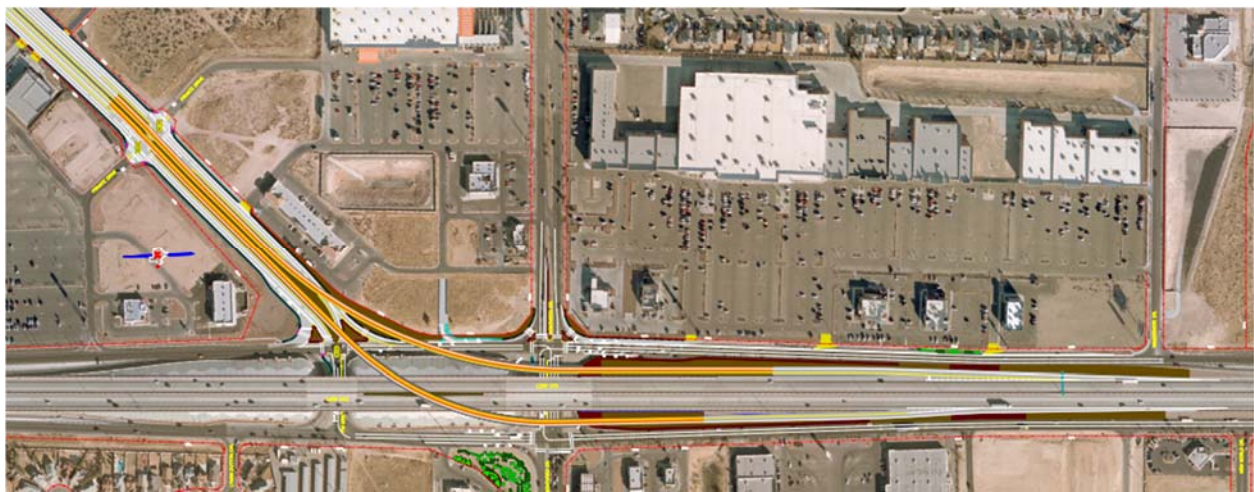
Loop 375 (Americas Ave.) Managed Lanes (CSJ: 2552-03-049) will add two express toll lanes (one in each direction) in the center median of the existing four-lane divided, limited access facility. The new lane will be tolled (also known as “managed”) and will connect to the recently constructed managed lanes on the Loop 375 Southern Corridor (Cesar Chavez) from US 54 to Zaragoza Rd. The project also includes adding frontage road bridges over major arterials (including the Union Pacific Rail Rd.) and extending frontage roads between Alameda Ave. and Farm-to Market Rd. 76 (North Loop Dr.) where no frontage roads exist. The proposed project is currently in the 2015-2018 Transportation Improvement Program (TIP) for fiscal year 2018 and 2040 Horizon MTP network year 2020.



### 3.7 Joe Battle Blvd./Loop 375 (North Section)

For this segment of Loop 375 from I-10 to Montana Ave., the results show that 2015 travel times had a small increase from the previous year. The increase of 1.8% was only for the northbound afternoon commute. Despite the construction at the Americas interchange which might have also affected travel times along this corridor, the southbound morning commute actually had a decrease of 0.8%.

A major construction along this segment was the implementation of the Zaragoza direct connector project (completed in November 2013). The purpose of the project was to improve access to and reduced congestion for both Joe Battle Blvd. and Zaragoza Rd. (FM 659). As well as to improve safety for the traveling public and a safe and convenient access for residential and commercial development along the Joe Battle and Zaragoza corridors. This intersection has been among the intersections with the most collisions several years in a row, including 45 collisions in 2011, according to city police statistics. FM 659 from Montwood Dr. to North Loop Dr. (FM 76) was also ranked number 62 of the top 2011 Most Congested Roadways in Texas and number 52 in 2012. The segment is no longer shown as a congested corridor in the 2014 list.



Texas Department of Transportation

#### **Future Projects along Joe Battle Boulevard:**

Proposed improvements along this segment are programed in the 2040 Horizon MTP for year 2020 (CSJ; 2552-03-054). TxDOT is considering adding a 12-foot travel lane in each direction to the existing two lanes between US 62/180 (Montana Avenue) to Bob Hope Dr. In addition, an operational improvement is planned to improve the weaving at the exit of Montwood Dr. by adding an auxiliary lane from the Loop 375 entrance ramp at Vista del Sol Dr. to exit at Montwood Dr.

## 4 - Program Implementation

### 4.1 Transportation Improvement Program (TIP)

The TIP is a short-range program of transportation improvements for the MPO's planning area, and is required by federal law. The TIP is prepared and coordinated by EPMPO staff with participating agencies that implement transportation projects and programs in accordance with regulations issued by the United States Department of Transportation. The TIP contains all projects to be funded with federal transportation funds, as well as all regionally significant transportation projects funded with non-federal funds. The Horizon 2015-2018 TIP is consistent with the El Paso MPO's Horizon 2040 Metropolitan Transportation Plan (MTP). All projects in the TIP must conform to the CMP.

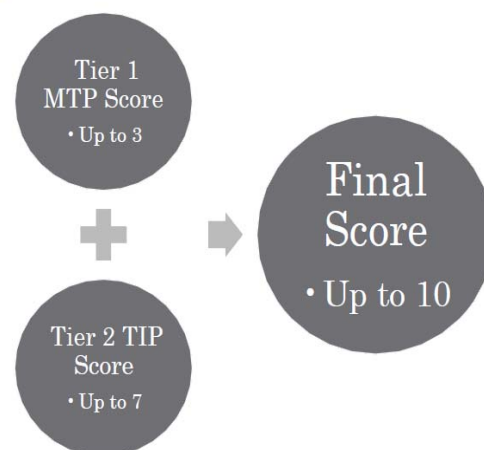
For all new roadway projects where the addition of general-purpose lanes is determined to be an appropriate strategy, other congestion management strategies must be considered. This can include travel demand management (TDM), traffic operations and/or public transportation strategies.

### 4.2 Project Selection Process (PSP)

To better link the CMP to the MTP and TIP process; the EPMPO just recently initiated using a methodology being used by large MPOs. Projects addressing CMP strategies are prioritized in the Project Selection Process. CMP strategies are one of the main ranking categories that are being evaluated when projects are submitted by implementing agencies during the call for projects. Projects with identified congestion management strategies receive extra points. Project addressing more than one strategy receive more points.

#### PSP Breakdown

- Phase 1 Call for Projects
- Phase 2 Need and Purpose
- Tier 1 MTP scores
  - Phase 2.1 National Goals
    - 25% of 6 max. possible points
  - Phase 2.2 MPO 2013 CMP Strategies
    - 25% of 6 max. possible points
- Tier 2 TIP scores
  - Phase 2.3A-C Project Financing
    - 25% of 8 max. possible points
  - Phase 2.3D-H Project Readiness
    - 25% of 20 max. possible points
- Phase 3 Draft Project List
- Phase 4 TPAC Recommendation
- Phase 5 Public Involvement
- Phase 6 TPB Action



### 4.3 FY 2015-2018 TIP amendment

Eligible projects evaluated during the project call for FY 2016 for inclusion in the Horizon 2015-2018 TIP were adopted during the July 17, 2015 Transportation Policy Board meeting. Identified strategies for each project are listed in Table 6. The PSP will also be applied as necessary to the eligible projects submitted for future Calls for Projects, the Transportation Project Advisory Committee (TPAC) will review the PSP project ranking results and make recommendations to the TPB for approval.





**PSP Tier 1 (MTP)**  
**Phase 2.2 2013 Congestion Management Process Strategies**

**1. Travel Demand Management Strategies** Travel demand management (TDM) strategies promote nonautomotive travel modes, land use management, any project that provides travelers with more options and reduces the number of vehicles or trips during congested periods. These include strategies that substitute communication for travel, or encourage regional cooperation to change development patterns and/or reduce sprawl. Other examples include programs that encourage transit use and ridesharing, such as marketing/outreach for transit and TDM services, also pedestrian and bicycle improvements.

**2. Traffic Operations Strategies** These strategies focus on improving efficiency of the system, focusing on operation of the existing network of roads. Many of these operations-based strategies are supported by the use of enhanced technologies and ITS. Examples at the arterial level include: optimizing the timing of traffic signals, restricting turns at key intersections, geometric improvements to roads and intersections, converting streets to one-way operations, transit signal priority, and access management policies.

**3. Public Transportation Strategies** These are projects that improve transit operations, improve access to transit, and expand transit service and help reduce the number of vehicles on the road by making transit more attractive or accessible. These strategies may be closely linked to strategies in the previous two categories (demand management and traffic operations). As with traffic operations, transit operations are often enhanced by ITS.

**4. Road Capacity Strategies** This category of strategies addresses adding more base capacity to the road network, such as adding additional lanes and building new highways, as well as redesigning specific bottlenecks (such as interchanges and intersections) to increase their capacity. Given the expense and possible adverse environmental impacts of new single-occupant vehicle capacity, management and operations strategies should be given due consideration before additional capacity is considered.

**5. Non-CMP Strategies** Several projects listed in the MTP are not considered CMP projects.

Table 6. Eligible FY 2016 projects with Identified Congestion Management Strategies in the FY 2015- 2018 TIP.

CSJ	Name	Travel Demand Management	Traffic Operations	Public Transportation	Non-CMP
New	West El Paso Traffic Mitigation Circulator Service	√		√	
2121-02-146	I-10/US 54 Replace Safety Lighting		√		
New	Bus Procurement (3) To Assist With I-10 Project Traffic Mitigation	√		√	
0924-06-471	Metropia Synergy Solution	√	√	√	
New	El Paso County Regional Transit Feasibility Study	√		√	
New	Sun Metro Engine Rebuilds			√	
2121-02-157	I-10/US 54 Install Overhead Signs		√		
New	State Spur 6 (Wildcat Drive) School Zone Safety				√
0924-06-480	Express Toll Lanes At Tornillo Port Of Entry		√		
2552-03-058	Loop 375 (Americas) Ramps & Frontage Roads Reconfiguration		√		
0924-06-457	Darrington Rd. Widening with Bicycle Facilities	√			
New	Greg/Edgemere Ext. with Bike Lane (PE and ROW Phase 1)	√			

## References and Resources for More Information

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**FHWA**, 2014 Urban Congestion Trends – Improved Data for Operations Decision Making, April 2015 (<http://www.ops.fhwa.dot.gov/publications/fhwahop15006/index.htm>)

**INRIX and TTI**, 2015 Urban Mobility Scorecard, August 2015 (<http://mobility.tamu.edu/ums/>)

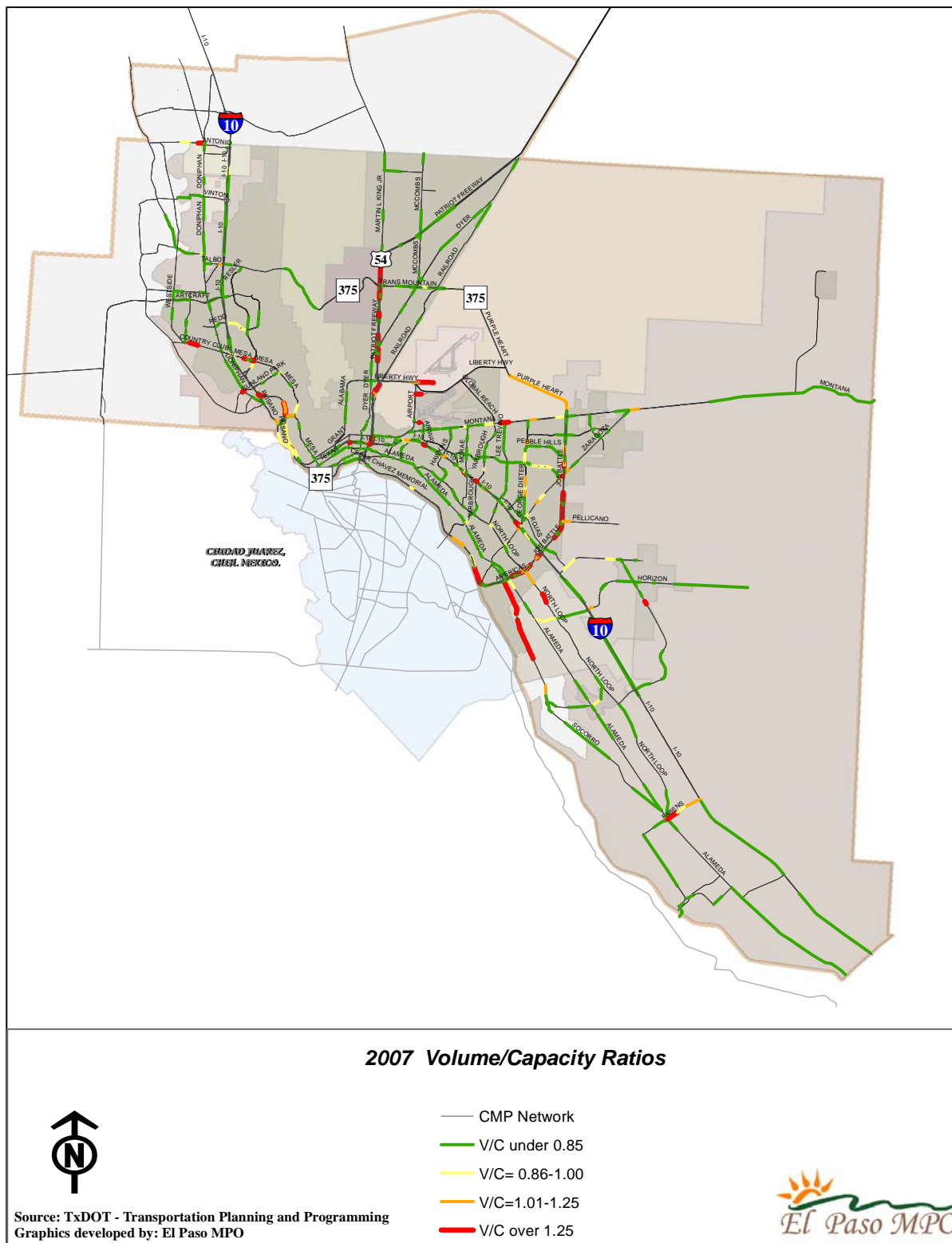
**FHWA and TTI**, Urban Congestion Report (UCR) – a Snapshot of Year-to-Year Congestion Trends in the U.S for January through March 2015  
([http://www.ops.fhwa.dot.gov/perf\\_measurement/ucr/reports/fy2015\\_q2.pdf](http://www.ops.fhwa.dot.gov/perf_measurement/ucr/reports/fy2015_q2.pdf))

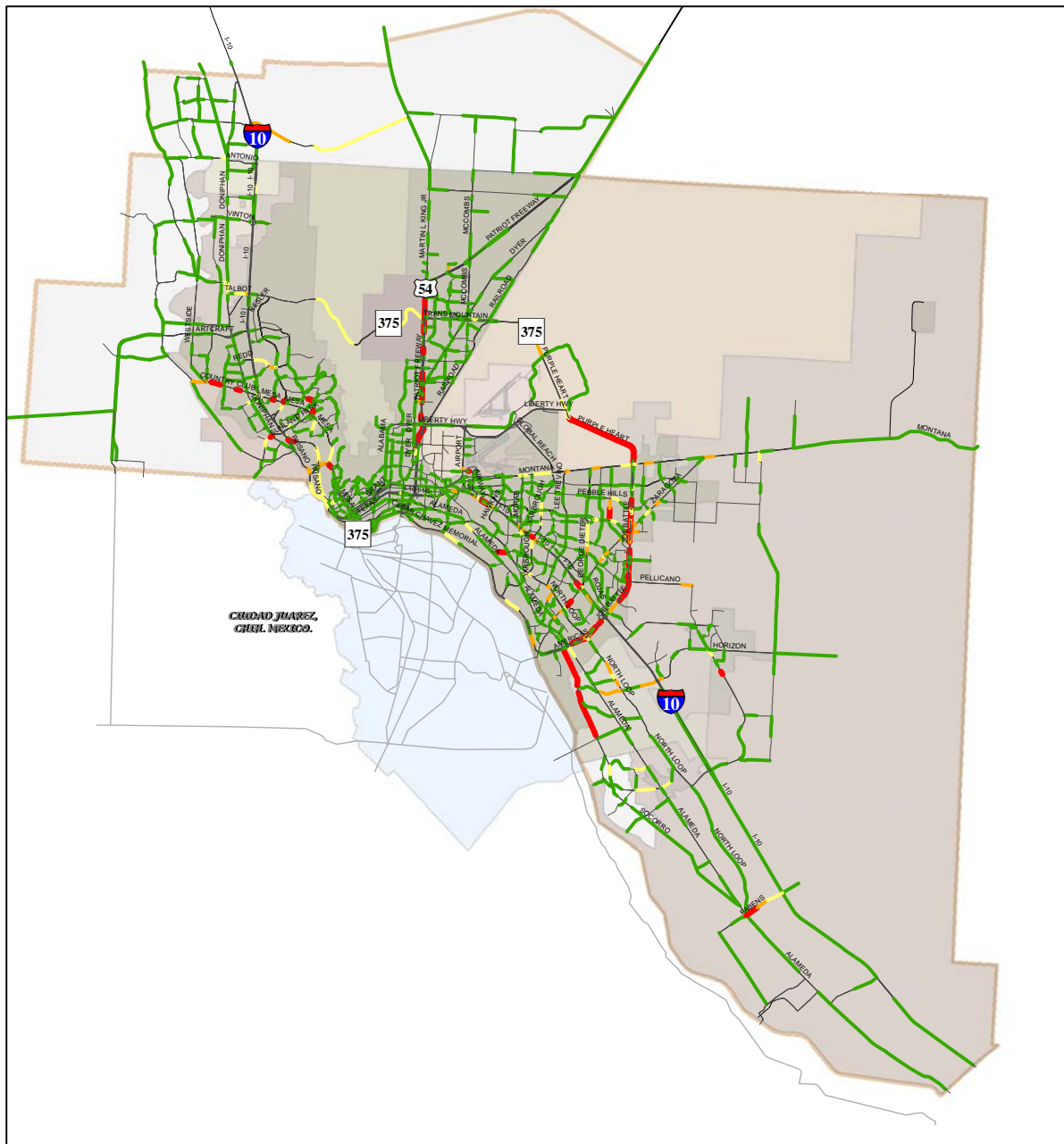
**TTI**, The most congested roads in Texas (<http://mobility.tamu.edu/most-congested-texas/>)

**TxDOT**, 100 Congested Roadways (<http://txdot.gov/inside-txdot/projects/100-congested-roadways.html>)

# Appendix

## 2007 and 2012 v/c Maps





### 2012 Volume/Capacity Ratios



Source: TxDOT - Transportation Planning and Programming  
Graphics developed by: El Paso MPO

- CMP Network
- V/C under 0.85
- V/C = 0.86-1.00
- V/C = 1.01-1.25
- V/C over 1.25

