Federal regulations require that all Transportation Management Areas (TMAs), such as EPMPO, incorporate an "objectives-driven performance-based" Congestion Management Process (CMP) into the regional transportation planning process. The CMP is intended to address congestion based on a cooperatively developed and implemented region-wide strategy that provides for the safe and effective management and operation of its multimodal transportation system. Strategies and projects are to be reflected in the MPO's long-range MTP and TIP. Strategies that manage travel demand, reduce Single Occupant Vehicle (SOV) travel, and improve transportation system management and operations are all to be considered, as well as those that address bicycling and walking.

The Congestion Management Process was recently updated and approved by the board in May 2013. The regional goals and objectives for congestion management identified in the CMP are:

1. Provide a transportation system that serves the public with mobility choices including pedestrians and bicycles
    a. Increase and improve bicycling options and facilities in the region
    b. Increase and improve pedestrian facilities in the region
    c. Increase and improve transit system and facilities
    d. Improve the reliability and efficiency of buses
    e. Continue Intelligent Transportation System (ITS) improvements in the region
2. Identify and mitigate congestion on the transportation system
    a. Identify, diagnose, and address highway bottlenecks and travel delays
    b. Reduce travel delays on major arterial roads for all alternative modes
    c. Reduce travel delays at traffic signals
    d. Increase and improve the regional incident management program
    e. Enhance border crossing road operations to improve facilitation of truck traffic
    f. Increase efforts to reduce crash rates and improve safety on the system
    g. Enhance partnerships between regional transportation system providers
3. Minimize air quality impacts of congestion
    a. Create and enhance shared ride programs in the region (e.g., carpools, vanpools)
    b. Promote transit options to citizens in the region
    c. Promote travel demand management programs in the region
4. Promote accessibility to an efficient transportation system for all citizens
    a. Improve connectivity between all modes in the system
    b. Improve border crossing activities for all users of the system (pedestrian, automobile, trucks)

The goals and objectives provide the MPO a "lens" through which it can evaluate the potential of each transportation project in the region for congestion management. The CMP (http://www.elpasompo.org/CMP/2013CMPFinalDraft.pdf) becomes a foundational planning document from which the MTP and TIP can begin to be constructed.

Data Collection and Data Management Plan

Data collection is the back bone of the CMP. Data has to be collected on a recurring basis and results presented for congestion analysis. Since 2007, the EPMPO has attempted to conduct a data collection plan to provide performance indicators and help determine current congestion levels in the El Paso MPO Study Area. This data collection effort is intended to help identify changes over time and assist in the monitoring and evaluation process. The plan includes data gathering (only on congested segments), collecting traffic counts and speed data, as well as support for the regional travel demand model. The data collection monitoring reported by the MPO covers a time frame of 24 hours for traffic counts and travel time data at peak hours (7:00 AM to 9:00 AM; 11:00 AM to 1:00 PM; 4:00 PM to 6:00 PM). The EPMPO intended to collect data every two and a half years.

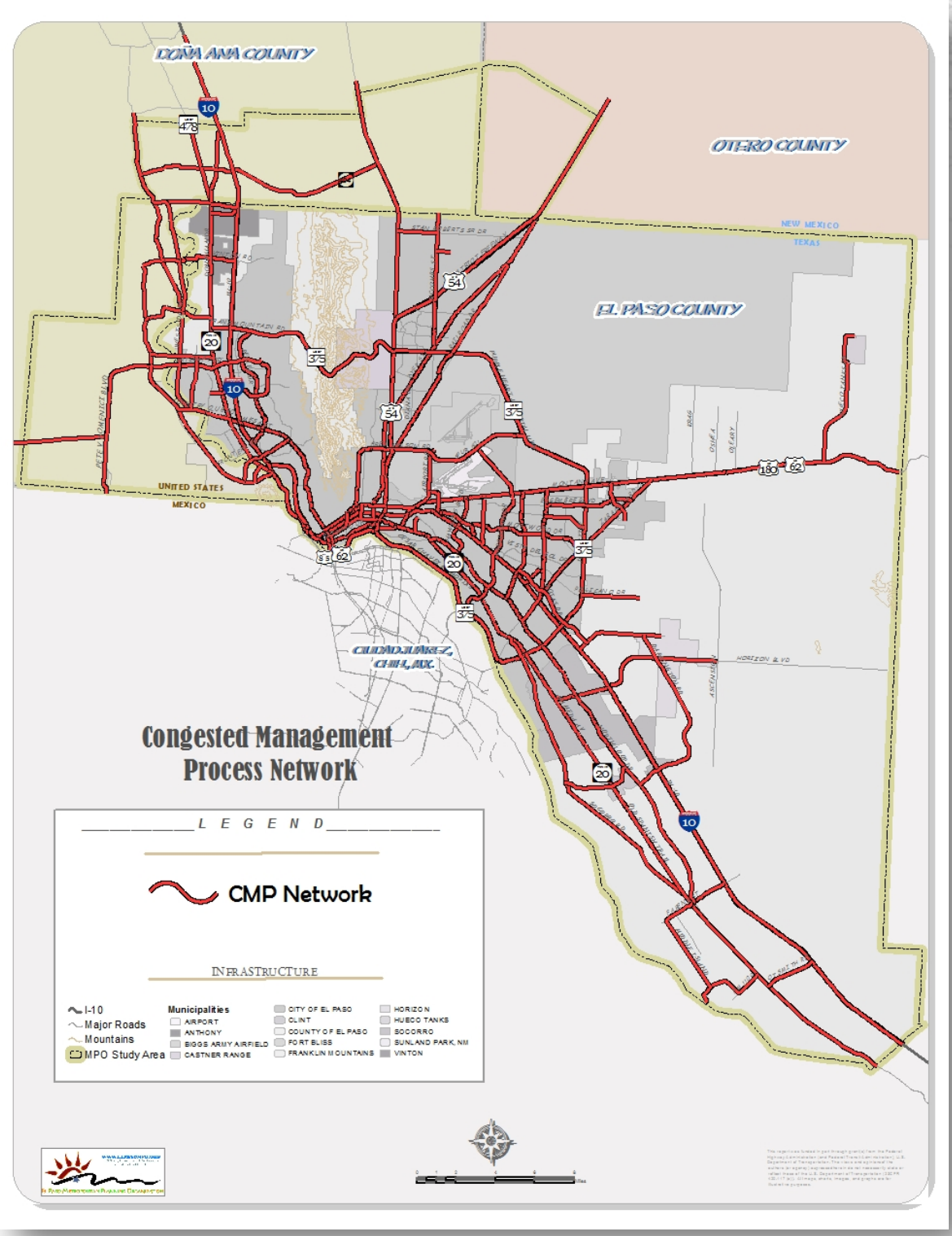
The most common types of data used by EPMPO are:

- Average Daily Traffic (ADT)
- Number of Lanes
- AM and PM Peak Hour Volumes by Direction
- Vehicle Classification Counts
- Travel Time statistics

In addition, the MPO intends to implement a robust system of collection based on regional cooperation with stakeholders and state and local agencies. Regional Data sources have been identified to acquire the necessary data to analyze congestion based on each of the identified performance measures. The EPMPO recognizes the importance of this data and will seek the required fund and resources to perform improved transportation system analysis and monitoring.

The data will be collected on a requiring basis for the roadways that comprise the CMP network. The CMP network (See *Map 10*) includes all roadways currently functionally classified as principal arterials and above under the federal functional classification system, several state roads and few other major roads consider of regional importance that did not fall under the principal arterial category such as Eastlake Blvd. and Darrington Rd. in the county area. It should be noted that the CMP network may be subject to change as conditions change in the EPMPO area.

Map 10: CMP Network



Identification and Evaluation of Congestion Management Strategies

With population in the EPMPO area expected to surpass 1.1 million by 2040, significant travel demand will be placed on the transportation infrastructure. This presents an opportunity for the region to evaluate system management and operational strategies that increase the efficiency of the existing transportation system and enhance options for travelers in the region.

The detail strategy evaluation process is identified in the updated CMP document. Strategies can be deployed as stand-along projects, at a system wide level or included as part of other capacity improvements and infrastructure projects to complement their effectiveness. The strategies planned in the EPMPO as part of the 2040 MTP are:

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.

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.

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.

Roadway 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.

Performance Measures

To further enhance strategy and project evaluation, new performance measures were developed by the subcommittee and MPO staff for each objective of the CMP. Great effort was made to lay the groundwork for performance measures that are specific, measurable, agreed upon by local agencies, realistic, and time-specific. The performance measures have also been developed based on the need for operational characteristics that are easily understood by the public and that provide consistency with existing MPO goals and objectives and national practice. They are listed below with their objective.

OBJECTIVE	PERFORMANCE MEASURE
1a) Increase and improve bicycling options and facilities in the region	Length of bike lanes per corridor mile (system)
	Number of buses with bike racks
	Number of transit facilities with bike parking facilities
1b) Increase and improve pedestrian facilities in the region	Length of sidewalks per corridor mile (system)
1c) Increase and improve transit system and facilities	System/Route Accessibility and expansion
	Construction of multimodal facilities
1d) Improve the reliability and efficiency of buses	Schedule adherence
1e) Continue Intelligent Transportation System (ITS) improvements in the region	Number of miles of highway and major arterial CMP network with traffic detectors, CCTV, and DMS coverage
2a) Identify, diagnose, and address highway bottlenecks and travel delays	V/C ratios and delays per link of Highway on CMP Network
2b) Reduce travel delays on major arterial roads for all alternative modes	V/C ratios and delays per link of major arterial roads on CMP Network
2c) Reduce travel delays at traffic signals	Intersection Level of Service at Peak-hour
2d)Increase and improve the regional incident management program	Number of incidents on state highways, incident response time, incident resolution time
2e) Enhance border crossing road operations to improve facilitation of truck traffic	Average truck border crossing time
2f) Increase efforts to reduce crash rates and improve safety on the system	Number of accidents (e.g., fatalities or injuries) on state highways on the CMP Network (on street network if data vailable from Police Departments)
2g) Enhance partnerships between regional transportation system providers	Regional incident management program participation
3a) Create and enhance shared ride programs in the region (e.g., carpools, vanpools)	Number of vehicles in vanpool/carpool programs
	Number of riders on vanpool/carpool program
3b) Promote transit options to citizens in the region	System/Route Accessibility–marketing programs developed and implemented
3c) Promote travel demand management programs in the region	Number of large employers in the region with official alternative work schedules (e.g., City of El Paso, UTEP)
4a) Improve connectivity between all modes in the system	Number of park and ride lots
	Number of transfer centers
4b) Improve border crossing activities for all users of the system (pedestrian, automobile, trucks)	Border wait times
	Number of pedestrians crossing the border

A critical step to integrate the CMP with the MTP, TIP, and local Capital Improvement Programs is setting targets for each of the congestion performance measures with the qualities previously described. Specifically, realistic metrics for performance measures are very important for implementation and monitoring of the CMP. Performance measure targets do not, in themselves, establish priorities to guide investment in the regional transportation system. The EPMPO MTP and TIP development process will accomplish priority setting in terms of how congestion relief fits with safety, system preservation, and other model improvement needs in the El Paso area. The CMP performance measure targets guide choices within the congestion management area.

The lack of comprehensive, system-wide data for many of the measures precluded setting for the targets. EPMPO staff will work with the TPB to develop and implement a more robust data collection program for the MPO in order to refine and recommend targets to the performance measures. These measures will be refined as additional data becomes available.

MAP-21 requires development of federal requirements for specific planning performance measure targets which are supposed to reflect local conditions and goals. Regardless, targets can be adjusted over time, usually linked to updates of the MTP and CMP. In general, performance targets should relate directly to the priority assigned to congestion mitigation by mode and strategy.

Citizens and stakeholders will expect to see progress on the performance measure targets. Therefore, the MPO must commit to investing in the strategies and projects linked to achieving improved transportation system performance.