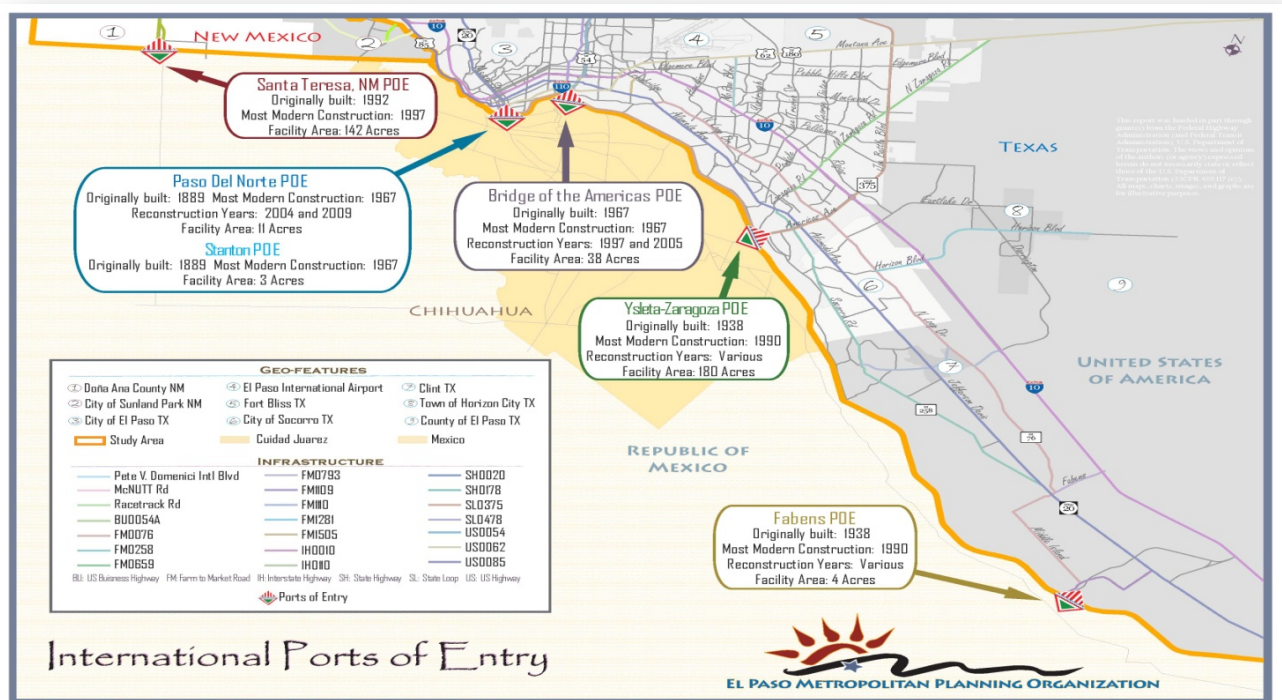


Border Planning

The El Paso/Dona Ana/Juárez international ports-of-entry (POEs) represent a system of land connections of regional significance. On one hand this system provides critical links between maquiladora factories, primarily located in Ciudad Juárez, and distribution centers and consumer markets located in metropolitan area of El Paso, Texas, New Mexico, and beyond. Over \$70 billion in U.S.-Mexico trade crossed through the region's POEs in 2012, representing about a fifth of the total trade between the U.S. and Mexico¹. In addition to facilitating trade, the network of area POEs also provides access to schools and businesses and contributes to a shared regional culture and lifestyle. In 2012, nearly 30,000 passenger cars and over 17,000 pedestrians used these crossings each day. Overall, border-dependent businesses and travelers contributed over \$1 billion to the regional economy and supported nearly 700,000 jobs on both sides of the border². Clearly, this POE system is a key contributor to the overall health and competitiveness of El Paso, Dona Ana, and Juarez, linking the two border communities, fostering international trade, and creating and supporting high paying, attractive jobs for the region's residents.

However, this vital system is being stressed by continued growth in traffic, trade, and pedestrian volumes, driven by the growing populations and economies of Texas and New Mexico, in general, and the El Paso/Dona Ana/Juarez region, in particular. Vehicular and pedestrian volumes are expected to grow significantly between now and 2040.



¹ U. S. Customs and Border Protection

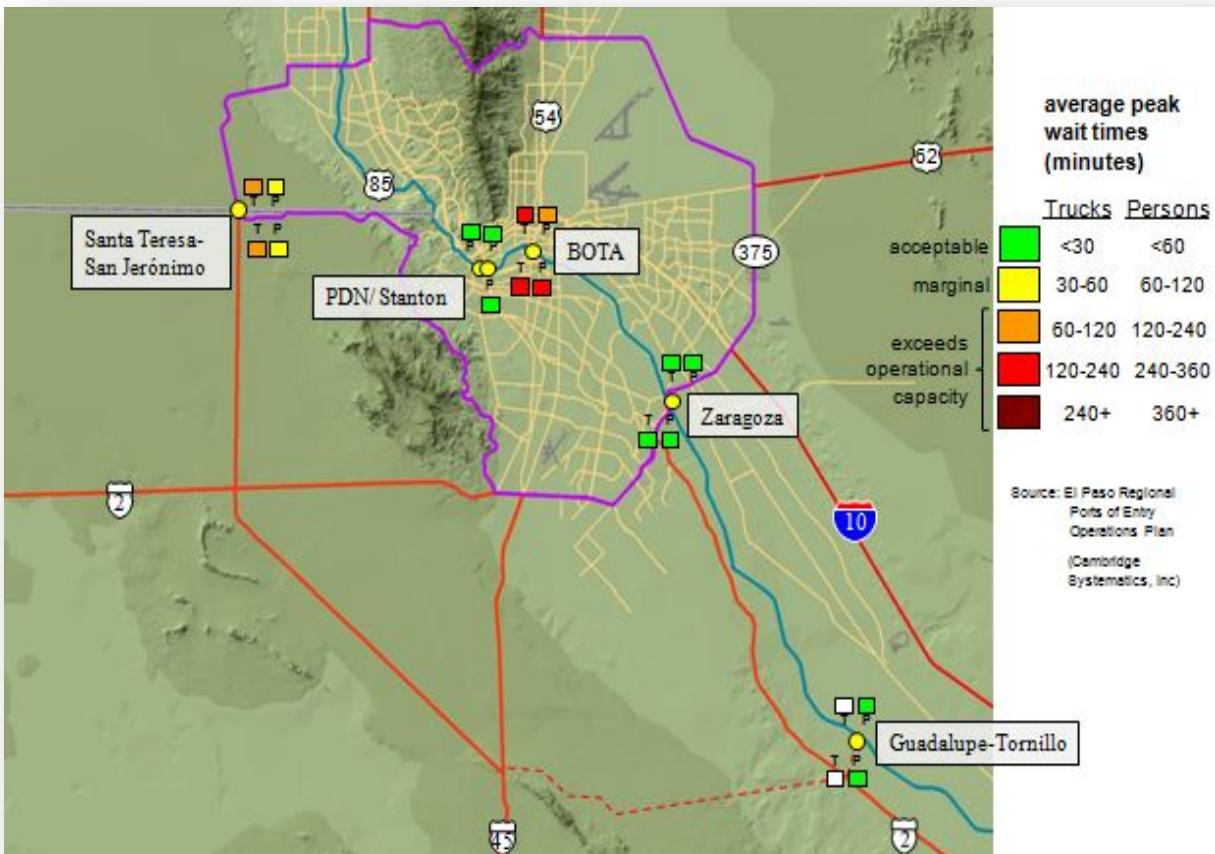
² "El Paso POE Operations Plan", Cambridge Systematics. Analysis based on REMI simulation.

Current Wait Times at Area POEs

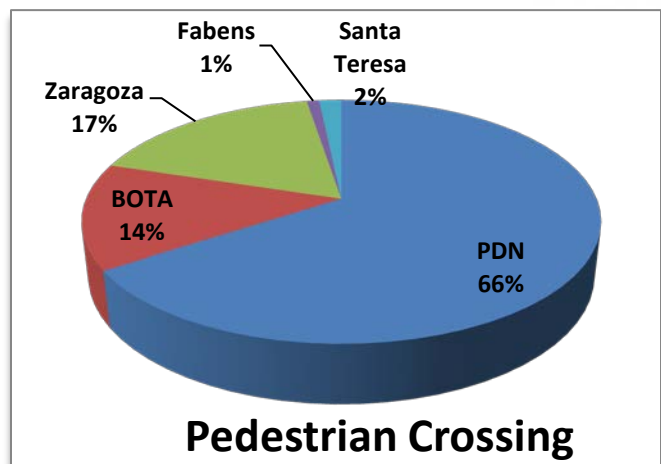
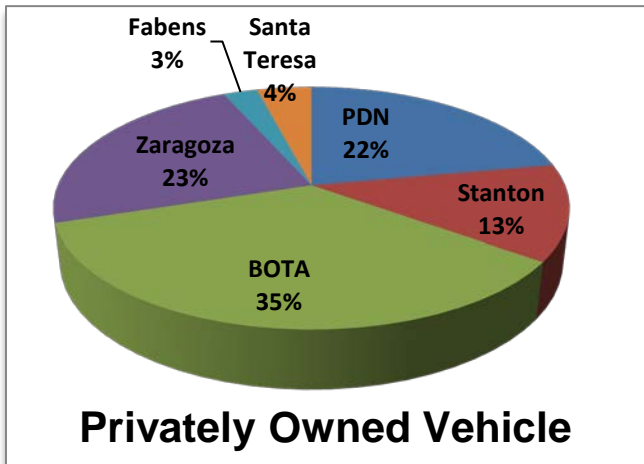
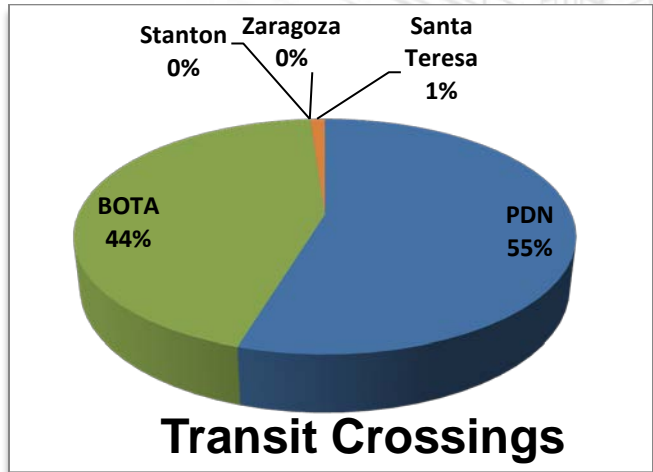
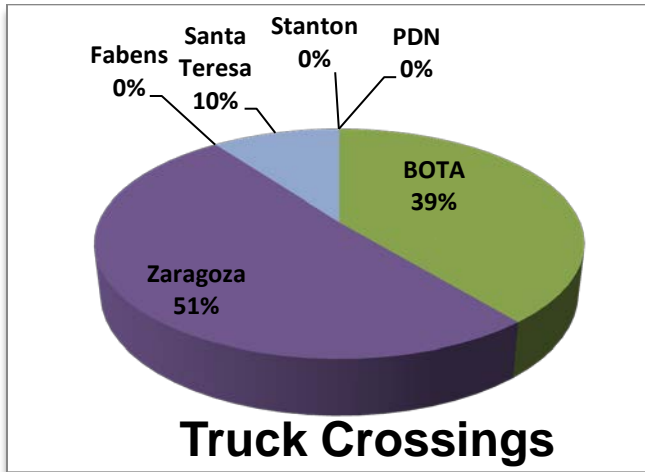
In an attempt to provide a measure of level-of-service, Cambridge Systematics/TxDOT's study "El Paso POE Operations Plans" developed the following categories of peak crossing wait times (in minutes):

| | Trucks | Persons |
|------------------------------|---------|---------|
| acceptable | <30 | <60 |
| marginal | 30-60 | 60-120 |
| exceeds operational capacity | 60-120 | 120-240 |
| | 120-240 | 240-360 |
| | 240+ | 360+ |

Wait times are already significant at a couple of the region's POEs, showing operations at or beyond capacity, as defined by Cambridge Systematics' study; this is shown schematically in the following map, with colors added to the categories for improved interpretation:



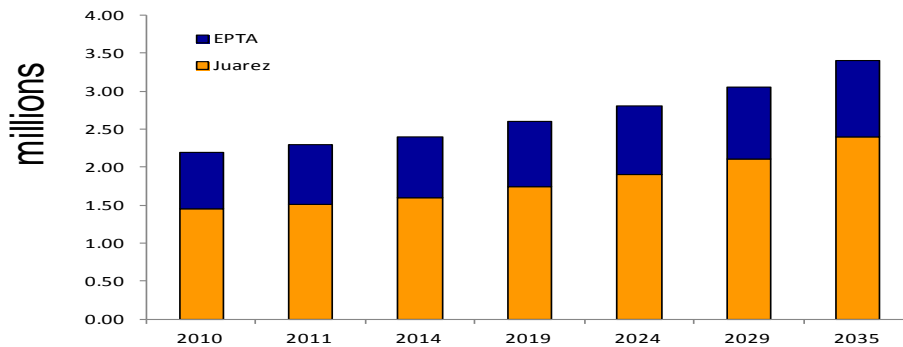
Border Crossings for 2012



Source: U.S. Customs Service and Border Protection

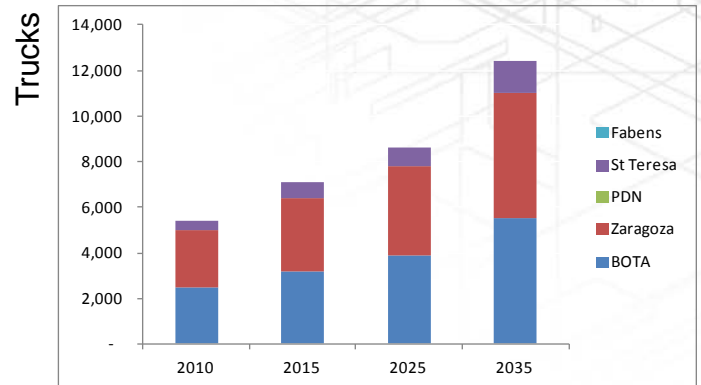
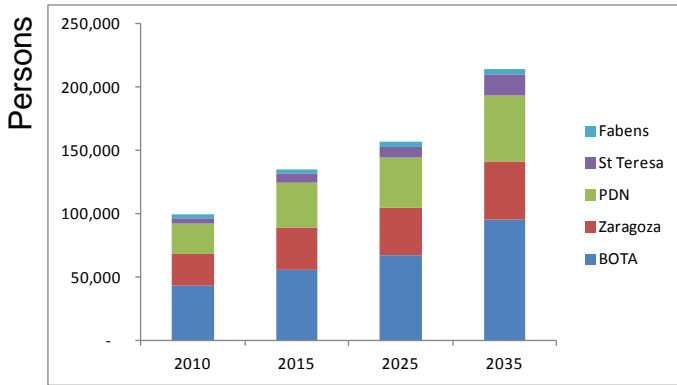
Expected Growth and POEs

Population in the El Paso/Dona Ana/Juarez border area is expected to almost double by 2040.



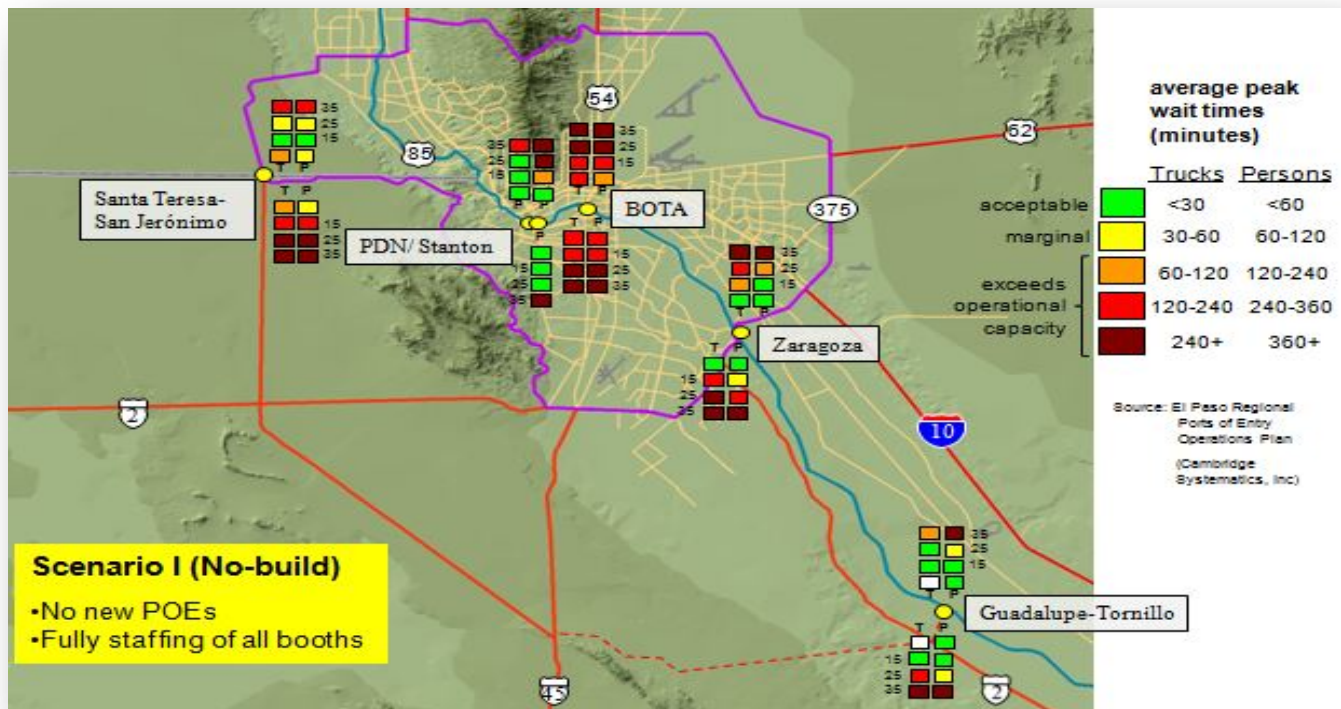
Source: UTEP, Borderplex Long-Term Economic Trends to 2029, April 2010 with Cambridge Systematics extrapolation from 2029-2035

Such growth in population is expected to double the number of international crossings through the region's POEs in the next 25 years, by people (as pedestrians only, bus users, or private vehicle occupants) and trucks.



Source: Cambridge Systematics based on 2010 U. S. Customs and Border Protection counts and UTEP Border Region Modeling Project demographic data and cross-border growth forecasts

The Cambridge Systematics' study evaluated such growth in crossing flows on each of the existing POEs in the region. The no-build of new POEs, even if staffing and operations are optimized (scenario I), will yield considerable wait times at existing POEs (in most POEs as soon as 2015), as shown in the map below:



Impact on regional Economy

Not addressing wait times at area POEs will affect the regional economy.

The El Paso/Dona Ana/Juarez economies are tightly linked and long and unpredictable border wait times will adversely impact the overall economic health of the region. If left unchecked through 2040, forecasted congestion and wait times at the border are expected to contract the economy by \$54 billion (21.8 percent), and cause a net job loss of about 850,000 (17.4 percent)³. The loss of business competitiveness due to cross-border freight wait times, will likely result in either relocation of businesses in the region or a potential cut-back in goods production.

While cross-border wait times associated with commuter trips is shown to have marginal impact on the regional economy today, it is expected to adversely affect El Paso's economy in the future. By 2035, work-related wait times are expected to cause a 2.6 percent loss in El Paso's economic activity, compared to 0.5 percent and 0.2 percent in Juárez/Chihuahua and Dona Ana County, respectively.

Efficient Transborder Mobility from Efficient System of POEs

Due to the extent of the border line and the geographical size of the twin border communities, a system of POEs working as a network can effectively provide improved transborder mobility; this includes improving the operation of current POEs as well as adding new ones.

In this regard, proposed new POEs include the following:

- Green POEs: LTR, BRT, pedestrian, bicycle modes (motor vehicles only as DCL/ non-commercial)
- Freight Shuttle POEs: elevated structure moving containers only
- Freight Rail POE at Santa Teresa / San Jerónimo POE

³ "El Paso POE Operations Plan", Cambridge Systematics. Analysis based on REMI simulation. These economic impacts are based on an unconstrained demand forecast through 2035.

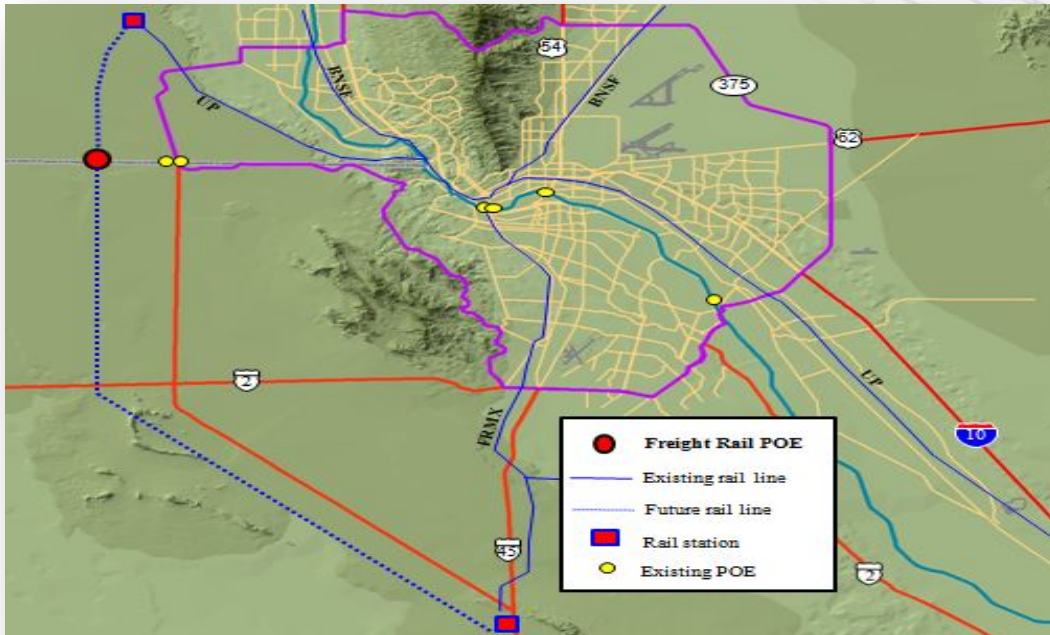
Proposed Green POE is the Camino Real Tierra Adentro (CRTA)



Proposed Freight Shuttle POEs are the Zaragoza East and Billy the Kid

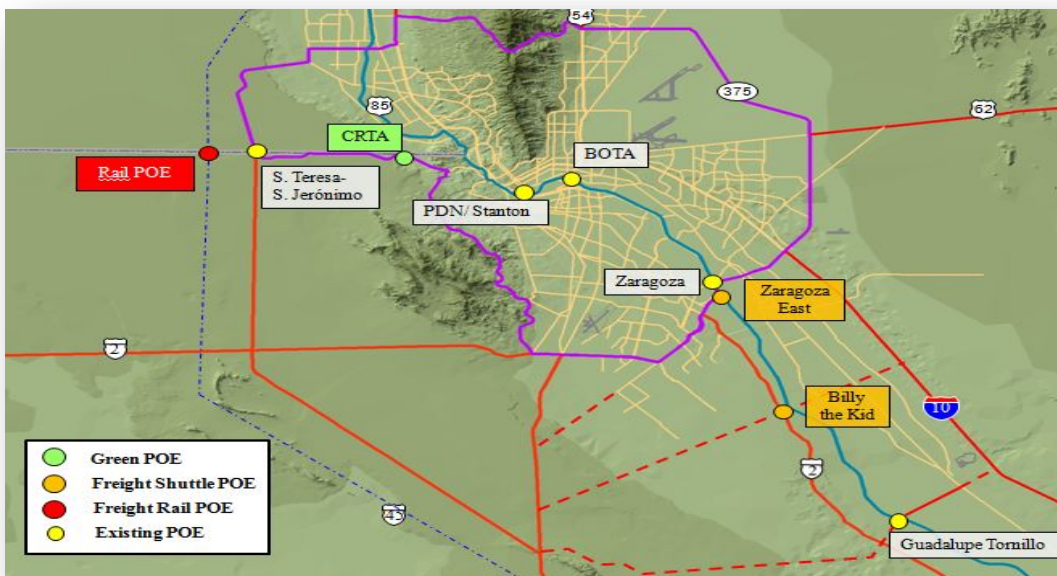


Proposed Freight Rail POE would be at Santa Teresa San Jerónimo.

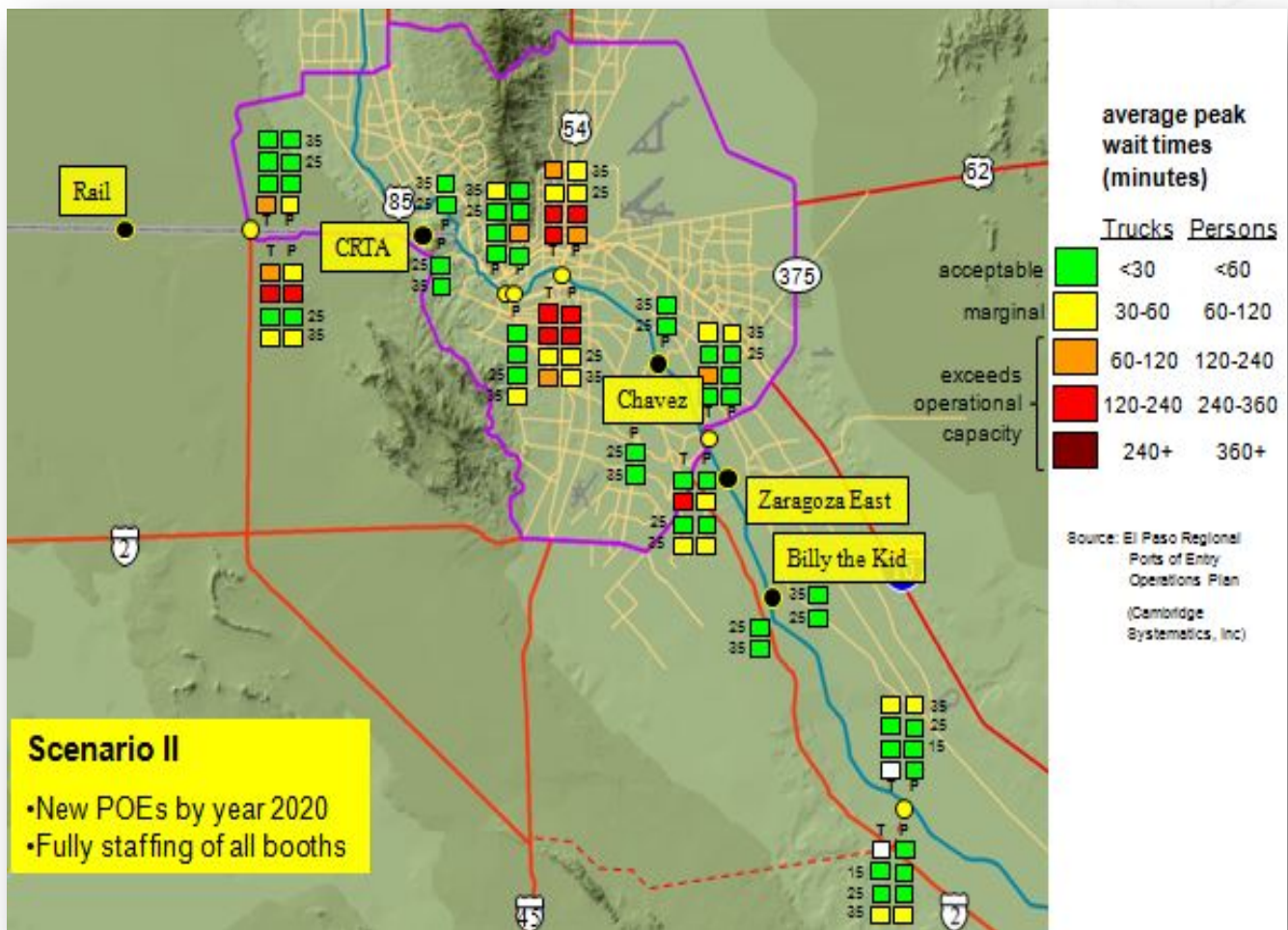


Finally, in addition to the new POEs, operational improvements to existing POEs would include High Security Lanes for access into the BOTA, and Zaragoza POEs.

The map below shows the location of new and existing POEs, working as a network:



A next step will be to estimate demand on the improved network of POEs, giving unlimited capacity to the new POEs. In theory, the effect should extend to existing POEs, re-distributing part of their flows to the new POEs, and equilibrating benefits region-wide. In theory, construction of new POEs could reduce wait times to acceptable levels even on existing POEs, beyond 2035.



Public Transportation Services

Accessibility and Public Demand

Moving forward on its goals to eliminate waste, generate efficiencies, and further reduce air pollution through improved coordination of public health and human service transportation, the Far West Texas/El Paso Regional Coordinated Transportation Stakeholders Committee (WTEP) has begun development of their draft FY 2014 regional health and human transportation services work plan after their successful FY 2013 campaign. EPMPO staff actively participates in WTEP, which was formed under the direction of the Texas Department of Transportation, as required by the Texas Transportation Code, Chapter 461 – Statewide Coordination of Public Transportation.

Demand-responsive paratransit is characterized by flexible routing and scheduling of small and medium sized vehicles providing a shared ride experience to users between pick-up and drop-off locations according to those passengers' needs. The Americans with Disabilities Act requires transit providers to provide complimentary demand-responsive paratransit services to individuals with disabilities. In the El Paso region, there are various providers of these services and Sun Metro, Project Amistad, and Sun City Cab Co. are just three of those providers. A list of providers can be sought at the WTEP website at <http://www.gobusgo.org/agency.html>.

Transportation needs of special demographics are a regional concern and limitations caused by age or disability often complicate the process of securing transportation for a portion of that demographic. Moreover, those who are low-income individuals or families who lack financial resources and are seeking employment or training opportunities find limited transportation options available. Those seeking transportation for second or third shifts and/or weekend employment are also limited. With an estimated growth of 952,632 in 2020 to 1,062,392 by 2030, the EPMPO Study Area finds itself at a defining moment in human services transportation where the demand is increasing but available funding for services is flat lined or decreasing. Additionally, the economic downturn and sequestration has placed additional burdens on these services. More assistance is being requested by those individuals and families as they struggle to maintain their jobs and medical care.

WTEP is required to have the work plan adopted by September 2013 and contributing members and agencies around the six county areas are assisting the committee to accomplish many of the deeds to reach that goal. Area and regional workshops and meetings have helped to update inventories and include other agencies that were not aware of the committee's efforts.

Elderly Population

With the advancement of medical treatment to various populations, people are beginning to see the effects of these advancements in the longevity of the human population and the growth of those who are elderly as people are starting to live longer lives. Although the older adults of the future will be healthier, better educated, and more financially secure than their peers of a few years ago. Many will experience physical, financial, emotional and mental barriers in using various modes of transport. Older adults living alone may have disabilities that prevent them from driving. They may also lack the availability of close-by family members to provide assistance and/or have limited financial means which can lead them to face more difficult and life-threatening transportation challenges.

People with Disabilities

Disabilities may be defined both within the context of the person's level of ability, as well as by society's ability to accommodate their needs. Disabilities include physical limitations, cognitive impairments, and visual impairments. The human services transportation solutions identified for people with disabilities often benefit all people by making transportation more accessible for everyone.

Low Income Population

Income affects access to a variety of resources, including transportation. Low-income populations are more likely to utilize transit services. Federal grants like 5310 were developed specifically to address these needs. As with people who have disabilities, it is more cost effective to offer low income populations access to transportation so they may maintain their self-sufficiency instead of using state sponsored health care and financial assistance.

Resources for Transportation Disadvantaged Populations**WTEP Vamonos Dos Regional Transportation Coordination Plan**

WTEP's Vamonos Dos plan's vision statement holds that all persons of the six-county Far West Texas region will have access to customer-centered, dependable, convenient and safe transportation services and choices. Stakeholders in the committee, which include representatives of the public and private sectors, promote this vision by proactively facilitating the planning and coordination between transportation providers, health and human service agencies and advocacy organizations in the six-county region to maximize mobility and the efficiency and effectiveness of public transportation resources. While the committee coordinates efforts within the six-county region, the El Paso urbanized area has the highest concentration of users within that six-county region. WTEP and EPMPPO staffs have coordinated planning strategies and efforts to implement these strategies successfully so as to be a best-practices example for the state and other national programs.

Goals for the plan include the following:

- Maintain an inclusive and sustainable planning process that seeks and values public participation, communicates its goals and activities to the public, and honors its Regional Plan and Priorities.
- Fill unacceptable gaps in service, especially for transit dependent populations, through the continuous identification and assessment of changing mobility needs, expansion of financial support, increased efficiency, redeployment of redundant resources and services innovation.
- Provide technical assistance and training to transit providers and encourage linkages between providers and with organizations serving transit dependent populations to create a customer-centered and seamless public transportation system.
- Build and maintain universal marketing and information programs that communicate the availability of public transportation services and educate the public about their most efficient use.
- Work to eliminate physical, financial, regulatory and operational barriers to the delivery of seamless regional transportation.
- Review efforts made by transportation providers to implement coordination strategies and measure the efficiency and quality of transportation services for the continuous improvement of coordinated regional transportation planning.

Far West Texas/El Paso Regional Action Plans

Every fiscal year, WTEP is required to submit an application for funding to administer the regional coordination program that is led by El Paso County's Transit Department. The County also hires staff to compliment the work done through the committee who provides the work to develop and produce a regional transportation plan and the complimenting yearly work plans. For FY 14, TxDOT has tentatively agreed to award El Paso County \$25,000 in §5304 planning funds of the \$86,107 request made by WTEP. However, they also asked the County to immediately submit a combined New Freedom/Rural Transportation Assistance Program (RTAP) request for the balance of our projects with the exception of the County-Wide Transit System project. An estimate of \$39,566 in RTAP funds was offered in response to that supplemental application, rejecting the Funding Forum project. In total, TxDOT has offered \$64,566, leaving a difference of \$21,541 of the original application. WTEP and El Paso County will need to find an additional \$21K to keep the project whole and dedicated staff on full time.

Some of the objectives demonstrated in the FY 2014 work plan are as follows:

- Prepare plan to guide \$5310 priorities and project selection
- Conduct forum for TxDOT & MPO funding opportunities
- Develop plan to reassign Demand – Response (D-R) Trips that exceed a wait time standard
- Prepare report documenting issues, benefits, and process to create a countywide transit system for El Paso
- Conduct survey and analysis to determine if sufficient ridership exists to support rural counties commuter service options

During FY 2013, the EPMPO and WTEP followed the Texas legislative movement regarding the state medical transportation program. Both House Bill (HB) 1145 and Senate Bill (SB) 8 were passed and were sent to the Governor for signing into law. Both bills would require the Health and Human Services Commission (HHSC) to provide nonemergency transportation services under the Medicaid medical transportation program through a Regional Managed Transportation Delivery Model (RMTDM) using a capitated (flat-fee) rate system, assume financial responsibility under a full-risk model, operate a call center, and use fixed routes when appropriate and available. The managed transportation organizations (MTOs) in the model could be rural or urban transit districts, public transportation providers, local private transportation providers, regional contracted brokers, or other HHSC-approved entities.



Various stakeholders within the region have addressed the bills and both the WTEP and the EPMPO have favored a law that would keep the system similar to what is presently being administered. Years of planning and coordination have gone into the one-click, one-call center system that is currently being implemented in the El Paso region.

On July 25th, 2013 the EPMPO hosted a public forum for the HHSC to get feedback on non-emergency medical transportation services provided through MTOs. HB 1145 and SB 8 take effect September 1, 2013. The bill would require the HHSC executive commissioner to establish the data analysis unit following this date. It would also require the RMTDM to be effective by September 1, 2014.

Efforts have been made regarding the seamless transfer of public transit between El Paso County Transit and Sun Metro services. WTEP staff has developed a matrix to compare both County transit and Sun Metro routes to ascertain a strategy on providing a more efficient transfer system from a County route to a Sun Metro route and vice versa. This project attempted to examine transfer logistics, fare policies and other issues associated with passenger transfers between El Paso County Transit and Sun Metro. The goal is improving the passenger experience for riders using both systems to reach their destination. All five County Transit routes were analyzed including schedules/timetables, shared terminals, terminal pull-in locations, and fares. These efforts will help create a more efficient transfer from each system to help reduce wait times, increase ridership, and provide more opportunities for the demographic for mobility.

TxDOT issued a series of program concepts regarding its implementation of various MAP-21 transit changes. It noted that the former JARC program ended with its resources awarded directly to §5307 and §5311 programs and the New Freedom program becoming part of the §5310 program. Regarding §5319, regional transportation coordination committees will play an expanded role by screening and selecting local programs to be forwarded to TxDOT for entry into a statewide competition. The last awards the EPMPO designated were awarded in November of 2012 by the TPB. Again, the awardees were a partnership of several transportation providers to efficiently disburse the funds in a broader manner and provide optimum transportation services and facilities utilizing the funds more effectively.

Throughout FY 2013, UTEP and El Paso County have conducted an analysis of transportation and health services for dialysis patients in the El Paso region. The main purpose of this study was to better understand dialysis related transportation issues and to investigate ways that transportation could be improved for patients currently undergoing hemodialysis in El Paso, Presidio, Pecos, Hudspeth, Culberson, Reeves, Jeff Davis, and Brewster Counties. Additionally, the study examines issues related to transportation and adequate treatment of dialysis patients. Expected to be released in August 2013, the study is set to provide findings regarding the obstacles in the transportation provided for these patients, the problems associated with it, potential strategies to help mitigate those problems and listing some patient recommendations for improvement. The full report will be made available on the gobusgo.org website.

FTA 5310 Program Management

In November of 2012, TxDOT announced that it would no longer be administering the FTA 5310 Urbanized Area Funding programs in the state as per the Moving Ahead for Progress in the 21st Century (MAP-21) regulation. Under MAP-21 the 5310 program no longer provided a single apportionment to the State; however, it provided apportionments specifically for large urbanized areas, small urbanized areas, rural areas, and it required new designations in large urbanized areas. TxDOT would still be administering the funds for small urbanized and rural areas of the state, but it was the responsibility of the metropolitan planning organizations, to designate a direct recipient for these funds, who would be administering the program for that urbanized area. After consulting with local officials and publicly and privately owned operators of public transportation through the WTEP, the EPMPO designated itself as the direct recipient for 5310 urbanized area funds. The EPMPO is responsible for administering the program; including, ensuring that all sub-recipients comply with Federal requirements, notifying eligible local entities of funding availability, developing a project selection process, determining project eligibility and developing recipient program requirements.

During the beginning of FY 2013, TxDOT ran a request for projects for the preliminary apportionment of FY 2013 5310 funds for District 24. Through its Elderly Advisory Committee the amount awarded was \$281,374, to three different transportation providers. Project Amistad of El Paso (PA) was awarded \$151,374, the City of Socorro's Nutrition Center was awarded \$58,000, and West Texas Opportunities (WTO) was awarded \$72,000. However, the total funds were later allocated to the El Paso urbanized area when MAP-21 regulations and guidance were in effect. WTO's funds were replaced into the final apportionment released in May 2013. *Table 12* displays the lineation of the funds that will be awarded to PA and the City of Socorro and what it covers. FTA's total 5310 allocation to the El Paso urbanized area in May 2013 was \$596,870, of which \$209,374 total has already been awarded. EPMPO will be utilizing 10% of total amount for administrative purposes and another request for projects will be released for the remaining total. EPMPO staff is developing the program management document and the project selection process for the 5310 program and is expected to release an RFP in early Fall 2013.



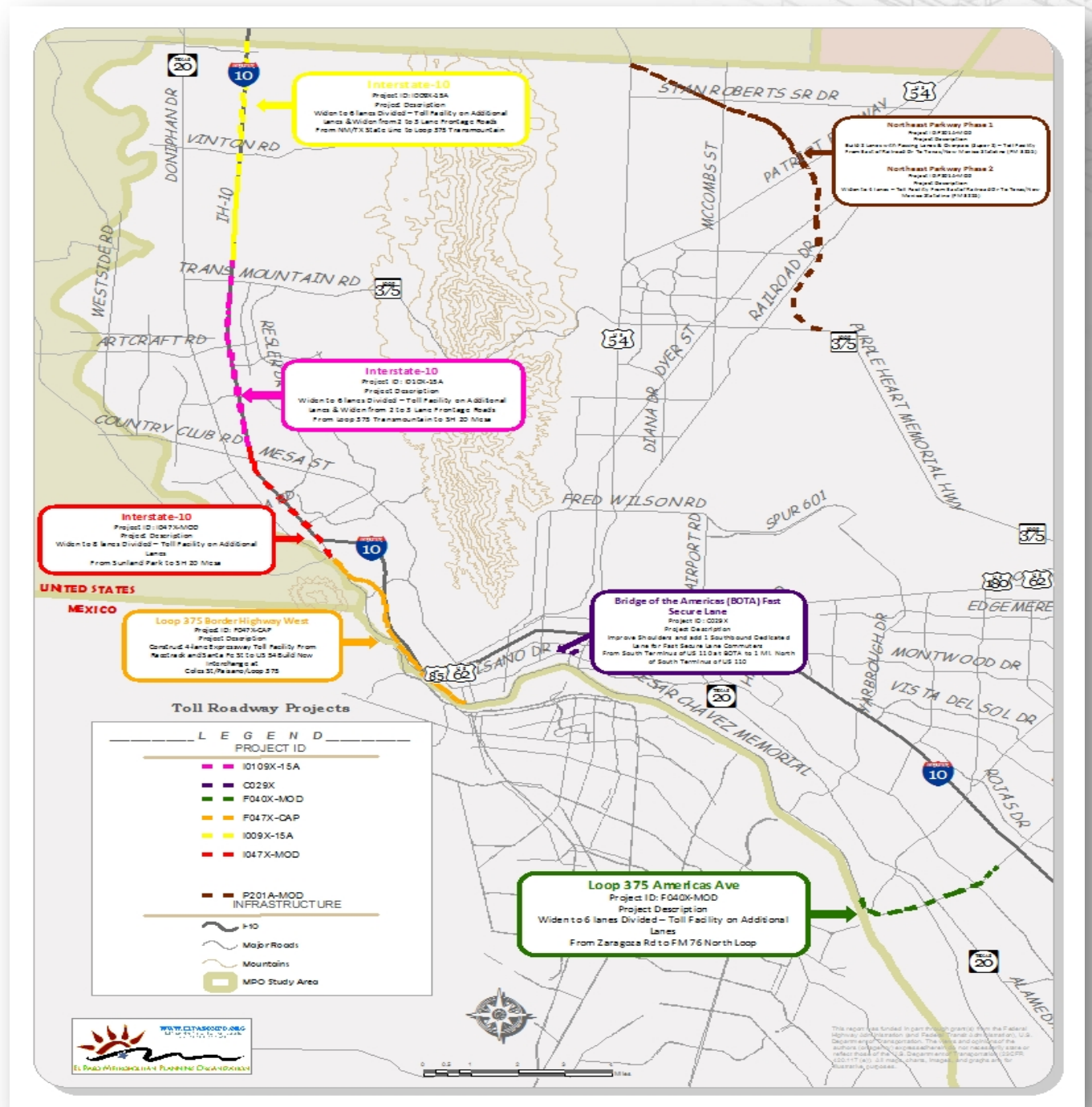
Table 12: Lineation of Funds

| SECTION 5310 PROGRAM OF PROJECTS | PROJECT DESCRIPTION | # UNIT | TOTAL AMOUNT | FEDERAL SHARE | LOCAL SHARE | TDC AMT |
|--|---------------------------|--------|-----------------|------------------|----------------|----------|
| LULAC PROJECT AMISTAD D/B/A PROJECT AMISTAD | PUBLIC NON- PROFIT | | | | | |
| | Computer Equipment | 1 | \$9,984 | \$9,984 | | \$1,697 |
| | Preventive Maintenance | 1 | \$37,500 | \$30,000 | \$7,500 | |
| | Type 3 Vehicle (GAS) | 1 | \$111,390 | \$111,390 | | \$18,936 |
| Total | | | | | | |
| | | 3 | \$158,874 | \$151,374 | \$7,500 | \$20,634 |
| CITY OF SOCORRO NUTRITION CENTER | PUBLIC NON- PROFIT | | | | | |
| | Type 2 Vehicle (ULSD) | 1 | \$58,000 | \$58,000 | | \$9,860 |
| | Purchase of Service | - | | \$0 | | \$0 |
| | Preventive Maintenance | - | \$0 | \$0 | \$0 | |
| Total | | | | | | |
| | | 1 | \$58,000 | \$58,000 | \$0 | \$9,860 |

Southern New Mexico Disadvantaged Population Planning Initiatives

Southern New Mexico’s health and human services planning group is the Coordinated Mobility Action Plan Steering Committee (CMAP). CMAP will develop a regional plan for all of Doña Ana County, which includes the Communities of Santa Teresa, Berino, and Chaparral, and the cities of Anthony and Sunland Park, NM. CMAP has accumulated a strong membership in its steering committee of regional service professionals and already the group is directing their efforts in collecting data for their goals and objectives within the region. EPMPO staff coordinates and assists the group in its development and will be coordinating with them and the Mesilla Valley MPO to provide services to the entire region.

Regional Toll Analysis



The goal in this Environmental Justice (EJ) Analysis is to avoid inequitable and disproportionate impacts on low-income groups when implementing the planned infrastructure for 2040 for El Paso. The test is to determine whether there are travel time differences for people of various income levels that could be attributed to decreased levels of roadway accessibility and overall mobility.

One way to reach this equal impact and/or improvement for all income groups within the area of study - once all projects for 2040 are implemented - is to utilize the Travel Demand Model to establish a measure of effectiveness (MOE) in order to make quantitative comparisons between EJ zones and non-EJ zones. This MOE applies a robust quantitative approach that utilizes travel time as a performance measure, and begins by identifying EJ zones. The objective is to ensure that populations within EJ zones are not unduly burdened by greater travel times when choosing between toll and non-toll roads.

The Horizon 2040 MTP acknowledges the importance of mobility and accessibility for the Study Area. In the Travel Demand Model, various household income groups exist within the 836 Traffic Analysis Zones (TAZs). Traffic Analysis Zones are geographic areas used in transportation forecasting that summarize socioeconomic and land use characteristics. First it was necessary to establish the EJ zones in year 2040 using the Household Poverty Guidelines (See *Table 13*).

Table 13: 2011 Household Poverty Guidelines

| Persons in Household | Household Income* |
|----------------------|-------------------|
| 1 | \$10,890 |
| 2 | 14,710 |
| 3 | 18,530 |
| 4 | 22,350 |
| 5 | 26,170 |
| 6 | 29,990 |
| 7 | 33,810 |
| 8 | 37,630 |

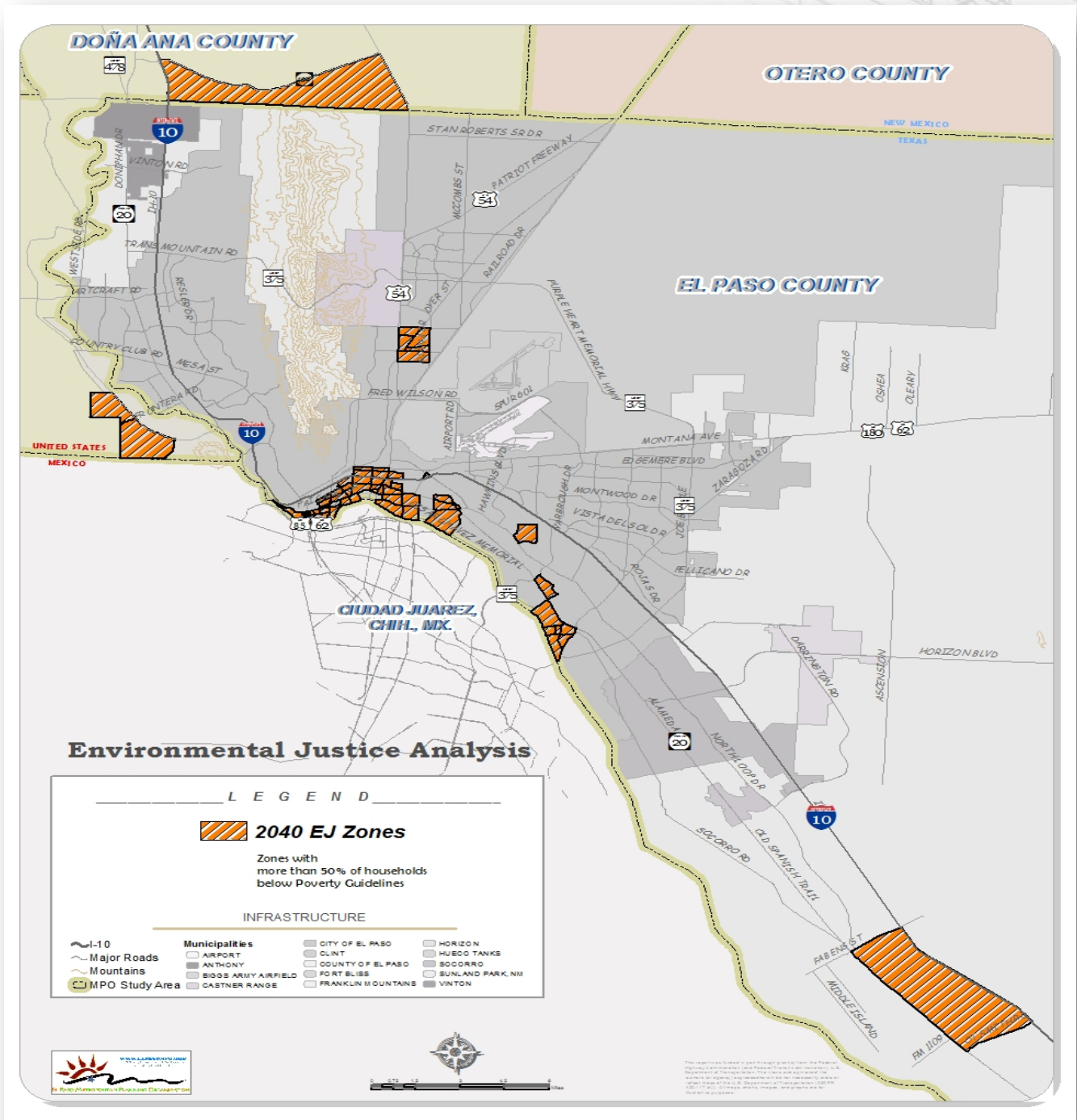
Note: For each additional person, add 3,820

*These amounts are for the 48 contiguous states and D.C.

Source: *Federal Register, Vol. 76, No. 13, January 20, 2011, pp.3637-3638*

EJ zones were identified as TAZs with more than 50% of households below poverty guidelines. For 2040 there were 65 EJ zones identified with a concentration in the historical center of the city and mission valley. A few outlying EJ zones in Sunland Park, northeast El Paso, and far southeast El Paso County were also identified (See *Map 8*).

Map 8: Environmental Justice Zones



The purpose of the analysis was to determine whether toll projects proposed in the Horizon 2040 MTP would collectively result in disproportionate negative impacts to EJ zones. This analysis shows no disproportionate effects when measuring average travel times (See *Table 14*).

Table 14: 2040 Average Travel Times

| Production Zones | Trip Segmentation | Percentage of Daily Trips | Avg Travel Time [minutes] | |
|------------------|--|---------------------------|---------------------------|----------------|
| | | | No-Build Scenario | Build Scenario |
| EJ Zones | Trips that can save time using a new toll facility | .1% | 13.9 | 13.2 |
| | Trips that can't save time using a new toll facility | .8% | 3.3 | 3.3 |
| Non-EJ Zones | Trips that can save time using a new toll facility | 8.3% | 15.9 | 15.5 |
| | Trips that can't save time using a new toll facility | 90.8% | 10.3 | 10.3 |

No-Build Alternative

The No-Build Alternative represents the option in which the proposed toll projects are not implemented. Both Americas Avenue and Cesar Chavez Memorial Highway (State Loop 375) would remain in their existing four lane configuration. Forecast demand for 2040 was introduced into this alternative to examine the performance of the travel model. No federal, state, or local funds would be expended on planning or construction. This alternative would save nearly \$670,000,000 (total project cost). The unused funding could then be used for other projects in the development of the MTP and TIP. The No-Build Alternative, however, would not improve mobility or decrease congestion on Loop 375, not meeting the direction of the Transportation Policy Board, spirit of the 2013 Comprehensive Mobility Plan and the forecast 2040 transportation demand. Under a no-build scenario, EJ zone produced trips are slightly better off at 13.9 minutes average travel time compared with non-EJ zones at 15.9 minutes.

Build Alternative

This alternative encompasses all four toll projects with additional roadway capacity in 2040. The four projects would provide additional roadway capacity. Under a no-build scenario EJ zone produced trips are slightly better off at 13.9 minutes compared with non-EJ zones at 15.9 minutes. While both are better off in the build scenario where EJ zone produced trips that can save time using a new toll facility at 13.2 minutes and non-EJ zones are at 15.5 minutes.

Recommended Alternative

Based on the alternatives analysis, the Build option is the preferred alternative because in addition to meeting the need and purpose of the project, it offers additional advantages over the No Build Alternative. These advantages include: providing users with an option to utilize express toll main lanes; paying for operation and maintenance. The Build Alternative would also meet the need and purpose of the project of improving mobility and decreasing congestion. Finally, under the preferred alternative, EJ zones are not negatively impacted compared to non-EJ zones.

Multimodal Systems

Multimodal transportation is characterized by the use of two or more modes of transportation to move people and/or goods. The main focus of multimodalism is to encourage the use of non-automotive transportation methods. The benefits of multimodal transportation include, improvements in congestion management for growing cities much like El Paso, public health improvements, affordable access to employment and/or recreational facilities, and environmentally friendly transportation. Multimodal transportation is largely dependent upon the connections between different modes of transportation.

Bicycle Infrastructure

Bicycle oriented planning is a critical component of multimodal transportation and can be used to create opportunities for air quality improvements. Bicycle infrastructure improvements are one avenue of promoting multimodal commuting and health oriented alternatives in transportation. The existing bike lanes throughout the City of El Paso are illustrated on the El Paso Department of Transportation "Bike Lanes" map located at the following address: <http://gis.elpasotexas.gov/bikelanes/index.html>.

Currently, the Horizon 2040 Transportation Improvement Program (TIP) is programmed and awaiting Federal approval for the following:

- \$2 Million Dollars for Non-State System infrastructure improvements in 2014
- \$602,600 Dollars for State System Infrastructure in 2016
- \$100,000 Dollars for bicycle education, outreach, and plan development of the bicycle infrastructure improvements in 2014, 2015, and 2016

The total amount of Bicycle Infrastructure Improvements programmed in the 2013-2016 TIP and awaiting Federal approval is \$2,902,600 Million Dollars.

Connectivity, Expense, and Convenience

In addition to bicycle infrastructure improvements, a multimodal study will be developed to capture the elements of connectivity, convenience, expense, way finding, safety, transportation technology, land-use, multimodal project prioritization, and travel behavior. The main focus of the study is to analyze existing multimodal conditions, provide research on multimodal opportunities, research non-motorized behavior unique to the El Paso area, and address multimodal opportunities for the future. The study is intended to promote alternative methods of travel that are safe, convenient, environmentally friendly, and healthy.

The use of technology is also a critical component to be discussed in the multimodal study as it relates to the improvement of connectivity between different means of transportation and identifying infrastructure improvement opportunities. Cost benefit analyses will also be provided for any projects proposed in the study. The study will include an emphasis on commuters and there will be opportunities for public input/comments on the document.

Education and Encouragement

Key factors in multimodal transportation include public education and encouragement programs to promote safe commuting. Commuter safety is, in part, a function of community awareness on safe practices, pedestrian and bicyclist visibility, and convenient access to transit terminals, bicycle infrastructure, and pedestrian walkways. The multimodal study will include safety best practices and will be the foundation for any future projects that may be developed as a result of the study.

Bus Rapid Transit



Another aspect in multimodalism is Bus Rapid Transit (BRT). The initiatives for Bus Rapid Transit service in El Paso began in 2009 with City Council and Sun Metro's decision to look into transportation enhancements. BRT is generally characterized by shorter commuting times and more frequent pick up times. BRT vehicles offer improved speed, reliability, high capacity occupancy, improved fare collection mechanisms, and controlled traffic signals specifically intended to promote travel efficiency. Sun Metro is the developing agency for the BRT plans in El Paso. According to Sun Metro, the BRT system in El Paso is anticipated to include uniquely branded 60 foot buses in mixed traffic with pick up frequency of ten to fifteen minutes. It is also designed to have less frequent stops, branded and landscaped stations with improved pedestrian amenities, and signal prioritization.

There are four main locations proposed for the BRT in El Paso (See *Map 9*). The first and second locations are the Mesa and Alameda corridors which are scheduled to be operational by late 2013 or early 2014. The third location, being the Dyer corridor, is scheduled to be operational by 2015. The fourth and last location is the Montana corridor, scheduled to be operational by 2016.

Park and Ride

Park and Ride is a transportation option that allows commuters to park their vehicles and ride the Sun Metro bus to another destination. Park and Ride options can lead to a reduction in congestion, reduction of vehicle miles traveled (VMT) leading to a reduction of vehicular emissions, and increased mobility options for commuters (*Systematic Approach to Evaluate Potential Park and Ride Facilities* by Kelvin Cheu, et.al).

The *Systematic Approach to Evaluate Potential Park and Ride Facilities* research report contains the results for a study conducted in October 2012 by the UTEP Center for Transportation Infrastructure Systems. The study included a feasibility evaluation on the development of a potential park and ride facility to be located on Joe Battle Blvd. and Montwood Dr., in El Paso. The main objectives of the study also included a review of relevant literature on park and ride facilities, discussion on the advantages and disadvantages of park and ride planning, analysis of the current reliability of the El Paso transit service, analysis of parking lot usage at suggested potential park and ride locations, development of a discrete choice model that estimates usage of park and ride facilities, and an estimation of infrastructure improvement costs for a park and ride facility. Lastly, the conclusions of the study were grouped to form guidelines for future analysis of potential park and ride facilities.

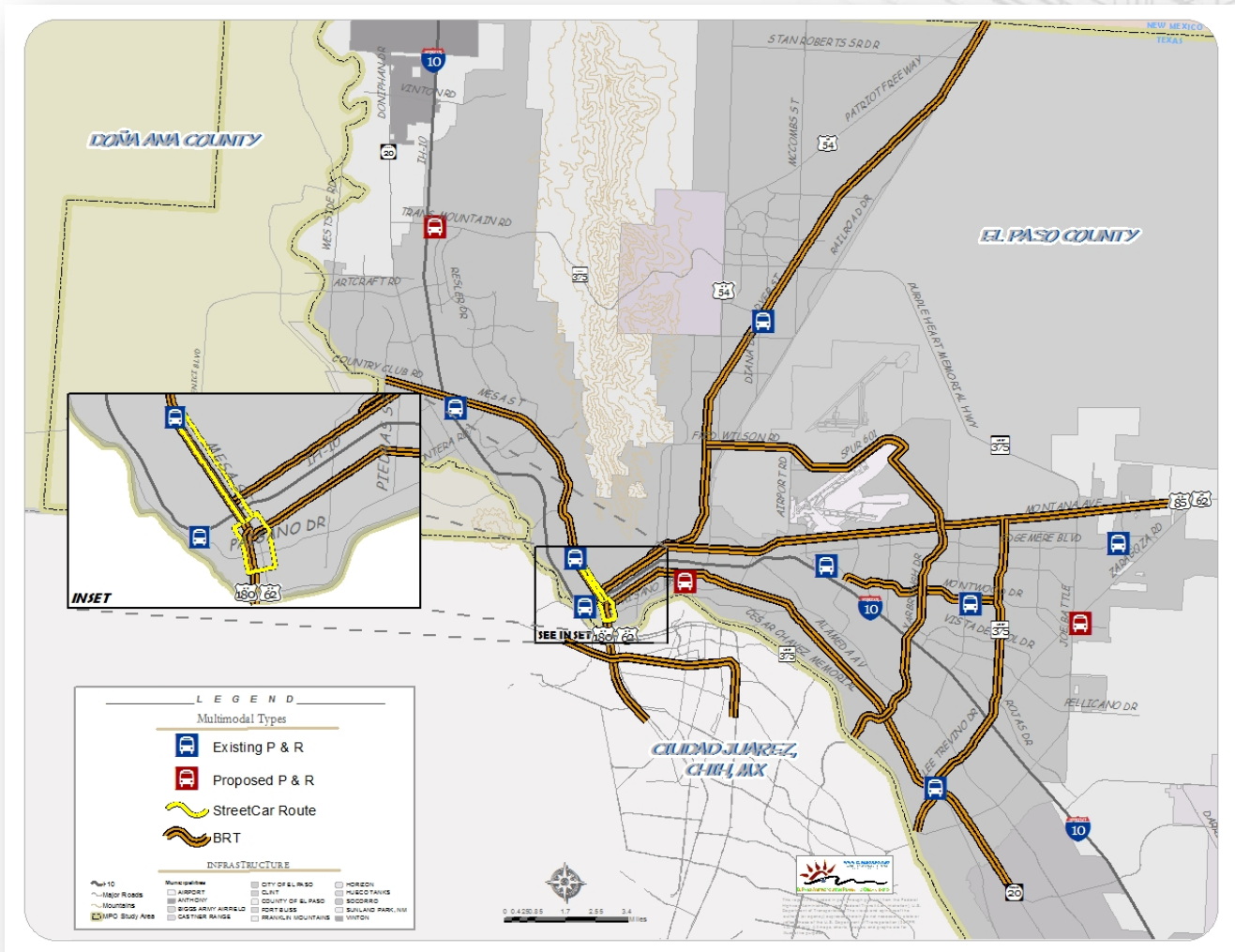
The analysis presented by the study showed estimates of park and ride ridership in the range of 46 passengers, in 2010, to 87 passengers in 2035. The cost of infrastructure improvements was estimated to be approximately \$51,000 dollars. Based on the number of estimated passengers, potential revenue was estimated to range from \$2,208 - \$4,146 dollars. The projected economic boost for nearby stores was estimated to range from \$463.06 - \$874.06 dollars per day.

Park and Ride services in El Paso are provided by Sun Metro. There are currently eight park and ride facilities in El Paso (See *Map 9*). Six of the eight facilities offer free parking and are located at transit terminals and/or transfer centers. The locations for the facilities include the Union Plaza Transit Terminal (Downtown El Paso), Northgate Terminal (Northeast), Al Jefferson Westside Transfer Center, Glory Road Transfer Center (Westside), Eastside Transit Terminal, RC Poe Park and Ride (Eastside), Vista Hills Park and Ride (Eastside), and the Nestor A. Valencia Mission Valley Transfer Center. According to the 2040 Horizon Metropolitan Transportation Plan (MTP) Project List, there are three proposed park and ride facilities in El Paso. Two of the three locations include Far East El Paso at Montwood near Loop 375/Zaragoza and West El Paso at I-10 and Transmountain Rd. The third location is the Bridge of the Americas Port of Entry (POE) which will be used to promote the use of mass-transit for cross-border travel and improve air quality.

Streetcar Project

The COEP and TxDOT are proposing a streetcar project as an alternative means of transport in the Downtown area of El Paso. The main goals of the project are to enhance mobility, promote economic development as well as new urbanism, and preserve the historical aspects of downtown El Paso. The route will be located along a two-mile double tracked corridor originating in the downtown shopping district and extending out to the University of Texas at El Paso and the Cincinnati Entertainment District (See *Map 9*). The tracks for the streetcar are anticipated to be located within existing traffic lanes along the right lane. The streetcar stops are proposed along two to three block intervals. The streetcars formerly used in El Paso will be rehabilitated for use in this project. The streetcars will be approximately 45 feet long and 8.5 feet wide with two entrances.

Map 9: Multimodal System



Bi-State/Bi-City Commute

Multimodalism is also greatly dependent upon intercity connectivity in cities like El Paso, Texas; Anthony, Texas; and Las Cruces New Mexico. The New Mexico Department of Transportation (NMDOT) created and operates two main bus routes between these cities. Both routes are available in the morning and afternoon Monday through Friday. The first route is the Gold Route. It circulates between El Paso, Texas; Anthony, Texas; and Las Cruces, New Mexico. In FY 2012, the average ridership was approximately 4,162 passengers per month and approximately 198 passengers per day. The second route is the Silver Route. It circulates from Las Cruces to the White Sands Missile Range near Alamogordo, New Mexico. The Gold and Silver Route charts below show the trends in ridership from FY 2012-2013. Overall, there was an increase in number of service days and ridership from FY 2012 to FY 2013 (See Figure 14 and 15).

Figure 14: Gold and Silver Routes Ridership for FY 2012

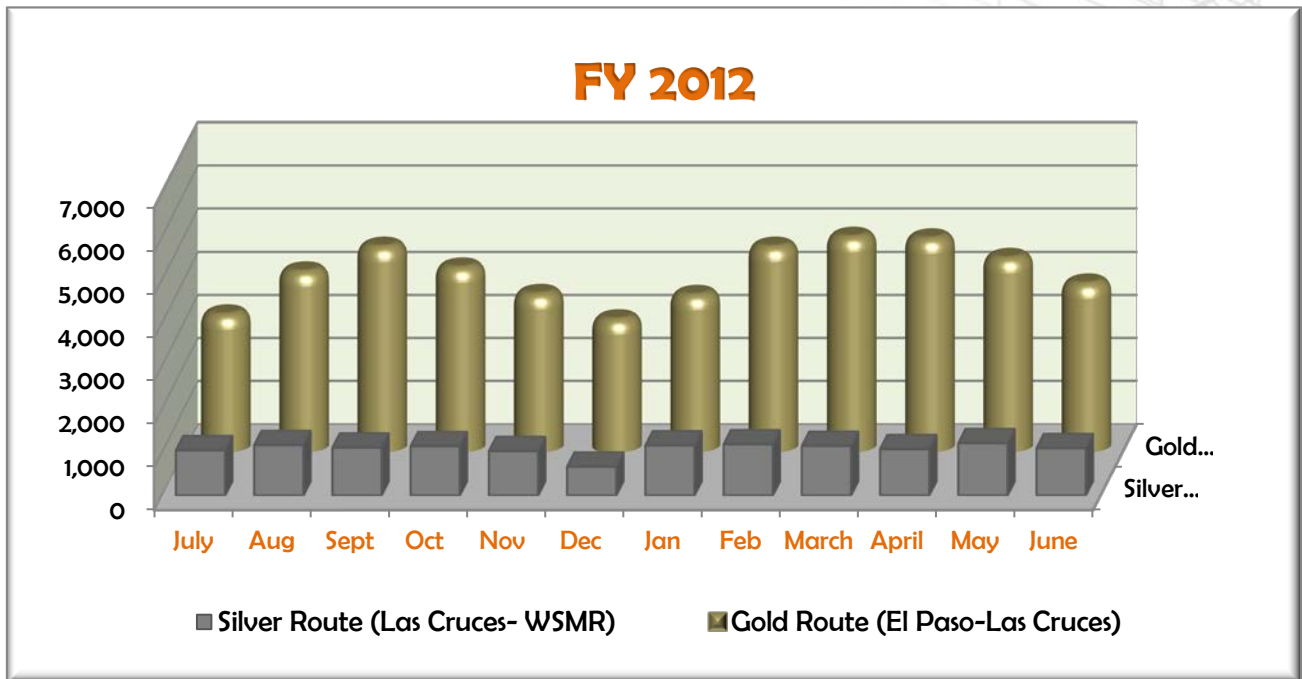
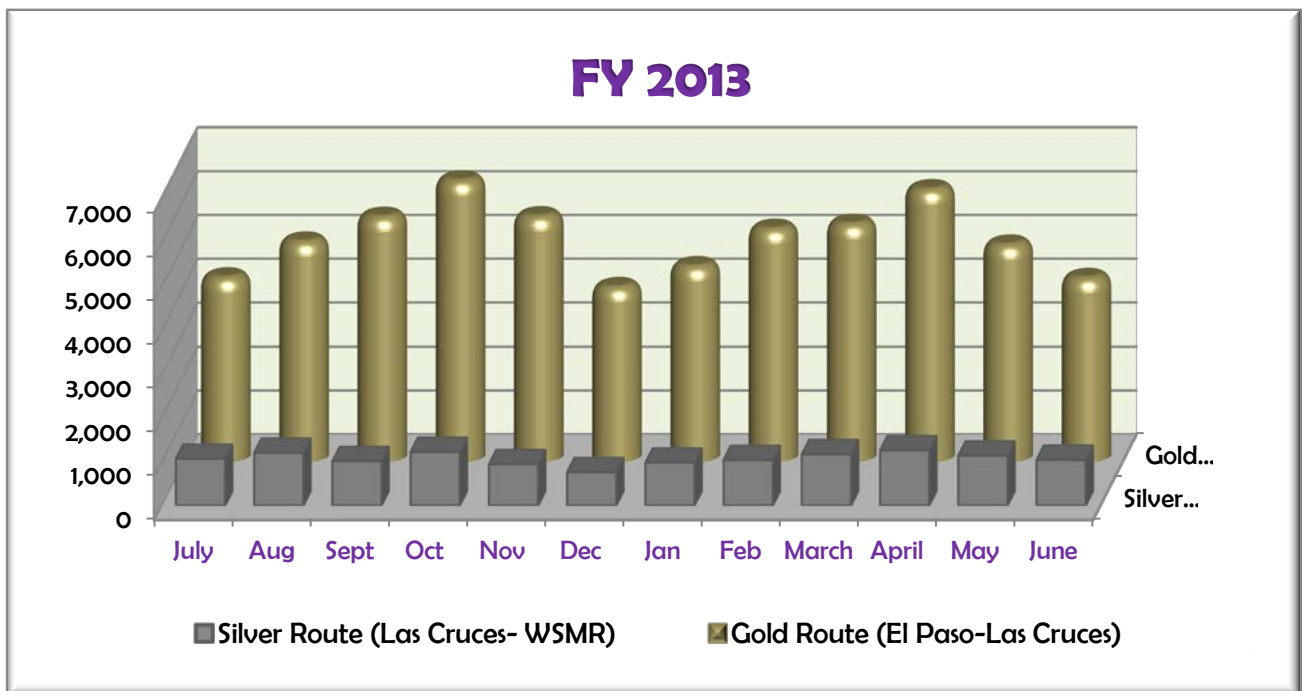


Figure 15: Gold and Silver Routes Ridership for FY 2013



Source: New Mexico Department of Transportation – Rail and Transit

Air Quality



Rider 8

The Clean Air Act is the overarching law that defines the national responsibility to protect and improve air quality in the United States. The Environmental Protection Agency (EPA) is the lead agency in these matters and as a result of the Clean Air Act, the National Ambient Air Quality Standards (NAAQS) were established for six criteria pollutants. These criteria pollutants were identified to be harmful to public health and the environment and include, Carbon Monoxide (CO), Lead (Pb), Nitrogen Dioxide (NO₂), Ozone (O₃), Particle Pollution (PM₁₀ and PM_{2.5}), and Sulfur Dioxide (SO₂).

Among the six criteria pollutants, El Paso was determined to be non-attainment (not within the standard limits) of PM₁₀ and is currently on a maintenance plan for CO. The current Ozone standard is 75 parts per billion by volume (PPB). The Ozone standard will be revised in upcoming years and is anticipated to fall between the ranges of 60-70 PPB. Although El Paso is currently in attainment of the Ozone standard, it is considered near-nonattainment because it is uncertain if El Paso will remain in attainment for Ozone should the standard be lowered.

Rider 8 is a Texas based program for near non-attainment areas. It was appropriated by Texas Legislature and is managed by the Texas Commission on Environmental Quality (TCEQ). El Paso is currently eligible for Rider 8 funding. Since inception of the program in El Paso, photochemical and conceptual models for Ozone have been developed to better understand the formation of Ozone in El Paso. A stakeholder group was formed to identify possible emissions reductions strategies as related to Ozone. Bicycle planning efforts are one of the selected control strategies. Additional work has included MPO attendance at public outreach events to promote community awareness on Ozone issues and different methods that can be done to reduce emissions such as, fueling up on gasoline after dusk and reducing idling time by parking and entering businesses. Rider 8 efforts in El Paso have also included the development, by the Texas A&M Transportation Research Institute (TTI), of an interactive web based tool used to estimate emissions by activity type. The emissions estimator is located at the following web address: <http://cleanairforelpasso.org/>

Any strategies, such as the bike share program, may be evaluated in terms of possible emissions reductions. In the event El Paso should be listed as non-attainment for Ozone, the TCEQ will develop a State Implementation Plan (SIP) designed to help El Paso reach attainment of the standard. The SIP has specific requirements for each designated non-attainment area. The ultimate goal of a SIP is to demonstrate that a region is making efforts to be in attainment of a standard and will be in attainment after a specified time frame. Emissions that are quantified from activities or projects may be submitted for SIP credits to further demonstrate the work being done to improve air quality.

PM₁₀ Emission Data

| Year | Season | VMT | PM ₁₀ Emissions (tons/day) |
|------|--------|------------|---------------------------------------|
| MVEB | -- | -- | 12.1 |
| 2010 | Summer | 15,787,118 | 3.63 |
| | Winter | 15,770,536 | 3.74 |
| 2020 | Summer | 19,489,731 | 4.32 |
| | Winter | 19,469,302 | 4.45 |
| 2030 | Summer | 22,680,734 | 5.06 |
| | Winter | 22,656,954 | 5.21 |
| 2040 | Summer | 20,559,661 | 5.86 |
| | Winter | 26,222,863 | 6.04 |

Winter Season CO Emission Data¹

| YEAR | Total Vehicle Miles of Travel (Including Intra-zonal) | CO Emissions in Tons per Day |
|------|---|------------------------------|
| MVEB | - | 29.66 |
| 2010 | 1,313,559 | 20.10 ² |
| 2020 | 1,457,664 | 17.02 |
| 2030 | 1,630,358 | 17.49 |
| 2040 | 1,869,330 | 19.84 |

Sources: Networks and Traffic Assignments, TxDOT. VMT, Emission Factors, and Emission Estimates, TTI.

¹ All values are average winter weekday estimates. The VMT and VHT listed are used to calculate the average speed. The CO estimates are for the network zones comprising the CO nonattainment area only. The PM₁₀ estimates (including both direct vehicle emissions and re-suspended paved road surface dust, estimated with MOBILE6.2.03 and AP-42 SECTION 13.2.1 models, respectively) and the activity estimates are for El Paso County. El Paso CO nonattainment area zones: 1-36, 38-40, 55, 60, 64, 65, 68, 71, 78, 105-127, 128, 129,184-192, 194-196, 242-244, 294, 296, 297, 604, 606, 609, 662, and 673-675.

² The 29.66 tons per day CO MVEB is utilized for the 2020 and later analysis years. For the 2010 analysis year an emissions estimate (23.56 tons per day) was calculated by interpolating between the 2002 base year emissions inventory estimate of 29.66 tons per day and the 2020 (last year of the maintenance plan) emissions inventory estimate of 15.94 tons per day.

PM10 and CO Boundaries

